APS Australian Psychological Society

Evidence-based psychological interventions in the treatment of mental disorders: A literature review

Fifth Edition
2024

Disclaimer and copyright

This publication was produced by The Australian Psychological Society Ltd (APS) to provide an overview of the current empirical research evidence for a range of psychological interventions used in the treatment of mental health disorders in adult and child/adolescent populations. The information provided does not replace clinical judgment and decision making. Although every reasonable effort has been made to ensure the accuracy of the information, no guarantee can be given that the information is free from error or omission. There may be interventions not covered by the scope of this review which have an evidence-base – the omission of these interventions does not imply a lack of available evidence, simply that it has not met the eligibility criteria specified. The APS, its officers, employees, and agents will accept no liability for any act or omission occurring from reliance on the information provided, or for the consequences of any such act or omission. The APS does not accept any liability for any injury, loss, or damage incurred by use of or reliance on information in this document. Such damages include, without limitation, damages that might be regarded as direct, indirect, special, incidental, or consequential.

Conflict of interest

We acknowledge that the project has been funded by the Department of Health and Aged Care and input has been sought and provided by the Department in all stages of the project including review of the methodology and this document.

Acknowledgements

This literature review has been produced by the Australian Psychological Society (APS) with funding from the Australian Government Department of Health and Aged Care.

APS project team

- Dr Zena Burgess (Project Sponsor)
- Minari Fernando
- Dr Vinita Godinho (Project Executive)
- Dr Zara Lasater (Project Lead)
- Laura Sciacchitano (Editor)
- Elly Smith (Project Lead)
- Josh Stamp

APS research team

- Yoni Manor
- Jaz Ocampo
- Annabelle Pontvianne
- Noor Shehabi (Research Lead)

APS internal working group

- Dr Linda De George Walker
- Natalie Eckberg
- Nicole Hope
- Michelle Tadros
- Dr Stephen Tang

Expert reference group

- Hannah Farndon (British Psychological Society)
- Dr Raquel Halfond (American Psychological Association)
- Associate Professor Christopher Lee
- Professor Cathy Mihalopolous

List of subject reviewers

- Associate Professor Rebecca Anderson
- Dr Rachel Brand
- Dr Kymbra Clayton
- Dr Simone Farrelly
- Professor David J Hawes
- Dr Moira Junge
- Professor Maria Kangas
- Emeritus Professor Justin Kenardy
- Associate Professor Christopher Lee
- Tracy MacFarlane
- Professor Peter McEvoy
- Professor Greg Murray
- Dr Imogen Rehm
- Professor Gemma Sharp
- Katrina Streatfield
- Professor Neil Thomas
- Silvia Violante Cumpa
- Professor Tracey Wade

Input was also sought from the following key stakeholders:

- Australian Association of Social Workers
- Australian College of Mental Health Nurses
- Australian Music Therapy Association
- Australian Physiotherapy Association
- Dr. Kate Renshaw, Play and Filial Therapy
- Lived Experience Australia
- Occupational Therapy Australia (OTA)
- Royal Australian College of General Practitioners
- Royal Australian and New Zealand College of Psychiatrists

Table of Contents

Review of the research literature

Background

This document is a systematic review undertaken to update the 2018 APS publication *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition). A review of the research evidence for selected psychological interventions was first conducted in 2003 in the context of the Australian Government's *Better Outcomes in Mental Health Care* initiative. It was updated in 2006 and in 2010, with consideration of the introduction of primary healthcare services through the *Access to Allied Psychological Services* (ATAPS) and *Better Outcomes to Mental Health Care* initiative. The 2018 literature review (4th edition) has been widely used by mental health practitioners, academics, and government.

The fifth edition provides new insights based on research published since 2018, while acknowledging insights gained in the previous edition whenever no new relevant research findings existed for a given intervention. The current review reflects changes to the International Classification of Diseases (ICD-11)[1] and best practices in research methodology by following the latest Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines.[2] This review also provides additional information in research synthesis by including assessments of Risk of Bias and statistical information for all articles published since 2018.

The review acknowledges the impact of the COVID-19 pandemic and the changing nature of primary mental health care services in Australia. Accordingly, a survey of APS member psychologists was undertaken at the commencement of the review in 2023. The aim of this survey was to ensure that the scope of the current review aligned with the treatment modalities and clinical presentations most commonly seen in psychological practice across Australia.

Purpose and scope of the review

The purpose of this review is to provide an overview of the current empirical research evidence for a range of psychological interventions used in the treatment of mental health disorders in adult and child/adolescent populations.

While acknowledging that reliable evidence in support of a given intervention must draw from multiple information sources, this review focuses on reporting published empirical research. In line with evidence-based practice, users of this document, and in particular, individual clinicians, should integrate the information provided here with other information sources, including practice-based evidence, lived experience, client preferences, availability of resources, individual and community factors, ethical and cultural considerations, and broader societal impacts on psychosocial outcomes.[3]

This edition is a valuable resource for mental health practitioners, particularly psychologists, as an overview of the current evidence-base for a range of psychological interventions. Importantly, all editions of these reviews do not seek to provide clinical guidelines and emphasise the importance of understanding clients' unique needs and formulating individualised treatment plans accordingly.

This systematic review did not entail a thorough evaluation of the research screened. Readers seeking a more in-depth understanding of the methodology and findings of the primary research should refer to the original articles.

---

[1] World Health Organization. (2022). ICD-11: *International classification of diseases* (11th revision). https://icd.who.int/
[2] Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., … Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ, 372*, n71. https://doi.org/10.1136/bmj.n71
[3] Thyer, B. A., & Pignotti, M. (2011). Evidence-based practices do not exist. *Clinical Social Work Journal, 39*(4), 328–333. https://doi.org/10.1007/s10615-011-0358-x

Disorders included in the literature review

The disorders selected for review are based on the ICD-11 diagnostic criteria.[4] They include recently added disorders and reflect diagnostic re-categorisations. These disorders have been chosen based on those included in previous editions as well as prevalence data[5] and current trends in mental health care.[6]

The following ICD-11 disorders are included in this literature review:

Mood disorders

- Depression
- Bipolar disorder

Anxiety or fear related disorders

- Generalised anxiety disorder
- Panic disorder
- Specific phobia
- Social anxiety disorder

Stress disorders

- Posttraumatic stress disorder
- Complex posttraumatic stress disorder
- Adjustment disorder

Obsessive-compulsive and related disorders

- Obsessive-compulsive disorder
- Body dysmorphic disorder
- Body-focused repetitive behaviour disorders
- Hypochondriasis

Substance use disorders

Psychotic disorders

Dissociative disorders

Feeding and eating disorders

- Anorexia nervosa
- Bulimia nervosa
- Binge eating disorder

Sleep-wake disorders

- Insomnia disorders

Disorders of bodily distress

- Bodily distress disorder

Personality disorders

- Borderline personality disorder

Neurodevelopmental disorders:

- Attention-deficit hyperactivity disorder

Disruptive behaviour or dissocial disorders

Elimination disorders

- Enuresis.

Interventions included in the review

Health professionals have an ethical and professional obligation to use treatment interventions that are supported by an evidence base. Within this evidence base, this review is confined to the following psychological interventions (unless otherwise stated in each chapter):[7]

- Acceptance and commitment therapy (ACT)
- Cognitive behaviour therapy (CBT)
- Compassion-focused therapy (CFT)
- Dialectical behaviour therapy (DBT)
- Emotion-focused therapy (EFT)
- Eye movement desensitisation and reprocessing (EMDR)
- Family-based interventions
- Hypnotherapy
- Internal family systems (IFS)
- Interpersonal psychotherapy (IPT)
- Mindfulness-based cognitive therapy (MBCT) and mindfulness-based stress reduction (MBSR)
- Narrative therapy
- Play therapy
- Psychodynamic psychotherapy
- Psychoeducation
- Self-guided digital interventions
- Schema therapy
- Solution-focused brief therapy (SFBT).

[4] While the APS acknowledges debates on the usage of the term 'disorder', terminology in this review is aligned to ICD-11 as agreed in the project contract.
[5] Australian Bureau of Statistics. (2023). *National study of mental health and wellbeing.* https://www.abs.gov.au/statistics/health/mental-health/national-study-mental-health-and-wellbeing
[6] The Australian Psychological Society. (July, 2023). APS ThoughtExchange survey.
[7] While the psychological interventions included in the current review were selected based on the professional practices of psychologists in Australia, it is recognised these interventions are shared among a range of health professionals and are often delivered in the context of a wider treatment plan, which may include psychological support, care coordination, and other multidisciplinary treatments.

The list below outlines the changes from the previous edition of this literature review, informed by consultation with APS member psychologists, subject matter experts, and the current literature.

- Inclusion of the following interventions:
  - Compassion-focused therapy (CFT)
  - Internal family systems (IFS)
  - Self-guided digital interventions.
- Exclusion of 'Bibliotherapy' due to rise in 'Self-guided digital interventions'
- Exclusion of 'Forms of e-therapy' which is now included in 'Self-guided digital interventions'
- Exclusion of 'Self-help' which is now encompassed by 'Self-guided digital interventions'.

There may be interventions not covered by the scope of this review which have an evidence-base and their omission does not imply a lack of available evidence.

Descriptions of interventions

Acceptance and commitment therapy

Acceptance and commitment therapy (ACT) is based on a contextual theory of language and cognition known as relational frame theory. ACT recognises the significant role that psychological flexibility has on how individuals relate to, and process, their experiences (e.g., emotions, behaviour, and cognition). ACT describes six key processes which can be bolstered to enhance psychological flexibility: contact with the present moment, acceptance, values, committed action, self as context, and defusion. In ACT, individuals learn to increase their awareness and acceptance of their subjective experiences (e.g., distressing thoughts, beliefs, sensations, and feelings) without attachment or judgement i.e., 'fusion', to these experiences. Implementing these six core processes aims to reduce unhelpful attachments, self-conceptualisations and avoidant behaviours, allowing more capacity to redirect to purpose-filled and value-driven actions.[8, 9]

Cognitive behaviour therapy

Cognitive behaviour therapy (CBT) is a focused approach based on the premise that cognitions influence feelings and behaviours, and that subsequent behaviours and emotions can influence cognitions. The clinician works with individuals to identify unhelpful thoughts, emotions, and behaviours. CBT has two aspects: behaviour therapy and cognitive therapy. Behaviour therapy is based on the theory that behaviour is learned and therefore can be changed. Cognitive therapy is based on the theory that distressing emotions and maladaptive behaviours are the result of faulty patterns of thinking. This review considers CBT interventions that use both aspects of behaviour therapy and cognitive therapy and excludes variations that focus on only one component alone, such as behavioural activation, cognitive therapy or metacognitive therapy. Where CBT has been adapted for specific disorders and included in the current review, this has been noted in the narrative summary of each relevant chapter. Where necessary, the categorisation of CBT has been expanded for specific disorders to match research trends and/or clinical practice. This has been noted in the relevant chapters.

Compassion-focused therapy

Compassion-focused therapy (CFT) draws on the framework of cognitive behaviour therapy (CBT) and incorporates empirically based findings from affective neuroscience, evolutionary psychology, mindfulness, and developmental psychology.[10] CFT considers three affect regulation systems: threat-focused system, incentive and resource-focused system, and the affiliative system.[11] Specifically, CFT aims to improve the utilisation of the affiliative system to promote self-

[8] Ruiz, F. J. (2012). Acceptance and commitment therapy versus traditional cognitive behavioral therapy: A systematic review and meta-analysis of current empirical evidence. *International Journal of Psychology & Psychological Therapy, 12*(3), 333-357.
[9] Hayes, S. C., Levin, M. E., Plumb-Vilardaga, J., Villatte, J. L., & Pistorello, J. (2013). Acceptance and commitment therapy and contextual behavioral science: Examining the progress of a distinctive model of behavioral and cognitive therapy. *Behavior Therapy, 44*(2), 180–198. https://doi.org/10.1016/j.beth.2009.08.002
[10] Riebel, M., Rohmer, O., Charles, E., Lefebvre, F., Weibel, S., & Weiner, L. (2023). Compassion-focused therapy (CFT) for the reduction of the self-stigma of mental disorders: The COMpassion for psychiatric disorders, autism and self-stigma (COMPASS) study protocol for a randomized controlled study. *Trials*, *24*(1), 393. https://doi.org/10.1186/s13063-023-07393-y
[11] Gilbert, P. (2009). The compassionate mind: A new approach to life's challenges. Constable.

soothing.[12] CFT interventions (e.g., mindfulness, self-soothing through breathing, imagery, developing more compassionate thoughts and behaviour) provide particular benefit for individuals who experience a repeated or heightened sense of self-criticism and shame by regulating negative emotions.[13, 14] Reducing inner shame and self-attributed stigma is an important component of CFT treatment and improving quality of life.[15]

Dialectical behaviour therapy

Dialectical behaviour therapy (DBT) is designed to serve five functions: enhance capabilities, increase motivation, enhance generalisation to the natural environment, structure the environment, and provide peer consultation for clinicians to effectively implement DBT skills. The overall goal is the reduction of ineffective coping mechanisms linked with deregulated emotions. It is delivered in four modes of therapy. The first mode involves a traditional didactic relationship with the clinician. The second mode is skills training which involves teaching the four basic DBT skills of mindfulness, distress tolerance, emotion regulation, and interpersonal effectiveness. Skills generalisation is the third mode of therapy in which the focus is on helping the individual to integrate the skills learnt into real-life situations. The fourth mode of therapy is team consultation, which is designed to support the therapeutic process and facilitate multidisciplinary feedback and support when required.[16]

Emotion-focused therapy

Emotion-focused therapy (EFT) combines a client-centred therapeutic approach with process-directive, marker-guided interventions derived from experiential and Gestalt therapies applied at in-session intrapsychic and/or interpersonal targets. These targets are thought to play prominent roles in the development and exacerbation of disorders such as depression. The major interventions used in EFT (e.g., empty-chair and two- chair dialogues, focusing on an unclear bodily-felt sense) facilitate creation of new meaning from bodily felt referents, letting go of anger and hurt in relation to another person, increased acceptance and compassion for oneself, and development of a new view and understanding of oneself.[17] In this review, emotion-focused therapy is distinguished from emotionally-focused therapy and more general therapeutic approaches that focus on emotion regulation.

Eye movement desensitisation and reprocessing

Eye movement desensitisation and reprocessing (EMDR) is a treatment developed to assist clients exposed to traumatic events. The technique uses bilateral stimulation, right/left eye movement, or tactile stimulation, that is said to activate cognitive processes to release emotional experiences that are 'trapped' or buried. EMDR was initially developed for the treatment of trauma-related difficulties; however, it has become more widely used for a range of mental health concerns. During an EMDR session the clinician helps the client to revisit the traumatic event(s) and connect with the associated thoughts, feelings, and sensations by utilising bilateral stimulation. While the client is tracking the movement and recalling the specific traumatic event the clinician works to move the client to more positive thoughts, hence helping to resolve the negative and distressing feelings associated with the event.[18]

---

[12] Altavilla, A., & Strudwick, A. (2022). Age inclusive compassion-focused therapy: A pilot group evaluation. *International Journal of Cognitive Therapy*, *15*(2), 209-230. https://doi.org/10.1007/s41811-022-00132-2

[13] Altavilla, A., & Strudwick, A. (2022). Age inclusive compassion-focused therapy: A pilot group evaluation. *International Journal of Cognitive Therapy*, *15*(2), 209-230. https://doi.org/10.1007/s41811-022-00132-2

[14] Leaviss, J., & Uttley, L. (2015). Psychotherapeutic benefits of compassion-focused therapy: An early systematic review. *Psychological Medicine, 45*(5), 927-945. https://doi.org/10.1017/s0033291714002141

[15] Riebel, M., Rohmer, O., Charles, E., Lefebvre, F., Weibel, S., & Weiner, L. (2023). Compassion-focused therapy (CFT) for the reduction of the self-stigma of mental disorders: The COMpassion for psychiatric disorders, autism and self-stigma (COMPASS) study protocol for a randomized controlled study. *Trials*, *24*(1), 393. https://doi.org/10.1186/s13063-023-07393-y

[16] Yeomans, F., Levy, K., & Meehan, K. (2012). Treatment approaches for borderline personality disorder. *Psychiatric Times, 29*, 42-46.

[17] Johnson, S. M., Burgess Moser, M., Beckes, L., Smith, A., Dalgleish, T., Halchuk, R., Hasselmo, K., Greenman, P. S., Merali, Z., & Coan, J. A. (2013). Soothing the threatened brain: Leveraging contact comfort with emotionally focused therapy. *PLoS One, 8*(11), e79314. https://doi.org/10.1371/journal.pone.0079314

[18] Shapiro, F. (2014). The role of eye movement desensitization and reprocessing (EMDR) therapy in medicine: Addressing the psychological and physical symptoms stemming from adverse life experiences. *The Permanente Journal*, *18*(1), 71-77. https://doi.org/10.7812/tpp/13-098

Family-based interventions

In this review, family-based interventions (including behavioural parent-training interventions) are defined as interventions that improve the symptoms and general functioning of the person with the disorder by improving family engagement and effectiveness in dealing with the challenges associated with this disorder.[19] Family-based interventions built upon the foundations of an established treatment (e.g. CBT-based family therapy) have been categorised under family-based interventions in the current review. Family-based interventions are included in both adult and child/adolescent chapters where applicable. Couples therapy has not been included under this definition.

Hypnotherapy

Hypnotherapy involves the use of hypnosis, a procedure during which the clinician suggests that the individual experiences changes in sensations, perceptions, thoughts, or behaviour. The hypnotic context is generally established by an induction procedure. Traditionally, hypnotherapy involves education about hypnosis and discussion of common misconceptions, an induction procedure such as eye fixation, deepening techniques such as progressive muscle relaxation, therapeutic suggestion such as guided imagery, anchoring techniques and ego-strengthening, and an alerting phase that involves orienting the individual to the surroundings.[20]

Internal family systems

Internal family systems (IFS) therapy considers that each person is comprised of a network of unique inner 'parts' that interact with one another to influence the human experience.[21] IFS does not pathologise or assign negative judgement to the emotional challenges people face; rather, IFS holds the view that through difficult life experiences, these thoughts or feelings i.e., 'parts' can become imbalanced and that people intrinsically hold the skills (e.g., self-compassion, mindfulness, reflection) to achieve healing.[22] IFS therapy utilises these skills to support individuals to be able to better understand and build capacity to tolerate distressing experiences, including trauma, without shame or harsh judgement.[23]

Interpersonal psychotherapy

Interpersonal psychotherapy (IPT) is a structured, time-limited therapeutic modality which focuses on the interpersonal factors that predispose, precipitate, and perpetuate an individual's distress.[24] The underlying assumption of IPT is that mental health problems and interpersonal problems are interrelated. The goal of IPT is to help clients understand how these problems, operating in their current life situation, lead them to become distressed and put them at risk of mental health problems. Specific interpersonal problems, as conceptualised in IPT, include interpersonal disputes, role transitions, grief, and interpersonal deficits. IPT explores individuals' perceptions and expectations of relationships and aims to improve communication and interpersonal skills.[25]

Mindfulness-based cognitive therapy and mindfulness-based stress reduction

Mindfulness-based cognitive therapy (MBCT) and mindfulness-based stress reduction (MBSR) have been included in the current review as treatments that emphasise mindfulness meditation as the primary therapeutic technique. While MBCT and MBSR both aim to interrupt patterns of ruminative cognitive-affective processing through similarly structured eight-week

[19] American Psychological Association. (2011). *Family interventions for caregivers*. https://www.apa.org/pi/about/publications/caregivers/practice-settings/intervention/family
[20] Izquierdo de Santiago, A., & Khan, M. (2007). Hypnosis for schizophrenia. *Cochrane Database of Systematic Reviews*, *2007*(4), Cd004160. https://doi.org/10.1002/14651858.CD004160.pub3
[21] Schwartz, R. C. (1995). *Internal family systems therapy*. Guilford Publications.
[22] Haddock, S. A., Weiler, L. M., Trump, L. J., & Henry, K. L. (2017). The efficacy of internal family systems therapy in the treatment of depression among female college students: A pilot study. *Journal of Marital and Family Therapy*, *43*(1), 131-144. https://doi.org/10.1111/jmft.12184
[23] Hodgdon, H., Anderson, F., Southwell, E., Hrubec, W., & Schwartz, R. (2021). Internal family systems (IFS) therapy for posttraumatic stress disorder (PTSD) among survivors of multiple childhood trauma: A pilot effectiveness study. *Journal of Aggression, Maltreatment & Trauma*, *31*, 22-43. https://doi.org/10.1080/10926771.2021.2013375
[24] Robertson, M., Rushton, P., & Wurm, C. (2008). Interpersonal psychotherapy: An overview. *Psychotherapy in Australia*, *14*, 46. https://search.informit.org/doi/10.3316/informit.544201226371144
[25] Jakobsen, J. C., Hansen, J. L., Simonsen, S., Simonsen, E., & Gluud, C. (2012). Effects of cognitive therapy versus interpersonal psychotherapy in patients with major depressive disorder: A systematic review of randomized clinical trials with meta-analyses and trial sequential analyses. *Psychological Medicine*, *42*(7), 1343-1357. https://doi.org/10.1017/s0033291711002236

programs, they have some differences. MBSR has a broader focus on navigating stressful experiences, such as distressing emotional states or physical pain through a range of practices, such as body scans, meditations, movement, and other mindful practices; whereas MBCT has a specific focus on utilising these skills to address recurring depressive symptoms in conjunction with cognitive therapy, to improve awareness of the connection between thoughts and mood.[26,27] The goal is not to change the dysfunctional thoughts but to experience them as being real in the present time and separate from the self.[28]

Narrative therapy

Narrative therapy is based on understanding the stories that people use to describe their lives. The clinician listens to how people describe their problems as stories and helps them consider how the stories may restrict them from overcoming their present difficulties. This therapy regards problems as being separate from people and assists individuals to recognise the range of skills, beliefs, and abilities that they hold and have successfully used, perhaps unknowingly, to apply to the problems they have experienced. Narrative therapy reframes the stories people tell about their lives and puts a major emphasis on identifying people's strengths, particularly those that they have used successfully in the past. Narrative therapy has been identified as a mode of working of particular value to Aboriginal and Torres Strait Islander people because it builds on the storytelling that is a central part of culture.[29]

Play therapy

Play therapy uses play modalities to engage children (and adults) in therapy and provide them with age-appropriate language and context to communicate with the clinician. Clinicians trained in play therapy use a systematic approach to identify patterns and themes in a child's play. The clinician's skill is to analyse what occurred in the session e.g., verbal and non-verbal cues, information that the child communicated through symbolic use of toys, drawings, and other play activities. In play therapy, the clinician must skilfully use play that is tailored to the child's presentation. For example, the clinician may decide to use games that facilitate discussion in particular areas or may consider that free play is preferable.[30] Search terms in this review for 'play therapy' also included 'filial therapy', 'child-parent relationship therapy', 'floor time', and 'theraplay'.

Psychodynamic psychotherapy

Psychodynamic psychotherapy is a focal, transference-based therapeutic approach that helps individuals by exploring and working through specific intrapsychic and interpersonal conflicts (i.e., conflicts within oneself and others). Psychodynamic psychotherapy can be delivered in short- or long-term modalities. It is characterised by the exploration of a focus that can be identified by both the clinician and the individual. This consists of material from current and past interpersonal and intrapsychic conflicts and interpretation through a process in which the clinician is active in creating the alliance and ensuring the time-limited focus. Long-term psychodynamic psychotherapy is open-ended, and intensive, characterised by a framework of central elements, including exploration of unconscious conflicts, developmental deficits, and distortion of intrapsychic structures. Confrontation, clarification, and interpretation are major elements, as well as the clinician's actions in ensuring an alliance when working in the therapeutic relationship to attain conflict resolution and greater self-awareness.[31]

---

[26] Kraines, M. A., Peterson, S. K., Tremont, G. N., Beard, C., Brewer, J. A., & Uebelacker, L. A. (2022). Mindfulness-based stress reduction and mindfulness-based cognitive therapy for depression: A systematic review of cognitive outcomes. *Mindfulness, 13*(5), 1126–1135. https://doi.org/10.1007/s12671-022-01841-7

[27] Janssen, M., Heerkens, Y., Kuijer, W., Van Der Heijden, B., & Engels, J. (2018). Effects of mindfulness-based stress reduction on employees' mental health: A systematic review. PloS one, 13(1), https://doi.org/10.1371/journal.pone.0191332

[28] Kahl, K. G., Winter, L., & Schweiger, U. (2012). The third wave of cognitive behavioural therapies: What is new and what is effective? *Current Opinion in Psychiatry*, *25*(6), 522-528. https://doi.org/10.1097/YCO.0b013e328358e531

[29] Etchison, M., & Kleist, D. M. (2000). Review of narrative therapy: Research and utility. *The Family Journal*, *8*(1), 61-66. https://doi.org/10.1177/1066480700081009

[30] Lin, Y.-W., & Bratton, S. C. (2015). A meta-analytic review of child-centered play therapy approaches. *Journal of Counseling & Development, 93*(1), 45–58. https://doi.org/10.1002/j.1556-6676.2015.00180.x

[31] Shedler, J. (2010). The efficacy of psychodynamic psychotherapy. *American Psychologist*, *65*(2), 98-109. https://doi.org/10.1037/a0018378

Psychoeducation

Psychoeducation involves the provision and explanation of evidence-based information about the aetiology, characteristics, and treatment of mental health conditions. Individuals often require specific information about their diagnosis, such as the meaning of specific symptoms and what is known about the causes, consequences, and implications of the problem. Information is also provided about medications, prognosis, and alleviating and aggravating variables, as well as early signs of relapse and how these signs can be actively monitored and effectively managed. Individuals are helped to understand their diagnosis to enhance their therapy and assist them to live more productive and fulfilling lives.[32]

Schema therapy

Schema therapy (SFT) emphasises identifying and changing maladaptive schemas and the associated ineffective coping strategies. Schemas are psychological constructs that develop throughout a person's childhood and progress into beliefs that people hold about themselves, the world, and other people. Schema change requires both cognitive and experiential work. Cognitive schema-change work employs basic cognitive- behavioural techniques to identify and change automatic thoughts, identify cognitive distortions, and conduct empirical tests of individuals' maladaptive rules about how to survive in an environment created from schemas. Experiential work includes work with visual imagery, Gestalt techniques, creative work to symbolise positive experiences, limited re-parenting, and the healing experiences of a validating clinician.[33]

Self-guided digital interventions

Self-guided digital interventions refer to psychological interventions that have been operationalised and transformed for delivery via digital platforms such as smartphone apps, the internet, or computer-based platforms.[34] These can be totally self-guided or used in conjunction with minimal clinician guidance (e.g., practical or informational support where no additional formal mental health therapy or intervention is provided). Self-guided digital interventions are differentiated from psychological care provided via telehealth or videoconferencing. For the purpose of this review, 'blended' therapy is defined as self-guided digital interventions that are used in conjunction with psychological therapy, which is delivered via telephone, videoconferencing, or face-to-face. When an intervention has been transformed for digital delivery (e.g. iCBT), it has been categorised under self-guided digital interventions for the purposes of this review.

Solution-focused brief therapy

Solution-focused brief therapy (SFBT) is a brief resource-oriented and goal-focused therapeutic approach that helps individuals change by constructing solutions. It aims to increase optimism and positive expectancies along with the experience of positive emotions to improve outcomes. SFBT includes using specific techniques such as miracle and scaling questions to draw on clients' strengths and resources to create new meaning for clients that provides a more positive future outlook.[35] SFBT also focuses on exception seeking, to highlight instances where a problem was less frequent or not present at all, to emphasise the power and positive influence a person has to overcome the problem.[36]

---

[32] Saito-Tanji, Y., Tsujimoto, E., Taketani, R., Yamamoto, A., & Ono, H. (2016). Effectiveness of simple individual psychoeducation for bipolar II disorder. *Case Reports in Psychiatry*, *2016*, 1-4. https://doi.org/10.1155/2016/6062801

[33] Kahl, K. G., Winter, L., & Schweiger, U. (2012). The third wave of cognitive behavioural therapies: What is new and what is effective? *Currnet Opinion in Psychiatry*, *25*(6), 522-528. https://doi.org/10.1097/YCO.0b013e328358e531

[34] Eysenbach, G., & CONSORT-EHEALTH Group. (2011). CONSORT-EHEALTH: Improving and standardizing evaluation reports of web-based and mobile health interventions. *Journal of Medical Internet Research, 13*(4), e1923. https://doi.org/10.2196/jmir.1923

[35] Franklin, C., Zhang, A., Froerer, A., & Johnson, S. (2017). Solution focused brief therapy: A systematic review and meta-summary of process research. *Journal of Marital and Family Therapy*, *43*(1), 16-30. https://doi.org/10.1111/jmft.12193

[36] Gan, C. (2020). Solution-focused brief therapy (SFBT) with individuals with brain injury and their families. *NeuroRehabilitation*, *46*(2), 143-155. https://doi.org/10.3233/NRE-192967

Establishing an evidence base

In line with earlier editions, the aim of this literature review is to systematically identify the highest level of evidence based on individual articles.

The National Health and Medical Research Council (NHMRC) has developed an evidence hierarchy which serves as a framework to categorise and assess the strength of evidence derived from different types of research studies (see Table 1 below). This evidence hierarchy remains broadly relevant and has been used as a basis for evaluating the levels of evidence identified in the research, as per previous editions of this review.

As previously outlined, the scope and purpose of this review is to provide an overview of the evidence base for a range of psychological interventions for mental health disorders and does not constitute clinical guidelines or recommendations. As such, the GRADE (Grading of Recommendations, Assessment, Development and Evaluation)[37] approach was not used. Where included in the review, clinical guidelines have been referenced.

Table 1. NHMRC levels of evidence[38]

Level I	A meta-analysis or a systematic review of level II studies[39] that included a quantitative analysis
Level II	A randomised controlled trial. A study of test accuracy with: an independent, blinded comparison with a valid reference standard, among consecutive persons with a defined clinical presentation
Level III-1	A pseudorandomised controlled trial (i.e. alternate allocation or some other method)
Level III-2	A comparative study with concurrent controls: - Non-randomised, experimental trial - Cohort study - Case-control study - Interrupted time series with a control group
Level III-3	A comparative study without concurrent controls: - Historical control study - Two or more single arm study - Interrupted time series without a parallel control group
Level IV	Case series with either post-test or pre-test/post-test outcomes

[37] GRADE, used to develop clinical guidelines, examines a body of evidence. This literature review ranks published articles against the NHMRC hierarchy and does not provide clinical guidelines.
[38] NHMRC. (2009). *Appendix F: Levels of evidence and recommendation grading.* https://www.nhmrc.gov.au/sites/default/files/images/appendix-f-levels-of-evidence.pdf
[39] Note: A systematic review was assigned a level of evidence as high as the studies it contained, excepting where those studies were Level II. https://www.ncbi.nlm.nih.gov/books/NBK121300/table/appb.t21/

Other factors that impact on research evidence

The NHMRC cautions that the level of evidence assigned to a research study is not sufficient for making treatment recommendations. The quality, relevance, and strength of the evidence must also be considered. In summarising the research studies evaluated in this review, where possible, information about the strengths, limitations, and quality of the research was noted. This included assessment of the potential risk of bias in specific studies using the standardised Cochrane Risk of Bias tools. However, as already indicated, systematic analysis of studies was not within the purview of this document.

Although randomised controlled trials (RCTs) have long been considered the gold standard for evaluating the effectiveness of interventions, the limitations of this research design are acknowledged in the current review. There may, for example, be aspects of an individual's presentation or the treatment conditions that make it impossible to undertake randomisation or to eliminate bias even with the adoption of the most rigorous research methodology.[40] The findings from RCTs may therefore be limited in reflecting the external validity of real-life settings, diversity of client populations, and specific cultural considerations.[41] More recent discussion is focussing on the value of lived experience perspectives to contribute to research and practice.

It is important to note that evidence used in this review is available only where the associated research has been undertaken and published, and some interventions and/or diagnoses may be more widely researched or more easily lend themselves to RCTs (e.g., those based on manualised treatment protocols). The absence of evidence does not therefore necessarily equate to an intervention being ineffective.

Much has been written about the importance of the therapeutic relationship, clinician training and experience, and client attitudes, preferences, and adherence to treatment.[42] In particular, extensive research has acknowledged the important relationship between therapeutic alliance and treatment outcomes.[43] Health professionals must use their professional judgement in determining the most appropriate intervention approach based on the current evidence base and consideration for the client's individual circumstances and contextual factors.

[40] West, S. G., Duan, N., Pequegnat, W., Gaist, P., Des Jarlais, D. C., Holtgrave, D., Szapocznik, J., Fishbein, M., Rapkin, B., Clatts, M., & Mullen, P. D. (2008). Alternatives to the randomized controlled trial. *American Journal of Public Health*, *98*(8), 1359-1366. https://doi.org/10.2105/ajph.2007.124446
[41] Kennedy-Martin, T., Curtis, S., Faries, D., Robinson, S., & Johnston, J. (2015). A literature review on the representativeness of randomized controlled trial samples and implications for the external validity of trial results. *Trials*, *16*, 1-14. https://doi.org/10.1186/s13063-015-1023-4
[42] Norcross, J. C., & Lambert, M. J. (2018). Psychotherapy relationships that work III. *Psychotherapy, 55*(4), 303–315. https://doi.org/10.1037/pst0000193
[43] Baier, A. L., Kline, A. C., & Feeny, N. C. (2020). Therapeutic alliance as a mediator of change: A systematic review and evaluation of research. *Clinical Psychology Review*, *82*, 101921. https://doi.org/10.1016/j.cpr.2020.101921

Methodology (2018-2024)

Eligibility criteria and study characteristics

The methodology utilised in this review was peer reviewed and approved by internal and external experts. It was developed according to global best practice PRISMA guidelines, and findings were categorised according to National Health and Medical Research Council (NHMRC) hierarchy levels. For a given disorder and intervention, only the article with the highest evidence level, lowest risk of bias, and more recent publication date was presented in detail.

The eligibility criteria[44] for this systematic literature review were established with careful consideration to ensure the relevance of the identified research studies published between 2018-2024. The inclusion criteria are as specified below:

Population

- Adult Studies: Studies reported on in this review included participants who received a clear diagnosis of a specified mental health diagnosis.
- Child and Adolescent Sections: For the child and adolescent sections, the criteria were broadened to encompass published studies involving children and adolescents presenting with clinical symptoms of a disorder. Formal diagnosis requirements were relaxed, acknowledging the challenges in diagnosing young individuals, especially children.

Research definitions

- Child: Individuals up to 12 years of age.
- Adolescent: Individuals between 13 and up to 18 years of age.
- Adult: Individuals over 18 years of age.
- Studies were eligible if participants were on no medication or a stable course of medication prior to commencing the study.
- Research populations that had co-occurring mental health conditions were only included if the primary diagnosis, outcome measures and key aims of the study were specific to the mental health diagnosis being investigated.

Exclusion criteria[45] included co-occurring physical or medical conditions and transdiagnostic approaches. Studies focusing on specific subpopulations (such as older adults, people with chronic health conditions, members of the LGBTIQA+ community, neurodiverse populations and CALD communities) were outside the scope of the current review. Studies were excluded if participants presented with subclinical mental health symptoms (e.g., subthreshold depressive symptoms that do not meet full diagnostic criteria for major depression). In addition, studies that had integration of treatment approaches or therapeutic components that contributed to change were excluded as per the parameters of the research.

Intervention

Included psychological interventions are listed under *Interventions included in the review* (p. 7); lack of inclusion in this review does not imply a lack of available evidence. Interventions delivered via the internet, a smartphone or a tablet were categorised under 'self-guided digital interventions' except when they were family-based, in which case they are presented under the family-based interventions section. Studies

[44] Where relevant, due to expert review, the eligibility criteria has been modified to match research trends and clinical practice for specific disorders. These details are provided in individual chapters.
[45] Unless otherwise specified, excluded studies included those that did not meet PICOT selection criteria, or were published before 1 January 2018 or in a non-English language. In terms of *study design*, excluded studies involved qualitative research, grey literature, unpublished evidence, ongoing trials, conference abstracts, feasibility, pilot, and preliminary studies. Additionally, single or double case studies, scoping reviews, comprehensive reviews, and umbrella reviews were excluded due to their inconsistency with the NHMRC levels of evidence. Follow-up studies were excluded unless they documented all relevant details from the original study or were published together with the original study. In terms of *participants* for single studies, excluded studies involved participants with subclinical symptoms or with comorbid mental health disorders, except where the disorder of interest was the primary disorder. For systematic reviews and meta-analyses, at least 70% of the total number of participants and total number of studies included had to meet all PICOT criteria. In terms of *interventions*, excluded studies included those that only used one aspect of a therapeutic intervention or combined two or more therapies. In terms of *outcomes*, excluded studies were those with non-psychometrically validated outcome measures and those not directly related to the diagnostic criteria.

investigating individual components of interventions, mechanisms of change or the use of combined psychological interventions were excluded.

Comparator

Accepted comparators encompass the below:

- Treatment as usual (TAU)
- Waitlist
- Placebo
- Active control conditions (e.g., another psychotherapy).

Outcome

Eligible outcomes consisted of validated measures of diagnostic symptoms that were specific to the research question. Studies that used only measures unrelated to diagnostic markers, such as general wellbeing or quality of life, were excluded. For family-based interventions, only studies that had outcome measures focused on the patient's clinical symptoms (as opposed to the wellbeing of family members) were included.

Literature search

The following databases were searched for the period 2018 to 2024 inclusive. In the case of disorders that were not represented in the 2018 review (e.g., following ICD-11 changes), the search period was expanded to include research published prior to 2018.

Databases

- Embase
- PsycINFO
- Medline (covered through PubMed)
- Psychology and Behavioural Sciences Collection
- SocINDEX
- Cochrane Collaboration
- PubMed.

Study types

Peer-reviewed journal articles of the following study designs were included in the review:

- Systematic review of research trials
  - Meta-analytical studies, including network meta-analyses
  - Systematic literature reviews
- Experimental studies
  - Randomised and pseudo-randomised controlled trials
- Non-randomised controlled trials
- Comparative studies
  - Concurrent control studies
  - Interrupted time series
- Observation studies
  - Case study series.

Clinical guidelines

The following clinical guidelines are referred to in the relevant chapters:

- American Academy of Child and Adolescent Psychiatry
- American Psychiatric Association
- American Psychological Association
- British Psychological Society
- National Institute for Clinical Excellence
- Royal Australian and New Zealand College of Psychiatry
- World Health Organisation.

In addition, disorder specific guidelines that were sourced from the following organisations have been included:

- Australian ADHD Professionals Association
- Australasian Sleep Association
- International Society for Traumatic Stress Studies
- National Eating Disorders Collaboration
- Phoenix Australia
- US Department of Veterans Affairs.

Search strategy

The current review used systematic research methods aligned with PRISMA protocols to identify the highest level of evidence for each intervention in the context of a specific diagnosis and age group.

The search string for each intervention and diagnosis was developed using key search terms and relevant search term mapping for each database. Alternative spellings and phrases were also accounted for in the search terms.

Searches were conducted across each database and documented with relevant details such as the date of the search, search strings used, and number of articles retrieved.

Selection process

Screening and review

For the initial abstract/title screening phase, a single reviewer assessed the relevance of articles within the database results. To reduce the risk of bias in the full-text screening phase, screening was performed by two researchers independently for a random selection of 25% of the articles. Any discrepancies on inclusion or exclusion decisions were resolved by discussion. When no resolution could be reached, the decision was discussed with the full research team (four researchers) until an agreement was found. The final stage of the review and inclusion was conducted by expert reviewers assigned to specific disorders. The APS Internal Working Group and the External Review Group only reviewed if there was a need for escalation.

Each stage of the review process adhered to the predetermined PICOT[46] statement and inclusion/exclusion criteria for each diagnosis and intervention.

Final inclusion

All studies that met final inclusion criteria were included in the reference list for each disorder. The articles selected for representation in summary tables were chosen based on the following decision criteria:

1. Articles representing the highest level of evidence available for that intervention were identified. Where multiple Level I studies were available that comprised of systematic reviews both with and without meta-analyses, the articles with meta-analyses were prioritised.

2. A risk of bias assessment was conducted for each article corresponding to the highest level of evidence available.

3. The article with the lowest risk of bias and most recent publication date (in that order) was chosen for representation in a research summary table.

4. Additional articles were chosen (regardless of level of evidence) to be included if they provided further information such as mode of delivery, group or individual format, and other intervention variables.

5. Where no articles were identified for a specific intervention in the current review timeframe, or where the highest level of evidence was found prior to 2018, these summary tables were included.

Risk of bias in individual studies

A risk of bias assessment was conducted for each article published since the 2018 edition, corresponding to the highest level of evidence available. A risk of bias rating provided an evaluation of the quality of research evidence and information about the limitations and potential sources of bias in systematic reviews and individual studies. The following assessment tools were used to evaluate risk of bias as applied to the appropriate study design (noting limitations, if any, with these tools):

[46] The PICOT framework is the most commonly used model for structuring clinical questions because it captures each key element required for a focused question. PICOT stands for: **P**atient or problem; **I**ntervention or exposure; **C**omparison or control; **O**utcome(s); **T**imeframe.

- ROBIS[47] – assessing risk of bias in systematic reviews. The ROBIS assesses risk across four domains and provides an overall risk of bias rating (Low, High, Unclear)

- RoB 2[48] – a revised tool for assessing risk of bias in randomised trials. The Cochrane RoB 2 assesses risk across five domains, and provides an overall risk rating (Low, High, Some Concerns)

- ROBINS-I[49] – assessing risk of bias in non-randomized studies of interventions. The ROBINS-I assess risk across seven domains and provides an overall risk judgment (Low, Moderate, Serious, Critical).

Overall risk of bias ratings were reported in the summary tables for each individual study. A more detailed breakdown of domain-specific risk ratings for each chapter can be found in the appendices.

Data collection process

Data extraction

Data extraction from research reports was conducted thoroughly, with data presented in a comprehensive summary table. No automation tools were employed in this process.

Data items

A detailed summary table was created to provide an overview of key data items relevant to each article (see *Reporting of individual studies*; p.19).

Outcomes and prioritisation

The review prioritised outcomes involving validated measures/tools pertinent to the specific key question. Emphasis was placed on outcomes related to the clinical symptoms directly associated with the key question. Variables associated with treatment adherence or mechanisms of change were not within the scope of this review. In the absence of any new evidence, reliance was placed on existing evidence from the fourth edition published in 2018.

Study records

Data management

An Excel spreadsheet and research summary tables were employed as the primary tool to systematically manage records and data throughout the review. This facilitated comprehensive tracking of search terms, dates, results, notes, and other relevant information.

The utilisation of standardised templates ensured consistency in documentation and management across reviewers. For efficient record management, a dedicated spreadsheet was maintained for each mental health disorder under examination, with considerations provided to independent screening.

PRISMA flow charts were created to visually represent the search process for each disorder and age group, providing a clear overview of the systematic search (see appendices for the PRISMA flow charts for each chapter). Additionally, Endnote was utilised to store references and search term strategies were saved in a separate document.

---

[47] Whiting, P., Savović, J., Higgins, J. P., Caldwell, D. M., Reeves, B. C., Shea, B., Davies, P., Kleijnen, J., & Churchill, R. (2016). ROBIS: A new tool to assess risk of bias in systematic reviews was developed. *Journal of Clinical Epidemiology, 69*, 225-234. https://doi.org/10.1016/j.jclinepi.2015.06.005

[48] Sterne, J. A. C., Savović, J., Page, M. J., Elbers, R. G., Blencowe, N. S., Boutron, I., Cates, C. J., Cheng, H. Y., Corbett, M. S., Eldridge, S. M., Emberson, J. R., Hernán, M. A., Hopewell, S., Hróbjartsson, A., Junqueira, D. R., Jüni, P., Kirkham, J. J., Lasserson, T., Li, T., ... Higgins, J. P. T. (2019). RoB 2: A revised tool for assessing risk of bias in randomised trials. *BMJ*, *366*, l4898. https://doi.org/10.1136/bmj.l4898

[49] Sterne, J. A., Hernán, M. A., Reeves, B. C., Savović, J., Berkman, N. D., Viswanathan, M., Henry, D., Altman, D. G., Ansari, M. T., Boutron, I., Carpenter, J. R., Chan, A. W., Churchill, R., Deeks, J. J., Hróbjartsson, A., Kirkham, J., Jüni, P., Loke, Y. K., Pigott, T. D., ... Higgins, J. P. (2016). ROBINS-I: A tool for assessing risk of bias in non-randomised studies of interventions. *BMJ, 355*, i4919. https://doi.org/10.1136/bmj.i4919

Presentation of the literature

The research evidence has been provided in two sections. The first section contains the research for interventions addressing mental health disorders in adults, and the second section contains the findings for children and adolescents.

Each chapter begins with a narrative summary outlining the current state of the evidence base for the relevant mental health disorder across all APS reviews. This summary includes a compilation of the highest levels of evidence available for each of the included interventions (as identified in the current and previous editions of the review), as well as treatment recommendations from major clinical guidelines.

This is followed by summary tables of research studies identified as providing the highest level of evidence for each psychological intervention included in the review. In some instances, whereby a study adds additional information to the evidence for a particular psychological intervention, there may be more than one study presented in the summary tables.

The tables summaries provide a snapshot of the key characteristics, methodologies, and findings from each study. As lived experience participation was not featured in the studies reviewed, this information was not included in the tables. For more comprehensive information about each study, the original research article should be sourced. In the appendix for each disorder, a list of all studies identified in the current review that met inclusion criteria but did not represent the highest level of evidence is presented.

For some disorders, no research evidence that met this review's eligibility criteria was found at the time of publication for any of the interventions included (see individual PRISMA diagrams for details). Accordingly, there are no chapters representing the following disorders for the children and adolescent populations:

- Adjustment disorder
- Bodily distress disorder
- Hypochondriasis.

Reporting of individual studies

Each study identified as part of the 2018-2024 systematic review is presented in the following framework:

- Title of paper
- Full citation
- Design (e.g., meta-analysis)
- Delivery format (e.g., individual, group, online)
- Participant information
- Demographic characteristics
- Treating clinician type
- Intervention(s)
- Outcome(s) measured
- Procedure
- Follow-up data collected
- Statistics summary
- Conflict of interest
- Risk of bias
- Summary of findings

Where studies included multiple interventions, these studies have been summarised separately under each intervention with information related to the analyses and findings specific to that intervention.

If no new evidence was identified, or the highest level of evidence predated 2018, research summaries from the 2018 edition have been included verbatim (i.e. no changes have been made to the original content). These summaries covered:

- Title of paper
- Full citation
- Level of evidence
- Design
- Follow-up
- Format
- Participants
- Treating clinician(s)
- Interventions
- Comparison group(s)
- Procedure
- Summary of findings.

ADULTS	Level I		Level II		Level III		Level IV	
	In support of	In relation to	In support of	In relation to	In support of	In relation to	In support of	In relation to[50]
Mood disorders								
Depression	ACT, CBT, EMDR, IPT, MBCT, PDT, PST, Psychoeducation, SGDI		DBT, EFT, FI, SFBT, ST					
Bipolar disorder	CBT	ACT (group), CBT (group), Psychoeducation (group), SGDI	DBT, IPSRT, FI	MBCT				
Anxiety or fear-related disorders								
Generalised anxiety disorder	CBT, IPT, SGDI		ACT, MBCT, MBSR, PDT, Psychoeducation					
Panic disorder	CBT, SGDI		ACT, PDT				MBCT	
Social anxiety disorder	CBT, IPT, PDT, SGDI		ACT, CFT, MBSR					
Specific phobia	CBT (exposure therapy), EMDR		SGDI					
Stress disorders								
Posttraumatic stress disorder	CBT-T, EMDR, IR, MBSR, SGDI	Hypnotherapy	DBT, EFT, IPT, MBCT, SGDI					
Complex posttraumatic stress disorder	CBT, EMDR						CBT-T (PE)	
Adjustment disorder	CBT		PDT	SGDI				
Obsessive-compulsive and related disorders								
Obsessive-compulsive disorder	ACT, CBT (with ERP), SGDI	MBCT	ACT (group), FI					
Body dysmorphic disorder	CBT		MBCT, SGDI	SGDI			ACT	
Body-focused repetitive behaviour disorders			AEBT (for trichotillomania), CBT (with HRT; group and individual)	De-coupling (self-help), HRT (self-help), SGDI				
Hypochondriasis	CBT, Psychoeducation		ACT (group), MBCT, SGDI					

[50] 'In support of' refers to where the research reviewed provided evidence in support of the intervention. 'In relation to' denotes where the intervention was investigated, with additional details related to outcome provided in the narrative summary for each chapter.

ADULTS	Level I		Level II		Level III		Level IV	
	In support of	In relation to	In support of	In relation to	In support of	In relation to	In support of	In relation to[50]
Substance use disorders								
Substance use disorders (inclusive)	ACT, CBT, MI, PDT, SGDI	IPT	FI, Hypnotherapy, MBRP	EMDR		Psychoeducation	DBT	
Psychotic disorders								
Psychotic disorders (inclusive)	CBT, FI, Psychoeducation (individual and group)	ACT	ACT (group), SGDI					
Dissociative disorders								
Dissociative disorders (inclusive)		CBT (for conversion disorders)			CBT (for depersonalisation-derealisation)		ACT (for functional neurological symptom disorder), PDT (for functional neurological disorder, dissociative amnesia & depersonalisation)	Psychoeducation
Feeding and eating disorders								
Anorexia nervosa	CBT-E, FI, PDT			SGDI			DBT, SSCM	
Bulimia nervosa	CBT, IPT	SGDI	DBT			PDT	Psychoeducation	
Binge eating disorder	CBT, DBT, IPT, SGDI		MBSR, Psychoeducation		EFT		ACT	
Sleep-wake disorders								
Insomnia disorders	CBT (individual, group, telehealth, self-guided), MBSR (group), SGDI		ACT (group)					
Disorders of bodily distress								
Bodily distress disorder	CBT		MBSR	SGDI				
Personality disorders								
Borderline personality disorder	DBT, ST	CBT, IPT, PDT	ACT (group)				MBCT	
Neurodevelopmental disorders								
Attention deficit hyperactivity disorder	CBT, MBCT, SGDI	DBT, Hypnotherapy, Psychoeducation						

Note. ACT: Acceptance and commitment therapy; AEBT: Acceptance-enhanced behavioural therapy; CBT: Cognitive behaviour therapy; CBT-E: Enhanced cognitive behaviour therapy; CBT-T: Cognitive behaviour therapies with trauma focus; CFT: Compassion-focused therapy; DBT: Dialectical behaviour therapy; EFT: Emotion-focused therapy; EMDR: Eye movement desensitisation and reprocessing; ERP: Exposure and response prevention; FI: Family-based interventions; HRT: Habit Reversal Training; IPSRT: Interpersonal and social rhythm therapy; IPT: Interpersonal psychotherapy; IR: Imagery rescripting; MBCT: Mindfulness-based cognitive therapy; MBSR: Mindfulness-based stress reduction; MBRP: Mindfulness-based relapse prevention; MI: Motivational interviewing; PDT: Psychodynamic psychotherapy; PE: Prolonged exposure therapy; PST: Problem-solving therapy; ST: Schema therapy; SFBT: Solution-focused brief therapy; SGDI: Self-guided digital interventions; SSCM: Specialist supportive clinical management.

CHILDREN AND ADOLESCENTS	Level I		Level II		Level III		Level IV	
	In support of	In relation to	In support of	In relation to	In support of	In relation to	In support of	In relation to
Mood disorders								
Depression	CBT, IPT	FI, SGDI	Play therapy					
Bipolar disorder			CBT (child and family), FI, Psychoeducation (family)	DBT	CBT (adolescent and family)			
Anxiety or fear-related disorders								
Generalised anxiety disorder			CBT (individual and group)					
Panic disorder			CBT				EMDR	
Social anxiety disorder	CBT		PDT, SGDI					
Specific phobia			CBT (exposure therapy), Psychoeducation, SGDI					
Stress disorders								
Posttraumatic stress disorder	CBT-T (individual and group), EMDR, Play therapy							
Complex posttraumatic stress disorder			CBT-T (TF-CBT)				CBT-T (CPT)	
Adjustment disorder								
Obsessive-compulsive and related disorders								
Obsessive-compulsive disorder	CBT with ERP			SGDI				
Body dysmorphic disorder			CBT					
Body-focused repetitive behaviour disorders		BT					CBT	
Hypochondriasis								
Substance use disorders								
Substance use disorders (inclusive)	CBT, FI, MI				CBT (for opioid use disorder)			
Psychotic disorders								
Psychotic disorders (inclusive)		CBT, FI						

CHILDREN AND ADOLESCENTS	Level I		Level II		Level III		Level IV	
	In support of	In relation to	In support of	In relation to	In support of	In relation to	In support of	In relation to
Dissociative disorders								
Dissociative disorders (inclusive)								
Feeding and eating disorders								
Anorexia nervosa	FI				CBT-E		CBT-E (intensive)	
Bulimia nervosa	FI		CBT, PDT					
Binge eating disorder			CBT					
Sleep-wake disorders								
Insomnia disorders	CBT		CBT (family), MBCT					
Disorders of bodily distress								
Bodily distress disorder								
Personality disorders								
Borderline personality disorder			DBT		CBT (CAT)		PDT	
Neurodevelopmental disorders								
Attention deficit hyperactivity disorder	CBT, FI, Psychoeducation, SGDI		Play therapy				Play therapy (PCIT)	
Disruptive behaviour or dissocial disorders								
Disruptive behaviour or dissocial disorders (inclusive)	CBT, FI		PDT, PT				FI	
Elimination disorders								
Enuresis	CBT (alarm therapy)	CBT (urotherapy)						

Note. ACT: Acceptance and commitment therapy; BT: Behavioural therapy; CAT: Cognitive analytic therapy; CBT: Cognitive behaviour therapy; CBT-E: Enhanced cognitive behaviour therapy; CBT-T: Cognitive behaviour therapies with trauma focus; CPT: Cognitive processing therapy; DBT: Dialectical behaviour therapy; EMDR: Eye movement desensitisation and reprocessing; ERP: Exposure and response prevention; FI: Family-based interventions; IPT: Interpersonal psychotherapy; MBCT: Mindfulness-based cognitive therapy; MI: Motivational interviewing; PDT: Psychodynamic psychotherapy; PCIT: Parent-child interaction therapy; SGDI: Self-guided digital interventions; TF-CBT: Trauma-focused cognitive behaviour therapy.

Mental disorders: Adults

Depression

SUMMARY OF EVIDENCE

Level I evidence[51] has been found in support of the following interventions for the treatment of depression[52] in adults:

- Acceptance and commitment therapy
- Cognitive behaviour therapy
- Eye movement desensitisation and reprocessing
- Interpersonal psychotherapy
- Mindfulness-based cognitive therapy
- Problem-solving therapy
- Short-term psychodynamic therapy
- Psychoeducation
- Self-guided digital interventions

Level II evidence has been identified in support of dialectical behaviour therapy, emotion-focused therapy, family-based interventions, schema therapy, and solution-focused therapy.

Guidelines provided by NICE (2022), RANZCP (2020), American Psychological Association (2019), and WHO (2023) support the use of cognitive behaviour therapy and short-term psychodynamic therapy in the treatment of depression in adults. In addition to this, the American Psychological Association, WHO, and NICE guidelines also support the use of mindfulness-based interventions, including mindfulness-based cognitive therapy, while the WHO supports the use of acceptance and commitment therapy and dialectical behaviour therapy. The RANZCP guidelines noted that digital CBT is as effective as face-to-face, and that digital interventions should be provided in therapist-guided format.

[51] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of depression in adults.

[52] This review does not distinguish between major depressive disorder (MDD, lifetime diagnosis of depression) versus major depressive episode (the acute experience of severe depression). This chapter covers depression as one overarching diagnosis, and each article summary has specified the type of depression where that detail was provided.

Acceptance and commitment therapy

Title of paper	**Efficacy and acceptability of third-wave psychotherapies in the treatment of depression: A network meta-analysis of controlled trials**
Full citation	Schefft, C., Heinitz, C., Guhn, A., Brakemeier, E. L., Sterzer, P., & Köhler, S. (2023). Efficacy and acceptability of third-wave psychotherapies in the treatment of depression: A network meta-analysis of controlled trials. *Frontiers in Psychiatry*, *14*, 1189970. https://doi.org/10.3389/fpsyt.2023.1189970
Level of evidence	Level I
Design	Systematic review and network meta-analysis (55 trials with 8 trials focused on ACT; 72 comparisons in total)
Delivery format	Individual and group; in-person and online
Participants	Total sample of 5827 participants, with 372 participants in the ACT subgroup. All participants in included studies were required to have a primary diagnosis of major depressive disorder (MDD) or persistent depressive disorder (PPD) according to DSM and ICD criteria.
Demographic characteristics	Studies included participants from the Americas, Europe, Australia, New Zealand, Asia, and Iran. The mean percentage of female participants was 65.5% (*SD* = 18.5) and the mean age was 39.53 years (*SD* = 7.98).
Treating clinician type	Not specified
Intervention	ACT
Outcome(s) measured	Depression symptom severity as measured by the SCID, HRSD, QIDS, BDI and BDI-II.
Procedure	A systematic review and network meta-analysis was conducted to investigate the efficacy and acceptability of a range of third-wave psychotherapies in the treatment of adult depression. The timeframe of the search conducted covered database inception to 31 July 2022.
Follow up	No
Statistics summary	A Bayesian random effects network meta-analysis was conducted to compare each psychotherapy type to each other, CBT, and a range of other control conditions. Effect sizes indicated no significant difference in outcome measures between ACT and CBT (*d* = 0.01, 95% [-0.54, 0.56]), however effect sizes did indicate a superior efficacy of ACT when compared to waitlist (*d* = 1.39, 95% CI [0.82,2.00]) and TAU (*d* = 1.12, 95% CI [0.52, 1.74]). Heterogeneity was rated as high (I^2 = 77%) on efficacy measures.
Conflict of interest	Yes (professional and financial)
Risk of bias	Low
Summary of findings	This systematic review and meta-analysis supports the efficacy of ACT in the treatment of adult depression when compared to waitlist and TAU. No significant difference in treatment outcomes was found between ACT and CBT.

Note. BDI: Beck Depression Inventory; HRSD: Hamilton Rating Scale for Depression; QIDS: Quick Inventory of Depressive Symptomatology; SCID: Structured Clinical Interview for DSM-III-R.

Cognitive behaviour therapy

Title of paper	**Effectiveness of group cognitive behavioral therapy for depression in adults: A systematic review and meta-analysis of delivery by different healthcare professionals**
Full citation	Wong, C. P. S., Yeung, J. T. K., Fong, D. Y. T., Smith, R. D., Ngan, A. H. Y., Lam, Y. Y. L., Chan, K. S. S., Leung, H. H. Y., Wang, M. P., & Wong, J. Y. H. (2024). Effectiveness of group cognitive behavioral therapy for depression in adults: A systematic review and meta-analysis of delivery by different healthcare professionals. *Cognitive Behaviour Therapy*, 1-22. https://doi.org/10.1080/16506073.2024.2313741
Level of evidence	Level I
Design	Systematic review and meta-analysis (33 RCTs)
Delivery format	Group, face-to-face
Participants	Total sample of 2,907 participants with a diagnosis of clinical depression.
Demographic characteristics	The mean age of the total sample was 46.74 years and 74.29% of the participants were female. The included studies were conducted in Europe, the Americas, Australasia, Asia, and Africa.
Treating clinician type	Trained mental health professionals (psychiatrists, psychologists, social workers, psychiatric nurses, CBT therapists), trained health professionals (nurses), students, and other professionals (mixed, unspecified).
Intervention	gCBT
Outcome(s) measured	Depression symptom severity as measured by the BDI, GDS, SRQ-20, PHQ-9, 17-HAMD, CES-D, CID, HADS-D, HRSD, DASS-21, and EPDS.
Procedure	This meta-analysis investigated the efficacy of gCBT in the treatment of adult depression when compared to inactive controls. The database search covered the inception of databases and was conducted between January 2018 and January 2023.
Follow up	No
Statistics summary	A random-effects meta-analysis was used to estimate the pooled effectiveness of gCBT in intervention groups compared to control groups. The random effects estimate was -0.97 (95% CI [-1.39, -0.55], $p < 0.01$), however the authors noted high heterogeneity (82.76%, $p < 0.01$).
Conflict of interest	None declared
Risk of bias	High
Summary of findings	This study provides preliminary support for the use of group CBT in the treatment of adult depression, however notes research limitations such as high heterogeneity and risk of bias across included studies.

Note. BDI: Beck Depression Inventory; CES-D: Center for Epidemiological Studies of Depression Scale; CID: Clinical Interview for Depression; DASS-21: Depression Anxiety Stress Scale; EPDS: Edinburgh Postnatal Depression Scale; gCBT: Group CBT; GDS: Geriatric Depression Scale; HADS-D: Hospital Anxiety and Depression Scale – Depression Subscale; 17-HAMD: Hamilton Depression Rating Scale; HRSD: Hamilton Rating Scale for Depression; PHQ-9: Patient Health Questionnaire; SRQ-20: Self-Reporting Questionnaire.

Title of paper	**Psychological interventions for the prevention of depression relapse: Systematic review and network meta-analysis**
Full citation	Zhou, Y, Zhao, D., Zhu, X., Liu, L., Meng, M., Shao, X., Zhu, X, Xiang, J., He, J., Zhao, Y., Yuan, Y., Gao, R., Jiang, L., & Zhu, Gang. (2023). Psychological interventions for the prevention of depression relapse: Systematic review and network meta-analysis. *Translational Psychiatry, 13*(1), 300–300. https://doi.org/10.1038/s41398-023-02604-1
Level of evidence	Level I
Design	Systematic review and network meta-analysis (25 RCTs, with 17 studies focused on CBT)
Delivery format	Not specified.
Participants	Total sample of 2,871 participants with 2,653 participants in the CBT studies. All included participants had a diagnosis of depression but were not in the acute phase at the time of randomization.
Demographic characteristics	The mean age of participants per included study ranged from 32 years to 52 years. The percentage of female participants ranged from 50% to 85%.
Treating clinician type	Not specified
Intervention	CBT
Outcome(s) measured	Depression relapse at eight time points, operationalized using the diagnostic criteria for depression based on DSM-III or DSM-IV diagnosis of MDD.
Procedure	This network meta-analysis compared the efficacy of psychological interventions in preventing depression relapse at eight follow-up time points. Databases were searched from their inception until 12 December 2021 and 1 July 2022 for PubMed.
Follow up	Yes, every three months starting at 3 months to 24 months.
Statistics summary	The authors performed a random-effects frequentist network meta-analysis. They used an intention-to-treat approach to calculate odd ratios (ORs) for binary outcomes. CBT was superior to TAU at follow-up after 3 months *OR* = 2.26 95% CI [1.31,3.90], 9 months *OR* = 1.66 95% CI [1.10,2.51], 12 months *OR* =1.56 95% CI [1.56,2.31], and 15 months *OR* = 1.54 95% CI [1.05,2.26]. CBT was superior to placebo at follow-up after 21 months *OR* = 7.32, 95% CI [1.72–31.04] and 24 months *OR* = 9.84, 95% CI [1.79–54.15].
Conflict of interest	None declared
Risk of bias	Unclear
Summary of findings	Compared to other psychotherapies, CBT had the longest - but not continuous - effect in preventing depression relapse.

Dialectical behaviour therapy

Title of paper	**Adaptation of dialectical behavior therapy skills training group for treatment-resistant depression**
Full citation	Harley, R., Sprich, S., Safren, S., Jacobo, M., & Fava, M. (2008). Adaptation of dialectical behavior therapy skills training group for treatment-resistant depression. *The Journal of Nervous and Mental Disease, 196*(2), 136–143. https://doi.org/10.1097/NMD.0b013e318162aa3f
Level of evidence	Level II
Design	RCT
Follow-up	6 months
Format	Group
Participants	24 adult outpatients diagnosed with major depressive disorder with ongoing depressive symptoms despite medication treatment. The mean age of participants was 41.8 years, and 75% were female. The mean depression scores at baseline were in the mild to moderate range.
Treating clinician(s)	Clinical psychologists
Intervention(s)	Dialectical behaviour therapy-based skills training (*n* = 12)
Comparison group(s)	Waitlist control (TAU) (*n* = 12)
Procedure	Participants were randomly allocated to DBT-based skills training (a modified version of the original DBT skills intervention for patients with borderline personality disorder) or a waitlist control. The intervention consisted of 16 weekly 90-minute group sessions with weekly homework assignments. A total of 19 participants completed the full 16 weeks of the study.
Summary of findings	Although both the intervention and waitlist group demonstrated improvement of depressive symptoms over time, the DBT group demonstrated significantly greater improvement. Effect sizes were large.

Emotion-focused therapy

Title of paper	Telephone-administered psychotherapy for depression
Full citation	Mohr, D. C., Hart, S. L., Julian, L., Catledge, C., Honos-Webb, L., Vella, L., & Tasch, E. T. (2005). Telephone-administered psychotherapy for depression. *Archives of General Psychiatry, 62*(9), 1007–1014. https://doi.org/10.1001/archpsyc.62.9.1007
Level of evidence	Level II
Design	RCT
Follow-up	3, 6, 9, and 12 months
Format	Telephone
Participants	127 adults diagnosed with depression and with functional impairment due to multiple sclerosis. The mean age of participants was 47.9 years, and 77.2% were female
Treating clinician(s)	Psychologists
Intervention(s)	EFT (*n* = 65)
Comparison group(s)	CBT (*n* = 62)
Procedure	Participants were randomised to receive weekly 50-minute sessions of telephone- administered supportive EFT or telephone-administered CBT for 16 weeks, according to manualised procedures. All but seven participants of the total sample completed the 16 weeks of treatment.
Summary of findings	Treatment gains were significant for both groups, with improvements over the 16 weeks significantly greater for those in the telephone CBT group. Treatment gains were maintained at the 12-month follow-up, but the differences between the groups were no longer significant.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 29. Copyright 2018 by the Australian Psychological Society.

Eye movement desensitization and reprocessing

Title of paper	**Eye movement desensitization and reprocessing for depression: A systematic review and meta-analysis**
Full citation	Carletto, S., Malandrone, F., Berchialla, P., Oliva, F., Colombi, N., Hase, M., Hofmann, A., & Ostacoli, L. (2021). Eye movement desensitization and reprocessing for depression: A systematic review and meta-analysis. *European Journal of Psychotraumatology*, *12*(1), 1–14. https://doi.org/10.1080/20008198.2021.1894736
Level of evidence	Level I
Design	Systematic review and meta-analysis (11 studies, with 6 studies focused on EMDR as stand-alone treatment)
Delivery format	Individual
Participants	373 participants meeting criteria for major depressive disorder or had depressive symptoms above a predefined clinical cut-off score. Of those, 220 participants were included in the studies assessing EMDR as a stand-alone treatment.
Demographic characteristics	10 out of 11 studies included adult participants, with one study focused on adolescents. Only adult participants were included in the relevant subgroup analysis.
Treating clinician type	Not specified
Intervention	EMDR
Outcome(s) measured	Depressive symptoms as measured by the BDI, BDI-II, DASS-21, SCL-90, HRSD, MADRS, and CES-D.
Procedure	A systematic review and meta-analysis (11 studies in total, 9 included in meta-analysis) assessed the effectiveness of EMDR as an add-on or stand-alone treatment for depression. Eight studies were RCTs and three were controlled studies. The included time frame was from the beginning of the databases until September 2020. Six studies compared EMDR as a stand-alone treatment against waitlist control, no treatment control group, and an active control (CBT).
Follow up	Yes - 4 studies completed follow-up, ranging from 3 to 6 months.
Statistics summary	A meta-analysis using random-effects model showed that EMDR significantly reduced depressive symptoms (n = 9, g = -1.07; 95% [CI -1.66, -0.48], I^2 = 84%). At follow-up (3-6 months), the effect remained significant (n = 3, g = -0.62; 95% CI [-0.97, -0.28]; I^2 = 84%). Compared with active controls, the effect of EMDR was also significant (n = 7, g = -0.68; 95% CI [-0.92, -0.43]; I^2 = 0).
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	This systematic review and meta-analysis indicated that EMDR is an effective treatment for depression, with non-superior effects compared with other active treatments.

Note. BDI: Beck Depression Inventory; CES-D: Center for Epidemiological Studies of Depression Scale; DASS-21: Depression Anxiety Stress Scale; SCL-90: Symptom Checklist; HRSD: Hamilton Rating Scale for Depression; MADRS: Montgomery-Asberg Depression Rating Scale.

Family-based interventions

Title of paper	Family psychoeducation for major depression: Randomised controlled trial
Full citation	Shimazu, K., Shimodera, S., Mino, Y., Nishida, A., Kamimura, N., Sawada, K., Fujita, H., Furukawa, T. A., & Inoue, S. (2011). Family psychoeducation for major depression: Randomised controlled trial. *The British Journal of Psychiatry: The Journal of Mental Science, 198*(5), 385–390. https://doi.org/10.1192/bjp.bp.110.078626
Level of evidence	Level II
Design	RCT
Follow-up	9 months
Format	Group
Participants	57 adults diagnosed with depression and primary family members. The mean age of participants in the two groups was 59.2 and 60.9 years, respectively, and 55.6% were male.
Treating clinician(s)	Two psychiatrists and a clinical psychologist
Intervention(s)	Family psychoeducation plus TAU (*n* = 25)
Comparison group(s)	TAU (*n* = 32)
Procedure	Participants were randomly allocated to the family psychoeducation intervention or the control group. The family psychoeducation intervention consisted of four fortnightly courses attended by up to five people, without the participation of the patients. Only one family member per patient attended. TAU consisted of bi-weekly visits to a treating psychiatrist as part of standard outpatient treatment.
Summary of findings	All participants allocated to the intervention completed all four sessions. Time to relapse was significantly longer in the intervention group than in the control group. Remission rates at 9-month follow-up were 83% and 33% in the intervention and control groups, respectively, demonstrating a significant between-group difference.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 30.

Interpersonal psychotherapy

Title of paper	Interpersonal psychotherapy for depression: A meta-analysis
Full citation	Cuijpers, P., Geraedts, A. S., van Oppen, P., Andersson, G., Markowitz, J. C., & van Straten, A. (2011). Interpersonal psychotherapy for depression: A meta-analysis. *The American Journal of Psychiatry, 168*(6), 581–592. https://doi.org/10.1176/appi.ajp.2010.10101411
Level of evidence	Level I
Design	Meta-analysis (38 studies)
Follow-up	Details of follow-up periods were not reported
Format	Individual, group
Participants	4,356 adults and adolescents with a depressive disorder or elevated level of depressive symptoms. In 29 studies, participants met diagnostic criteria, and only six studies included adolescent samples. The mean age and gender of participants was not reported
Treating clinician(s)	Not reported
Intervention(s)	Interpersonal psychotherapy (IPT)
Comparison group(s)	Waitlist, TAU, placebo, alternative psychological intervention, pharmacotherapy, combined IPT, and pharmacotherapy.
Procedure	Meta-analysis of RCTs published up to January 2010 investigating the efficacy of IPT for the treatment of depression. Most studies were individually delivered, and participants received a mean of 13.4 treatment sessions (range six to 24).
Summary of findings	A medium effect size in favour of IPT was found for depressive symptoms compared with standard treatment or no treatment. Separate meta-analyses comparing IPT with alternative psychological interventions, and combination therapy with IPT alone, did not yield significant treatment effects.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 22. Copyright 2018 by the Australian Psychological Society.

Title of paper	**Effects of cognitive therapy versus interpersonal psychotherapy in patients with major depressive disorder: A systematic review of randomized clinical trials with meta- analyses and trial sequential analyses**
Full citation	Jakobsen, J. C., Hansen, J. L., Simonsen, S., Simonsen, E., & Gluud, C. (2012). Effects of cognitive therapy versus interpersonal psychotherapy in patients with major depressive disorder: A systematic review of randomized clinical trials with meta-analyses and trial sequential analyses. *Psychological Medicine, 42*(7), 1343–1357. https://doi.org/10.1017/S0033291711002236
Level of evidence	Level I
Design	Systematic review and meta-analysis (seven studies)
Follow-up	One study reported a 9-month follow-up period.
Format	Individual, group, combined individual and group
Participants	741 adults diagnosed with major depressive disorder. The mean ages of participants ranged from 30.6 to 42.7 years, and in all studies over half were female.
Treating clinician(s)	Not reported
Intervention(s)	Interpersonal psychotherapy (IPT) Cognitive therapy (CT)
Comparison group(s)	Cognitive therapy (CT)
Procedure	Systematic review and meta-analysis of RCTs published up to August 2010 assessing the effects of cognitive therapy versus interpersonal psychotherapy in the treatment of major depressive disorder. All studies must have adhered to a treatment manual to be included in the study. The length of the intervention period ranged from eight weekly sessions to 24 weekly sessions.
Summary of findings	Results of the systematic review demonstrated comparable results among the intervention groups, with the effect of CT not differing significantly from the effect of IPT on any outcome measure at posttreatment.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 23. Copyright 2018 by the Australian Psychological Society.

Mindfulness-based cognitive therapy

Title of paper	**Mindfulness-based cognitive therapy for prevention and time to depressive relapse: Systematic review and network meta-analysis**
Full citation	McCartney, M., Nevitt, S., Lloyd, A., Hill, R., White, R., & Duarte, R. (2021). Mindfulness-based cognitive therapy for prevention and time to depressive relapse: Systematic review and network meta-analysis. *Acta Psychiatrica Scandinavica, 143*(1), 6–21. https://doi.org/10.1111/acps.13242
Level of evidence	Level I
Design	Systematic review and network meta-analysis (23 studies, with 14 RCTs included in meta-analysis)
Delivery format	Group
Participants	2,077 participants (14 RCTs) were analyzed for depression relapse and 2,017 participants (13 RCTs) were analyzed for time to relapse of depression. All participants had a recurrent depressive disorder and were either in remission or had residual depressive symptoms.
Demographic characteristics	Majority of participants were female (ranging from 58% to 80%). The mean age ranged from 35 to 54 years across studies.
Treating clinician type	Not specified
Intervention	MBCT
Outcome(s) measured	Depression relapse was assessed using the depression module of the SCID or the CIDI depression module.
Procedure	A systematic review and meta-analysis/network meta-analysis assessing long-term effectiveness of MBCT on depression relapse (14 RCTs) and time to depression relapse (13 RCTs). Included time frame was from the beginning of databases until June 2019. Subgroup analyses were performed for the number of previous depressive episodes and use of booster sessions.
Follow up	Yes (12 months or longer)
Statistics summary	Network meta-analysis using random-effects model showed MBCT was significantly superior to TAU for depression relapse (risk ratio *RR* = 0.73, 95% CI [0.54, 0.98]) and to TAU and placebo for time to depression relapse (MBCT vs TAU, time to depression relapse (hazard ratio *HR* = 0.57, 95% [CI 0.37, 0.88]; MBCT vs placebo, *HR* = 0.23, 95% CI 0.08 to 0.67). Subgroup meta-analysis indicated booster sessions might lead to improved treatment effectiveness.
Conflict of interest	One author (R.H.) declared a financial, non-personal, non-specific interest.
Risk of bias	Low
Summary of findings	MBCT is more effective than TAU in the long-term prevention of depression relapse and has advantages over TAU and placebo for time to relapse of depression.

Note. CIDI: Centre for Epidemiological Studies of Depression Scale; SCID: Structured Clinical Interview for DSM.

Title of paper	**Efficacy and acceptability of third-wave psychotherapies in the treatment of depression: A network meta-analysis of controlled trials**
Full citation	Schefft, C., Heinitz, C., Guhn, A., Brakemeier, E. L., Sterzer, P., & Köhler, S. (2023). Efficacy and acceptability of third-wave psychotherapies in the treatment of depression: A network meta-analysis of controlled trials. *Frontiers in Psychiatry*, *14*, 1189970. https://doi.org/10.3389/fpsyt.2023.1189970
Level of evidence	Level I
Design	Systematic review and network meta-analysis (55 trials with 12 trials focused on MBCT; 72 comparisons in total)
Delivery format	Individual and group; in-person and online
Participants	Total sample of 5827 participants, with 909 participants in the MBCT subgroup. All participants in included studies were required to have a primary diagnosis of major depressive disorder (MDD) or persistent depressive disorder (PPD) according to DSM and ICD criteria.
Demographic characteristics	Studies included participants from the Americas, Europe, Australia, New Zealand, Asia, and Iran. The mean percentage of female participants was 65.5% (*SD* = 18.5) and the mean age was 39.53 years (*SD* = 7.98).
Treating clinician type	Not specified
Intervention	MBCT
Outcome(s) measured	Depression symptom severity as measured by the SCID, BDI-II, MINI, HRSD, IDS-SR, QIDS and CIDI.
Procedure	A systematic review and network meta-analysis was conducted to investigate the efficacy and acceptability of a range of third-wave psychotherapies in the treatment of adult depression. The timeframe of the search conducted covered database inception to 31 July 2022.
Follow up	No
Statistics summary	A Bayesian random effects network meta-analysis was conducted to compare each psychotherapy type to each other, CBT, and a range of other control conditions. Effect sizes indicated no significant difference in outcome measures between MBCT and CBT (*d* = 0.33, 95% [-0.85, 0.17]), however effect sizes did indicate a superior efficacy of MBCT when compared to waitlist (*d* = 1.05, 95% CI [0.56, 1.57]) and TAU (*d* = 0.78, 95% CI [0.31, 1.25]). Heterogeneity was rated as high (I^2 = 77%) on efficacy measures.
Conflict of interest	Yes (professional and financial)
Risk of bias	Low
Summary of findings	This systematic review and meta-analysis supports the efficacy of MBCT in the treatment of adult depression when compared to waitlist and TAU. No significant difference in treatment outcomes was found between MBCT and CBT.

Note. BDI-II: Beck Depression Inventory; CIDI: Composite International Diagnostic Interview; HRSD: Hamilton Rating Scale for Depression; IDS-SR: Inventory of Depressive Symptomatology Self Report; MINI: Mini-International Neuropsychiatric Interview; QIDS: Quick Inventory of Depressive Symptomatology; SCID: Structured Clinical Interview for DSM.

Problem-solving therapy

Title of paper	**Meta-analysis of problem solving therapy for the treatment of major depressive disorder in older adults**
Full citation	Kirkham, J. G., Choi, N., & Seitz, D. P. (2016). Meta-analysis of problem solving therapy for the treatment of major depressive disorder in older adults. *International Journal of Geriatric Psychiatry, 31*(5), 526–535. https://doi.org/10.1002/gps.4358
Level of evidence	Level I
Design	Systematic review (eight studies) and meta-analysis (six studies)
Follow-up	12 weeks to 6 months
Format	Individual, group
Participants	569 older adults diagnosed with major depressive disorder. The mean age of participants was 74.1 years, and the majority were female (gender data across studies were not reported). Although all but one study excluded adults with dementia, four studies included older adults with some degree of cognitive impairment.
Treating clinician(s)	Not reported
Intervention(s)	Problem-solving therapy (PST)
Comparison group(s)	Waitlist, supportive therapy, TAU
Procedure	Systematic review and meta-analysis of RCTs examining the effectiveness of PST for the treatment of major depressive disorder in older adults. PST was delivered weekly in the majority of included studies and the length of treatment ranged from five to 12 sessions. All but one study was individually-delivered.
Summary of findings	Compared with pooled control conditions, there was a significant reduction in mean depression scores for the PST group, with a corresponding large effect size. In studies that included an outcome measure of disability, PST significantly reduced disability compared with pooled controls, with a medium effect size demonstrated. Studies using up to eight sessions of PST demonstrated increased treatment efficacy compared with those using more than eight sessions, where no between-group differences were observed.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 24. Copyright 2018 by the Australian Psychological Society.

Title of paper	**Brief psychotherapy for depression: A systematic review and meta-analysis**
Full citation	Nieuwsma, J. A., Trivedi, R. B., McDuffie, J., Kronish, I., Benjamin, D., & Williams, J. W. (2012). Brief psychotherapy for depression: A systematic review and meta-analysis. *International Journal of Psychiatry in Medicine, 43*(2), 129–151. https://doi.org/10.2190/PM.43.2.c
Level of evidence	Level I
Design	Systematic review and meta-analysis (15 studies, five on PST)
Follow-up	6 to 52 weeks
Format	Individual, group
Participants	991 adults diagnosed with major depressive disorder, dysthymic disorder, or minor depression in acute-phase treatment. The mean ages of participants ranged from 34.5 to 74 years, and an average of 72.6% were female.
Treating clinician(s)	Psychologists, nurses, allied health professionals, graduate students, psychiatrists, trained GPs, social workers, counsellors
Intervention(s)	Brief problem-solving therapy (five studies), brief CBT (six studies), MBCT (one study)
Comparison group(s)	Placebo, waitlist, TAU, pharmacotherapy alone
Procedure	Systematic review and meta-analysis of published RCTs between January 2000 and August 2010 to determine the efficacy of brief evidence-based psychotherapies for depression. Participants received on average six sessions of brief problem-solving therapy.
Summary of findings	Brief PST was found to be efficacious for the acute-phase treatment of depression in primary care compared with pooled control conditions, with a small effect size demonstrated. The relatively few studies included in the review did not allow for comparisons of variables such as depression severity.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 25. Copyright 2018 by the Australian Psychological Society.

Psychodynamic therapy

Title of paper	**Efficacy and moderators of short-term psychodynamic psychotherapy for depression: A systematic review and meta-analysis of individual participant data**
Full citation	Wienicke, F. J., Beutel, M. E., Zwerenz, R., Brähler, E., Fonagy, P., Luyten, P., Constantinou, M., Barber, J. P., McCarthy, K. S., Solomonov, N., Cooper, P. J., De Pascalis, L., Johansson, R., Andersson, G., Lemma, A., Town, J. M., Abbass, A. A., Ajilchi, B., Connolly Gibbons, M. B., … Driessen, E. (2023). Efficacy and moderators of short-term psychodynamic psychotherapy for depression: A systematic review and meta-analysis of individual participant data. *Clinical Psychology Review, 101*, 102269. https://doi.org/10.1016/j.cpr.2023.102269
Level of evidence	Level I
Design	Systematic review and meta-analysis of individual participant data (13 studies)
Delivery format	Individual
Participants	837 participants (ranging from 20 to 157 participants across studies) who met diagnostic criteria for unipolar mood disorder or had elevated depressive symptoms. 771 participants were included in the meta-analysis.
Demographic characteristics	Mean age of participants was 40.8 years (*SD* = 13.3), and 592 (79%) of participants were female. Studies were conducted in Iran, USA, Germany, UK, Sweden, Mexico, Italy, and Canada.
Treating clinician type	Not specified
Intervention	Short-term psychodynamic psychotherapy (STPP)
Outcome(s) measured	Depressive symptoms as measured by the EPDS, HAMD, BDI, BDI-II, PHQ-9, and HADS-Depression subscale.
Procedure	A systematic review and individual participant data (IPD) meta-analysis assessing the efficacy of short-term psychodynamic psychotherapy (STPP) for depression compared to control conditions. Moderation analyses were also conducted to examine moderators of STPP. The included time frame was from the beginning of databases until September 2022.
Follow up	Yes; 5.5 months to 2 years.
Statistics summary	One-stage IPD meta-analyses were conducted using mixed-model analyses. STPP was significantly more efficacious in reducing depressive symptoms compared to controls at post-treatment (d = -0.62, 95% CI -0.76 to -0.47, p < .001, I^2 = 0). Moderation analyses showed STPP was more efficacious for participants with longer rather than shorter current depressive episode durations.
Conflict of interest	Two authors (E.D., P.L.) made declarations of potential competing interests.
Risk of bias	Low
Summary of findings	STPP is an efficacious treatment for adult depression and shows greater benefits for individuals with longer depressive episode durations.

Note. BDI: Beck Depression Inventory; EPDS: Edinburgh Postnatal Depression Scale; HADS-D: Hospital Anxiety and Depression Scale – Depression Subscale; HAMD: Hamilton Depression Rating Scale.

Psychoeducation

Title of paper	The effect of psychoeducation for depression: A meta-analysis 2010–2016
Full citation	Moreno-Lacalle, R. (2016). The effect of psychoeducation for depression: A meta-analysis 2010–2016. *The Philippine Journal of Nursing, 86*(2), 36–43.
Level of evidence	Level I
Design	Meta-analysis (11 studies)
Follow-up	None
Format	Individual, group, online
Participants	1,560 adults diagnosed with depression. The mean age and gender of participants was not reported.
Treating clinician(s)	Not reported
Intervention(s)	Psychoeducation
Comparison group(s)	TAU
Procedure	Meta-analysis of RCTs published between 2010 and 2016 investigating the effectiveness of psychoeducation for the treatment of depression. Intervention length ranged from a single session of psychoeducation to 16 sessions delivered over an 8-month period
Summary of findings	At posttreatment, a small treatment effect in favour of psychoeducation was found for depression scores of intervention group members compared with pooled controls. Studies were highly heterogeneous and varied widely in terms of treatment content and delivery method. Studies with longer treatment duration were found to be more effective than were shorter duration interventions.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 26. Copyright 2018 by the Australian Psychological Society.

Schema therapy

Title of paper	**Psychotherapy for depression: A randomised clinical trial comparing schema therapy and cognitive behavior therapy**
Full citation	Carter, J. D., McIntosh, V. V., Jordan, J., Porter, R. J., Frampton, C. M., & Joyce, P. R. (2013). Psychotherapy for depression: A randomized clinical trial comparing schema therapy and cognitive behavior therapy. *Journal of Affective Disorders, 151*(2), 500–505. https://doi.org/10.1016/j.jad.2013.06.034
Level of evidence	Level II
Design	RCT
Follow-up	None
Format	Individual
Participants	100 outpatients diagnosed with major depression. The mean age of participants was 38 years, and 69% were female
Treating clinician(s)	Clinical psychologists
Intervention(s)	Schema therapy (*n* = 50)
Comparison group(s)	CBT (*n* = 50)
Procedure	Participants were randomised to weekly therapy sessions of schema therapy or CBT for 6 months, followed by monthly sessions for 6 months. Participants in the schema therapy condition received a mean of 18 weekly sessions and 4.3 monthly sessions, and those in the CBT condition received a mean of 15.9 weekly and 3.3 monthly sessions
Summary of findings	No significant differences in outcome measures were found between the two therapies. The two interventions produced similar rates of improvement in terms of treatment response, remission, and recovery

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 30. Copyright 2018 by the Australian Psychological Society.

Self-guided digital interventions

Title of paper	Efficacy of virtual care for depressive disorders: Systematic review and meta-analysis
Full citation	Schiller, C. E., Prim, J., Bauer, A. E., Lux, L., Lundegard, L. C., Kang, M., Hellberg, S., Thompson, K., Webber, T., Teklezghi, A., Pettee, N., Gaffney, K., Hodgins, G., Rahman, F., Steinsiek, J. N., Modi, A., & Gaynes, B. N. (2023). Efficacy of virtual care for depressive disorders: Systematic review and meta-analysis. *JMIR Mental Health, 10*(1), 1–18. https://doi.org/10.2196/38955
Level of evidence	Level I
Design	Systematic review and meta-analysis (24 RCTs)
Delivery format	Digital, with and without therapist guidance
Participants	4,706 participants (ranging from 42 to 647 participants in each study) diagnosed with major depressive disorder. Depression severity ranged from mild to severe.
Demographic characteristics	Studies were conducted in countries with a very high human development index. The average age of participants ranged from 25 to 64 years, and the percentage of females ranged from 2% to 100% across studies.
Treating clinician type	Trained mental health professional (mental health specialist), trained health professional (nurse, primary care provider), other professional (trained coach, peer-support specialist), and students.
Intervention	Digital therapy (including CBT, ACT, PST, IPT, Psychodynamic, BA)
Outcome(s) measured	Primary outcomes were rates of remission, rates of response, and depression severity at posttreatment. Depressive symptoms were measured using a wide range of validated self-report and interview-administered instruments.
Procedure	A systematic review and meta-analysis of 24 RCTs that tested the efficacy of virtual interventions for depressive disorders. Studies were retrieved from electronic databases searched from January 2010 to October 2021 and reported on using PRISMA guidelines. The study also aimed to examine the efficacy of virtual interventions compared with in-person interventions and other virtual interventions.
Follow up	Longer-term outcomes not examined due to variability in follow-up assessments
Statistics summary	Meta-analysis using random effects model showed that virtual interventions had higher odds of remission compared with waitlist controls (*OR* = 10.30, 95% CI [5.70, 18.60]; *n* = 619) and compared with TAU and virtual attention control conditions (*OR* = 2.27, 95% CI [1.10,3.35], *n* = 512). Virtual interventions had lower posttreatment symptom severity compared with waitlist (*SMD* = 0.81, 95% CI [0.52, 1.10]; *n* = 1071) as well as TAU and virtual attention control conditions (*SMD* = 0.25, 95% CI [0.09, 0.42]; *n* = 573).
Conflict of interest	Not specified
Risk of bias	Low
Summary of findings	This systematic review and meta-analysis indicate that virtual therapy is an effective method of treatment for mild to moderate depressive disorders compared with several control conditions. The study did not find any evidence for the superiority of one virtual intervention over another.

Solution-focused brief therapy

Title of paper	**The effect of a solution-oriented therapy on the depression levels and the perceived social support of depressive patients**
Full citation	Ayar, D., & Sabancioğullari, S. (2022). The effect of a solution-oriented therapy on the depression levels and the perceived social support of depressive patients. *Archives of Psychiatric Nursing, 36*, 62–69. https://doi.org/10.1016/j.apnu.2021.11.004
Level of evidence	Level II
Design	Randomised controlled trial (RCT)
Format	Individually, face to face.
Participants	Sixty-one participants diagnosed with a depressive disorder with a BDI mean score between 30 and 45 (severe depression), without comorbid psychiatric disorders or chronic organic illnesses. Intervention *N* = 31, control *N* = 30.
Demographic characteristics	47.3% female; age *M* = 39.5 years, *SD* = 11.8 years. Turkish public hospital inpatients
Treating clinician type	Trained mental health professional (psychiatric nurses)
Intervention	Solution-oriented therapy
Study groups	Intervention group: solution-oriented therapy. Control group: passive control (routine clinical care).
Outcome(s) measured	Depression symptom severity as measured by BDI mean score (primary outcome) and perceived level of social support as measured by PPSI mean score (Turkish version).
Follow up	Yes, three months.
Procedure	Six 40-minute sessions delivered over 20 days (one preliminary interview and five solution-oriented interviews). The intervention consisted of solution-oriented techniques such as establishing positive goals, and the miracle question. Participants could request additional sessions to go over the content covered in sessions 2-6 for up to 10 sessions in total.
Statistics summary	Independent sample *t*-tests showed a greater reduction in the BDI mean score in the experimental group than in the control group at post-treatment (t = 2.14, p = .036; experimental: M = 29.9, SD = 4.2; control: M = 34.6, SD = 4.3), and at the three-month follow-up (t = 2.73, p = .008; experimental: M = 31.7, SD = 3.7; control: M = 34.6, SD = 4.3).
Conflict of interest	Not specified
Risk of bias	High
Summary of findings	Six to 10 sessions of solution-oriented therapy appear to be more efficacious to reduce depressive symptoms than routine clinical care alone but there was a high risk of bias due to the choice of analyses. Treatment gains were reduced but still evident after 3 months.

Note. BDI: Beck Depression Inventory; PPSI: Perceived Social Support Inventory.

Bipolar disorder

SUMMARY OF EVIDENCE

Psychological interventions for bipolar disorder are typically delivered in conjunction with pharmacotherapy.[53] Adjunctive psychological interventions primarily target specific outcomes such as relapse prevention or current depressive symptoms, rather than the diagnosis as a whole.

Level I evidence[54] has been identified in support of individual cognitive behaviour therapy in the treatment of bipolar disorder in adults. Level II evidence was found in support of group acceptance and commitment therapy, family-based interventions, and interpersonal and social rhythm therapy (retained from 2018 edition). Level II evidence was also found for dialectical behaviour therapy, however study results only indicated efficacy for symptoms of mania but not depression.

Level I evidence in relation to self-guided digital interventions found mixed evidence, where the higher quality study did not find support for smartphone-based interventions. Level I evidence in relation to group cognitive behaviour therapy did not indicate efficacy for the treatment of depression or mania. Level II evidence in relation to mindfulness-based cognitive therapy also did not provide support for its efficacy when compared to a passive control group. Level I evidence in relation to group psychoeducation indicated some efficacy, however this effect was only found in the case of relapse prevention and not for the reduction of depression or manic symptoms.

Guidelines provided by NICE (2023), RANZCP (2020), and WHO (2023) highlight the role of psychological interventions as adjunctive to pharmacotherapy in the treatment of bipolar disorder in adults. More specifically, they provide recommendations on the use of cognitive behaviour therapy, interpersonal psychotherapy, family-focused therapy, psychoeducation, and interpersonal and social rhythms therapy.

[3] Yatham, L. N., Kennedy, S. H., Parikh, S. V., Schaffer, A., Bond, D. J., Frey, B. N., Sharma, V., Goldstein, B. I., Rej, S., Beaulieu, S., Alda, M., MacQueen, G., Milev, R. V., Ravindran, A., O'Donovan, C., McIntosh, D., Lam, R. W., Vazquez, G., Kapczinski, F., … Berk, M. (2018). Canadian network for mood and anxiety treatments (CANMAT) and international society for bipolar disorders (ISBD) 2018 guidelines for the management of patients with bipolar disorder. *Bipolar Disorders, 20*(2), 97–170. https://doi.org/10.1111/bdi.12609

[54] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of bipolar disorder in adults.

Acceptance and commitment therapy

Title of paper	**Efficacy of acceptance and commitment therapy on impulsivity and suicidality among clients with bipolar disorders: A randomized control trial**
Full citation	El-Sayed, M. M., Elhay, E. S. A., Taha, S. M., Khedr, M. A., Mansour, F. S. A., & El-Ashry, A. M. (2023). Efficacy of acceptance and commitment therapy on impulsivity and suicidality among clients with bipolar disorders: A randomized control trial. *BMC Nursing, 22*(1), 1–271. https://doi.org/10.1186/s12912-023-01443-1
Level of evidence	Level II
Design	Randomised controlled trial (RCT)
Delivery format	Group, face to face
Participants	Total of *n* = 60 (intervention *n* = 30, control *n* = 30) participants who met DSM-5 the criteria for either Bipolar I or II disorder
Demographic characteristics	Participants were between 30-39 years old, with 50% being female. Participants were outpatients from a university hospital in Egypt.
Treating clinician type	Trained mental health professional (psychiatric nurse)
Intervention	ACT
Study groups	Intervention group: ACT + TAU Control group: passive control (TAU and waitlist)
Outcome(s) measured	Impulsivity was measured by AAQII and SUPPS-P, whilst suicidality was measured by BSSI
Procedure	Participants were randomly allocated to one of two conditions: The first condition was treatment as usual which comprised of pharmacotherapy as prescribed by their psychiatrist. The second condition was the intervention group whereby groups of six participants attended 90-minute sessions of ACT for eight weeks in addition to TAU.
Follow up	Yes, 2 months
Statistics summary	A student t-test was used for between-groups analysis. At post-treatment, there was a significant difference between the intervention and control group (t = 6.02, p < .001) with an effect size of η^2 = 0.856. There was also a significant difference at the two-month follow-up, (t = 3.12, p = .014) with an effect size of η^2 = 0.314.
Conflict of interest	Not specified
Risk of bias	Low
Summary of findings	The intervention group demonstrated significantly lower scores on suicidality and impulsivity compared to treatment as usual, with scores remaining significantly lower at the two-month follow up. The study's generalizability was limited due to the small sample size and homogenous ethnocultural group.

Note. AAQ-II: Acceptance and Action questionnaire-II; BSSI: Beck Scale for Suicide Ideation, Arabic Version; SUPPS-P: Short Arabic version of the UPPS-P Impulsivity Behaviour Scale; TAU: treatment as usual.

Cognitive behaviour therapy

Title of paper	**A meta-analysis of group cognitive behavioral therapy and group psychoeducation for treating symptoms and preventing relapse in people living with bipolar disorder**
Full citation	Tan, M. K., Chia, E.-C., Tam, W. W., McIntyre, R. S., Zhang, Z., Dam, V. A., Nguyen, T. T., Do, H. T., Ho, R. C., & Ho, C. S. H. (2022). A meta-analysis of group cognitive behavioral therapy and group psychoeducation for treating symptoms and preventing relapse in people living with bipolar disorder. *Healthcare, 10*(11), 2288. https://doi.org/10.3390/healthcare10112288
Level of evidence	Level I
Design	Systematic review and meta-analysis (11 studies, with 4 studies focused on Group CBT)
Delivery format	Group, face to face
Participants	Total pooled sample of *n* = 1,191 adults above the age of 18 with either Bipolar I or II disorder according to DSM-IV or DSM-IV-TR criteria, with *n* = 229 in subgroup analysis specific to Group CBT
Demographic characteristics	The mean age of participants across studies ranged from 33-45 years old. There are between 28-53% males compared to females. Studies were conducted in Italy, China, Spain, Norway, Denmark, United Kingdom, and Australia.
Treating clinician type	Trained mental health professionals
Intervention	Group CBT (GCBT)
Outcome(s) measured	Three primary outcomes were measured including depressive symptom severity as measured by HDRS, BHS, BDI, and MADRS, manic symptom severity measured by YMRS, and relapse rates.
Procedure	A systematic review and meta-analysis were conducted to investigate the effect of group cognitive behaviour therapy or group psychoeducation on bipolar symptoms, when delivered as an adjunct treatment to pharmacotherapy. Subgroup analyses were completed on each intervention. The search covered RCTS published from inception until March 2022.
Follow up	Yes; 2 GCBT studies completed follow up ranging from 6 months to 12 months
Statistics summary	A random-effects meta-analysis Standardized mean differences were used as effect size measures for symptoms of depression and mania. Both depressive symptom scores (*SMD* = 0.11, 95% CI [0.77, 0.55], *Z* = 0.33, *p* = .74) and manic symptom scores (*SMD* = 0.24, 95% CI [0.08, 0.56], *Z* = 1.48, *p* = .14) showed no significant difference between GCBT and control groups. The odds ratio for relapse reduction with GCBT did not reach significance (*OR* = 0.72, 95% CI [0.19, 2.66], *Z* = 0.50, *p* = 0.62).
Conflict of interest	Yes; professional associations of author
Risk of bias	Low
Summary of findings	There is insufficient evidence to support GCBT as superior to pharmacotherapy alone in reducing relapse rates, depressive symptoms, or manic symptoms in bipolar disorder. Researchers highlight the small sample size for GCBT potentially limiting statistical power necessary to detect difference between study groups.

Note. BDI: Beck Depression Inventory; BHS: Beck Hopelessness Scale; HDRS: Hamilton Depression Rating Scale; MADRS: Montgomery–Asberg Depression Rating Scale; YMRS: Young Mania Rating Scale.

Title of paper	**Do psychological interventions reduce symptoms of depression for patients with bipolar I or II disorder? A meta-analysis**
Full citation	Yilmaz, S., Huguet, A., Kisely, S., Rao, S., Wang, J., Baur, K., Price, M., O'Mahen, H., & Wright, K. (2022). Do psychological interventions reduce symptoms of depression for patients with bipolar I or II disorder? A meta-analysis. *Journal of Affective Disorders, 301*, 193-204. https://dx.doi.org/10.1016/j.jad.2021.12.112
Level of evidence	Level I
Design	Systematic review and meta-analysis (22 studies, with 11 studies focused on CBT)
Delivery format	Individual and group, face-to-face
Participants	Total pooled sample of *n* = 1,878 participants that had a diagnosis of bipolar I or II disorder using a valid instrument. There were *n* = 614 participants from 8 RCTs of CBT included in the quantitative analysis.
Demographic characteristics	No information regarding gender and age of the participants of the overall sample was provided. Included studies were conducted in Australia, USA, Iran, UK, China, Spain, Egypt, France, Tawain, and New Zealand.
Treating clinician type	Not specified
Intervention	CBT
Outcome(s) measured	Depressive symptom severity was measured by the BDI, HDRS, MADRS, and HAMD-17.
Procedure	A systematic review and meta-analysis were conducted on RCT studies that evaluated the effectiveness of specific psychological interventions for bipolar I or bipolar II disorder. Subgroup and sensitivity analyses were completed on intervention types and follow-up effects. The database search included RCTs published from 1952 to 2020.
Follow up	Yes; 6 RCTs of CBT reported follow up effects that ranged from 3 - 12 months.
Statistics summary	A random-effects meta-analysis with low heterogeneity (p = .31, I^2 = 15%) revealed that at post-treatment, CBT based on eight studies significantly reduced depression compared to usual care (*SMD* = -0.51, 95% CI [-0.75, -0.27], Z = 4.23, p < .001). However, at follow-up, heterogeneity was high (p < .001, I^2 = 80%) with five out of six studies indicating no significant difference in depression outcomes between the CBT and control groups.
Conflict of interest	None declared
Risk of bias	High
Summary of findings	The findings from this review indicate that CBT yields positive effects on depression symptoms compared to usual care immediately after treatment, but not when compared to placebo control. Additionally, this review did not identify any lasting effects of CBT on depression outcomes during follow-up assessments.

Note. BDI: Beck Depression Inventory; HAMD-17: 17-item Hamilton Depression Rating Scale; HDRS: Hamilton Depression Rating Scale; MADRS: Montgomery–Asberg Depression Rating Scale.

Dialectical behavioural therapy

Title of paper	**Effectiveness of dialectical behavioral therapy on executive function, emotional control, and severity of symptoms in patients with Bipolar I Disorder**
Full citation	Zargar, F., Haghshenas, N., Rajabi, F., & Tarrahi, M. (2019). Effectiveness of dialectical behavioral therapy on executive function, emotional control, and severity of symptoms in patients with Bipolar I Disorder. *Advanced Biomedical Research*, *8*(1), 59. https://doi.org/10.4103/abr.abr_42_19
Level of evidence	Level II
Design	Randomised controlled trial (RCT)
Delivery format	Group, face to face
Participants	Total *n* = 50 participants (intervention *n* = 25; control group *n* = 25) who have been formally diagnosed with Bipolar I Disorder and are in the maintenance phase
Demographic characteristics	The intervention group had a mean age of 32.3 years (*SD* = 9.6); 45% were males. Control group matched in demographics ($p < .05$). The study was conducted in Iran.
Treating clinician type	Trained mental health professional (clinical psychologist)
Intervention	DBT
Study groups	Intervention group: DBT Control group: passive control (TAU)
Outcome(s) measured	Primary outcomes include manic symptoms as measured by the YMRS and depressive symptoms as measured by the BDI-II. Secondary outcomes include emotional control as measured by ACS and executive functioning as measured by CTT.
Procedure	Participants were stratified randomly to two conditions: Treatment as usual (pharmacotherapy) or the intervention group, whereby participants attended twelve 60–90-minute sessions in groups of 12-13.
Follow up	Yes; 3 months
Statistics summary	A multivariate covariance analysis was performed to compare the mean manic and depressive symptom scores between intervention and control groups. At post-treatment, the intervention group had significantly lower manic symptoms than the control group ($p = .048$), but no significant difference for depressive symptoms ($p = .438$).
Conflict of interest	None declared
Risk of bias	Some concerns
Summary of findings	This study supports the efficacy of DBT in reducing manic symptoms among adults with bipolar disorder, but not for depressive symptoms. There were also inconclusive findings regarding the improvement in the secondary outcomes of emotional control and executive function.

Note. ACS: Affective Control Scale; CTT: Color Trail Test; BDI-II: Beck Depression Inventory-II; MADRS: Montgomery–Asberg Depression Rating Scale; YMRS: Young Mania Rating Scale.

Family-based interventions

Title of paper	**The effectiveness of family-based intervention on symptom severity, expressed emotion, and coping styles of bipolar patients**
Full citation	Alibeigi, N., & Momeni, F. (2018). The effectiveness of family-based intervention on symptom severity, expressed emotion, and coping styles of bipolar patients. *Iranian Red Crescent Medical Journal*, *20*(8), e60802. https://doi.org/10.5812/ircmj.60802
Level of evidence	Level II
Design	Randomised controlled trial (RCT)
Format	Family / group, face-to-face
Participants	The primary caregivers of *n* = 62 patients (intervention group *n* = 34, control group *n* = 33) who were diagnosed with one type of bipolar disorder and had been hospitalised in the second half of 2017 were recruited.
Demographic characteristics	Detailed demographic characteristics of the patients were not published at the request of caregivers. In the experimental group, the mean age of caregivers was 46.8 years and in the control group, the mean age of caregivers was 48.0 years. The study was conducted in Iran.
Treating clinician type	Trained mental health professionals (psychologists)
Intervention	Family-focused therapy (FFT)
Study groups:	Intervention group: FFT Control group: passive control (waitlist)
Outcome(s) measured	Manic symptom severity, family coping styles, and expressed emotion were measured with the YMRS, CISS, and EEQ respectively
Procedure	In the experimental group, the primary caregiver attended 12 weekly sessions of 90-minute structured group FFT based on the Mickowitz protocol. The control group received no intervention. Participants were assessed at pre-test, post-test, and follow-up.
Follow up	Yes; 3 months
Supportive of treatment	Yes
Statistical strength / effect sizes	Multivariate repeated measure tests were used to analyse the data. A significant difference between the experimental and control conditions were reported on all measures (severity of symptoms, coping styles and expressed emotion types). The effect size was reported to be 0.80 (p = .023) or greater in all variables.
Conflict of interest	Not specified
Risk of bias	Some concerns
Summary of findings	Results indicated that a structured group family-based intervention for primary caregivers can improve manic symptom severity in patients as well as family coping styles and emotional expression.

Note. CISS: Coping Inventory for Stressful Situations; EEQ: Emotional Expressiveness Questionnaire; YMRS: Young Mania Rating Scale.

Title of paper	**Randomized trial comparing caregiver-only family-focused treatment to standard health education on the 6-month outcome of bipolar disorder**
Full citation	Perlick, D. A., Jackson, C., Grier, S., Huntington, B., Aronson, A., Luo, X., & Miklowitz, D. J. (2018). Randomized trial comparing caregiver-only family-focused treatment to standard health education on the 6-month outcome of bipolar disorder. *Bipolar Disorders*, *20*(7), 622-633. https://doi.org/10.1111/bdi.12621
Level of evidence	Level II
Design	Randomised controlled trial (RCT)
Format	Individual, face-to-face
Participants	Primary caregivers of *n* = 46 persons who had been diagnosed with bipolar disorder. The caregivers were also selected on the basis of the presence of difficulties related to mental health or health behaviours. Of the persons with bipolar disorder, 85% had been diagnosed with bipolar I disorder, and 15% had been diagnosed with bipolar II disorder.
Demographic characteristics	The mean age of caregivers was 52.9 years (*SD* = 12.4), and 83.7% were female. The mean age of those with bipolar disorder was 34.2 years (*SD* = 14.9) and 62.5% were female.
Treating clinician type	Trained mental health professionals
Intervention	Family-Focused-Treatment-Health Promoting Intervention (FFT-HPI)
Study groups	Intervention group: Individual FFT-HPI Control group: Active control
Outcome(s) measured	Bipolar disorder symptom severity was measured by the YMRS and HAM-D. The primary caregiver outcomes were measured by the SF-36 and the CES-D.
Procedure	Primary caregivers in the experimental group attended 12 weekly sessions of individual FFT-HPI. These were 45 minutes in duration and specified a goal related to areas of interpersonal, affective, and health/self-care. The control group completed 12 45-minute sessions of health education on the most common health problems reported by caregivers based on previous research.
Follow up	Yes; six months
Statistics summary	Mixed effects linear regression models were used to evaluate the impact of treatment assignment on outcome measures. Patients whose caregivers were assigned to FFT-HPI indicated a significant decrease in HAM-D scores when compared to those whose caregivers were assigned to control (group-by-time interaction, z = -2.08, P = .04). The difference in scores on YMRS was analysed by separating baseline scores into 'high' vs 'low' dichotomies, and a significant effect between groups was also reported (group-by-time-by-YMRS-baseline dichotomised score, z = -2.30, P = .021).
Conflict of interest	Not specified
Risk of bias	Some concerns
Summary of findings	Results support the hypothesis that a caregiver-only adaptation of FFT can benefit not only the health and mental health of caregivers but can also reduce symptom severity of the persons with bipolar disorder that they provide care for.

Note. CES-D: Center for Epidemiological Studies of Depression Scale, HAM-D: Hamilton Depression Rating Scale; YMRS: Young Mania Rating Scale.

Interpersonal and social rhythm therapy

Title of paper	Group interpersonal and social rhythm therapy for bipolar depression
Full citation	Hoberg, A. A., Ponto, J., Nelson, P. J., & Frye, M. A. (2013). Group interpersonal and social rhythm therapy for bipolar depression. *Perspectives in Psychiatric Care, 49*(4), 226–234. https://doi.org/10.1111/ppc.12008
Level of evidence	Level IV
Design	Case series with pretest and posttest
Follow-up	12 weeks
Format	Group
Participants	Nine adults diagnosed with bipolar I or II depression. The mean age of participants was 41.2 years, and 77% were female.
Treating clinician(s)	Psychiatric clinical nurse specialist with training in interpersonal therapy and group therapy
Interventions	Interpersonal and social rhythm therapy (IPSRT) plus adjunctive medication
Comparison group(s)	None
Procedure	Seven of the nine participants who began treatment completed all group sessions. Participants first attended two 60-minute individual therapy sessions, followed by six 60-minute group IPSRT sessions over a 2-week period (three sessions per week). Topics of group discussion were adapted from the IPSRT treatment manual.
Summary of findings	Six participants, all female, were included in the final analysis. Compared with baseline scores, mean depression scores were significantly lower at posttreatment and follow-up. At posttreatment, one-half of participants met remission criteria, which was reduced to one participant at follow-up. Furthermore, from baseline to follow-up, functioning scores improved significantly.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 36.

Title of paper	**Randomized, controlled trial of interpersonal and social rhythm therapy for young people with bipolar disorder**
Full citation	Inder, M. L., Crowe, M. T., Luty, S. E., Carter, J. D., Moor, S., Frampton, C. M., & Joyce, P. R. (2015). Randomized, controlled trial of interpersonal and social rhythm therapy for young people with bipolar disorder. *Bipolar Disorders, 17*(2), 128–138. https://doi.org/10.1111/bdi.12273
Level of evidence	Level II
Design	RCT
Follow-up	None
Format	Individual
Participants	100 young adults aged 15–36 diagnosed with bipolar I or II disorder. The mean age of participants was 26.6 years, and 76% were female.
Treating clinician(s)	Not reported
Interventions	Interpersonal and social rhythm therapy (IPSRT) (*n* = 49)
Comparison group(s)	Specialist supportive care (*n* = 51)
Procedure	Participants were randomly allocated to receive IPSRT or specialist supportive care (a manualised psychoeducational and supportive therapy). Clinicians met with participants weekly for 3 months, fortnightly for up to 6 months, and then fortnightly to monthly for 12 months. Therapy frequency was tailored to individual patients' needs, with participants receiving an average of 26.2 sessions of IPSRT.
Summary of findings	There were significant reductions in depressive and mania symptoms and improvements in social adjustment from baseline to posttreatment in both intervention groups. However, there were no statistically significant differences between the two interventions on any outcome measure.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 36. Copyright 2018 by the Australian Psychological Society.

Title of paper	**A randomized pilot study of psychotherapy and quetiapine for the acute treatment of bipolar II depression**
Full citation	Swartz, H. A., Frank, E., & Cheng, Y. (2012). A randomized pilot study of psychotherapy and quetiapine for the acute treatment of bipolar II depression. *Bipolar Disorders, 14*(2), 211–216. https://doi.org/10.1111/j.1399-5618.2012.00988.x
Level of evidence	Level II
Design	Pilot RCT
Follow-up	None
Format	Individual
Participants	25 adults diagnosed with bipolar II disorder (currently depressed). The mean age of participants in the two intervention groups was 40.1 and 32.1 years, and 60% were female.
Treating clinician(s)	Master's level clinicians
Interventions	Interpersonal and social rhythm therapy (IPSRT; *n* = 14)
Comparison group(s)	Pharmacotherapy (quetiapine; *n* = 11)
Procedure	Participants were randomly assigned to either IPSRT or quetiapine. Participants in the IPSRT condition received weekly, 45-minute therapy sessions over a period of 12 weeks. They received on average 8.5 sessions over the treatment period. Participants assigned to quetiapine met weekly with a psychiatrist for medication management.
Summary of findings	Significant improvements in depressive and hypomanic symptoms were demonstrated in both treatment groups over time, with no significant between-group differences on any outcome measure. Response rates (defined as a greater than 50% reduction in depression scores without an increase in mania scores) were 29% and 27% in the IPSRT and quetiapine groups, respectively.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 37. Copyright 2018 by the Australian Psychological Society.

Mindfulness-based cognitive therapy

Title of paper	**Mindfulness-based cognitive therapy versus psychoeducational intervention in bipolar outpatients: Results from a randomized controlled trial**
Full citation	Dios, C., Carracedo-Sanchidrián, D., Bayón, C., Rodríguez-Vega, B., Bravo-Ortiz, M. F., González-Pinto, A. M., Lahera, G., & BIMIND Group (2023). Mindfulness-based cognitive therapy versus psychoeducational intervention in bipolar outpatients: Results from a randomized controlled trial. *Spanish Journal of Psychiatry and Mental Health*, *16*(4), 251–258. https://doi.org/10.1016/j.rpsm.2021.08.001
Level of evidence	Level II
Design	Randomised controlled trial (RCT)
Delivery format	Group, face-to-face
Participants	The study included a total of *n* = 84 participants (MBCT group *n* = 40, psychoeducation group *n* = 34, control group *n* = 10). All participants had a diagnosis of bipolar disorder and were in clinical remission of acute mood episode.
Demographic characteristics	The mean age of participants was 46.8 years, 95% CI [44.5 - 49.1] and 35.7% of the study sample were male. The study was conducted in Spain.
Treating clinician type	Trained mental health professionals (therapists)
Intervention	MBCT
Study groups	Intervention groups: TAU plus psychoeducation TAU plus MBCT Control group: TAU
Outcome(s) measured	Relevant primary outcome include bipolar disorder symptom severity as measured by the HDRS, YMRS, HAM-A, CGI-BD-M, FAST.
Procedure	The MBCT intervention followed a manual program of 8 weekly 90-min group sessions with some brief written information on BD provided at the beginning. The psychoeducation intervention involved 8 weekly 2-hour group sessions which covered several topics related to BD. The TAU condition did not receive any structured psychosocial interventions or written information.
Follow up	Yes; six months
Statistics summary	A Student *t* test was performed to compare outcome measures between the three groups. Participants in the MBCT group did not significantly differ to the control group in hypo/mania symptoms ($t = 1.35$, $p = .20$) and depressive symptoms ($t = 0.44$, $p = 1.00$) at post-treatment. There were also no significant differences in other outcomes and time points between the three study groups.
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	There is no evidence in the current study that supports the superiority of adjunctive MBCT over adjunctive psychoeducation or treatment as usual in the reduction of symptoms in bipolar disorder related to depression, anxiety, hypo/mania, relapse rate, or overall functioning.

Note. CGI-BD-M: Clinical Global Impression Scale modified for bipolar disorder; FAST: Functioning Assessment Short Test; HAM-A: Hamilton Anxiety Rating Scale HDRS: Hamilton Depression Rating Scale; YMRS: Young Mania Rating Scale.

Psychoeducation

Title of paper	**A meta-analysis of group cognitive behavioral therapy and group psychoeducation for treating symptoms and preventing relapse in people living with bipolar disorder**
Full citation	Tan, M. K., Chia, E.-C., Tam, W. W., McIntyre, R. S., Zhang, Z., Dam, V. A., Nguyen, T. T., Do, H. T., Ho, R. C., & Ho, C. S. H. (2022). A meta-analysis of group cognitive behavioral therapy and group psychoeducation for treating symptoms and preventing relapse in people living with bipolar disorder. *Healthcare, 10*(11), 2288. https://doi.org/10.3390/healthcare10112288
Level of evidence	Level I
Design	Systematic review and meta-analysis (11 studies, with 7 studies on group psychoeducation)
Format	Group, face to face
Participants	Total pooled sample of *n* = 1,191 adults with either Bipolar I or II disorder according to DSM-IV or DSM-IV-TR criteria (for group psychoeducation, *n* = 962).
Demographic characteristics	The mean age of participants across studies ranged from 33-45 years old. There are between 28-53% males compared to females. Studies were conducted in Italy, China, Spain, Norway, Denmark, United Kingdom, and Australia.
Treating clinician type	Not specified
Intervention	Group psychoeducation
Study groups	Not applicable
Outcome(s) measured	Primary outcome measures included relapse rates, depressive symptoms measured by HDRS-17, and manic symptoms measured by the YMRS and BRMS.
Procedure	A systematic review and meta-analysis was conducted to investigate the treatment outcomes of bipolar patients with group cognitive behaviour therapy or group psychoeducation as an adjunct treatment to pharmacotherapy. Subgroup analyses were completed on each intervention. The search covered RCTs published from inception until March 2022.
Follow up	Yes; all GPE studies completed follow up ranging from 60 weeks to 27 months
Supportive of treatment	Inconclusive
Statistics summary	The odds ratio for relapse reduction with GPE was significant (*OR* = 0.43, 95% CI [.28, 0.62]), (*Z* = - 4.14, *p* < .0001). The standardized mean difference was used as the effect size measure. Both depressive symptom scores (*SMD* = - 0.07, 95% CI = [- 0.26 to 0.11], *Z* = 0.76, *p* = .45) and manic symptom scores (*SMD* = -0.04 (95% CI = −0.23 to 0.14, *Z* = 0.44, *p* = .66) showed no significant difference between GCBT and control groups.
Conflict of interest	Yes; professional associations of author
Risk of bias	Low
Summary of findings	Findings suggest that GPE has a significant impact in reducing the relapse rates of people with bipolar disorder when used as an adjunct therapy to psychotropic medications. However, there is not enough evidence to suggest that GPE could reduce the severity of manic and depressive symptoms in the same treatment context.

Note. BRMS: Bech-Rafaelsen Mania Scale; HDRS-17: 17-item Hamilton Depression Rating Scale; YMRS: Young Mania Rating Scale.

Self-guided digital interventions

Title of paper	**Smartphone-based interventions in bipolar disorder: Systematic review and meta-analyses of efficacy. A position paper from the International society for bipolar disorders (ISBD) big data task force**
Full citation	Anmella, G., Faurholt-Jepsen, M., Hidalgo-Mazzei, D., Radua, J., Passos, I. C., Kapczinski, F., Minuzzi, L., Alda, M., Meier, S., Hajek, T., Ballester, P., Birmaher, B., Hafeman, D., Goldstein, T., Brietzke, E., Duffy, A., Haarman, B., López-Jaramillo, C., Yatham, L. N., … Kessing, L. V. (2022). Smartphone-based interventions in bipolar disorder: Systematic review and meta-analyses of efficacy. A position paper from the International society for bipolar disorders (ISBD) big data task force. *Bipolar Disorders*, *24*(6), 580–614. https://doi.org/10.1111/bdi.13243
Level of evidence	Level I
Design	Systematic review and meta-analysis (10 studies, with 7 RCTs)
Delivery format	Digital intervention
Participants	Total pooled sample of n = 757 participants formally diagnosed with bipolar disorder, with n = 479 participants from RCTs
Demographic characteristics	For RCTs, the pooled mean age of participants was 39.6 years and 54.5% were female. For observational studies, the pooled mean age of participants was 38.7 years and 60% were female. Participants were from the US, Spain, or Denmark.
Treating clinician type	Self-guided
Intervention	Smartphone-based digital intervention
Outcome(s) measured	Relevant primary outcomes include depressive symptom severity as measured by the HDRS, MADRS and BDI-II, manic symptom severity as measured by the YMRS, and relapse rates.
Procedure	The meta-analysis examined the effectiveness of smartphone interventions in the treatment of bipolar disorder across multiple outcomes. Subgroup analyses were conducted on the RCT studies alone as well as disorder and control group subtypes. The search covered RCTs and observational studies from inception until January 2022.
Follow up	Yes; all studies reported follow-up measures ranging from 6 weeks to 6 months
Statistics summary	Hedge's g was used to calculate the pooled effect size. Across the 5 RCTs that measured depression symptoms, the pre-post change in HDRS scores was not significantly different between intervention versus control (g = -0.19, 95% CI [-0.72, 0.34], Z = -0.69, p = 1.0; I^2 = 85%). Across the 4 RCTs that measured symptoms of mania, the difference in YMRS scores was also not found to be significant (g = -0.05, 95% CI [-0.36, 0.27], Z = -0.31, p = 1.0; I^2 = 56%).
Conflict of interest	Not specified
Risk of bias	Low
Summary of findings	This meta-analysis concluded that there is no evidence to support the use of smartphone app interventions to reduce symptoms of depression and mania in those diagnosed with bipolar disorder.

Note. BDI-II: Beck Depression Inventory – II; HDRS: Hamilton Depression Rating Scale; MADRS: Montgomery–Asberg Depression Rating Scale; YMRS: Young Mania Rating Scale.

Title of paper	**Effects of smartphone-based interventions and monitoring on bipolar disorder: A systematic review and meta-analysis**
Full citation	Liu, J.-Y., Xu, K.-K., Zhu, G.-L., Zhang, Q.-Q., & Li, X.-M. (2020). Effects of smartphone-based interventions and monitoring on bipolar disorder: A systematic review and meta-analysis. *World Journal of Psychiatry*, *10*(11), 272–285. https://doi.org/10.5498/wjp.v10.i11.272
Level of evidence	Level I
Design	Systematic review and meta-analysis (10 studies, with 7 RCT studies)
Delivery format	Smartphone-based digital intervention
Participants	Total pooled sample of *n* = 1154 participants (pooled sample of *n* = 985 participants in RCTs) with a diagnosis of bipolar disorder according to DSM or ICD-10
Demographic characteristics	Participants from 16 - 59 years of age (*Mdn* = 38 years). Studies were comprised of between 38 – 88% females.
Treating clinician type	Self-guided
Intervention	Smartphone-based digital intervention
Outcome(s) measured	The primary outcome measures were mania symptom severity, measured by YMRS and PSYRATS as well as depression symptom severity measured by BDI-II, HAMD-17, HDRS, MADRS, and QIDS-SR
Procedure	A systematic review and meta-analysis was conducted to evaluate the effectiveness of smartphone-based digital interventions in treating mania and depression symptoms for adults with bipolar disorder. The search covered RCTS published from 1993 to August 1, 2019.
Follow up	Not specified
Statistics summary	At post-treatment, a fixed-effect model significantly favoured digital interventions against the control group in reducing manic symptoms (k = 6, *n* = 785, *g* = -0.19, 95% CI [-0.33, -0.04], *P* = 0.01, I^2 = 0). A random-effect model with heterogeneity (*P* < 0.05, I^2 = 75%) also favoured digital interventions in reducing depressive symptoms (k = 8, *n* = 985, *g* = -0.28, 95% CI [0.55, -0.01]).
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	Smartphone-based digital interventions were shown to be effective in treating manic and depressive symptoms of bipolar disorder in adults. Researchers identified limitations in performing subgroup analyses, including lack of information about bipolar severity, the efficacy of purely self-monitoring apps, and the inclusion of studies with high risk of bias.

Note. BDI-II: Beck Depression Inventory – II; HAMD-17: 17-item Hamilton Depression Rating Scale; HDRS: Hamilton Depression Rating Scale; MADRS: Montgomery–Asberg Depression Rating Scale; PSYRATS: Psychotic Symptom Rating Scales; QIDS-SR: Quick Inventory of Depressive Symptoms – Self Report; YMRS: Young Mania Rating Scale.

Generalised anxiety disorder

SUMMARY OF EVIDENCE

This review identified Level I evidence[55] in support of cognitive behaviour therapy, interpersonal psychotherapy, and self-guided digital interventions in the treatment of generalised anxiety disorder (GAD) in adults. Self-guided digital interventions included internet-based cognitive behaviour therapy and psychodynamic therapy, with none-to-minimal therapist guidance. Level II evidence was found to support the use of acceptance and commitment therapy (individual and group), mindfulness-based stress reduction, mindfulness-based cognitive therapy, psychodynamic therapy, and psychoeducation (group).

Guidelines provided by WHO (2023) and RANZCP (2018) provide recommendations in support of the use of cognitive behaviour therapy, self-guided digital interventions (specifically internet-based CBT) and psychoeducation in the treatment of GAD in adults.

[55] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of generalised anxiety disorder in adults.

Acceptance and commitment therapy

Title of paper	**A randomized clinical trial comparing an acceptance-based behavior therapy to applied relaxation for generalized anxiety disorder**
Full citation	Hayes-Skelton, S. A., Roemer, L., & Orsillo, S. M. (2013). A randomized clinical trial comparing an acceptance-based behavior therapy to applied relaxation for generalized anxiety disorder. *Journal of Consulting and Clinical Psychology, 81*, 761–773. https://doi.org/10.1037/a0032871
Level of evidence	Level II
Design	RCT
Follow-up	6 months
Format	Individual
Participants	81 adults diagnosed with GAD. The mean age of participants was 32.9 years, and 65.4% were female.
Treating clinician(s)	Doctoral students in clinical psychology
Intervention(s)	Acceptance-based behaviour therapy (ABBT; *n* = 40)
Comparison group(s)	Applied relaxation (*n* = 41)
Procedure	Participants were randomised to receive either manualised ABBT (an acceptance-based approach developed specifically for GAD) or manualised applied relaxation. Both interventions consisted of 16 weekly 60-minute sessions, except for the initial four sessions which lasted 90 minutes. Participants in both groups completed an average of approximately 13 therapy sessions.
Summary of findings	Sixty-three participants completed treatment and were included in the analyses. Large significant treatment effects were demonstrated over time on all primary and secondary outcome measures for both groups, indicating that the severity of GAD was reduced irrespective of treatment condition. Treatment gains were maintained at follow-up for both conditions. There were no significant between-group effects at any time point.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 41. Copyright 2018 by the Australian Psychological Society.

Title of paper	**A randomised controlled trial of acceptance and behaviour therapy and cognitive behaviour therapy for generalised anxiety disorder**
Full citation	Avdagic, E., Morrissey, S. A., & Boschen, M. J. (2014). A randomised controlled trial of acceptance and commitment therapy and cognitive-behaviour therapy for generalised anxiety disorder. *Behaviour Change, 31*(2), 110–130. https://doi.org/10.1017/bec.2014.5
Level of evidence	Level II
Design	RCT
Follow-up	3 months
Format	Group
Participants	51 adults diagnosed with GAD. The mean age of participants was 36.2 years, and 66.7% were female.
Treating clinician(s)	Psychologists
Intervention(s)	ACT (*n* = 25)
Comparison group(s)	CBT (*n* = 26)
Procedure	Participants were randomly allocated to receive either manualised ACT or manualised CBT group therapy across a period of 6 weeks. Group therapy was conducted with between four and six participants per group, and sessions were of 2 hours duration in both conditions.
Summary of findings	Thirty-eight participants completed treatment and were included in the analyses. Both interventions demonstrated large within-group effect sizes on almost all outcome measures at posttreatment, with treatment gains maintained at follow-up. Both groups showed similar degrees of improvement on all measures with no significant between-group differences at follow-up. Compared with the CBT group at posttreatment, the ACT group demonstrated significantly greater reduction of worry symptoms; however, at follow-up this difference was no longer significant. Similar results were found at posttreatment when, compared with the CBT group, a larger proportion of ACT participants were considered improved or recovered, but no differences were noted at follow-up.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 42. Copyright 2018 by the Australian Psychological Society.

Cognitive behaviour therapy

Title of paper	**Psychotherapies for generalized anxiety disorder in adults: A systematic review and network meta-analysis of randomized clinical trials**
Full citation	Papola, D., Miguel, C., Mazzaglia, M., Franco, P., Tedeschi, F., Romero, S. A., Patel, A. R., Ostuzzi, G., Gastaldon, C., Karyotaki, E., Harrer, M., Purgato, M., Sijbrandij, M., Patel, V., Furukawa, T. A., Cuijpers, P., & Barbui, C. (2024). Psychotherapies for generalized anxiety disorder in adults: A systematic review and network meta-analysis of randomized clinical trials. *JAMA Psychiatry, 81*(3), 250–259. https://doi.org/10.1001/jamapsychiatry.2023.3971
Level of evidence	Level I
Design	Systematic review and meta-analysis (65 RCTs, with 27 studies focused on CBT)
Delivery format	Individual or group, with majority delivered face-to-face and few studies using guided/unguided self-help delivery
Participants	Total participant sample included 5048 adults (aged over 18) with a primary diagnosis of generalised anxiety disorder. Participants numbers in the CBT conditions was not reported.
Demographic characteristics	Overall mean age was 42.2 (*SD* = 12.5), and overall mean percentage of females was 70.9% (*SD* = 11.9%). Studies were conducted in Canada, Iran, Sweden, USA, Netherlands, Turkey, Australia, UK, Brazil, Germany, China, Scotland, Norway, Italy, Belgium, Ireland, Hong Kong, and Puerto Rico.
Treating clinician type	Not specified
Intervention	CBT
Outcome(s) measured	Generalised anxiety disorder symptoms as measured by the GAD-7, GAD-SS, BAI, ADIS, Zung SAS, HAMA, DASS anxiety, as well as all-cause trial discontinuation as measured by the proportion of participants who dropped out from post-treatment assessment (primary outcomes).
Procedure	A systematic review and meta-analysis were conducted to assess the comparative effectiveness and acceptability of different psychotherapy types in treating adults with GAD. The database search included RCTs published from database inception to January 2023. Subgroup and sensitivity analyses were further conducted.
Follow up	Yes; ranging from 4 to 72 weeks (mean 23.6 [*SD* = 13.6] weeks)
Statistics summary	Random-effects model pairwise and network meta-analyses were conducted, and standardized mean differences were pooled to assess effectiveness. CBT was associated with significantly reduced GAD symptoms compared to TAU (*SMD* -0.74, 95% CI [-1.09, -0.39]) at posttreatment, and remained significant compared to TAU at 3 to 12 months follow-up (*SMD* -0.60, 95% CI [-0.99, -0.21]). Global heterogeneity for the NMA was moderate ($\tau 2$ = 0.24), and there was no evidence of global inconsistency ($\chi 2$ = 15.27; p = .91).
Conflict of interest	Yes (financial, employment-related)
Risk of bias	Low
Summary of findings	Findings indicated that CBT is effective in reducing symptoms of adult GAD both at posttreatment and 3-to-12-month follow-up compared with treatment as usual.

Note. ADIS: Anxiety and Related Disorders Interview Schedule; BAI: Beck Anxiety Inventory; DASS: Depression Anxiety Stress Scales; GAD-7: Generalized Anxiety Disorder Scale, 7-item; GAD-SS: Generalized Anxiety Disorder Severity Scale; HAMA: Hamilton Anxiety Rating Scale; SAS: Self-Rating Anxiety Scale.

Interpersonal psychotherapy

Title of paper	**Efficacy of interpersonal psychotherapy in mainland China: A systematic review and meta-analysis**
Full citation	Tang, L., Xu, F., Yu, G., Li, C., Wen, S., & Zheng, W. (2023). Efficacy of interpersonal psychotherapy in mainland China: A systematic review and meta-analysis. *Frontiers in Psychiatry, 14*, 1160081. https://doi.org/10.3389/fpsyt.2023.1160081
Level of evidence	Level I
Design	Systematic review and meta-analysis (40 RCTs, with 3 studies focused on GAD)
Delivery format	Individual, face-to-face
Participants	Overall participant numbers varied from 21 to 176 across the 40 studies, with the majority (57.5%) involving 80 or more participants. In the 3 studies focused on GAD, 254 adult participants with a diagnosis of GAD were included.
Demographic characteristics	Mean age was 35.8 (*SD* ranged from 3.1 to 11.5) across the 3 GAD-focused studies. All studies were conducted in mainland China with Chinese participants.
Treating clinician type	Not specified
Intervention	IPT
Outcome(s) measured	Severity of anxiety symptoms as measured by the HAMA
Procedure	A systematic review and meta-analysis were conducted to assess the evidence for IPT in mainland China. Study findings were grouped and summarized per psychiatric diagnoses. The systematic search included RCTs published from database inception to September 2022.
Follow up	No
Statistics summary	A narrative review of the 3 GAD studies identified was reported. A meta-analysis could not be conducted due to the limited number of studies identified. All three studies showed a significant effect of IPT in reducing anxiety symptoms ($p < .05$) and showed no differences between the effects of IPT and CBT in treating anxiety symptoms.
Conflict of interest	None declared
Risk of bias	High
Summary of findings	Findings indicated that IPT is efficacious in the treatment of adults with GAD among Chinese populations.

Note. HAMA: Hamilton Anxiety Rating Scale.

Mindfulness-based cognitive therapy

Title of paper	**Effects of group mindfulness-based cognitive therapy and group cognitive behavioural therapy on symptomatic generalized anxiety disorder: A randomized controlled noninferiority trial**
Full citation	Jiang, S. S., Liu, X. H., Han, N., Zhang, H. J., Xie, W. X., Xie, Z. J., Lu, X. Y., Zhou, X. Z., Zhao, Y. Q., Duan, A. D., Zhao, S. Q., Zhang, Z. C., & Huang, X. B. (2022). Effects of group mindfulness-based cognitive therapy and group cognitive behavioural therapy on symptomatic generalized anxiety disorder: A randomized controlled noninferiority trial. *BMC psychiatry, 22*(1), 481. https://doi.org/10.1186/s12888-022-04127-3
Level of evidence	Level II
Design	Randomised control trial (RCT)
Delivery format	Group, face to face
Participants	Participants were 138 adults diagnosed with GAD based on DSM-IV criteria.
Demographic characteristics	Mean age was 35.1 (*SD* = 10.1) in the MBCT-A condition and 36.8 (*SD* = 11.9) in the CBT-A condition. Females accounted for 38% of the MBCT-A condition, and 44% of the CBT-A condition. The study was conducted with Chinese participants.
Treating clinician type	Trained mental health professionals (psychologist, psychiatrist)
Intervention	Mindfulness-based cognitive therapy (MBCT)
Study groups	Intervention: MBCT-A (adapted for GAD) Control group: CBT-A (adapted for GAD)
Outcome(s) measured	Anxiety response rate as measured by the HAMA (primary outcome). Anxiety remission rates, scores on the HAMA, STAI, HAMD, CGI-S, SF-12, and FFMQ (secondary outcomes)
Procedure	Participants were randomly allocated to either MBCT-A or CBT-A groups. The MBCT-A intervention consisted of weekly sessions for 8 weeks, each lasting two hours and involving 20-25 participants. The CBT-A intervention consisted of weekly 1.5-hour sessions over 8 weeks, with 10-15 participants per group. Both interventions were adapted to be appropriate for treating GAD.
Follow up	Yes; 3 months
Statistics summary	Both intention-to-treat (ITT) and per-protocol (PP) analyses showed that MBCT-A was non-inferior compared with CBT-A for response rate at 8 weeks (ITT rate difference = 7.25%, 95% CI[-8.16, 22.65]; PP rate difference = 5.85%, 95% CI [-7.83, 19.53]). The HAMA remission rate in the MBCT-A group was significantly higher than the CBT-A group (63.8% vs 44.6%, p = 0.040, Cohen's d = 0.39). There were no significant differences between the groups at 3-month follow-up.
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	Findings indicated that MBCT-A is noninferior to CBT-A in reducing anxiety symptoms in adults with GAD and is effective both at posttreatment and 3-month follow-up.

Note. CGI-S: Clinical Global Impression Scale – Severity Subscale; FFMQ: Five Facet Mindfulness Questionnaire; HAMA: Hamilton Anxiety Scale; HAMD: Hamilton Depression Scale; STAI: State-Trait Anxiety Inventory; SF-12: 12-item Short-Form Health Survey.

Mindfulness-based stress reduction

Title of paper	**Randomized controlled trial of mindfulness meditation for generalized anxiety disorder: Effects on anxiety and stress reactivity**
Full citation	Hoge, E. A., Bui, E., Marques, L., Metcalf, C. A., Morris, L. K., Robinaugh, D. J., Worthington, J. J., Pollack, M. H., & Simon, N. M. (2013). Randomized controlled trial of mindfulness meditation for generalized anxiety disorder: Effects on anxiety and stress reactivity. *The Journal of Clinical Psychiatry, 74*(8), 786–792. https://doi.org/10.4088/JCP.12m08083
Level of evidence	Level II
Design	RCT
Follow-up	None
Format	Group
Participants	93 adults diagnosed with GAD. The mean age of participants was 39 years, and 51% were female.
Treating clinician(s)	Not reported
Intervention(s)	MBSR (*n* = 48)
Comparison group(s)	Active control (stress management education; *n* = 45)
Procedure	Participants were randomly allocated to either MBSR or a stress management education group. All participants underwent a social stress test before and after treatment which included an 8-minute public speaking task followed by a 5-minute mental arithmetic task. The MBSR intervention comprised eight weekly 2-hour group sessions with a 4-hour "retreat". The stress management intervention consisted of eight weekly 2-hour group lecture-style sessions, with one 4-hour physical health and wellbeing speciality class.
Summary of findings	Participants who completed at least one session of treatment were included in the analyses. Both groups demonstrated statistically significant improvements on all outcome measures including anxiety symptoms, sleep quality, and stress reactivity as measured by the social stress test. However, on all but one outcome measure (one of the three measures of anxiety), participants in the MBSR group demonstrated significantly greater improvement on all outcome measures.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 43. Copyright 2018 by the Australian Psychological Society.

Psychodynamic therapy

Title of paper	**Long-term effects of short-term psychodynamic psychotherapy and cognitive behavioural therapy in generalized anxiety disorder: 12-month follow-up**
Full citation	Salzer, S., Winkelbach, C., Leweke, F., Leibing, E., & Leichsenring, F. (2011). Long-term effects of short-term psychodynamic psychotherapy and cognitive-behavioral therapy in generalized anxiety disorder: 12-month follow-up. *The Canadian Journal of Psychiatry, 56*(8), 503–508. http://doi.org/10.1177/070674371105600809
Level of evidence	Level II
Design	RCT
Follow-up	6 and 12 months
Format	Individual
Participants	57 adults with a primary diagnosis of GAD. The mean age of participants was 42.5 years, and 80.7% were female.
Treating clinician(s)	Details not reported
Intervention(s)	Short-term psychodynamic therapy (*n* = 28)
Comparison group(s)	CBT (*n* = 29)
Procedure	In the original RCT, participants were randomly allocated to either short-term psychodynamic therapy or CBT. The intervention for both groups consisted of 30 weekly 50-minute sessions carried out according to treatment manuals. Participants completed a mean of 28.8 sessions of CBT and 29.1 sessions of psychodynamic therapy.
Summary of findings	Both therapeutic interventions resulted in significant and mostly large within-group improvements in symptoms of anxiety, worry, and depression from baseline to 12-month follow-up. Large between-group effect sizes in favour of CBT were found on measures of trait anxiety and worry. For all other outcome measures, between-group effect sizes in favour of CBT were small to medium.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 44. Copyright 2018 by the Australian Psychological Society.

Psychoeducation

Title of paper	**Mindfulness-based cognitive therapy v. group psychoeducation for people with generalised anxiety disorder: Randomised controlled trial**
Full citation	Wong, S. Y., Yip, B. H., Mak, W. W., Mercer, S., Cheung, E. Y., Ling, C. Y., Lui, W. W., Tang, W. K., Lo, H. H., Wu, J. C., Lee, T. M., Gao, T., Griffiths, S. M., Chan, P. H., & Ma, H. S. (2016). Mindfulness-based cognitive therapy v. group psychoeducation for people with generalised anxiety disorder: Randomised controlled trial. *The British Journal of Psychiatry: The Journal of Mental Science, 209*(1), 68–75. https://doi.org/10.1192/bjp.bp.115.166124
Level of evidence	Level II
Design	RCT
Follow-up	3 months for all conditions; six and 9 months for the MBCT and psychoeducation groups.
Format	Group
Participants	182 adults with a diagnosis of GAD. The mean age of participants was 50 years, and 79.1% were female.
Treating clinician(s)	Clinical psychologists
Intervention(s)	MBCT (*n* = 61), psychoeducation (*n* = 61)
Comparison group(s)	TAU (*n* = 60)
Procedure	Participants were randomly allocated to one of three conditions: group psychoeducation, MBCT, or TAU. Both active interventions were manual-based, consisted of weekly 2-hour sessions over 8 weeks, and were designed to be comparable in terms of structure and clinician contact time. Participants received an average of 6.4 and 7.1 therapy sessions in the MBCT and psychoeducation groups, respectively.
Summary of findings	Compared with the TAU group, both the MBCT and psychoeducation groups showed clinically significant reductions in anxiety symptoms at posttreatment and 3-month follow-up. Psychoeducation, but not MBCT, was significantly more effective than was TAU in reducing worry at 3-month follow-up. Although follow-up data were not available for the control group, both anxiety and worry symptoms continued to decrease significantly at each follow-up time point for both active intervention groups. There were no significant between-group differences at either follow-up time point.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 43. Copyright 2018 by the Australian Psychological Society.

Self-guided digital interventions

Title of paper	**Two decades of digital interventions for anxiety disorders: A systematic review and meta-analysis of treatment effectiveness.**
Full citation	Pauley, D., Cuijpers, P., Papola, D., Miguel, C., & Karyotaki, E. (2023). Two decades of digital interventions for anxiety disorders: A systematic review and meta-analysis of treatment effectiveness. *Psychological Medicine*, *53*(2), 567–579. https://doi.org/10.1017/S0033291721001999
Level of evidence	Level I
Design	Systematic review and meta-analysis (47 RCTs with 9 studies focused on generalised anxiety disorder)
Delivery format	Digital intervention, with none to minimal therapist guidance
Participants	Participants were 4958 adults diagnosed with an anxiety disorder according to DSM-5 criteria (1203 participants with generalised anxiety disorder)
Demographic characteristics	Age and gender demographics were not specified. Studies were conducted in Europe, Oceania, and North America.
Treating clinician type	Not specified
Intervention	Internet-based cognitive behaviour therapy, internet delivered psychodynamic therapy
Outcome(s) measured	The primary outcome was anxiety symptom severity as measured by the PSWQ and GAD-7
Procedure	A systematic review and meta-analysis were conducted to investigate the efficacy of digital interventions for anxiety disorders, exploring their efficacy broadly and specifically across all disorders. The systematic search included RCTs published from database inception to January 2020. Subgroup and sensitivity analyses were further conducted.
Follow up	Not specified
Statistics summary	A random-effects pooling meta-analysis was used to calculate the effect size of digital interventions compared to passive control across all anxiety disorders. A significant overall effect for digital interventions was found (Hedges g = 0.80, 95% CI [0.68, 0.93]) with high heterogeneity (I^2 = 75%). Subgroup analyses of studies that focused on GAD showed a significant effect in reducing anxiety symptoms (Hedge's g = 0.62, 95% CI [0.31, 0.93]) with high heterogeneity (I^2 = 81%).
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	Findings indicated that digital interventions, including internet-based cognitive behaviour therapy and psychodynamic therapy, were efficacious in treating symptoms of GAD in adults.

Note. DSM-5: Diagnostic and statistical manual of mental disorders, fifth edition; GAD-7: Generalized Anxiety Disorder Scale, 7-item; PSWQ: Penn State Worry Questionnaire.

Panic disorder

SUMMARY OF EVIDENCE

Level I evidence[56] was found in support of the use of cognitive behaviour therapy and self-guided digital interventions in the treatment of panic disorder in adults. Level II evidence was identified in support of acceptance and commitment therapy and short-term psychodynamic therapy. Additionally, there is Level IV evidence in support of mindfulness-based cognitive therapy in the treatment of panic disorder in adults.

Guidelines provided by the American Psychiatric Association (2010), NICE (2020), RANZCG (2018), and WHO (2023) endorse the use of cognitive behaviour therapy (CBT) in the treatment of adult panic disorder, including when delivered face-to-face (individual or group), in digital format (via a computer, tablet or smartphone application), or via self-help books. The American Psychiatric Association guidelines (2010) also support with moderate clinical confidence the conditional use of panic-focused psychodynamic psychotherapy as an initial treatment. The WHO guidelines (2023) conditionally recommend stress management techniques such as relaxation or mindfulness training.

In this review, inclusion criteria included a requirement that panic disorder be the primary diagnosis when comorbidity existed among study participants (see methodology section for details). Panic disorder and agoraphobia are highly comorbid and were not classified as distinct disorders until the release of the DSM-5 (APA, 2013). Therefore, many articles based on clinical populations diagnosed pre-DSM-5 were excluded from this systematic review.

[56] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of panic disorder in adults.

Acceptance and commitment therapy

Title of item	**Treating treatment-resistant patients with panic disorder and agoraphobia using psychotherapy: A randomized controlled switching trial**
Author(s) and source	Gloster, A. T., Sonntag, R., Hoyer, J., Meyer, A. H., Heinze, S., Ströhle, A., Eifert, G., & Wittchen, H. U. (2015). Treating treatment-resistant patients with panic disorder and agoraphobia using psychotherapy: A randomized controlled switching trial. *Psychotherapy and Psychosomatics, 84*(2), 100–109. https://doi.org/10.1159/000370162
Evidence level	Level II
Design	RCT
Follow-up	6 months
Format	Individual
Participants	43 adults with treatment-resistant panic disorder with agoraphobia. The mean age of participants was 37.1 years, and 73.4% were female. Participants had previously unsuccessfully undergone a mean of 42.2 therapy sessions and had tried a mean of 2.1 pharmacological agents.
Treating clinician(s)	Graduate students of a CBT university training centre ACT (n = 33)
Intervention(s)	ACT (n = 33)
Comparison group(s)	Waitlist control (n = 10)
Procedure	Participants were randomly allocated to receive a 4-week manualised ACT intervention adapted for panic disorder or waitlist control. The intervention consisted of eight, twice- weekly sessions lasting between 90 and 120 minutes over a 4-week period.
Summary of findings	Compared with the waitlist group, large between-group effect sizes were demonstrated in favour of the ACT group at posttreatment in terms of panic/agoraphobic symptoms and general functioning. Treatment gains for the intervention group were either maintained or further improved at the 6-month follow-up across all primary and secondary outcomes. Furthermore, the number of comorbid symptoms was significantly reduced at follow-up for participants in the ACT group.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 47. Copyright 2018 by the Australian Psychological Society.

Cognitive behaviour therapy

Title of paper	**Psychological therapies for panic disorder with or without agoraphobia in adults: A network meta-analysis**
Full citation	Pompoli, A., Furukawa, T. A., Imai, H., Tajika, A., Efthimiou, O., & Salanti, G. (2016). Psychological therapies for panic disorder with or without agoraphobia in adults: A network meta-analysis. *The Cochrane Database of Systematic Reviews, 4*(4), CD011004. https://doi.org/10.1002/14651858.CD011004.pub2
Evidence level	Level I
Design	Systematic review (60 studies) and meta-analysis (54 studies)
Follow-up	Not reported
Format	Individual, group
Participants	3,021 adults with a primary diagnosis of panic disorder with or without agoraphobia. The age and gender of participants was not reported.
Treating clinician(s)	Not reported
Intervention(s)	CBT, behaviour therapy, cognitive therapy, psychoeducation, supportive therapy, third-wave CBT interventions (i.e., MBCT, ACT, metacognitive therapy, schema therapy), psychodynamic therapies.
Comparison group(s)	Waitlist control, no treatment, attention placebo, psychological placebo, alternative intervention.
Procedure	Systematic review and meta-analysis of all relevant RCTs published to March 2015 focusing on adults with a formal diagnosis of panic disorder with or without agoraphobia.
Summary of findings	Behaviour therapy, cognitive therapy, and CBT were shown to be significantly better than was waitlist control in terms of short-term remission, with large effect sizes. When small study effects were taken into account for short-term remission, CBT remained significantly more effective than was waitlist. However, compared with behaviour therapy for short-term remission, the effect size was reduced to small. A small treatment effect in favour of CBT was also found. Similarly in terms of short-term improvement, CBT, cognitive therapy, and behaviour therapy were significantly better than was waitlist, with large effect sizes. Compared with applied relaxation, a large effect size in favour of short-term psychodynamic therapy was found in terms of short-term improvement and remission; however, this was based on only one study.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 45. Copyright 2018 by the Australian Psychological Society.

Title of paper	**Efficacy of group psychotherapy for panic disorder: Meta-analysis of randomized, controlled trials**
Full citation	Schwartze, D., Barkowski, S., Strauss, B., Burlingame, G. M., Barth, J., & Rosendahl, J. (2017). Efficacy of group psychotherapy for panic disorder: Meta-analysis of randomized, controlled trials. *Group Dynamics: Theory, Research, and Practice, 21*(2), 77–93. https://doi.org/10.1037/gdn0000064
Evidence level	Level I
Design	Meta-analysis (15 studies)
Follow-up	Nil to 2 years
Format	Group
Participants	864 adults diagnosed with panic disorder with or without agoraphobia. The mean age of participants was 37 years, and 70% were female.
Treating clinician(s)	Not reported
Intervention(s)	Group CBT (14 studies), group cognitive therapy (one study)
Comparison group(s)	Waitlist control, minimal contact, alternative treatment (i.e., individual CBT, pharmacotherapy, relaxation)
Procedure	Meta-analysis of all available RCTs published since 1990 on the efficacy of group therapies for the treatment of adult panic disorder. The treatment could be based on any theoretical approach, but only studies that applied CBT or cognitive therapy (without the exposure component) were included.
Summary of findings	Compared with no-treatment control, a large and significant effect in favour of group therapy was found on panic and agoraphobic symptoms as well as on secondary measures of general anxiety and depression. There were no significant differences between group therapy and the alternative treatments as a whole (i.e., individual CBT, pharmacotherapy, and relaxation). However, only a small number of studies were identified for each type of alternative treatment. Follow-up data were available for three studies only, and therefore data were not able to be analysed by meta-analysis.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 46. Copyright 2018 by the Australian Psychological Society.

Title of paper	**Disorder-specific versus transdiagnostic and clinician-guided versus self-guided internet-delivered treatment for panic disorder and comorbid disorders: A randomized controlled trial**
Full citation	Fogliati, V. J., Dear, B. F., Staples, L. G., Terides, M. D., Sheehan, J., Johnston, L., Kayrouz, R., Dear, R., McEvoy, P. M., & Titov, N. (2016). Disorder-specific versus transdiagnostic and clinician-guided versus self-guided internet-delivered treatment for panic disorder and comorbid disorders: A randomized controlled trial. *Journal of Anxiety Disorders, 39*, 88–102. https://doi.org/10.1016/j.janxdis.2016.03.005
Evidence level	Level II
Design	RCT
Follow-up	3, 12, and 24 months
Format	Online (clinician-guided vs self-guided)
Participants	145 adults with symptoms consistent with panic disorder; 132 participants met diagnostic criteria. The mean age of participants was 41.4 years, and 79% were female.
Treating clinician(s)	Three psychologists and one CBT-trained counsellor
Intervention(s)	Transdiagnostic online CBT (TD-CBT; *n* = 72), self-guided online CBT (SG-CBT; *n* = 73) Disorder-specific online CBT (DS-CBT; *n* = 73), clinician-guided online CBT (CG-CBT; *n* = 72)
Comparison group(s)	Participants were randomly allocated to one of four treatment conditions: TD-CBT, SG-CBT, DS-CBT and CG-CBT. Courses included five lessons delivered online over 8 weeks and shared the same overall format. The TD-CBT presented a broad range of therapeutic information and skills relevant to psychological distress generally. The DS-CBT treatment was specifically designed to target symptoms of panic disorder. Participants in the clinician-guided condition received weekly telephone or email contact designed to be approximately 10 minutes per contact.
Procedure	All treatment conditions were associated with large within-group treatment effects for panic disorder symptomatology, and medium to large treatment effects on symptoms of depression, generalised anxiety, and social anxiety at posttreatment and at 3-, 12-, and 24-month follow- up. There were no significant differences on any outcome measure across time between the TD-CBT and DS-CBT groups, or between the CG-CBT and SG-CBT groups.
Summary of findings	All treatment conditions were associated with large within-group treatment effects for panic disorder symptomatology, and medium to large treatment effects on symptoms of depression, generalised anxiety, and social anxiety at posttreatment and at 3-, 12-, and 24-month follow up. There were no significant differences on any outcome measure across time between the TD-CBT and DS-CBT groups, or between the CG-CBT and SG-CBT groups.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 46. Copyright 2018 by the Australian Psychological Society.

Title of paper	**The effects of the five-session cognitive behavior group therapy for panic disorders: Ultra-brief treatment**
Full citation	Yığman, F., Efe, C., Ekici, E., & Özdel, K. (2021). The effects of the five-session cognitive behavior group therapy for panic disorders: Ultra-brief treatment. *International Journal of Cognitive Therapy, 14*(3), 552-565. https://doi.org/10.1007/s41811-021-00099-6
Evidence level	Level IV
Design	Non-randomised experimental study
Format	Group, face to face.
Participants	46 patients from a hospital psychiatry outpatient clinic, diagnosed with a primary panic disorder.
Demographic characteristics	Mean age: 33.7; range: 18-55. 52.2% females. Living in Turkey.
Treating clinician type	Trained health professionals: three therapists including two trained in CBT.
Intervention	CBT
Outcome(s) measured	Panic disorder symptom severity as measured by the PDSS (Turkish adaptation) and BSQ.
Procedure	This intervention consisted of five 60-to-75-minute sessions of CBT, delivered in groups of up to 8 participants and comprised psychoeducation, intra-session exposure, cognitive restructuring and behavioural assignments. Scales were administered before the intervention (pretest), after the 2nd (mid-test) and 5th sessions (posttest), and six months after the intervention (follow-up).
Follow up	Yes, six months.
Statistics summary	A repeated measures ANOVA was performed to compare the PDSS and BSQ mean scores between pretest, mid-test, posttest, and follow-up. There was a statistically significant difference in mean scores between measurement times for the PDSS (F = 223.6, p <.001, η^2 = 0.83) and the BSQ (F = 39.74, p <.001, η^2 = 0.47). Post-hoc comparisons indicated that PDSS and BSQ mean scores were significantly different between pretest, mid-test and posttest, but not between posttest and follow-up.
Conflict of interest	None declared
Risk of bias	Moderate
Summary of findings	The results of this study show that an ultra-brief intervention of group CBT is effective in reducing panic disorder symptom severity, with gains maintained after six months.

Note. PDSS: Panic Disorder Severity Scale.

Mindfulness-based cognitive therapy

Title of item	**Effectiveness of a mindfulness-based cognitive therapy program as an adjunct to pharmacotherapy in patients with panic disorder**
Author(s) and source	Kim, B., Lee, S. H., Kim, Y. W., Choi, T. K., Yook, K., Suh, S. Y., Cho, S. J., & Yook, K. H. (2010). Effectiveness of a mindfulness-based cognitive therapy program as an adjunct to pharmacotherapy in patients with panic disorder. *Journal of Anxiety Disorders, 24*(6), 590–595. https://doi.org/10.1016/j.janxdis.2010.03.019
Evidence level	Level IV
Design	Case series with pretest and posttest
Follow-up	1 year
Format	Group
Participants	23 adults diagnosed with panic disorder with or without agoraphobia. The mean age of participants was 41.2 years, and 57% were male. Participants were required to have been on medication for at least 6 months.
Treating clinician(s)	Psychiatrists with 3 years' experience with MBCT
Intervention(s)	MBCT (*n* = 23)
Comparison group(s)	None
Procedure	All participants completed the MBCT group intervention, which consisted of weekly 90-minute sessions over an 8-week period. The intervention was manualised and delivered according to standard MBCT protocol but adapted for panic disorder and the Korean context. Medication adherence was monitored weekly by psychiatrists. Seventeen of the original 23 participants completed the 1-year follow-up assessment.
Summary of findings	Clinically significant reductions in symptom severity were found on both clinician-administered and self-report measures from pre- to post-treatment, with large effect sizes for the clinician- administered measures of general anxiety and panic disorder severity, and small to medium effect sizes for the self-report measures of general anxiety, anxiety sensitivity, and agoraphobic symptoms. Fifteen of the 17 participants who were assessed at follow-up no longer met diagnostic criteria for panic disorder.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 48. Copyright 2018 by the Australian Psychological Society.

Psychodynamic therapy

Title of item	Implementing panic-focused psychodynamic psychotherapy into clinical practice
Author(s) and source	Beutel, M. E., Scheurich, V., Knebel, A., Michal, M., Wiltink, J., Graf-Morgenstern, M., Tschan, R., Milrod, B., Wellek, S., & Subic-Wrana, C. (2013). Implementing panic-focused psychodynamic psychotherapy into clinical practice. *Canadian Journal of Psychiatry, 58*(6), 326–334. https://doi.org/10.1177/070674371305800604
Evidence level	Level II
Design	RCT
Follow-up	6 months
Format	Individual
Participants	54 adults diagnosed with panic disorder with or without agoraphobia. The mean age of participants was 36.2 years, and 57.4% were female.
Treating clinician(s)	Clinicians trained in panic-focused psychodynamic therapy, and certified CBT clinicians. Panic-focused psychodynamic therapy (*n* = 36)
Intervention(s)	Panic-focused psychodynamic therapy (*n* = 36)
Comparison group(s)	CBT (*n* = 18)
Procedure	Participants were randomly allocated in a 2:1 ratio to receive a brief, time-limited form of psychodynamic therapy developed for panic disorder or CBT plus exposure. Both interventions were manualised. The psychodynamic therapy intervention comprised 24 x 50-minute sessions twice-weekly over a period of 12 weeks. The CBT intervention was completed over the same 12-week period and with the same amount of clinician contact, with the exception of the exposure sessions that varied in length (up to 2 hours).
Summary of findings	At posttreatment and follow-up, both interventions achieved significant reduction of panic symptoms with large within-group effect sizes at both time points. CBT was significantly more effective than was psychodynamic therapy at posttreatment, with a medium between- group effect size observed. However, this difference was no longer significant at 6-month follow-up, with treatment effects remaining large and comparable for both groups. Remission was achieved by 44.4% and 61.1% of participants in the PFPP and CBT groups, respectively, at posttreatment, with a small between-group effect size in favour of CBT. This difference was no longer apparent at follow-up.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 47. Copyright 2018 by the Australian Psychological Society.

Self-guided digital interventions

Title of paper	**Computer therapy for the anxiety and depression disorders is effective, acceptable, and practical health care: An updated meta-analysis**
Full citation	Andrews, G., Basu, A., Cuijpers, P., Craske, M. G., McEvoy, P., English, C. L., & Newby, J. M. (2018). Computer therapy for the anxiety and depression disorders is effective, acceptable, and practical health care: An updated meta-analysis. *Journal of Anxiety Disorders, 55*, 70-78. https://doi.org/10.1016/j.janxdis.2018.01.001
Evidence level	Level I
Design	Meta-analysis (64 studies)
Format	Digital intervention, with and without therapist guidance
Participants	Total sample size of *n* = 8,279 participants, with *n* = 584 in the panic disorder subgroup analysis. All participants met criteria for either major depressive disorder, generalized anxiety disorder, panic disorder with or without agoraphobia or social anxiety disorder as a primary diagnosis.
Demographic characteristics	Not specified
Treating clinician type	Not specified
Intervention	iCBT
Outcome(s) measured	Panic disorder symptom severity as measured by the PDSS and BSQ.
Procedure	A systematic review and meta-analysis investigated the effectiveness of iCBT for anxiety and depressive disorders, with subgroup analyses completed for each disorder included. The included time frame was from the beginning of the databases until September 2016.
Follow up	Yes; 50 studies completed follow up ranging from 1 month to 36 months
Statistics summary	A meta-analysis was conducted, and effect sizes (Hedge's *g*) were calculated to assess the post-treatment effects of iCBT versus control groups. In the panic disorder subgroup analysis, results indicated a significant effect ($p < .001$) with a Hedge's *g* score of 1.31 (95% CI [0.85, – 1.76]). Heterogeneity was rated as high ($I^2 = 84$, 95% CI [74 - 90]).
Conflict of interest	Not specified
Risk of bias	High
Summary of findings	This meta-analysis concludes that iCBT is an effective treatment for panic disorder compared to control groups. ICBT, traditional face-to-face CBT and iCBT with bibliotherapy appeared to be equally beneficial.

Note. BSQ: Body Sensations Questionnaire; PDSS: Panic Disorder Severity Scale

Social anxiety disorder

SUMMARY OF EVIDENCE

Level I evidence[57] was found in support of cognitive behaviour therapy, self-guided digital interventions (including internet-delivered and application-delivered CBT), interpersonal psychotherapy, and psychodynamic therapy in the treatment of social anxiety disorder in adults. Level II evidence was identified in support of acceptance and commitment therapy, compassion-focused therapy, and mindfulness-based stress reduction adapted for social anxiety disorder.

Guidelines provided by RANZCP (2018) and NICE (2013) endorse the use of cognitive behaviour therapy in both face-to-face and digital formats as a first-line treatment for social anxiety disorder in adults.

.

[57] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of social anxiety disorder in adults.

Acceptance and commitment therapy

Title of paper	**Randomized controlled trial of acceptance and commitment therapy versus traditional cognitive behavior therapy for social anxiety disorder: Symptomatic and behavioral outcomes.**
Full citation	Herbert, J. D., Forman, E. M., Kaye, J. L., Gershkovich, M., Goetter, E., Yuen, E. K., Glassman, L., Goldstein, S., Hitchcock, P., Tronieri, J. S., Berkowitz, S., & Marando-Blanck, S. (2018). Randomized controlled trial of acceptance and commitment therapy versus traditional cognitive behavior therapy for social anxiety disorder: Symptomatic and behavioral outcomes. *Journal of Contextual Behavioral Science, 9*, 88–96. https://doi.org/10.1016/j.jcbs.2018.07.008
Evidence level	Level II
Design	Randomized controlled trial (RCT)
Delivery format	Individual, face-to-face
Participants	Participants were 88 adults who met criteria for a primary diagnosis of social anxiety disorder (generalized subtype) based on DSM-IV-TR. Forty-nine participants were randomized to receive ACT and fifty-three participants to receive traditional CBT.
Demographic characteristics	Participants mean age was 30 (*SD* = 11). The sample consisted of 51.1% females and was racially diverse.
Treating clinician type	Student therapist (master's and doctoral level)
Intervention	ACT
Study groups	Intervention group: ACT Active control: traditional CBT (tCBT)
Outcome(s) measured	Social anxiety symptoms as measured by the ADIS-IV, LSAS, SPAI, and SCID-IV (diagnostic status); clinical severity and improvement were measured by the CGI-S and CGI-I; behavioral outcomes were measured by a behavioral assessment task..
Procedure	Both treatments consisted of 12 individual weekly sessions, with the first two scheduled for 90 minutes, and the remaining for one hour. Both protocols included within-session exposure exercises from sessions 3 through 12.
Follow up	No
Statistics summary	Primary outcomes were analyzed using mixed factorial ANOVAs, independent samples t-tests and chi-square tests. Both groups showed large, significant improvements across symptom measures over time. Participants in the tCBT group had lower symptoms severity scores compared to ACT at post-treatment (*p*s = 0.002-0.01), higher rates of diagnostic remission (64.3%) compared to 40.6% in the ACT group ($\chi 2$ [1, n=58] = 3.52, *p* =.06, Φ=-0.25), and were rated as less severely ill at post-treatment (*p* = .01).
Conflict of interest	None declared
Risk of bias	Some concerns
Summary of findings	Study findings indicated that ACT significantly reduced social anxiety symptoms, however traditional CBT showed greater improvements in social anxiety symptoms and overall functioning.

Note. ADIS-IV: Anxiety Disorder Interview Schedule for DSM-IV; LSAS: Liebowitz Social Anxiety Scale; ; CGI-I: Clinical Global Impression - Improvement ; CGI-S: Clinical Global Impressions Scale - Severity; ; SCID-IV: Structured Clinical Interview for DSM-IV Disorders; SPAI: Social Phobia Anxiety Inventory.

Cognitive behaviour therapy

Title of paper	**Cognitive behavioral therapy for anxiety and related disorders: A meta-analysis of randomized placebo-controlled trials**
Full citation	Carpenter, J. K., Andrews, L. A., Witcraft, S. M., Powers, M. B., Smits, J. A. J., & Hofmann, S. G. (2018). Cognitive behavioral therapy for anxiety and related disorders: A meta-analysis of randomized placebo-controlled trials. *Depression and Anxiety, 35*(6), 502-514. https://doi.org/10.1002/da.22728
Evidence level	Level I
Design	Meta-analysis (*N* =41 studies, *n* = 12 studies for social anxiety disorder)
Delivery format	Combination of individual and group delivery.
Participants	*N*= 2842 (*n* = 753 for social anxiety disorder) Patients met DSM-III-R, DSM-IV, or DSM-5 diagnostic criteria for acute stress disorder, generalised anxiety disorder (GAD), obsessive compulsive disorder (OCD), panic disorder (PD), posttraumatic stress disorder (PTSD), and social anxiety disorder (SAD).
Demographic characteristics	For the whole meta-analysis, the average study sample had a mean age of 36.0 years (*SD* = 6.53), of which 58.9% was female (*SD* = 21.21) and 73.0% was white (*SD* = 21.87).
Treating clinician type	Not specified
Intervention	CBT
Outcome(s) measured	Social anxiety symptom severity as measured by the ADIS, ADIS-R, APPQ-S, BFNE, BSPS, CGI, CGI-S, FNE, FQ, FQ-SP, IIP, IIS, LSAS, SAD, SAFE, SCI, SCL-90, SIAS, SISST, SPAI, SPDS-S, SPS, SPWWS, and SUDS.
Procedure	This meta-analysis aimed to examine the efficacy of CBT for anxiety-related disorders compared to compared to pill or psychological placebos, based on randomised controlled trials. The disorders included were acute stress disorder, GAD, OCD, PD, PTSD, and SAD. PubMed and PsycINFO were searched for articles published from the first available date to 4 January 2017.
Follow up	Yes, 6 months, but not reported at the disorder level.
Statistics summary	A random-effect meta-analysis was performed. Placebo-controlled effect size of treatment response for CBT for SAD: Hedge's *g* = = 0.48, 95%CI [0.26, 0.71]. Odds ratios and 95% confidence intervals (CI) of treatment response for CBT for SAD: OR = 3.51 95%CI [1.64, 7.53]. (Heterogeneity statistics were not provided at the disorder level.)
Conflict of interest	Yes (financial)
Risk of bias	Unclear
Summary of findings	Results from this meta-analysis indicate that CBT is more effective than pill or psychological placebos in reducing SAD symptom severity. CBT was also associated with greater benefits than placebo on other measures of anxiety, depression, and quality of life. Analyses across all included disorders showed that gains were maintained six months after treatment. Analyses conducted for SAD and PTSD combined indicated that group treatment had smaller effect sizes than individual treatment.

Note. ADIS: Anxiety Disorder Interview Schedule for DSM-IV; ADIS-R: Anxiety Disorder Interview Schedule Revised; APPQ-S: Albany Panic and Phobia Scale – Social Phobia subscale; BFNE: Brief Fear of Negative Evaluation Scale; BSPS: Brief Social Phobia Scale; CGI: Clinical Global Impressions Scale ; CGI-S: Clinical Global Impressions Scale – Severity FNE:; FQ: Fear Questionnaire; FQ-SP: Fear Questionnaire – Social Phobia scale; ; IIP: Inventory of Interpersonal Problems; IIS: Inventory of Interpersonal Situations; LSAS: Liebowitz Social Anxiety Scale; SAD: Social Avoidance and Distress Scale; SAFE: Subtle Avoidance Frequency Examination; SCI: Social Cognitions Inventory; SCL-90: Symptom Checklist 90 ; ; SIAS: Social Interaction Anxiety Scale; ; SISST: Social Interaction Self-Statement Test; SPAI: Social Phobia Anxiety Inventor; SPDS-S: Social Phobic Disorder Severity and Change Form – Severity; SPS: Social Phobia Scale; SPWWS: Social Phobia Weekly Summary Scale; SUDS.: Subjective Units of Distress Scale.

Compassion-focused therapy

Title of paper	A randomized controlled trial of compassion focused therapy for social anxiety disorder
Full citation	Gharraee, B., Tajrishi, K. Z., Farani, A. R., Bolhari, J., & Farahani, H. (2018). A randomized controlled trial of compassion focused therapy for social anxiety disorder. *Iranian Journal of Psychiatry and Behavioral Sciences, 12*(4). https://doi.org/10.5812/ijpbs.80945
Evidence level	Level II
Design	Randomised controlled trial (RCT)
Delivery format	Individual, face-to-face
Participants	Participants were 34 adults with a primary diagnosis of social anxiety disorder based on DSM-IV-TR. Half the participants (n = 17) were randomly assigned to either the CFT group or waitlist control.
Demographic characteristics	The sample consisted of 47% females, with mean age of 23.4 (SD = 4.58) in the CFT group, and 22 (SD = 4.39) in the control group.
Treating clinician type	Student (PhD level)
Intervention	CFT
Study groups	Intervention group: CFT Control group: waitlist
Outcome(s) measured	Social anxiety symptoms as measured by the LSAS (primary outcome).
Procedure	The CFT group received 12 weekly, individual treatment sessions, of one hour each. The waitlist group were told they would receive the treatment after five months.
Follow up	Yes; 2 months
Statistics summary	Repeated measures analysis of variance (RM-ANOVA) was used to analyze the data. CFT was found to be significantly more effective than waitlist control in reducing severity of social anxiety symptoms as well as psychological inflexibility and self-criticism (p < .001), both at post-treatment and follow-up. CFT was found to significantly increase levels of mindfulness, self-compassion, and quality of life (p < .001)
Conflict of interest	None declared
Risk of bias	High
Summary of findings	Findings indicated that CFT significantly reduced symptoms of social anxiety when compared with a waitlist control, with gains maintained at two-month follow-up. CFT was also more effective than waitlist in reducing psychological inflexibility and self-criticism, and in increasing levels of mindful attention, self-compassion, and quality of life. Caution should be exercised in interpreting these findings due to the high risk of bias found in the study.

Note. LSAS: Liebowitz Social Anxiety Scale.

Interpersonal psychotherapy

Title of paper	Efficacy of interpersonal psychotherapy in mainland China: A systematic review and meta-analysis
Full citation	Tang, L., Xu, F., Yu, G., Li, C., Wen, S., & Zheng, W. (2023). Efficacy of interpersonal psychotherapy in mainland China: A systematic review and meta-analysis. *Frontiers in Psychiatry, 14*, 1160081. https://doi.org/10.3389/fpsyt.2023.1160081
Evidence level	Level I
Design	Systematic review and meta-analysis (40 RCTs, with 2 studies focused on SAD)
Delivery format	Group, face-to-face.
Participants	Overall participant numbers varied from 21 to 176 across the 40 studies, with the majority (57.5%) involving 80 or more participants. In the 3 studies focused on GAD, 254 adult participants with a diagnosis of generalised anxiety disorder were included.
Demographic characteristics	Mean age was 35.8 (*SD* ranged from 3.1 to 11.5) across the 3 GAD-focused studies. All studies were conducted in mainland China with Chinese participants.
Treating clinician type	Not specified
Intervention	IPT
Outcome(s) measured	Severity of anxiety symptoms as measured by the IAS and SADS.
Procedure	A systematic review and meta-analysis were conducted to assess the evidence for IPT in mainland China. Study findings were grouped and summarized per psychiatric diagnoses. The systematic search included RCTs published from database inception to September 2022.
Follow up	No
Statistics summary	A narrative review of the two SAD studies identified was reported. A meta-analysis could not be conducted due to the limited number of studies identified. One RCT showed IPT significantly reduced social anxiety symptoms compared with waitlist group. The second RCT showed IPT significantly reduced social avoidance and distress symptoms compared with no-treatment controls.
Conflict of interest	None declared
Risk of bias	High
Summary of findings	Findings from two RCTs indicated that group IPT is efficacious in the treatment of adults with SAD among Chinese populations.

Note. IAS: Interaction Anxiousness Scale; SADS: Social Avoidance and Distress Scale.

Mindfulness-based stress reduction

Title of paper	**Randomized trial of cognitive behaviour group therapy and a mindfulness-based intervention for social anxiety disorder: Preliminary findings**
Full citation	Koszycki, D., Guérin, E., DiMillo, J., & Bradwejn, J. (2021). Randomized trial of cognitive behaviour group therapy and a mindfulness-based intervention for social anxiety disorder: Preliminary findings. *Clinical Psychology & Psychotherapy, 28*(1), 200-218. https://doi.org/10.1002/cpp.2502
Evidence level	Level II
Design	Randomised controlled trial (RCT)
Delivery format	Group, face-to-face.
Participants	Adults aged 18-65 with a primary diagnosis of social anxiety disorder, based on a structured interview, with mean LSAS scores > 30, mean CGI-S scores ≥ 4, and mean MADRAS scores <24.
Demographic characteristics	MBI-SAD groups: 73.1% females, 73.1% Caucasian, mean age 41.52 ± 13.6 years. CBGT groups: 51.1% females, 80% Caucasian, mean age 40.09 ± 13.9 years.
Treating clinician type	MBI-SAD groups: trained mental health professional (master's level clinical social workers, doctoral-level psychotherapist) and student (PhD in clinical psychology). CBGT groups: trained mental health professionals (doctoral-level psychologists), and students (PhD in clinical psychology).
Intervention	Mindfulness-based intervention (MBI) adapted for SAD (MBI-SAD)
Study groups	Intervention Group: MBI-SAD (*N* = 52). Control: Cognitive Behaviour Group Therapy (CBGT; *N* = 45).
Outcome(s) measured	Social anxiety symptom severity as measured by the LSAS (primary outcome).
Procedure	Participants were randomised to 12 weekly 2-hour, group sessions (5-10 participants) of the MBI-SAD or CBGT. MBI-SAD included mindful exposure to feared social cues and explicit training in self-compassion. Both interventions were manualised and included weekly homework. assessments were conducted at baseline, Sessions 6 and 12 and 6 months follow-up.
Follow up	Yes, 6 months.
Statistics summary	Linear mixed model analyses were conducted with and without model adjustments for pre-specified covariates. Both interventions significantly reduced LSAS scores from baseline to Week 12 (MBI-SAD: Cohen's *d* = 1.02; CBGT: Cohen's *d* = 1.78). The Time × Condition interaction was significant for the LSAS with covariate adjustment ($F(2, 159.61) = 3.73$; $p = .026$) and without ($F(2, 159.51) = 3.60$; $p = .03$) and remained significant at follow-up. The estimated mean difference between treatments favoured CBGT at Week 6, Week 12, and follow-up in both models (*ps* < .05). Non-inferiority analyses were inconclusive.
Conflict of interest	None declared.
Risk of bias	Some concerns
Summary of findings	Results indicated that CBGT is more effective than MBI-SAD in reducing clinician- and self-rated social anxiety severity and in eliciting treatment response. CBGT should be considered as a first line treatment for adult SAD. CBGT also increased levels of mindfulness and self-compassion. No intervention differences emerged for improvement other indices of well-being (depression, self-esteem, satisfaction with life, social adjustment). Treatment gains were maintained for both interventions at 6-month follow-up.

Note. LSAS: CGI-S Clinical Global Impression-Severity.; Liebowitz Social Anxiety Scale; MADRAS: Montgomery-Åsberg Depression Rating Scale.

Psychodynamic therapy

Title of paper	The efficacy of psychodynamic therapy for social anxiety disorder–A comprehensive meta-analysis
Full citation	Zhang, Q., Yi, P., Song, G., Xu, K., Wang, Y., Liu, J., Chen, Z., Zhang, H., Ma, L., Liu, W., & Li, X. (2022). The efficacy of psychodynamic therapy for social anxiety disorder–A comprehensive meta-analysis. *Psychiatry Research, 309*, 114403. https://doi.org/10.1016/j.psychres.2022.114403
Evidence level	Level I
Design	Systematic review and meta-analysis (12 studies)
Delivery format	Individual and group, face to face
Participants	Total sample of *n* = 1213 participants with a primary diagnosis of social anxiety disorder social phobia according to the DSM or ICD.
Demographic characteristics	The mean age of participants and other demographic information specific to the adult population subgroup was not provided.
Treating clinician type	Not specified
Intervention	Psychodynamic Therapy (PDT); Psychodynamic Group Therapy (PGT); Short-Term Psychodynamic Therapy (STDP); Internet-based Psychodynamic Therapy (IPDT); Manualised Short-Term Psychodynamic Therapy (mSTPP); Panic-Focused Psychodynamic Therapy (PFPP).
Outcome(s) measured	Relevant primary outcome was social anxiety symptoms, measured by the LSAS, SPI, HAMA, and ADIS.
Procedure	A systematic review and meta-analysis was conducted to investigate the efficacy of psychodynamic therapy in the treatment of social anxiety disorder. Subgroup analyses were completed for group and individual formats, as well as active and inactive controls. The database search covered all publication dates until January 17,2020.
Follow up	Yes (6; 12; 24 months)
Statistics summary	Fixed model and random-effects models were used. Scores on outcome measures were significantly lower for the psychodynamic therapy groups compared to both inactive controls (*SMD* = -0.77, 95% CI [-0.95, -0.58]. *p* <.00001. I^2 = 15%) and active controls (*SMD* = 0.15, 95% CI [0.02, 0.28], *p* = 0.02, I^2 = 0%). Subgroup analyses found a larger effect size for individual PDT versus group PDT, and this difference was significant ($\chi 2$ = 2.84, *df* = 1, *p* = 0.09, I^2 = 64.8%).
Conflict of interest	None declared
Risk of bias	Unclear
Summary of findings	These findings support the efficacy of psychodynamic therapy in the treatment of social anxiety disorder. Furthermore, subgroup analyses in this study have indicated that individual psychodynamic therapy may be more effective than group psychodynamic therapy.

Note. ADIS: Anxiety Disorders Interview Schedule; LSAS: Liebowitz Social Anxiety Scale; HAMA: Hamilton Anxiety Rating Scale; SPI: Social Phobia Inventory.

Self-guided digital interventions

Title of paper	**Two decades of digital interventions for anxiety disorders: A systematic review and meta-analysis of treatment effectiveness.**
Full citation	Pauley, D., Cuijpers, P., Papola, D., Miguel, C., & Karyotaki, E. (2023). Two decades of digital interventions for anxiety disorders: A systematic review and meta-analysis of treatment effectiveness. *Psychological Medicine*, *53*(2), 567–579. https://doi.org/10.1017/S0033291721001999
Evidence level	Level I
Design	Systematic review and meta-analysis (47 RCTs with 20 studies focused on social anxiety disorder)
Delivery format	Digital intervention, with none to minimal therapist guidance
Participants	Participants were 4,958 adults diagnosed with an anxiety disorder according to DSM-5 criteria (1960 participants with social anxiety disorder).
Demographic characteristics	Age and gender demographics were not specified. Studies were conducted in Europe, Oceania, and North America.
Treating clinician type	Not specified
Intervention	Internet-based cognitive behavior therapy, internet delivered psychodynamic therapy
Outcome(s) measured	Social anxiety symptom severity as measured by LSAS/LSAS-SR, SIAS, and BAI (primary outcome).
Procedure	A systematic review and meta-analysis were conducted to investigate the efficacy of digital interventions for anxiety disorders, exploring their efficacy broadly and specifically across all disorders. The systematic search included RCTs published from database inception to January 2020. Subgroup and sensitivity analyses were further conducted.
Follow up	Not specified
Statistics summary	A random-effects pooling meta-analysis was used to calculate the effect size of digital interventions compared to passive control across all anxiety disorders. Subgroup analyses of studies that focused on SAD showed a significant effect in reducing anxiety symptoms (Hedge's g = 0.76, 95% CI [0.62, -0.91]) with moderate heterogeneity (I^2 = 53%).
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	Findings indicated that digital interventions, including internet-based cognitive behavior therapy and psychodynamic therapy, were efficacious in treating adults with SAD.

Note. LSAS/LSAS-SR Liebowitz Social Anxiety Scale; SIAS: Social Interaction Anxiety Scale; BAI: Beck Anxiety Inventory.

Title of paper	**Remote cognitive behaviour therapy for social anxiety disorder: A meta-analysis**
Full citation	Winter, H. R., Norton, A. R., Burley, J. L., & Wootton, B. M. (2023). Remote cognitive behaviour therapy for social anxiety disorder: A meta-analysis. *Journal of Anxiety Disorders, 100*, 102787. https://doi.org/10.1016/j.janxdis.2023.102787
Evidence level	Level I
Design	Meta-analysis (31 studies)
Delivery format	Digital intervention, with and without therapist guidance
Participants	Participants were 2905 adults (1861 in treatment conditions, 1044 in control conditions) with a primary diagnosis of social anxiety disorder.
Demographic characteristics	Mean age ranged from 24.7 to 41.7 years, and female representation ranged from 37.5% to 78.9% in included studies. Studies were conducted in several countries, including Australia, China, New Zealand, the UK, Japan, Sweden, and Hong Kong.
Treating clinician type	Unguided treatment: self-assisted Guided treatment: not specified
Intervention	Remote CBT (internet-delivered, application-delivered, bibliotherapy-delivered, and videoconferencing-delivered)
Outcome(s) measured	Social anxiety symptoms as measured by the LSAS, SIAS, SPS, BFNE, SPIN, and MINI-SPIN.
Procedure	A meta-analysis of 31 studies (including 25 RCTs) examining the effectiveness of remote CBT in treating social anxiety disorder. Studies were retrieved from electronic databases searched from inception of databases through to October 2022. PRISMA guidelines were followed.
Follow up	Yes; ranging 4 - 104 weeks
Statistics summary	Random effects meta-analyses were used to analyze within-group and between-group effect sizes (Hedge's *g*). Internet-delivered CBT (*g* = 1.08, 95% CI [0.98-1.19], I^2 = 77.69) and application-delivered CBT (*g* = 1.19, 95% CI [0.75-1.64], I^2 = 75.7) showed large within-group effect sizes. Pooled between-group effects indicated that remote CBT treatments were more effective than passive control (*g* = 0.87, 95% CI [0.7-1.03]) and non-CBT remote treatments (*g* = 0.41, 95% CI [0.17-0.77]). Guided remote CBT (*g* = 1.16, 95% CI [1.05-1.26], I^2 = 67.54) showed larger within-group effects compared to unguided remote CBT (*g* = 0.81, 95% CI [0.61-1.01], I^2 = 83.76).
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	Findings indicated that remote CBT treatments, including primarily internet-delivered and application-delivered CBT, were more effective in treating social anxiety disorder compared with passive controls and non-CBT remote treatments. Furthermore, guided remote CBT was more effective than unguided remote CBT in treating social anxiety disorder.

Note. LSAS: Liebowitz Social Anxiety Scale; SIAS: Social Interaction Anxiety Scale; SPS: Social Phobia Scale; BFNE: Brief Fear of Negative Evaluation Scale; SPIN, Social Phobia Inventory; MINI-SPIN: Abbreviated version of the Social Phobia Inventory.

Specific phobia

SUMMARY OF EVIDENCE

Level I evidence[58] was identified in support of cognitive behaviour therapy (specifically, exposure therapy) and eye movement desensitisation and reprocessing in the treatment of specific phobia in adults. It was noted that the evidence for exposure therapy published after 2018 was primarily focused on virtual reality exposure therapy. In addition to this, Level II evidence was identified for the use of self-guided digital interventions in the provision of exposure therapy.

[58] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of specific phobia in adults.

Cognitive behaviour therapy

Title of paper	**Virtual reality exposure therapy for anxiety and related disorders: A meta-analysis of randomized controlled trials**
Full citation	Carl, E., Stein, A. T., Levihn-Coon, A., Pogue, J. R., Rothbaum, B., Emmelkamp, P., Asmundson, G. J. G., Carlbring, P., & Powers, M. B. (2019). Virtual reality exposure therapy for anxiety and related disorders: A meta-analysis of randomized controlled trials. *Journal of Anxiety Disorders*, *61*, 27-36. https://doi.org/10.1016/j.janxdis.2018.08.003
Level of evidence	Level I
Design	Systematic review and meta-analysis (30 studies, with 14 studies focused on specific phobia)
Format	Individual, face-to-face
Participants	Total sample of 1057 participants with anxiety disorders. The 14 studies focusing on specific phobia had a pooled total of 637 participants.
Demographic characteristics	Demographic information was not provided.
Treating clinician type	Not specified
Intervention	Virtual Reality Exposure Therapy (VRET)
Outcome(s) measured	Primary outcomes measured in the studies on specific phobia were the AES, AFA, AQ, DES, DFS, FAM, FFI, FFM, FFS, MDAS, SUDS, QAF, and VAS.
Procedure	A systematic review of RCT studies that tested the effectiveness of VRET on anxiety disorders was conducted. Subgroup analyses on specific anxiety disorders and control types were also conducted. The included time frame was up to 2018.
Follow up	No follow-up data or analyses investigated
Statistical strength / effect sizes	A meta-analysis was conducted, and effect sizes (Hedges' *g*) were calculated to measure post-treatment effects of VRET versus control groups. The pooled effect size for *k*=12 studies comparing VRET to psychological placebo or waitlist controls was large (*g* = 0.95, 95% CI [0.63 to -1.28]). Heterogeneity scores were not calculated.
Conflict of interest	Yes; professional and financial.
Risk of bias	High
Summary of findings	This systematic review and meta-analysis of studies indicates that VRET has a positive effect on the reduction of specific phobia symptoms when compared to controls.

Note. AES: Anxiety Expectancy Scale; AFA: General Fear of Flying Questionnaire; AQ: Acrophobia Questionnaire; DES: Danger Expectancy Scale; DFS: Dental Fear Survey; FAM: Flight Anxiety Modality Questionnaire; FFI: Fear of Flying Inventory; FFM: Fear of Falling Measure; FFS: Fear of Flying Scale; MDAS: Modified Dental Anxiety Scale; SUDS: Subjective Units of Distress; QAF: Questionnaire on Attitudes Toward Flying; VAS: Visual Analogue Scale.

Eye movement desensitisation and reprocessing

Title of paper	**The effectiveness of eye movement desensitization and reprocessing toward anxiety disorder: A meta-analysis of randomized controlled trials**
Full citation	Yunitri, N., Kao, C.-C., Chu, H., Voss, J., Chiu, H.-L., Liu, D., Shen, S.-T. H., Chang, P.-C., Kang, X. L., & Chou, K.-R. (2020). The effectiveness of eye movement desensitization and reprocessing toward anxiety disorder: A meta-analysis of randomized controlled trials. *Journal of Psychiatric Research*, *123*, 102–113. https://doi.org/10.1016/j.jpsychires.2020.01.005
Level of evidence	Level I
Design	Systematic review and meta-analysis (17 studies, with 7 studies focused on specific phobia)
Format	Individual and group, face-to-face
Participants	647 participants that met the criteria for anxiety or had a diagnosis of phobia, panic disorder, or a combination of disorders. The 7 studies focusing on specific phobia had a pooled total of 147 participants.
Demographic characteristics	83% of the total sample was adults and 72.3% were female.
Treating clinician type	Not specified
Intervention	EMDR
Outcome(s) measured	Outcomes measured in the studies on specific phobia were the ACQ, BAT, DFS, IFR, PRCA-24, SPQ, and SPQ-C.
Procedure	A systematic review of RCT studies that tested the effectiveness of EMDR on anxiety disorders was conducted. Subgroup analyses on specific anxiety disorders were also conducted. The included time frame was from the beginning of the databases until December 2018.
Follow up	No; only 4 of the 17 included studies provided follow-up measures, so no analysis was conducted on follow-up data
Statistical strength / effect sizes	A meta-analysis was conducted, and effect sizes (Hedges' *g*) were calculated to measure post-treatment effects of EMDR versus control groups. Specific to phobia, results indicated a significant effect (p = .018) with a moderate Hedge's *g* score of -0.45 (95% CI [-0.81 to -0.08]). Heterogeneity was rated as moderate (Q = 10.43, p = .11, I^2 = 42.48%).
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	This systematic review and meta-analysis of studies indicates that EMDR has a positive effect on the reduction of phobia symptoms.

Note. ACQ: Agoraphobic Cognitions Questionnaire; BAT: Behavioural Avoidance Test; DFS: Dental Fear Survey; IFR: Imaginary Fearsomeness Rating; PRCA: Personal Report of Communication Anxiety; SPQ: Spider Phobia Questionnaire.

Self-guided digital interventions

Title of paper	**Efficacy of an internet-based exposure treatment for flying phobia (*NO-FEAR Airlines*) with and without therapist guidance: A randomized controlled trial**
Full citation	Campos, D., Bretón-López, J., Botella, C., Mira, A., Castilla, D., Mor, S., Baños, R., & Quero, S. (2019). Efficacy of an internet-based exposure treatment for flying phobia (*NO-FEAR Airlines*) with and without therapist guidance: A randomized controlled trial. *BMC Psychiatry*, *19*. https://doi.org/10.1186/s12888-019-2060-4
Level of evidence	Level II
Design	Randomised controlled trial (RCT)
Delivery format	Digital intervention, both with and without therapist guidance
Participants	A total of *n* = 69 participants were recruited for the study, with *n* = 23 participants randomly allocated to the control and two experimental conditions, respectively. Participants were recruited if they met DSM-5 criteria for specific, situational phobia.
Demographic characteristics	The mean age of the sample was 36.4 years and 72.5% were female. All participants spoke Spanish fluently, with 63 of the 69 participants residing in Spain.
Treating clinician type	Trained mental health professionals (psychologists)
Intervention	Internet-based exposure therapy
Study groups	Intervention groups: 1. Internet-based exposure treatment without therapist guidance 2. Internet-based exposure treatment with therapist guidance Control group: Passive control (waitlist)
Outcome(s) measured	Flying phobia symptoms as measured by the FFQ-II and FFS (primary outcomes), and the fear and avoidance scales, clinician severity scale, and patient's improvement scale (secondary outcomes).
Procedure	The Internet exposure program was made of three components: psychoeducation, exposure, and overlearning. The program is designed to be completed within 3-4 weeks, with a maximum period of 6 weeks. The therapist guidance condition comprised of a weekly 5min phone call to assess progress and provide feedback and reinforcement.
Follow up	Yes; 3 months and 12 months
Statistics summary	An ANOVA analysis was completed using intent-to-treat (ITT) mixed-model analyses. For the primary outcome measures, a statistically significant difference was found at post-treatment between the intervention groups and the waitlist control group. The effect size was *d* = -1.13 (95% CI [-1.81 to -.46]) for the FFQ-II and *d* = -1.51 (95% CI [-2.13 to -.71]) for the FFS. There was no statistically significant difference found between the two intervention groups and completion rates were comparable, with *n* = 6 withdrawing from the totally self-applied intervention group and *n* = 7 withdrawing from the therapist guidance intervention group.
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	Results indicated that those who used the internet-based exposure program had significantly reduced symptoms of flying phobia compared to the waitlist control. These treatment gains were maintained at 3- and 12- month follow ups. No significant difference in effectiveness was found between the program being totally self-assisted or being delivered with therapist guidance.

Note. FFQ: Fear of Flying Questionnaire; FFS: Fear of Flying Scale.

Title of paper	Testing a gamified spider app to reduce spider fear and avoidance
Full citation	Haberkamp, A., Walter, H., Althaus, P., Schmuck, M., Rief, W., & Schmidt, F. (2021). Testing a gamified spider app to reduce spider fear and avoidance. *Journal of Anxiety Disorders, 77*. https://doi.org/10.1016/j.janxdis.2020.102331
Level of evidence	Level II
Design	Randomised controlled trial (RCT)
Format	Digital intervention, with no therapist guidance
Participants	68 adults with spider phobia symptoms (intervention *n* = 37; control *n* = 31). Criteria for entry was based on an above 14 score on a Spider Phobia Questionnaire (SPQ), a Behavioral Avoidance Test (BAT), and a diagnostic interview.
Demographic characteristics	Participants in the experimental group were 18 – 30 years old (*M* = 22.73) with a 34:3 female to male ratio. Participants in the control group were 19 – 35 years old (*M* = 22.57) with a 26:5 female to male ratio. The study was conducted in Germany.
Treating clinician type	No therapist assistance (completely self-guided)
Intervention	Smartphone-based digital intervention
Study groups	Intervention group: (spider app, "Search the Spider") Control group: passive control (non-spider-associated app, "Bubble Shooter")
Outcome(s) measured	Spider fear was measured by the SPQ and behavioural avoidance was measured by the BAT
Procedure	The experimental group used a gamified "search for the spider" app that uses images of spiders. The control group used a gamified "Bubble Shooter" app that worked on similar principles but used images of bubbles instead of spiders. Both groups were encouraged to use their app twice a day for approximately 12 minutes over the course of a week.
Follow up	Yes, 1 week
Supportive of treatment	Yes
Statistics summary	Study groups were compared using a linear mixed model of group, time, and time x group interaction. The intervention group had a significantly larger reduction in SPQ scores, (time × group: $F(2,77.44) = 4.65$, $p = .012$), with a time effect size of *FE* = -2.33, 95% CI [-4.17, -0.48] and group effect size of *FE* = -0.19, 95% CI [-1.64, 1.26]. Pairwise comparisons found no significant difference at post-test ($p = .061$) but were significant at follow-up ($p = .042$).
Conflict of interest	Not specified
Risk of bias	Some concerns
Summary of findings	Results indicated that immediately after using the app for a week, the experimental group reported lower levels of avoidance behaviours but higher anxiety, disgust and arousal ratings. In the one week follow up, however, these ratings of anxiety, disgust and arousal had decreased to the same levels of the control group. The paper outlined limitations in the study with regard to evidence for change in behavioural avoidance in the long term.

Note. BAT: Behavioural Avoidance Test; SPQ: Spider Phobia Questionnaire.

Posttraumatic stress disorder

SUMMARY OF EVIDENCE

For the purposes of this review, we follow the categorisation of cognitive behaviour therapies with a trauma focus (CBT-T) by the International Society for Traumatic Stress Studies (ISTSS; 2020), which classifies variants such as cognitive therapy for PTSD, cognitive processing therapy, prolonged exposure, narrative exposure therapy, as well as manualised trauma-focused cognitive behaviour therapy (TF-CBT) under the same umbrella. (Upon expert review, imagery rescripting was added to the intervention list for this chapter.)

Level I evidence[59] has been identified in support of cognitive behaviour therapies with a trauma focus, with narrative exposure therapy being effective for adult refugee populations. Level I evidence was additionally found supporting individual cognitive behaviour therapy without a trauma focus, eye movement desensitisation and reprocessing, imagery rescripting, and mindfulness-based stress reduction. Evidence supporting self-guided interventions was also found. Specifically, internet-based cognitive behaviour therapy was supported with Level I evidence, whilst internet-based stress management approaches were supported with Level II evidence.

Level II evidence was found in support of dialectical behavioural therapy, emotion-focused therapy, and mindfulness-based cognitive therapy. Level II evidence was found in support of interpersonal psychotherapy, although it was not found to be superior to the active control.

Level I evidence in relation to hypnotherapy was identified, however findings on the efficacy were mixed.

Guidelines provided by Phoenix Australia (2023), WHO (2023), the U.S. Department of Veteran Affairs Management of Posttraumatic Stress Disorder Work Group (2023), and ISTSS (2020) provide recommendations in support of trauma-focused cognitive behaviour therapy, cognitive processing therapy, eye movement desensitisation and reprocessing, and prolonged exposure therapy.[60] Additionally, some interventions that were outside the scope of the review but were conditionally recommended by these guidelines include narrative exposure therapy, present-centred psychotherapy, and stress inoculation training.

[59] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of posttraumatic stress disorder in adults.
[60] The American Psychological Association's updated clinical practice guideline on PTSD is anticipated to be released in early 2025.

Cognitive behaviour therapy

Title of paper	**Psychological therapies for post-traumatic stress disorder in adults: Systematic review and meta-analysis**
Full citation	Lewis, C., Roberts, N. P., Andrew, M., Starling, E., & Bisson, J. I. (2020). Psychological therapies for post-traumatic stress disorder in adults: Systematic review and meta-analysis. *European Journal of Psychotraumatology, 11*(1), 1729633–1729633. https://doi.org/10.1080/20008198.2020.1729633
Level of evidence	Level I
Design	Systematic review and meta-analysis of 114 RCTs (with ten studies that included CBT without a trauma focus)
Delivery format	Individual and group, face to face
Participants	8,171 adults with a primary diagnosis of PTSD according to DSM or ICD criteria
Demographic characteristics	Age characteristics were not specified. 27 studies with female-only participants and being males-only. For the rest, the percentage of females ranged from 1.75% to 96%. Majority of the studies were conducted in America followed by Europe, Australia, Asia, and Africa. The types of trauma include combat-related, sexual assault or rape, war-related, or civilian, and others.
Treating clinician type	Trained health professionals and trained mental health professionals
Intervention	CBT without a trauma focus
Outcome(s) measured	Primary outcome measures were PTSD symptom severity, with priority on clinician-administered measures such as the CAPS-5, but self-report measures such as the PCL-5 were also included
Procedure	A systematic review and meta-analysis evaluated the effectiveness of psychological interventions for PTSD, and to determine effect sizes for manualized PTSD interventions. The quality of evidence was evaluated using the GRADE approach. The search covered RCTs from January 2008 to the 31 May 2018.
Follow up	None
Statistics summary	A random-effects meta-analysis showed that individual CBT without a trauma focus was favoured over waitlist/TAU (k = 7, n = 318, SMD = −1.06, 95% CI [−1.39,−0.73]) and supportive counselling (k = 1, n = 101, SMD = −0.04, 95% CI [−0.43, 0.35)]. However, no significant differences were found when compared to present-centred therapy, nor between group CBT without a trauma focus and group supportive counselling.
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	The review found that CBT-T is consistently one the most effective treatments for adults with a PTSD and found supporting evidence for a clinically important effect for individual CBT without a trauma focus. The reviewers note that most studies excluded those with substance dependence, psychosis, or severe depression, limiting conclusions on effectiveness to adults with simpler PTSD presentations.

Note. CAPS: Clinician-Administered PTSD Scale for DSM-5; PCL-5: PTSD Checklist for DSM 5.

Title of paper	**Cognitive behavior therapy for adult post-traumatic stress disorder in routine clinical care: A systematic review and meta-analysis**
Full citation	Öst, L.-G., Enebrink, P., Finnes, A., Ghaderi, A., Havnen, A., Kvale, G., Salomonsson, S., & Wergeland, G. J. (2023). Cognitive behavior therapy for adult post-traumatic stress disorder in routine clinical care: A systematic review and meta-analysis. *Behaviour Research and Therapy, 166*, 104323–104323. https://doi.org/10.1016/j.brat.2023.104323
Level of evidence	Level I
Design	Systematic review and meta-analysis of 33 studies (with 16 being RCTs)
Delivery format	Individual and group, face to face
Participants	6,432 adults with a diagnosis of PTSD according to DSM or ICD criteria
Demographic characteristics	The mean age of participants ranged from 30.9 – 64.9 years in each study. The percentage of females ranged from 0 to 100%. The types of trauma were predominantly combat-related, but included childhood abuse, assault, and terrorism.
Treating clinician type	Trained health professionals and trained mental health professionals
Intervention	Trauma-focused cognitive behaviour therapies classified as prolonged exposure, cognitive processing therapy, and cognitive therapy
Outcome(s) measured	Relevant primary outcomes include PTSD symptom severity as measured by CAPS, PCL, PDS, PSS-I, and PSS-R. Other outcomes such as depression, anxiety, and quality of life measures were also measured.
Procedure	A systematic review and meta-analysis evaluated the effectiveness of trauma-focused cognitive behaviour therapies (CBT-T) in routine clinical for treating PTSD in adults. The review also aimed to identify possible moderator outcomes. Effectiveness and efficacy studies were also compared. The search covered RCTs from inception to June 2020, and updated in May 2022.
Follow up	Yes, from 1 – 12 months
Statistics summary	The study utilised random-effects meta-analyses to assess the effectiveness of CBT-T and assessed moderating variables. Looking at post-treatment PTSD symptoms in RCTs, CBT-T was favoured over active interventions (k = 8, g = 0.33, 95% CI [0.06 , 0.60], z = 2.41, p = .02). Benchmarking analysis revealed no significant difference between effectiveness and efficacy studies. Within-group effect size of CBT-T in routine clinical care yielded a large effect size at post-treatment (k = 16, g = 1.65, 95% CI [1.42, 1.89], however heterogeneity was large (I^2 = 92.4%).
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	Due to large heterogeneity, the reviewers cautiously point to the effectivenes of CBT-T for treating adults with PTSD in routine clinical care. Their review also found that the results of effectiveness studies in PTSD are comparable to those of efficacy studies.

Note. CAPS: Clinician-Administered PTSD Scale for DSM-5; PCL: PTSD Checklist; PDS: Posttraumatic Diagnostic Scale. PSS-I: PTSD Symptom Scale—Interview; PSS-R: PTSD Symptom Scale Self-Report.

Title of paper	**Efficacy and cultural adaptations of narrative exposure therapy for trauma-related outcomes in refugees/asylum-seekers: A systematic review and meta-analysis**
Full citation	Wright, A., Reisig, A. & Cullen, B. (2020). Efficacy and cultural adaptations of narrative exposure therapy for trauma-related outcomes in refugees/asylum-seekers: A systematic review and meta-analysis. *Journal of Behavioral and Cognitive Therapy, 30*(4), 301-314. https://doi.org/10.1016/j.jbct.2020.10.003
Level of evidence	Level I
Design	Systematic review and meta-analysis of six RCTs
Delivery format	Individual and group, face to face
Participants	272 participants over 16 years with a diagnosis of any trauma-related disorder and classifed refugees/asylum-seekers according to the World Bank criteria
Demographic characteristics	Over 70% of the participants had a diagnosis of PTSD according to ICD or DSM criteria. The mean age of participants ranged from 28.0 – 48.2 years in each study. Participants originated from the Middle East, Africa and the Balkan region and live in high income countries. The types of trauma were predominantly due to organised violence, war, and torture.
Treating clinician type	Trained health professionals and trained mental health professionals
Intervention	Narrative exposure therapy
Outcome(s) measured	The relevant primary outcome is trauma symptom severity as measured by CAPS, HTQ, and PDS, PSS-I. and PSS-R. Depression symptoms was also measured as a primary outcome.
Procedure	A systematic review and meta-analysis evaluated the effectiveness of narrative exposure therapy (NET) for treating trauma and depression in refugees and asylum-seekers with trauma-related disorders living in high-income countries. Its other aim was to assess how NET has been culturally adapted. Treatment lasted between 3 -10 sessions. The search covered RCTS from January 2002 to February 2019 and updated in September 2020.
Follow up	Yes, from 1 – 12 months
Statistics summary	A random-effects meta-analyses revealed that NET significantly reduced trauma scores compared to control group, with a medium to large effect size at post-treatment (*SMD* = -0.75, 95% CI [-1.19, -0.31]), and substantial heterogeneity (I^2 = 57%, p = .04). This significant result was not maintained at follow-up. NET was also shown to be more effective in reducing trauma than depressive symptoms.
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	The review supported NET's effectiveness for PTSD in refugees and asylum-seekers in high-income countries. Limitations included small sample sizes, a narrow focus on high-income country populations, and potential bias from researchers affiliated with NET.

Note. CAPS: Clinician-Administered PTSD Scale for DSM-5; HTQ: Harvard Trauma Questionnaire; PDS: Posttraumatic Diagnostic Scale.

Dialectical behavioural therapy

Title of paper	**Dialectical behaviour therapy for post-traumatic stress disorder after childhood sexual abuse in patients with and without borderline personality disorder: A randomised controlled trial**
Full citation	Bohus, M., Dyer, A. S., Priebe, K., Krüger, A., Kleindienst, N., Schmahl, C., Niedtfeld, I., & Steil, R. (2013). Dialectical behaviour therapy for post-traumatic stress disorder after childhood sexual abuse in patients with and without borderline personality disorder: A randomised controlled trial. *Psychotherapy and Psychosomatics, 82*(4), 221–233. https://doi.org/10.1159/000348451
Level of evidence	Level II
Design	RCT
Follow-up	18 and 24 weeks
Format	Individual and group
Participants	74 adult women diagnosed with PTSD related to childhood sexual abuse, with and without borderline personality disorder (BPD). The mean age of participants was 35.9 years.
Treating clinician(s)	Clinical psychologists
Interventions	DBT-PTSD program (*n* = 36)
Comparison group(s)	Waitlist control (*n* = 38)
Procedure	Participants were randomly assigned to either DBT or waitlist. The highly structured DBT-PTSD program consisted of twice-weekly, 45-minute sessions of individual therapy over 12 weeks, plus weekly group therapy sessions. Participants in the DBT-PTSD group received on average 25 individual treatment sessions across an average of 12.5 weeks. Participants in the waitlist group received 6 months of any treatment of their choice with the exception of DBT-PTSD, before being offered the DBT intervention.
Summary of findings	Compared with the control group, participants in the intervention group demonstrated significantly greater reductions in PTSD symptoms, with large between-group effect sizes. Subgroup analyses on PTSD symptoms revealed that significant between-group differences were evident for participants both with and without a diagnosis of BPD, with similar large effect sizes.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 66. Copyright 2018 by the Australian Psychological Society.

Emotion-focused therapy

Title of paper	**A randomized controlled trial of 7-day intensive and standard weekly cognitive therapy for PTSD and emotion-focused supportive therapy**
Full citation	Ehlers, A., Hackmann, A., Grey, N., Wild, J., Liness, S., Albert, I., Deale, A., Stott, R., & Clark, D. M. (2014). A randomized controlled trial of 7-day intensive and standard weekly cognitive therapy for PTSD and emotion-focused supportive therapy. *American Journal of Psychiatry, 171*(3), 294–304. https://doi.org/10.1176/appi.ajp.2013.13040552
Level of evidence	Level II
Design	RCT
Follow-up	27 and 40 weeks post-randomisation
Format	Individual
Participants	121 adults diagnosed with chronic PTSD. The mean age of participants was 38.9 years, and 58.7% were female.
Treating clinician(s)	Clinical psychologists and nurse therapists
Interventions	Intensive cognitive therapy (*n* = 30)
Comparison group(s)	Emotion-focused supportive therapy (*n* = 30), standard weekly cognitive therapy (*n* = 31), waitlist (*n* = 30)
Procedure	Participants were randomly allocated to one of four conditions: standard manualised cognitive therapy, intensive 7-day cognitive therapy, manualised emotion-focused supportive therapy, or waitlist control. Participants in the standard cognitive therapy group and those in the emotion-focused group received up to 20 hours of therapy spread evenly over the 3.5 month intervention period. Those allocated to the intensive cognitive therapy condition received up to 18 hours of therapy over 1 week. Across groups, participants received an average of 10 therapy sessions over the 14 week period, plus an average of two optional booster sessions following treatment completion.
Summary of findings	All active treatments resulted in greater reduction of PTSD symptoms compared with waitlist control. Participants who received intensive and standard cognitive therapy experienced greater symptom reduction at posttreatment and follow-up than did the emotion-focused group. However, the emotion-focused group also experienced large within-group treatment effects from baseline to posttreatment on PTSD symptoms and depression. Although effective, treatment effects for emotion-focused therapy were approximately half the size of both cognitive therapy groups across most outcome measures.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 67.

Eye movement desensitisation and reprocessing

Title of paper	**The efficacy and acceptability of psychological interventions for adult PTSD: A network and pairwise meta-analysis of randomized controlled trials**
Full citation	Hoppen, T. H., Jehn, M., Holling, H., Mutz, J., Kip, A., & Morina, N. (2023). The efficacy and acceptability of psychological interventions for adult PTSD: A network and pairwise meta-analysis of randomized controlled trials. *Journal of Consulting and Clinical Psychology, 91*(8), 445–461. https://doi.org/10.1037/ccp0000809
Evidence level	Level I
Design	Systematic review and meta-analysis of 157 RCTs (23 studies had an EMDR comparison group)
Delivery format	Combination of individual and group, face to face
Participants	11,565 participants diagnosed with PTSD according to DSM or ICD criteria
Demographic characteristics	The mean age of participants was 39.8 years with 59% being female. Trauma histories were diverse in 41% of the sample, with others specifically from combat, sexual assault, and childhood trauma.
Treating clinician type	Not specified
Intervention	Eye movement desensitisation and reprocessing (EMDR)
Outcome(s) measured	Primary outcome measures were PTSD symptom severity, with priority on clinician-administered measures such as the CAPS-5.
Procedure	A systematic review and network meta-analysis evaluated the short, mid, and long-term efficacy of psychological interventions in treating PTSD in adults compared to waitlist and active control. Sensitivity analyses were performed to account for potential effects of study quality and delivery format. Treatment averaged 11 sessions. The search covered RCTs from inception until April 2022.
Follow up	Yes; classified as short (post-treatment), mid (< 5 months), and long-term (> 5 months)
Statistics summary	A network meta-analysis with 190 comparisons across 157 trials was conducted. The results indicated large and significant heterogeneity within groups but not between groups ($\tau^2 = 0.16$, $I^2 = 69.10\%$; $Q_{total} = 533.22$, $df = 165$, $p < .001$). EMDR demonstrated efficacy in reducing PTSD symptoms compared to control conditions across time points in both main and sensitivity analyses (refer to Table 2). Ranking intervention efficacy via SUCRA ranking revealed EMDR as second only to TF-CBT in short and mid-term follow-up (refer to Table 3).
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	All psychological interventions included were effective across time points in reducing PTSD symptoms compared to control conditions. TF-CBT and EMDR consistently produce the most favorable outcomes, except for long-term efficacy with EMDR. However, the researchers noted that most studies focus on TF-CBT, and the scarcity of evidence regarding long-term efficacy with EMDR cautions against drawing strong conclusions.

Note. CAPS-5: Clinician-Administered PTSD Scale for DSM-5.

Title of paper	**EMDR v. other psychological therapies for PTSD: A systematic review and individual participant data meta-analysis**
Full citation	Wright, S. L., Karyotaki, E., Cuijpers, P., Bisson, J., Papola, D., Witteveen, A., Suliman, S., Spies, G., Ahmadi, K., Capezzani, L., Carletto, S., Karatzias, T., Kullack, C., Laugharne, J., Lee, C. W., Nijdam, M. J., Olff, M., Ostacoli, L., Seedat, S., & Sijbrandij, M. (2024). EMDR v. other psychological therapies for PTSD: A systematic review and individual participant data meta-analysis. *Psychological Medicine, 54*(8), 1580–1588. https://doi.org/10.1017/S0033291723003446
Evidence level	Level I
Design	Systematic review and individual participant data meta-analysis (IPDMA) of 15 RCTs, with 8 studies included in the IPDMA
Delivery format	Individual, face to face
Participants	346 participants diagnosed with PTSD according to DSM or ICD criteria were included in the IPDMA
Demographic characteristics	The mean age of participants was 38.6 (*SD* = 11.9) years with 59% being female. The studies were conducted in Australia, Italy, Iran, Netherlans and Scotland.
Treating clinician type	Not specified
Intervention	Eye movement desensitisation and reprocessing (EMDR)
Outcome(s) measured	Primary outcome measures were PTSD symptom severity, treatment response, and PTSD remission, using measures such as the IES-R, MPTSD, and PCL.
Procedure	A systematic review and IPDMA evaluated the effectiveness of EMDR against other psychological interventions amond adults with PTSD and to explore any moderators on treatment effect. The search covered RCTs from inception until May 2018, and then updated to include untril January 2021.
Follow up	None
Statistics summary	A one-stage IPDMA amongst treatment completers (n = 270 across 8 studies) showed no significant difference in PTSD symptom severity between EMDR and comparison interventions (β = −0.24, 95% CI [−0.62, 0.14], p = .210). Similar results were found for the full sample with imputed data, as well as the two-stage completer analysis. Moderator analysis revealed that higher PTSD symptom at baseline and unemployment is linked to higher PTSD symptom post-treatment.
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	This findings suggest that EMDR is equally efficacious to other psychological treatments in treating adult PTSD. The reviewers highlight the strength of the study design in identifying individual-level moderators, such as employment status and gender. They also recommend that researchers store and anonymize participant data for future use in IPDMA studies.

Note. IES-R: Impact of Event Scale-Revised; MPTSD: Mississippi Scale for PTSD; PCL: PTSD Checklist.

Title of paper	**Comparative effectiveness of psychotherapies in adults with posttraumatic stress disorder: A network meta-analysis of randomised controlled trials**
Full citation	Yunitri, N., Chu, H., Kang, X. L., Wiratama, B. S., Lee, T.-Y., Chang, L.-F., Liu, D., Kustanti, C. Y., Chiang, K.-J., Chen, R., Tseng, P., & Chou, K.-R. (2023). Comparative effectiveness of psychotherapies in adults with posttraumatic stress disorder: A network meta-analysis of randomised controlled trials. *Psychological Medicine, 53*(13), 6376–6388. https://doi.org/10.1017/S0033291722003737
Evidence level	Level I
Design	Network meta-analysis (98 studies, with 12 studies involving EMDR)
Delivery format	Individual and group, face to face
Participants	5,567 participants who have a primary diagnosis of PTSD under DSM, ICD, or WHO criteria
Demographic characteristics	Summary not provided, but participant characteristics are presented in supplementary material
Treating clinician type	Not reported
Intervention	Eye movement desensitization and reprocessing
Outcome(s) measured	The relevant primary outcome is PTSD symptom severity, and relevant secondary outcome include loss of PTSD diagnosis. Measures were listed individually in the supplementary material.
Procedure	A network meta-analysis was conducted to investigate the short and long-term effectiveness of nine psychotherapies included in clinical guidelines in treating PTSD in adults. The certainty of evidence was evaluated using the GRADE approach. Sensitivity analyses were also conducted using a Bayesian approach. The search covered RCTs from inception until January 2021.
Follow up	Combination, nil to post-6 months
Statistics summary	Network meta-analyses using a random-effects model showed that among other psychotherapies, EMDR significantly improved PTSD symptoms at post-treatment (*SMD* = -1.39, 95% CI [−1.69, -1.10], I^2 = 76.9%, τ^2 = 0.266), short-term (*SMD* = -1.02, 95% CI [−1.40 -0.65], I^2 = 55.9%, τ^2 = 0.072), and long-term follow-up (*SMD* = -0.64, 95% CI [−1.24, -0.04], I^2 = 68.9%, τ^2 = 0.111). Rank analysis of p-scores identified EMDR as one of the most effective psychotherapies for reducing PTSD symptoms severity and loss of PTSD diagnosis.
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	This review consistently found EMDR as the most effective therapy in reducing PTSD symptoms in adults alongside cognitive processing therapy, cognitive therapy, and narrative exposure therapy. Researchers have therefore recommended EMDR as a therapeutic approach for adult PTSD.

Hypnotherapy

Title of paper	**Australian guidelines for the treatment of adults with acute stress disorder and post-traumatic stress disorder**
Full citation	Forbes, D., Creamer, M., Phelps, A., Bryant, R., McFarlane, A., Devilly, G. J., Matthews, L., Raphael, B., Doran, C., Merlin, T., & Newton, S. (2007). Australian guidelines for the treatment of adults with acute stress disorder and post-traumatic stress disorder. *Australian and New Zealand Journal of Psychiatry, 41*(8), 637–648. https://doi.org/10.1080/00048670701449161
Level of evidence	Level I
Design	Systematic review and meta-analysis
Follow-up	Not reported
Format	Not reported
Participants	Adults with a diagnosis of PTSD or acute stress disorder (ASD). The age and gender of participants was not reported.
Treating clinician(s)	Not reported
Interventions	Hypnotherapy
Comparison group(s)	No treatment, waitlist control, TAU, alternative psychological interventions
Procedure	Systematic review and meta-analysis of RCTs published from 2005 to 2011 examining the relative efficacy of psychological interventions for the treatment of PTSD and ASD.
Summary of findings	Based on the four studies on hypnotherapy included in the review, the authors concluded that there was insufficient evidence to suggest that hypnotherapy was more effective than waitlist control for the treatment of PTSD in adults. The guidelines recommend that adults diagnosed with PTSD should be offered trauma-focused CBT or EMDR as first-line treatment.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 65. Copyright 2018 by the Australian Psychological Society.

Title of paper	A meta-analysis for the efficacy of hypnotherapy in alleviating PTSD symptoms
Full citation	Rotaru, T. S., & Rusu, A. (2016). A meta-analysis for the efficacy of hypnotherapy in alleviating PTSD symptoms. *International Journal of Clinical and Experimental Hypnosis, 64*(1), 116–136. https://doi.org/10.1080/00207144.2015.1099406
Level of evidence	Level I
Design	Meta-analysis (5 studies)
Follow-up	1 month to 2 years
Format	Not reported
Participants	386 individuals with a diagnosis of PTSD. Four studies used adult samples, and one study used children. The mean ages of participants ranged from 9.8 to 42 years, and 52.8% were female.
Treating clinician(s)	Hypnotherapists (one study), psychiatrists experienced in hypnotherapy (one study). The clinician type for the remaining studies was not reported.
Interventions	Hypnotherapy
Comparison group(s)	Pharmacotherapy, placebo control, waitlist control, nontreatment control
Procedure	Meta-analysis of all relevant RCTs on the efficacy of hypnosis-based interventions as standalone interventions in reducing PTSD symptomatology. Hypnotherapeutic methodologies varied. One study adopted a cognitive-behavioural focus, another used a symptom-oriented hypnotherapy approach, a third study used a spiritual-hypnosis-assisted therapy approach, and the final two studies both comprised a manualised hypnotherapy approach (abreactive ego state therapy). In three studies, participants received a single session of therapy, in one study they received four sessions, and in the fifth study participants received a mean of 14.4 sessions.
Summary of findings	The mean weighted effect size was large and in favour of the hypnosis-based interventions at posttreatment compared with pooled control conditions. The effect sizes of the two RCTs that used the manualised abreactive ego state therapy were large compared with the other interventions which produced medium effect sizes at posttreatment and at follow-up. However, the study results are only partially reliable due to the small number of studies included in the meta-analysis, the small numbers of participants within studies, and the large variation in the results between studies.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 66. Copyright 2018 by the Australian Psychological Society.

Imagery rescripting

Title of paper	**Efficacy of imagery rescripting in treating mental disorders associated with aversive memories – An updated meta-analysis**
Full citation	Kip, A., Schoppe, L., Arntz, A., & Morina, N. (2023). Efficacy of imagery rescripting in treating mental disorders associated with aversive memories – An updated meta-analysis. *Journal of Anxiety Disorders, 99*, 102772–102772. https://doi.org/10.1016/j.janxdis.2023.102772
Evidence level	Level I
Design	Systematic review and meta-analysis of 17 RCTs (with six studies focused on PTSD)
Delivery format	Individual, face to face
Participants	908 participants with aversive memories (365 participants diagnosed with PTSD according to DSM or ICD criteria)
Demographic characteristics	The mean age of participants in each PTSD study ranged from 37.2 – 45.2 years, with 9.1% to 100% being female. Trauma type, age range, and study location were not specified.
Treating clinician type	Not specified
Intervention	Imagery rescripting
Outcome(s) measured	Relevant primary outcome measures were PTSD symptom severity measured by the BDI, CAPS, PDS and PSS-I.
Procedure	An updated systematic review and meta-analysis from a previous study was conducted to evaluate the efficacy of imagery rescripting (ImRs) in treating mental disorders associated with aversive memories, which included PTSD in adults. The search covered RCTs from January 2016 until May 2023. Treatment averaged 4.3 sessions with a mean duration of 79.6 minutes.
Follow up	Yes; nil to 12 months
Statistics summary	A random-effects meta-analysis found a non-significant effect when ImRs was compared to prolonged exposure and EMDR for adult PTSD at short-term (k = 4, g = − 0.15, 95% CI [− 0.38, 0.08]). The review did not report statistics for PTSD-specific results, but when ImRs was compared to passive controls at short-term, there is a large and significant effect (g = 0.68, 95 % CI [0.18, 1.18]).
Conflict of interest	None declared
Risk of bias	Unclear
Summary of findings	This review found support for the efficacy of imagery rescripting for some mental disorders, including PTSD. The researchers note that there is evidence found in this review that suggest the equivalence of imagery rescripting to more established interventions for PTSD, however more trials are needed to draw conclusions.

Note. BDI: Beck Depression Inventory; CAPS-5: Clinician-Administered PTSD Scale for DSM-5; PDS: Posttraumatic Diagnostic Scale; PSS-I: The PTSD Symptom Scale Interview.

Interpersonal psychotherapy

Title of paper	**A randomized clinical trial comparing interpersonal psychotherapy with prolonged exposure for the treatment of PTSD in veterans**
Full citation	Shea, M. T., Krupnick, J. L., Sautter, F. J., Mete, M., Green, B. L., Norman, S. B., Finley, S. L., & Eaton, E. (2023). A randomized clinical trial comparing interpersonal psychotherapy with prolonged exposure for the treatment of PTSD in veterans. *Journal of Anxiety Disorders, 99*, 102770–102770. https://doi.org/10.1016/j.janxdis.2023.102770
Evidence level	Level II
Design	Randomised controlled trial (RCT)
Delivery format	Individual, face to face
Participants	109 adults with a diagnosis of military-related PTSD according to the DSM-5 criteria (IPT group n = 58 adults, PE group n= 51 adults)
Demographic characteristics	The mean age of participants was 49 (*SD* = 16) years with 95% being male, 64% of Caucasian background and with 95% having combat-related trauma exposure
Treating clinician type	Trained mental health professional (psychologists and clinical social workers)
Intervention	Interpersonal psychotherapy for PTSD
Study groups	Intervention group: individual Interpersonal psychotherapy (IPT) Control group: individual prolonged exposure (PE)
Outcome(s) measured	The relevant primary outcome is PTSD symptom severity measured by CAPS-5. Other relevant outcomes measured were relationship dysfunction measured by IIP-32 and types of trauma measured by the LEC-5, loss of diagnosis, and remission
Procedure	12 individual weekly sessions of 50 mins
Follow up	Yes; six months
Statistics summary	Equivalence analysis was conducted by comparing the confidence intervals between group mean difference. The pre-post mean difference in CAPS-5 scores between IPT (*MD* = 8.1, *SD* = 9.0) and PE (*MD* = 5.5, *SD* = 11.3) groups was not significant (-2.6, *SE* = 2.6) and did not fall into the margin of equivalence (95% CI [-7.0, 1.9]). There were no significant differences ($p < .05$) between IPT and PE regarding loss of PTSD diagnosis and remission.
Conflict of interest	Yes; two authors have financial relationships from commercial funding and royalties
Risk of bias	Some concerns
Summary of findings	IPT did not demonstrate equivalence with prolonged exposure in reducing PTSD symptoms in veterans and did not show superiority in improving interpersonal functioning outcomes. However, it did effectively reduce PTSD symptoms. The size of the improvement for IPT was larger than CPT but given the small sample size the overall effects of each treatment could not be rated as equivalent. Additionally, researchers highlighted the advantage of IPT's shorter session length compared to prolonged exposure, making it a viable alternative.

Note. CAPS-5: Clinician-Administered PTSD Scale; IIP-32: Inventory of Interpersonal Problems; LEC-5: The Life Events Scale.

Mindfulness-based cognitive therapy

Title of paper	**Influence of adjuvant mindfulness-based cognitive therapy (MBCT) on symptoms of post-traumatic stress disorder (PTSD) in veterans - results from a randomized control study**
Full citation	Jasbi, M., Sadeghi Bahmani, D., Karami, G., Omidbeygi, M., Peyravi, M., Panahi, A., Mirzaee, J., Holsboer-Trachsler, E., & Brand, S. (2018). Influence of adjuvant mindfulness-based cognitive therapy (MBCT) on symptoms of post-traumatic stress disorder (PTSD) in veterans - results from a randomized control study. *Cognitive Behaviour Therapy, 47*(5), 431–446. https://doi.org/10.1080/16506073.2018.1445773
Evidence level	Level II
Design	Randomised controlled trial (RCT)
Delivery format	Group, face to face
Participants	48 military veterans with a diagnosis of PTSD according to DSM-5 criteria (intervention *n* = 24 adults, control *n* = 24 adults)
Demographic characteristics	Participants were aged 50-55 years to be included in the study and had to be military veterans from the Iraq-Iran war. The mean age was 52.3 years wi 100% were male
Treating clinician type	Trained mental health professional (clinical psychologists and psychotherapists)
Intervention	MBCT (adjuvant to SSRI medication)
Study groups	Intervention group: Group MBCT with citalopram medication Control group: socio-therapeutic group with citalopram medication
Outcome(s) measured	Primary outcome was PTSD symptoms as measured by PCL-5. Other measures included were depression, anxiety, and stress symptoms as measured by the DASS-21.
Procedure	Participants were randomly assigned to the MBCT group or the control group. The intervention group completed sessions lasting 60-70mins weekly for eight consecutive weeks in groups of 7-12 participants.
Follow up	No
Statistics summary	A repeated measures ANOVA was conducted to examine the effect of MBCT in reducing PTSD symptoms, revealing a significant Time × Group interaction for all PCL-5 scores, such as for the 're-experiencing the events' subscale, $F(1, 46) = 39.73$, $p < .001$, with an effect size of $\eta_p^2 = .812$. Pre-post change yielded large effect sizes in the MBCT group, and small to medium in the control group, suggesting that the effect was larger in the intervention group.
Conflict of interest	None declared
Risk of bias	Some concerns
Summary of findings	This study demonstrated that group MBCT combined with medication is effective in reducing war-related PTSD symptoms among military veterans. However, limitations of the findings include an exclusively male sample with a stringent age bracket, as well as the reliance of the inferential statistics on effect sizes, which does not reflect the influence of sample size.

Note. DASS-21: 21-item Depression Anxiety and Stress Scale; PCL-5: PTSD Checklist for DSM-5.

Mindfulness-based stress reduction

Title of paper	**The efficacy of mindfulness-based stress reduction intervention 3 for post-traumatic stress disorder (PTSD) symptoms in patients with PTSD: A meta-analysis of four randomized controlled trials**
Full citation	Liu, Q., Zhu, J., & Zhang, W. (2022). The efficacy of mindfulness-based stress reduction intervention 3 for post-traumatic stress disorder (PTSD) symptoms in patients with PTSD: A meta-analysis of four randomized controlled trials. *Stress and Health, 38*(4), 626–636. https://doi.org/10.1002/smi.3138
Level of evidence	Level I
Design	Systematic review and meta-analysis of ten RCTs
Delivery format	Individual, face to face
Participants	768 participants with a diagnosis of PTSD according to DSM-4 or DSM-5 criteria
Demographic characteristics	The mean age of participants was 51.7 (*SD* = 5.7) years, with 37-84% being male with the exclusion of three single-gender studies. Participants were drawn from veteran, traffic-accident survivors, and victims of interpersonal violence populations
Treating clinician type	Not specified
Intervention	Mindfulness-based stress reduction (MBSR)
Outcome(s) measured	PTSD symptoms as measured by the PCL-C, PSS-I, CAPS-5, PCL-5, and PTSD-SS
Procedure	A systematic review and meta-analysis evaluated the efficacy of MBSR intervention for adults with PTSD, including subgroup analyses to identify any aspects of the intervention or the population associated with PTSD symptom reduction. The search covered English and Chinese-language RCTs from inception until December 2021.
Follow up	Yes, ten studies completed follow-up ranging from three weeks to six months
Statistics summary	A random-effects meta-analysis was conducted with low levels of heterogeneity (Q = 2.97, p = 0.94, I^2 = 0%). Following sensitivity analysis correction, the findings favoured MBSR in reducing PTSD symptoms compared to control conditions (nine studies, N = 646, g = 0.46, 95% CI [0.31, 0.62], p < .001). The effect remained significant in subgroup analyses where MBSR is the sole intervention (i.e. without exercise and brief psychoeducation)
Conflict of interest	None declared
Risk of bias	High
Summary of findings	This review indicated that MBSR is effective in the treatment of PTSD in adults, particularly in veteran populations. The study has low heterogeneity, but on the other hand, only MBSR studies with 8-weeks treatment were included in the review, which challenges the generalizability of the study findings.

Note. CAPS-5: Clinician-Administered PTSD Scale for DSM-5; PCL-5: PTSD Checklist for DSM-5; PCL-C: PTSD Checklist –Civilian Version; PSS-I: PTSD Symptom Scale – Interview; PTSD-SS: Post-Traumatic Stress Disorder Self-Rating Scale.

Self-guided digital interventions

Title of paper	**A counsellor-supported 'PTSD coach' intervention versus enhanced treatment-as-usual in a resource-constrained setting: A randomised controlled trial.**
Full citation	Bröcker, E., Olff, M., Suliman, S., Kidd, M., Greyvenstein, L., & Seedat, S. (2024). A counsellor-supported 'PTSD coach' intervention versus enhanced treatment-as-usual in a resource-constrained setting: A randomised controlled trial. *Global Mental Health, 11*, e7-25. https://doi.org/10.1017/gmh.2023.92
Evidence level	Level II
Design	Randomised controlled trial (RCT)
Delivery format	Digital intervention, with minimal therapist guidance
Participants	62 participants with a diagnosis of PTSD according to DSM-5 criteria
Demographic characteristics	Participant age range was 19 – 61 (M = 34.4, SD = 11.4) years. 89% were female and 77% were Black.
Treating clinician type	Trained mental health professional (counsellor)
Intervention	'PTSD Coach' app (Smartphone-based digital intervention)
Study groups	Intervention group: 'PTSD Coach' app Control group: enchanced treatment as usual (e-TAU)
Outcome(s) measured	The primary outcome was PTSD symptom severity measured by the clinician administered CAPS-5. Self-reported PTSD symptoms measured by PCL-5 was used for comparison. Other relevant secondary outomes included depression, stress, and anxiety symptoms measured by the DASS-21.
Procedure	Participants were randomised to the 'PTSD Coach' app or e-TAU. The intervention group consisted of four weekly sessions of 40–60-minute durations. Counsellors provided technical and language support, agreement with homework, but nor providing therapeutic support.
Follow up	Yes, 1 -3 months post-treatment
Statistics summary	An intention-to-treat analysis with a linear mixed effects regression model indicated a significant reduction in CAPS-5 scores over time in the intervention group compared to control, $F_{3.136} = 3.33$, p = 0.02. Hedge's g was calculated for effect size. Post-treatment (g = 0.33, p = 0.22) and 1-month follow-up (g = 0.37, p = 0.10) effect sizes were not significant, but it was significant at 3-month follow-up (g = 0.86, p = < .01).
Conflict of interest	None declared
Risk of bias	Some concerns
Summary of findings	The study found some evidence supporting the efficacy of the 'PTSD-Coach' app in the treatment of PTSD symptoms in adults. However, the lack of statistical power in this study might have led to the non-detection of intervention effect. The authors highlight the potential usefulness of the app in resource-constrained settings.

Note. CAPS-5: Clinician-Administered PTSD Scale for DSM-5; DASS-21: 21-item Depression Anxiety Stress Scales; PCL-5: PTSD Checklist for DSM-5.

Title of paper	**Therapist-assisted online psychological therapies differing in trauma focus for post-traumatic stress disorder (STOP-PTSD): A UK-based, single-blind, randomised controlled trial.**
Full citation	Ehlers, A., Wild, J., Warnock-Parkes, E., Grey, N., Murray, H., Kerr, A., Rozental, A., Thew, G., Janecka, M., Beierl, E. T., Tsiachristas, A., Perera-Salazar, R., Andersson, G., & Clark, D. M. (2023). Therapist-assisted online psychological therapies differing in trauma focus for post-traumatic stress disorder (STOP-PTSD): A UK-based, single-blind, randomised controlled trial. *The Lancet. Psychiatry, 10*(8), 608–622. https://doi.org/10.1016/S2215-0366(23)00181-5
Evidence level	Level II
Design	Randomised controlled trial (RCT)
Delivery format	Digital intervention, with minimal therapist guidance
Participants	217 participants with a diagnosis of PTSD according to DSM-5 criteria
Demographic characteristics	Participant age range was 18 – 71 (*M* = 36.4, *SD* = 12.1) years. 73% were female, 26% were male, 1% (*n* = 2) had another gender. 78% were White (British)
Treating clinician type	Trained mental health professional (clinical psychologists)
Intervention	Internet-delivered cognitive therapy for PTSD (iCT-PTSD), Internet-delivered stress management therapy for PTSD (iStress-PTSD)
Study groups	Intervention group: 1. Internet-delivered cognitive therapy for PTSD (iCT-PTSD) 2. Internet-delivered stress management therapy for PTSD (iStress-PTSD) Control group: waitlist with treatment as usual
Outcome(s) measured	The primary outcome was PTSD symptom severity measured by the PCL-5. The IES-R and CAPS-5 were also used as comparison measures. Relevant secondary outcomes were depression measured by the PHQ-9, anxiety measured by the GAD-7, and sleep disturbance measured by the ISI.
Procedure	Participants were randomised (stratified by location) in a 3:3:1 ratio for iCT-PTSD, iStress-PTSD, and waitlist. Interventions were delivered weekly via an online platform with therapist support through twelve weekly 20-minute phone calls during the intervention phase, three monthly calls in the booster phase, and messages via the online program.
Follow up	Yes, at nine to 39 weeks post-treatment
Statistics summary	An intention-to-treat analysis with a linear mixed effects regression model was conducted. iStress-PTSD was superior to the waitlist control group in reducing PCL-5 scores at post-treatment (*d* = 1.29, 95% CI [0.85, 1.72]) and follow-up. iCT-PTSD remained superior to iStress-PTSD at post-treatment (*d* = 0.38, 95% CI [0.07, 0.69]) and at follow-up.
Conflict of interest	Yes (financial)
Risk of bias	Low
Summary of findings	Both self-guided digital interventions in this three-arm study showed efficacy in the treatment of PTSD symptoms in adults, with the trauma-focused iCT-PTSD showing superiority over non-trauma focused iStress-PTSD. Positive outcomes were magnified for adults with more severe PTSD symptoms who received the iCT-PTSD intervention.

Note. CAPS-5: Clinician-Administered PTSD Scale for DSM-5; GAD-7: Clinician-Administered PTSD Scale for DSM-5; IES-R: Impact of Event Scale-Revised; ISI: Insomnia Sleep Index; PCL-5: PTSD Checklist for DSM-5; PHQ-9: Patient Health Questionnaire.

Title of paper	**Internet-based cognitive and behavioural therapies for post-traumatic stress disorder (PTSD) in adults**
Full citation	Simon, N., Robertson, L., Lewis, C., Roberts, N. P., Bethell, A., Dawson, S., & Bisson, J. I. (2021). Internet-based cognitive and behavioural therapies for post-traumatic stress disorder (PTSD) in adults. *The Cochrane Database of Systematic Reviews, 5*(5), CD011710. https://doi.org/10.1002/14651858.CD011710.pub3
Level of evidence	Level I
Design	Systematic review and meta-analysis (13 studies)
Delivery format	Digital intervention, combination of nil to minimal therapist guidance
Participants	808 participants diagnosed with PTSD according to either DSM-4 or DSM-5 criteria
Demographic characteristics	Where reported, the mean age ranged from 22.0 - 47.2 years. The percentage of females ranged from 18.75% to 100% in studies.
Treating clinician type	Self-assisted with minimal therapist guidance
Intervention	Internet-based cognitive and behavioural therapy (i-CBT), trauma-focused and non-trauma focused
Outcome(s) measured	Relevant primary outcomes include severity of PTSD symptoms measured by IES-R, CAPS-5, PCL-C, PSS-I, and PDS.
Procedure	A systematic review and meta-analysis evaluated the efficacy of digital interventions in treating PTSD in adults compared to waitlist and active control. The quality of evidence was evaluated using the GRADE approach. Subgroup analyses were performed to investigate heterogeneity. Treatment ranged from 3-12 weeks. The search covered RCTs from inception until June 2020.
Follow up	Nil to longer than one year
Statistics summary	Random-effects meta-analyses were performed to account for the substantial heterogeneity. I-CBT favoured waitlist in the reduction of PTSD symptom severity in post-treatment (*SMD* = -0.61, 95% CI [-0.93, -0.29], k = 10, I^2 = 69%). When the duration of follow-up was below six months, no evidence of difference between groups was found (*SMD* = -0.45, 95% CI [-1.29, 0.39], k = 4, I^2 = 82%).
Conflict of interest	Three authors have declared involvement in the development of an intervention included in the review
Risk of bias	Low
Summary of findings	The findings revealed support for i-CBT for PTSD in adults, however the quality of evidence was very low due to the limited number of included trials. The researchers pointed to the numerous ongoing trials at the time of the review.

Note. CAPS-5: Clinician-Administered PTSD Scale for DSM-5; IES-R: Impact of Event Scale; PCL-C: PTSD Checklist –Civilian Version; PDS: Posttraumatic Diagnostic Scale PSS-I: PTSD Symptom Scale – Interview.

Complex posttraumatic stress disorder

SUMMARY OF EVIDENCE

Following the formal recognition of complex posttraumatic stress disorder (C-PTSD) as a new diagnosis in the ICD-11, C-PTSD has been included in the current review for the first time. As such, the current systematic review has included articles on C-PTSD published prior to 2018 to capture the research which preceded the formal recognition of this diagnosis.[61]

For the purposes of this review, the section on cognitive behaviour therapy includes studies on cognitive therapy, cognitive processing therapy, prolonged exposure, and narrative exposure therapy. The inclusion of these therapies under cognitive behaviour therapy is consistent with the categorisation used by the International Society for Traumatic Stress Studies (ISTSS; 2020).

The current review identified Level I evidence[62] in support of cognitive behaviour therapy and eye movement desensitisation reprocessing in the treatment of C-PTSD in adults. This research did however note reduced efficacy of treatment for people who had experienced childhood trauma and highlight the limitations of the current evidence base related to the treatment of C-PTSD. Level IV evidence in support of intensive prolonged exposure therapy was also identified.

Guidelines provided by Phoenix Australia, acknowledge the sparsity of research on how best to treat C-PTSD across all populations and highlight the interest in whether current trauma-focused therapies for PTSD are likely to be optimal for C-PTSD patient populations. These guidelines also emphasise the importance of trauma-informed care across all types of service delivery for individuals with C-PTSD.

[61] For the purpose of exploring emerging literature specific to C-PTSD, this literature review has focused on research that has specifically used this diagnostic term and has excluded research on related symptom clusters or other descriptors used to describe this presentation. Those seeking a comprehensive understanding of the evidence related to these symptoms are encouraged to explore relevant research which may have used different terminology than that covered by the recently formalised C-PTSD diagnosis.

[62] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of C-PTSD in adults.

Cognitive behaviour therapy

Title of paper	**Psychological interventions for ICD-11 complex PTSD symptoms: Systematic review and meta-analysis**
Full citation	Karatzias, T., Murphy, P., Cloitre, M., Bisson, J., Roberts, N., Shevlin, M., Hyland, P., Maercker, A., Ben-Ezra, M., Coventry, P., Mason-Roberts, S., Bradley, A., & Hutton, P. (2019). Psychological interventions for ICD-11 complex PTSD symptoms: Systematic review and meta-analysis. *Psychological Medicine*, *49*(11), 1761-1775. https://doi.org/10.1017/S0033291719000436
Level of evidence	Level I
Design	Meta-analysis (52 studies, with 35 studies focused on CBT)
Format	Individual and group, face-to-face
Participants	Total sample size of *n* = 3,849 participants who had PTSD and clinically significant baseline levels of CPTSD clusters that reflect 'disturbances in self-organisation' (DSO). This takes into account the ICD-11 diagnostic criteria that requires PTSD criteria to be met in addition to the specific CPTSD symptom clusters.
Demographic characteristics	The mean age and other demographic information related to the overall sample was not specified.
Treating clinician type	Trained mental health professional
Intervention	CBT
Outcome(s) measured	Severity of symptoms related to both PTSD and CPTSD symptom clusters (emotion dysregulation, negative self-concept and/or interpersonal disturbance) as measured by the CAPS, ERS, PTCI, SAS, SDS, SF-36, TRGI, TSI, and WSAS.
Procedure	A systematic review and network meta-analysis of RCTs was conducted to investigate the most efficacious and accepted psychological treatments for the treatment of CPTSD. The included time frame was from database inception to October 2017.
Follow up	Not specified
Statistics summary	Random-effects meta-analyses were conducted, and subgroup analyses were done on specific DSO symptoms, comparator types and other factors. When effects were pooled across the 9 CBT studies that reported data on PTSD and at least 1 DSO symptom, a small effect was documented (k = 9, g = -0.34, 95% CI [-0.62 to -0.06) with NNTS of between 8 (50% CER) and 14 (10% CER).
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	This meta-analysis indicates that CBT has some efficacy in treating PTSD with specific CPTSD symptom clusters. The researchers note that this effect is moderated by the onset of trauma, such that childhood trauma is associated with reduced efficacy. The need for further research in the area was highlighted and outlined.

Note. CAPS: Clinician-Administered PTSD Scale; ERS: Emotion Regulation Scale; PTCI: Posttraumatic Cognitions Inventory; SAS: Social Adjustment Scale; SDS: Sheehan Disability Scale; SF-36: Short Form-36 Health Survey; TRGI: Trauma Related Guilt Inventory; TSI: Traumatic Stress Institute Beliefs Scale; WSAS: Work and Social Adjustment Scale.

Title of paper	**Intensive prolonged exposure therapy for chronic PTSD patients following multiple trauma and multiple treatment attempts**
Full citation	Hendriks, L., de Kleine, R. A., Broekman, T. G., Hendriks, G. J., & van Minnen, A. (2018). Intensive prolonged exposure therapy for chronic PTSD patients following multiple trauma and multiple treatment attempts. *European Journal of Psychotraumatology*, *9*(1). https://doi.org/10.1080/20008198.2018.1425574
Level of evidence	Level IV
Design	Non-randomised experimental study
Format	Individual, face to face
Participants	73 participants with chronic PTSD and a likely diagnosis of ICD-11 Complex PTSD following multiple interpersonal trauma and a history of multiple treatment attempt
Demographic characteristics	Participants' age range was 19-63 years and mean age 35.9 (*SD* = 11.3). Females represented 86% of the sample. Participants were regular referrals to a Dutch outpatient mental health clinic. All participants had experienced multiple interpersonal trauma (71.2% childhood sexual abuse and 63.0% childhood physical abuse). All reported symptoms of complex PTSD (i.e. affect dysregulation, negative self-concept, and interpersonal problems).
Treating clinician type	Trained mental health professional (qualified clinicians holding a master's degree in clinical psychology and trained in PE therapy for PTSD)
Intervention	Intensive prolonged exposure therapy (iPE)
Study groups	Intervention group: iPE
Outcome(s) measured	Clinician-rated PTSD symptom severity and diagnostic status as measured by the CAPS-IV and self-rated PTSD symptom severity as measured by the Dutch translation of the PSS-SR PTSD.
Procedure	Participants received 3 × 90-minute iPE daily sessions over four days (intensive phase), involving prolonged imaginal exposure, drawing the scenes of the hotspots of the traumatic memory, and exposure in vivo to trauma related situations and material. This was followed by four weekly 90-minute booster prolonged exposure sessions (booster phase).
Follow up	Yes, 3 and 6 months.
Statistics summary	Mixed model repeated measures analyses showed a decrease in CAPS-IV and PSS-SR scores between baseline and posttreatment (CAPS-IV: d = 1.21, p < .001; PSS-SR: d = 1.23) that persisted during the three-month (CAPS-IV: d = 1.30; PSS-SR: d = 1.23) and six-month (CAPS-IV: d = 1.42; PSS-SR: d = 1.29) follow-ups. Most participants were responders at posttreatment (CAPS-IV: 71.2%; PSS-SR: 58.9%), and at three-month (CAPS-IV:74.0%; PSS-SR: 60.3%) and six-month (CAPS-IV: 79.5%; PSS-SR: 64.4%) follow-ups.
Conflict of interest	None declared
Risk of bias	Moderate
Summary of findings	The results of this study indicate that iPE is effective and safe to treat PTSD patients with multiple interpersonal childhood trauma and reporting ICD-11 Complex PTSD symptoms. Despite unsuccessful previous treatment attempts, 71% of the patients showed partial or complete response during iPE, with results being maintained up to six months.

Note. CAPS-IV: Clinician-Administered PTSD Scale); PSS-SR: PTSD Symptom Scale, Self-Report.

Eye movement desensitisation and reprocessing

Title of paper	**Psychological interventions for ICD-11 complex PTSD symptoms: Systematic review and meta-analysis**
Full citation	Karatzias, T., Murphy, P., Cloitre, M., Bisson, J., Roberts, N., Shevlin, M., Hyland, P., Maercker, A., Ben-Ezra, M., Coventry, P., Mason-Roberts, S., Bradley, A., & Hutton, P. (2019). Psychological interventions for ICD-11 complex PTSD symptoms: Systematic review and meta-analysis. *Psychological Medicine*, *49*(11), 1761-1775. https://doi.org/10.1017/S0033291719000436
Level of evidence	Level I
Design	Meta-analysis (52 studies, with 9 studies focused on EMDR)
Format	Individual and group, face-to-face
Participants	Total sample size of *n* = 3,849 participants who had PTSD and clinically significant baseline levels of CPTSD clusters that reflect 'disturbances in self-organisation' (DSO). This takes into the account the ICD-11 diagnostic criteria that requires PTSD criteria to be met in addition to the specific CPTSD symptom clusters.
Demographic characteristics	The mean age and other demographic information related to the overall sample was not specified.
Treating clinician type	Trained mental health professional
Intervention	EMDR
Outcome(s) measured	Severity of symptoms related to both PTSD and CPTSD symptom clusters (emotion dysregulation, negative self-concept and/or interpersonal disturbance) as measured by the Mississippi Scale for PTSD, PTCI, PTGI, SDI, SDS, TSCS, and WHO-QOL.
Procedure	A systematic review and network meta-analysis of RCTs was conducted to investigate the most efficacious and accepted psychological treatments for the treatment of CPTSD. The included time frame was from database inception to October 2017.
Follow up	Not specified
Statistics summary	Random-effects meta-analyses were conducted, and subgroup analyses were done on specific DSO symptoms, comparator types and other factors. Three EMDR studies were pooled to calculate the effect of EMDR on the composite outcome of PTSD and at least one CPTSD DSO symptom (k = 3, g = -0.52, 95% CI [-0.97 to -0.08]) with NNTs of between 5 (CER 50%) and 8 (CER 10%). No effect was found on the composite outcome of PTSD and more than one CPTSD DSO symptom.
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	This meta-analysis indicates that EMDR has some efficacy in treating PTSD with specific CPTSD symptom clusters. The researchers note that this effect is moderated by the onset of trauma, such that childhood trauma is associated with reduced efficacy. The need for further research in the area was highlighted and outlined.

Note. PTCI: Posttraumatic Cognitions Inventory; PTGI: Post-Traumatic Growth Inventory; SDI: Social Disability Index; SDS: Sheehan Disability Scale; TSCS: Tennessee Self-Concept Scale; WHO-QOL: World Health Organization Quality of Life Questionnaire.

Adjustment disorder

SUMMARY OF EVIDENCE

Level I evidence[63] was identified in support of the use of cognitive behaviour therapy for the treatment of adjustment disorder in adults. Level II evidence was identified in support of psychodynamic therapy. Level II evidence was found in relation to self-guided digital interventions (blended CBT); although this was based on within-group effects.

The research evidence presented in this chapter was based on different conceptualisations and diagnostic criteria for adjustment disorder across time, as formalised in the DSM-IV, DSM-V, ICD-10, and ICD-11. These differences may lead to clinically different populations, and subsequent implications for treatment. As such, caution is warranted when interpreting findings.

The methodology of this review excludes co-occurring physical and medical conditions. It is acknowledged that these conditions can at times be a precursor to adjustment disorder, however there were no articles excluded on this basis for adjustment disorder.

[63] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of adjustment disorder in adults.

Cognitive behaviour therapy

Title of paper	Interventions to facilitate return to work in adults with adjustment disorders
Full citation	Arends, I., Bruinvels, D. J., Rebergen, D. S., Nieuwenhuijsen, K., Madan, I., Neumeyer-Gromen, A., Bültmann, U., & Verbeek, J. H. (2012). Interventions to facilitate return to work in adults with adjustment disorders. *The Cochrane Database of Systematic Reviews*, *12*, CD006389. https://doi.org/10.1002/14651858.CD006389.pub2
Level of evidence	Level I
Design	Systematic review and meta-analysis (9 studies)
Follow-up	10 months to 2 years
Format	Not reported
Participants	1,546 adults diagnosed with adjustment disorder. Participant demographics were not reported.
Treating clinician(s)	Not reported
Intervention(s)	CBT (5 studies), problem-solving therapy (4 studies)
Comparison group(s)	No treatment, TAU (occupational physicians or general practitioners)
Procedure	Systematic review and meta-analysis of all available RCTs published up to 2011 evaluating the effectiveness of interventions to facilitate the return to work of adults with adjustment disorders compared with no or other treatment.
Summary of findings	Based on low and moderate quality evidence, CBT was not found to increase the rate at which workers partially or fully returned to work and did not significantly reduce complaints of distress when compared with no treatment at 1-year follow-up. Based on moderate quality evidence (from one study), problem solving therapy significantly reduced time to partial return to work at 1-year follow-up compared with TAU. However, further moderate quality evidence (based on two studies) indicated no significant effect of problem-solving therapy in reducing the number of days until full return to work at 1-year follow-up.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 89. Copyright 2018 by the Australian Psychological Society.

Title of paper	**Work-focused treatment of common mental disorders and return to work: A comparative outcome study**
Full citation	Lagerveld, S. E., Blonk, R. W., Brenninkmeijer, V., Wijngaards-de Meij, L., & Schaufeli, W. B. (2012). Work-focused treatment of common mental disorders and return to work: A comparative outcome study. *Journal of Occupational Health Psychology*, *17*(2), 220–234. https://doi.org/10.1037/a0027049
Level of evidence	Level III
Design	Non-randomised comparative study with concurrent control
Follow-up	1, 3, 6, 9, and 12 months
Format	Individual
Participants	168 adults on sick leave diagnosed with one of four common mental health disorders. Most participants (67%) were diagnosed with adjustment disorder. The mean age of participants was 40.7 years, and 60% were female.
Treating clinician(s)	Psychologists
Intervention(s)	CBT (*n* = 79)
Comparison group(s)	Work-focused CBT (*n* = 89)
Procedure	Participants were allocated to the treatment conditions based on logistics (proximity to home). Both interventions were manualised and were based on the same CBT protocol, with the addition of a module focusing on work and the return to work in the work-focused CBT condition. Participants in both groups received a mean of 11 therapy sessions over the course of 5.5 months of therapy.
Summary of findings	There was a significant difference between groups in favour of work-focused CBT for the proportion of participants who had fully resumed work at 3 and 6 months' follow-up. A significant decrease in mental health problems over time was demonstrated in both groups, and there were no significant between-group differences at the 12-month follow-up.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 89. Copyright 2018 by the Australian Psychological Society.

Title of paper	Counseling in primary care improves depression and quality of life
Full citation	Carta, M., Petretto, D., Adamo, S., Bhat, K., Lecca, M., Mura, G., Carta, V., Angermeyer, M., & Moro, M. (2012). Counseling in primary care improves depression and quality of life. *Clinical Practice and Epidemiology in Mental Health*, *8*, 152–157. https://doi.org/10.2174/1745017901208010152
Level of evidence	Level III
Design	Non-randomised comparative study with concurrent control
Follow-up	Not reported
Format	Individual
Participants	64 patients between 16 and 68 years of age (mean age 42) with a diagnosis of depressive episode, adjustment disorder with depressed mood, or dysthymia. Most participants (56.3%) were diagnosed with adjustment disorder, and 65.6% were female.
Treating clinician(s)	Psychologists
Intervention(S)	CBT plus TAU (*n* = 34)
Comparison group(s)	TAU (*n* = 30)
Procedure	The control group was selected and matched with the intervention group by severity of depression, age, and gender. The intervention group received TAU by GPs plus manualised CBT which was delivered every 2 weeks over a 6-month period. The control group received TAU provided by GPs.
Summary of findings	Depressive symptomatology decreased in both conditions; however, participants in the CBT group demonstrated greater improvement than did the control group at posttreatment. Scores on quality of life also improved significantly for participants in the CBT group from baseline to posttreatment, but not for those in the control group.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 90. Copyright 2018 by the Australian Psychological Society.

Psychodynamic therapy

Title of paper	**The effectiveness of brief versus intermediate duration psychodynamic psychotherapy in the treatment of adjustment disorder**
Full citation	Ben-Itzhak, S., Bluvstein, I., Schreiber, S., Aharonov-Zaig, I., Maor, M., Lipnik, R., & Bloch, M. (2012). The effectiveness of brief versus intermediate duration psychodynamic psychotherapy in the treatment of adjustment disorder. *Journal of Contemporary Psychotherapy, 42*(4), 249–256. https://doi.org/10.1007/s10879-012-9208-6
Level of evidence	Level II
Design	RCT
Follow-up	9 months (for the brief therapy group only)
Format	Individual
Participants	91 adults diagnosed with adjustment disorder began treatment, but only 66 completed the treatment program and were included in the analysis. The mean age of participants was 43.6 years, and 78.8% were female.
Treating clinician(s)	Seven clinical psychologists and two psychiatric social workers.
Intervention(s)	Brief psychodynamic therapy (*n* = 48)
Comparison group(s)	Intermediate psychodynamic therapy (*n* = 43)
Procedure	Participants were randomly allocated to either a brief 12-session psychodynamic therapy condition delivered over a 3-month period or a longer psychodynamic therapy condition of approximately 48 sessions delivered over a 12-month period.
Summary of findings	Participants in both treatment groups demonstrated significant improvements on measures of psychiatric symptom severity, psychological distress, and wellbeing after 3 months of therapy. Significant improvements were maintained at posttreatment for the intermediate therapy group on measures of psychiatric symptom severity and distress. There were no significant differences between conditions at follow-up (which was posttreatment for the intermediate therapy group).

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 88. Copyright 2018 by the Australian Psychological Society.

Self-guided digital interventions

Title of paper	**A blended cognitive behavioral intervention for patients with adjustment disorder with anxiety: A randomized controlled trial**
Full citation	Leterme, A. C., Behal, H., Demarty, A. L., Barasino, O., Rougegrez, L., Labreuche, J., Duhamel, A., Vaiva, G., & Servant, D. (2020). A blended cognitive behavioral intervention for patients with adjustment disorder with anxiety: A randomized controlled trial. *Internet Interventions, 21*, 100329. https://doi.org/10.1016/j.invent.2020.100329
Level of evidence	Level II
Design	Randomised controlled trial (RCT)
Format	Individual, face-to-face CBT, or blended CBT (computer-delivered CBT with minimal therapist guidance).
Participants	120 participants diagnosed with adjustment disorder with anxiety (ADA) according to the DSM, with a HADS anxiety subscale score ≥ 10 and a HADS depression subscale score <10. Participants were referred by their general practitioner to a stress and anxiety psychiatric consultation service in a French university hospital.
Demographic characteristics	Women: 64.7%; mean age: 37.9 ±10.2.
Treating clinician type	For the face-to-face CBT: trained mental health professional (trained clinical psychologists (graduate of a master's program in cognitive and emotional therapy with a minimum of 1 year of practice in CBT and cognitive behavioral stress management)). For the blended CBT face-to-face support: trained health professional (nurse).
Intervention	CBT, blended CBT.
Study groups	Intervention groups: face-to-face CBT (n = 40) ; blended CBT (n = 40). Control group: wait-list control (n = 40).
Outcome(s) measured	Anxiety severity as measured by the State-Trait Anxiety Inventory-Trait (STAI-T) (primary outcome).
Procedure	This study examined the effectiveness of five weekly individual sessions of a CBT intervention delivered face-to-face (45-to-60-minute sessions with a clinical psychologist) or in a blended format (1-hour e-learning sessions on a hospital computer with 10 minutes of face-to-face guidance and Internet-based home training between sessions), compared with a waitlist group, to reduce symptoms of anxiety, depression, perceived stress and worry in patients with a diagnosis of ADA.
Follow up	Yes, 6 months after inclusion in the study.
Statistics summary	A constrained longitudinal data analysis (cLDA) model was used to compare changes between groups. From baseline to 2-month, the STAI score was reduced in both experimental groups, with an effect size (mean between-group difference in change between experimental and control groups) of -11.0 (95% CI[-15.5,-6.5]; p < 0.001) for face-to-face CBT and -14.1 (95% CI[-18.6, -9.7; p < 0.001) for blended CBT. There was no difference between face-to-face and blended CBT after two months of treatment (mean between-group difference -3.2; 95% CI[-7.8,1.3); p = 0.16) and at 6 months posttreatment (mean-between-group difference - 4.6; 95% CI[-10.3,1.1]; p = 0.12).
Conflict of interest	None declared
Risk of bias	Some concerns
Summary of findings	This study suggests that a CBT intervention is effective for treating ADA, while also suggesting that internet intervention is also effective. Face-to-face CBT and blended CBT both appear to be effective in reducing anxiety (as well as depression, worry and perceived stress) after two months of treatment in patients with a strict diagnosis of ADA according to the DSM-5. These improvements were maintained at the 6-month follow-up. However, these findings report on within-group effects and so caution should be applied, particularly given the nature of adjustment disorder where there is a usual process of natural remission which often occurs with or without any intervention.

Note. STAI-T: State-Trait Anxiety Inventory-Trait.

Obsessive-compulsive disorder

SUMMARY OF EVIDENCE

For the purposes of this review, the categorisation of cognitive behaviour therapy was expanded to incorporate exposure and response prevention for obsessive-compulsive related disorders.

Level I evidence[64] was identified in support of acceptance and commitment therapy, cognitive behaviour therapy with exposure and response prevention, and self-guided digital interventions in the treatment of obsessive-compulsive disorder in adults. Level II evidence was found to support the use of family-based interventions and group acceptance and commitment therapy. Level I evidence in relation to mindfulness-based cognitive therapy was inconclusive about the efficacy of its use in the treatment of obsessive-compulsive disorder in adults.

[64] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of OCD in adults.

Acceptance and commitment therapy

Title of paper	**A randomized controlled trial of group-based acceptance and commitment therapy for obsessive-compulsive disorder**
Full citation	Lee, S. W., Choi, M., & Lee, S. J. (2023). A randomized controlled trial of group-based acceptance and commitment therapy for obsessive-compulsive disorder. *Journal of Contextual Behavioral Science*, *27*, 45-53. https://doi.org/10.1016/j.jcbs.2022.11.009
Level of evidence	Level II
Design	Randomised controlled trial (RCT)
Format	Group, face to face
Participants	A sample size of *n* = 72 participants, with *n* = 36 in the intervention group (*n* = 34 completing) and *n* = 36 in the control group (*n* = 31 completing). All participants were required to meet clinical diagnosis for OCD through a structured clinical interview conducted at intake.
Demographic characteristics	The mean age of participants was 26.7 years (*SD* = 8.2) and 27.5 years (*SD* = 8.5) in the intervention and control groups, respectively. Percentage of males in the study were 56% in the intervention group and 64.5% in the control group. The study was conducted in Korea.
Treating clinician type	Trained mental health professionals (psychologists and psychiatrists)
Intervention	Group ACT (GACT)
Study groups	Intervention group: GACT Control group: Passive (wait-list control)
Outcome(s) measured	Severity of OCD symptoms as measured by the Y-BOCS and OCI-R.
Procedure	The GACT component was comprised of 90-min weekly sessions over 8 weeks. Each group consisted of 3-5 participants, and sessions covered topics such as cognitive fusion and its relationship to experiential avoidance, mindfulness, intolerance of uncertainty, acceptance of uncomfortable feelings, and values.
Follow up	Yes; 8 weeks
Statistics summary	Post-hoc pairwise comparisons were used to compare group differences in Y-BOCS and OCI-R scores at post-treatment and follow-up, expressed as Cohen's *d*. The difference in Y-BOCS scores between the intervention and control groups was found to be significant, favouring the intervention, at both post-treatment (*d* = -0.62, 95% CI [-1.12, -0.12]) and follow-up (*d* = -1.57, 95% CI [-2.13, -1.01]). No significant differences between groups was identified in the relation to the OCI-R domain-specific outcome scores.
Conflict of interest	None declared
Risk of bias	High
Summary of findings	These findings support the efficacy of GACT as a treatment for OCD in adults. Secondary findings related to processes also showed a significant association between cognitive fusion and changes in obsessive-compulsive symptoms.

Note. OCI-R: Obsessive-Compulsive Inventory-Revised; Y-BOCS: Yale-Brown Obsessive-Compulsive Scale.

Title of paper	**The applicability of acceptance and commitment therapy for obsessive-compulsive disorder: A systematic review and meta-analysis**
Full citation	Soondrum, T., Wang, X., Gao, F., Liu, Q., Fan, J., & Zhu, X. (2022). The applicability of acceptance and commitment therapy for obsessive-compulsive disorder: A systematic review and meta-analysis. *Brain Sciences*, *12*(5), 656. https://doi.org/10.3390/brainsci12050656
Level of evidence	Level I
Design	Systematic review and meta-analysis (14 studies, with 8 RCTs included in the meta-analysis)
Format	Individual, face to face
Participants	Total sample of *n* = 413 participants with a diagnosis of OCD according to DSM criteria, with *n* = 366 from studies included in the meta-analysis
Demographic characteristics	The mean age of participants ranged from 19 to 40 years. Other demographic information was not provided.
Treating clinician type	Not specified
Intervention	ACT
Outcome(s) measured	Severity of OCD symptoms as measured by the Y-BOCS.
Procedure	A systematic review and meta-analysis was conducted to investigate the efficacy of ACT in the treatment of OCD. Subgroup analyses were completed for different control types. The database search covered all publication dates until May 2021.
Follow up	No
Statistics summary	Random-effects models were used in all analyses. The intervention group had a statistically significant overall effect when compared to all control types (*SMD* = -1.19, 95% CI [-1.87, -0.51], I^2 = 87%). The subgroup analyses on active and inactive control types showed a significant effect for active control conditions (*SMD* = -1.38, 95% CI [-2.248, -0.508), I^2 = 90%) and a non-significant effect for inactive control conditions.
Conflict of interest	None declared
Risk of bias	High
Summary of findings	These findings support the efficacy of ACT in the treatment of OCD. However, this article also noted high levels of heterogeneity and small sample sizes in the available studies and highlights the need for further research in this area.

Note. Y-BOCS: Yale-Brown Obsessive-Compulsive Scale.

Cognitive behaviour therapy

Title of paper	**Cognitive behavioural therapy with exposure and response prevention in the treatment of obsessive-compulsive disorder: A systematic review and meta-analysis of randomised controlled trials**
Full citation	Reid, J. E., Laws, K. R., Drummond, L., Vismara, M., Grancini, B., Mpavaenda, D., & Fineberg, N. A. (2021). Cognitive behavioural therapy with exposure and response prevention in the treatment of obsessive-compulsive disorder: A systematic review and meta-analysis of randomised controlled trials. *Comprehensive Psychiatry*, *106*. https://doi.org/10.1016/j.comppsych.2021.152223
Level of evidence	Level I
Design	Systematic review and meta-analysis (36 studies, with 26 studies conducted on adult populations)
Format	Individual and group, face to face
Participants	Total sample of *n* = 2,020 participants with OCD. The total sample size specific to the adult population subgroup was not provided.
Demographic characteristics	The mean age of participants and other demographic information specific to the adult population subgroup was not provided.
Treating clinician type	Not specified
Intervention	CBT with ERP
Outcome(s) measured	Severity of OCD symptoms as measured by the Y-BOCS and DOCS.
Procedure	A systematic review and meta-analysis was conducted to investigate the efficacy of CBT with ERP in the treatment of OCD. Subgroup analyses were completed for adult and child/adolescent populations as well as moderating factors such as different comparator types. The database search covered all publication dates until April 2020.
Follow up	No
Statistics summary	Random-effects models were used in all analyses. The primary analysis investigating the change in OCD scores across all studies was significant (g = 0.74, 95% CI [0.51, 0.97]) with an I^2 value of 83.08. The subgroup analysis for the adult population was also significant (g = 0.60, 95% CI [0.35, 0.84]). Effect sizes remained significant when the comparators were either psychological placebo or waitlist, however analyses done on studies using active psychological interventions as the comparator revealed no significance.
Conflict of interest	Yes (financial/commercial/professional)
Risk of bias	Low
Summary of findings	These findings support the efficacy of CBT with ERP as an intervention or OCD in both children and adults, however no advantage of ERP was found when compared to other psychological treatments. The authors also noted concerns about the quality of published studies and the role of researcher allegiance which may reduce generalizability of findings.

Note. Y-BOCS: Yale-Brown Obsessive-Compulsive Scale; DOCS: Dimensional Obsessive-Compulsive Scale.

Title of paper	**The effect of exposure and response prevention therapy on obsessive-compulsive disorder: A systematic review and meta-analysis**
Full citation	Song, Y., Li, D., Zhang, S., Jin, Z., Zhen, Y., Su, Y., Zhang, M., Lu, L., Xue, X., Luo, J., Liang, M., & Li, X. (2022). The effect of exposure and response prevention therapy on obsessive-compulsive disorder: A systematic review and meta-analysis. *Psychiatry Research*, *317*, 114861. https://doi.org/10.1016/j.psychres.2022.114861
Level of evidence	Level I
Design	Systematic review and meta-analysis (30 studies)
Format	Individual, face-to-face
Participants	Total sample size of *n* = 1,793 participants. All participants had been diagnosed with OCD according to the DSM-IV Structured Clinical Interview.
Demographic characteristics	The mean age of participants across all studies was 34.4 years and 49.66% of the total sample was female.
Treating clinician type	Trained mental health professional (unspecified)
Intervention	ERP
Outcome(s) measured	Severity of OCD symptoms as measured by the Y-BOCS and MOCI.
Procedure	A systematic review and meta-analysis was conducted to investigate the efficacy of ERP in the treatment of OCD. Subgroup analyses were completed for different control types. The database search covered all publication dates until January 2022.
Follow up	No
Statistics summary	Random-effects models were used to calculate Hedge's *g* effect sizes. When the intervention group was compared across all controls, the effect size was significant in favour of the intervention group (*g* = 0.37, 95% CI [0.15, 0.58], I^2 = 77%) and the significant difference was maintained when compared to drug control (*g* = 0.59, 95% CI [0.14, 1.04], I^2 = 77%) and placebo (*g* = 0.97, 95% CI [0.58, 1.37], I^2 = 73%). No significant effect was found when the intervention group was compared to another treatment group (i.e. active control).
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	These findings support the efficacy of ERP in the treatment of OCD. A significant difference in symptom severity was found when ERP was compared to placebo or drug treatment, however, no significant difference was found when ERP was compared to other active treatment approaches.

Note. ERP: Exposure and Response Prevention. MOCI: Maudsley Obsessional-Compulsive Inventory. Y-BOCS: Yale-Brown Obsessive-Compulsive Scale.

Family-based interventions

Title of paper	**A randomized controlled study of brief family-based intervention in obsessive compulsive disorder**
Full citation	Baruah, U., Pandian, R. D., Narayanaswamy, J. C., Math, S. B., Kandavel, T., & Reddy, Y. C. J. (2018). A randomized controlled study of brief family-based intervention in obsessive compulsive disorder. *Journal of Affective Disorders*, *225*, 137-146. https://doi.org/10.1016/j.jad.2017.08.014
Level of evidence	Level II
Design	Randomised controlled trial (RCT)
Format	Family, face to face
Participants	Total sample size of *n* = 64 participants, with *n* = 30 allocated to the intervention group and *n* = 34 allocated to the control group (*n* = 58 completed the study, made up of *n* = 29 completers from each group). All participants were required to have an OCD diagnosis of at least 1 year duration, on stable dose of SRIs for a minimum of 2 months before the study, and a Y-BOCS score of at least 20 (i.e. moderate severity).
Demographic characteristics	The mean age of participants was 30.40 years (*SD* = 7.96) and 30.64 years (*SD* = 7.66) in the intervention and control groups, respectively. Percentage of females in the study were 40% in the intervention group and 50% in the control group. The study was conducted in India.
Treating clinician type	Trained mental health professionals
Intervention	Brief family-based intervention (BFBI)
Study groups	Intervention group: BFBI Control group: Active (relaxation exercises)
Outcome(s) measured	Severity of OCD symptoms as measured by the Y-BOCS and CGI; and family outcomes as measured by the FEICS and FAS.
Procedure	The BFBI intervention consisted of 6 sessions of 90-120min each, over 4 weeks. These were attended by both the individual with OCD and their family member. These sessions covered assessment, psychoeducation, ERP principles, the family's role in therapy, and family accommodation. The relaxation control condition comprised of deep breathing and progressive muscle relaxation exercises over an equal number of sessions which were also attended by both the individual with OCD and their family member.
Follow up	Yes; 3 months
Statistics summary	Intent-to-treat (ITT) analyses indicated a higher response rate in the intervention group compared to the control group. This effect was not significant at 1-month follow up [4 (13%) vs 1 (3%); $\chi^2 = 2.39$, $p = 0.12$] however showed significance at the 3-month follow up [16/30 (53%) vs 4/34 (12%); $\chi^2 = 12.81$, $p < 0.001$]. RMANOVA demonstrated a significant decline in Y-BOCS scores between the intervention and control group at 3-months follow up ($F = 7.689$, $p = 0.004$).
Conflict of interest	Not specified
Risk of bias	High
Summary of findings	The current findings indicate that a brief family-based intervention could be efficacious in reducing symptom severity, expressed emotions and family accommodation in adults with OCD when compared to an active control. However, this effect was identified after 3 months and did not appear to be significant at the 1 month time point.

Note. Y-BOCS: Yale-Brown Obsessive-Compulsive Scale; CGI: Clinical Global Impression; FEICS: Family Emotional Involvement and Criticism Scale; FAS: Family Accommodation Scale.

Mindfulness-based cognitive therapy

Title of paper	**Examination of the effectiveness of mindfulness-based cognitive therapy on patients with obsessive-compulsive disorder: Systematic review and meta-analysis**
Full citation	Başkaya, E., Özgüç, S., & Tanrıverdi, D. (2021). Examination of the effectiveness of mindfulness-based cognitive therapy on patients with obsessive-compulsive disorder: Systematic review and meta-analysis. *Issues in Mental Health Nursing, 42*(11), 998-1009. https://doi.org/10.1080/01612840.2021.1920652
Level of evidence	Level I
Design	Systematic review and meta-analysis (5 studies, including 3 RCTs)
Format	Group, face to face
Participants	Total sample size of *n* = 238 participants, with *n* = 191 in the RCT studies. Participants had a diagnosis of OCD based on DSM-criteria, except for one non-RCT study that required a score above clinical cut-off on a standardised OCD scale.
Demographic characteristics	Average age range across the studies was 25.7 to 46.06 years. Information on gender ratios across the studies was not provided. Studies were conducted in Germany, Canada, UK, and Iran.
Treating clinician type	Not specified
Intervention	MBCT
Outcome(s) measured	OCD symptom severity as measured by the Y-BOCS, OCI-R, and OBQ.
Procedure	This systematic review and meta-analysis aimed to assess the efficacy of MBCT interventions for OCD in adults. Several subgroup analyses were completed, including the effect of MBCT on obsession and compulsion levels in the 3 RCT studies included. The database search covered the period from 2008 to 2020.
Follow up	No
Statistics summary	The authors performed random-effects meta-analyses to calculate Hedges' g effect sizes. In the *k* = 3 subgroup analysis on the effect of MBCT on obsession and compulsion levels compared to the control group, a non-significant effect was found (*g* = 0.333, 95% CI [-0.208. 0.875], *Z* = 1.207, *p* = .227) with high heterogeneity I^2 = 78.5%.
Conflict of interest	None declared
Risk of bias	High
Summary of findings	The authors note that the overall effect size suggests that MBCT could be used as an intervention for OCD in adults. However, when a subgroup analysis was done on the RCTs identified, these suggested that when compared to a control group the effect of MBCT on OCD symptoms was not significantly different between groups.

Note. OBQ: Obsessive Beliefs Questionnaire; OCI-R: Obsessive-Compulsive Inventory-Revised; Y-BOCS: Yale-Brown Obsessive-Compulsive Scale.

Self-guided digital interventions

Title of paper	**Unguided computer-assisted self-help interventions without human contact in patients with obsessive-compulsive disorder: Systematic review and meta-analysis**
Full citation	Imai, H., Tajika, A., Narita, H., Yoshinaga, N., Kimura, K., Nakamura, H., Takeshima, N., Hayasaka, Y., Ogawa, Y., & Furukawa, T. (2022). Unguided computer-assisted self-help interventions without human contact in patients with obsessive-compulsive disorder: Systematic review and meta-analysis. *Journal of Medical Internet Research*, *24*(4), e35940. https://doi.org/10.2196/35940
Level of evidence	Level I
Design	Systematic review and meta-analysis (11 studies)
Format	Digital intervention, with no therapist guidance
Participants	Total sample size of *n* = 983 participants. To meet inclusion criteria, participants had to have a primary diagnosis of OCD according to the DSM or ICD, or be diagnosed with OCD by a health professional and have clinically significant OCD symptoms as measured by validated scales.
Demographic characteristics	The mean age of participants ranged from 28 to 41 years, with one study targeting adolescents having a mean age of 15 years. The proportion of women ranged from 42% to 83% per study. Studies were conducted in European countries, North America, and cross-continentally.
Treating clinician type	Not applicable
Intervention	AS, BT STEPS, CBM-I, CCT, COMET, IBT, iCBT, and myMCT
Outcome(s) measured	Severity of OCD symptoms as measured by the Y-BOCS and OCI-R.
Procedure	A systematic review and meta-analysis was conducted to investigate the efficacy of self-guided computer-assisted interventions in the treatment of OCD. The database search covered all publication dates until July 2021.
Follow up	No
Statistics summary	Random-effects models were used in all analyses. Outcomes from the primary analyses indicated a significant effect of the intervention group compared to waitlist or psychological placebo (*SMD* = -0.47, 95% CI [-0.73, -0.22) with moderate heterogeneity (I^2 = 59%)
Conflict of interest	Yes (financial/commercial/professional)
Risk of bias	Low
Summary of findings	These findings support the efficacy of self-guided internet-treatment for OCD, however noted that the quality of evidence was very low due to inconsistent results and high risk of bias across the available studies.

Note. AS: Association Splitting; BT STEPS: Behavior Therapy Self-Help System; CBM-I: Cognitive Bias Modification of Interpretation Training; CCT: Computerized Cognitive Control; COMET: Competitive Memory Training; IBT: Inference-Based Therapy; iCBT: Internet-based Cognitive Behaviour Therapy; myMCT: Metacognitive training online intervention; OCI-R: Obsessive-Compulsive Inventory-Revised; Y-BOCS: Yale-Brown Obsessive-Compulsive Scale.

Title of paper	**Effectiveness of metacognitive interventions for mental disorders in adults — A systematic review and meta-analysis (METACOG).**
Full citation	Philipp, R., Kriston, L., Lanio, J., Kühne, F., Härter, M., Moritz, S., & Meister, R. (2019). Effectiveness of metacognitive interventions for mental disorders in adults—A systematic review and meta-analysis (METACOG). *Clinical Psychology and Psychotherapy*, *26*(2), 227–240. https://doi.org/10.1002/cpp.2345
Level of evidence	Level I
Design	Systematic review and meta-analysis (49 studies, with 3 studies focused on OCD)
Format	Digital intervention, with no therapist guidance
Participants	Total sample size of n = 2,609 participants, with n = 245 in the studies focused on OCD. Diagnoses were based on a formal classification (e.g., ICD, World Health Organization, 1992; DSM, American Psychiatric Association, 2000) or on reliable and validated disorder-specific questionnaires.
Demographic characteristics	Average age range: 24-46 years. Females: 0% -96% (> 50% of participants in 43% of studies). Studies were conducted in Europe (50%), Iran, Australia, New Zealand, China, India, the United States, and Indonesia.
Treating clinician type	Not specified
Intervention	Metacognitive training developed as an unguided online self-help intervention (myMCT)
Outcome(s) measured	OCD symptom severity as measured by the Y-BOCS and OCI/OCI-R.
Procedure	This systematic review and meta-analysis aimed to assess the effects of metacognitive interventions for adults with mental disorders. The database search was conducted for all included databases until 28 April 2017 and updated for MEDLINE on 7 March 2018.
Follow up	No
Statistics summary	The authors performed random-effects meta-analyses. myMCT was superior to standard treatment (3 studies) with an effect size of z = -2.58, p = 0.01 (Q = 0.45, p = 0.80, I^2 = 0.0%). A post-hoc analysis (4 studies) comparing myMCT to both standard treatment and psychological treatment (psychoeducation) showed significantly less symptoms in the myMCT group compared to control groups with an effect size of z = -2.32, p = 0.02 (Q = 2.04, p = 0.56, I^2 = 0.0%).
Conflict of interest	Yes (professional/educational)
Risk of bias	Unclear
Summary of findings	Findings of this meta-analysis suggest that metacognitive training in the form of an unguided online self-help intervention may be superior when compared to both standard treatment and psychoeducation in the reduction of severity in OCD symptoms in adults.

Note. Y-BOCS: Yale-Brown Obsessive-Compulsive Scale; OCI-R: Obsessive-Compulsive Inventory-Revised.

Body dysmorphic disorder

SUMMARY OF EVIDENCE

This review identified Level I evidence[65] in support of cognitive behaviour therapy for the treatment of body dysmorphic disorder in adults. Level II evidence was found in support of mindfulness-based cognitive therapy and self-guided digital interventions, and Level IV evidence was identified in support of acceptance and commitment therapy.

Clinical guidelines provided by NICE (2005) recommend brief cognitive behaviour therapy (including exposure and response prevention) delivered in group or individual format for cases of mild functional impairment. For cases of moderate to severe functional impairment, they recommend more intensive cognitive behaviour therapy (including exposure and response prevention) delivered individually.

[65] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of body dysmorphic disorder in adults.

Acceptance and commitment therapy

Title of paper	Acceptance-based exposure therapy for body dysmorphic disorder: A pilot study
Full citation	Linde, J., Rück, C., Bjureberg, J., Ivanov, V. Z., Djurfeldt, D. R., & Ramnerö, J. (2015). Acceptance-based exposure therapy for body dysmorphic disorder: A pilot study. *Behavior Therapy, 46*, 423–431. https://doi.org/10.1016/j.beth.2015.05.002
Level of evidence	Level IV
Design	Case series with pretest and posttest
Follow-up	6 months
Format	Group and individual
Participants	21 adults diagnosed with BDD. The mean age of participants was 27.3 years, and 61.9% were female.
Treating clinician(s)	Psychologists
Intervention(s)	ACT
Comparison group(s)	None
Procedure	Participants received a manualised acceptance-based exposure therapy intervention consisting of 12 weekly 180-minute group sessions and weekly individual 60-minute sessions beginning in the third week of treatment. Participants completed a mean of 10 group and six individual therapy sessions over the intervention period.
Summary of findings	A significant reduction from baseline to posttreatment was found on the primary outcome measure of BDD symptom severity, with a large within-group effect size. Treatment effects were maintained at follow-up. Large effect sizes were also demonstrated for secondary measures of depression and disability at posttreatment.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 108. Copyright 2018 by the Australian Psychological Society.

Cognitive behaviour therapy

Title of paper	**Is cognitive behavioral therapy an efficacious treatment for psychological interventions in body dysmorphic disorders? A meta-analysis based on current evidence from randomized controlled trials**
Full citation	Zhao, F., Guo, Z., Bo, Y., Feng, L., & Zhao, J. (2024). Is cognitive behavioral therapy an efficacious treatment for psychological interventions in body dysmorphic disorders? A meta-analysis based on current evidence from randomized controlled trials. *Journal of Affective Disorders, 352*, 237–249. https://doi.org/10.1016/j.jad.2024.02.004
Level of evidence	Level I
Design	Meta-analysis (11 studies)
Format	Individual, face to face
Participants	Participants were 667 adults with a diagnosis of body dysmorphic disorder based on DSM-IV/V or ICD-10/11 criteria.
Demographic characteristics	Mean age for the adult samples (10/11 studies) ranged from 23.7 (*SD* = 6.5) to 36.7 (*SD* = 13.7). One study included adolescents with a mean age of 16.1 (*SD* = 1.8). Females made up over 50% of total participants (ranging from 51.6% to 92.5%). Studies were conducted in the US, UK, Germany, Sweden, and Iran.
Treating clinician type	Trained mental health professional (clinical psychologists, 7 studies); Student (bachelors/masters/doctoral level, 4 studies).
Intervention	CBT
Outcome(s) measured	Primary outcomes were remission and response rates of BDD, and BDD symptom indicators as measured by the BDD-YBOCS, BDDE, BABS, and SDS.
Procedure	A meta-analysis was conducted to evaluate the efficacy of CBT in treating adults with BDD. The database search included RCTs published from database inception to January 2023. Subgroup and sensitivity analyses were further conducted.
Follow up	Yes; 1-6 months
Statistics summary	Fixed and random-effects meta-analyses were conducted. Odds ratios and standardised mean differences were also calculated. CBT led to significantly reduced severity of BDD at posttreatment (*SMD* = -1.73, 95% CI [-2.90; -0.57], $p < 0.01$, I^2 = 96.3%) compared with controls and increases in both remission of BDD (*OR* = 7.37, 95% CI [2.17, 24.98], I^2 = 59.3%) and response of BDD (*OR* = 8.86, 95% CI [4.85, 16.18], I^2 = 5%) compared with controls.
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	Findings indicated that CBT is an efficacious treatment for adult with BDD, both in reducing severity of symptoms and increasing rates of response and remission. Further evidence, however, is needed for the long-term effects of CBT on BDD

Note. BABS: Brown Assessment of Beliefs Scale; BDD-YBOCS: Yale-Brown Obsessive Compulsive Scale Modified for BDD; BDDE: Body Dysmorphic Disorder Exam; SDS: Sheehan Disability Scale.

Mindfulness-based cognitive therapy

Title of paper	**A randomized controlled trial of mindfulness-based cognitive therapy for body dysmorphic disorder: Impact on core symptoms, emotion dysregulation, and executive functioning**
Full citation	Gu, Y. Q., & Zhu, Y. (2023). A randomized controlled trial of mindfulness-based cognitive therapy for body dysmorphic disorder: Impact on core symptoms, emotion dysregulation, and executive functioning. *Journal of Behavior Therapy and Experimental Psychiatry, 81*, 101869. https://doi.org/10.1016/j.jbtep.2023.101869
Level of evidence	Level II
Design	Randomised controlled trial (RCT)
Format	Group, face-to-face
Participants	Participants were 116 adults with a primary diagnosis of BDD based on DSM-5 criteria, equally split across the MBCT (*n* = 58) and TAU conditions (*n* = 58)
Demographic characteristics	Participant ages ranged from 18 to 49 years, with a mean age of 32.5 (*SD* = 8.5) years. Females comprised 76.8% of the total sample.
Treating clinician type	Trained mental health professional (psychiatrist)
Intervention	Mindfulness-based cognitive therapy (MBCT)
Study groups	Intervention group: MBCT Control group: TAU
Outcome(s) measured	BDD symptoms as measured by the BDD-YBOCS, BABS and COPS. Mindful awareness, emotionally dysregulated behaviour, anxiety and depressive symptoms, and executive functioning were measured by the MAAS, DERS, BAI, BDI-II, BRIEF-A, and CANTAB, respectively.
Procedure	Participants were randomly assigned to the MBCT or TAU groups and assessed at pre-treatment, post-treatment and 3-month follow-up. The MBCT intervention consisted of eight weekly sessions lasting 1.5 hours each, a modification of the original MBCT course. The intervention was delivered by a group leader and co-leader. The TAU group received instructed pharmacological and psychosocial treatments and were offered MBCT at the end of the study.
Follow up	Yes; 3 months
Statistics summary	General linear models with repeated-measures analysis of variance and chi-square tests were performed. In intent-to-treat analyses (n = 114), MBCT showed lower BDD-YBOCS and BABS scores compared with TAU (FYBOCS [1,114] = 10.65, p = .056, partial η2 = 0.100; FBABS[1,114] = 6.42, p = .013, partial η2 = 0.053), and significantly greater improvements on COPS scores compared with TAU (F[1,114] = 17.70, p < .001, partial η2 = 0.156). The percentage of participants no longer meeting BDD criteria was significantly lower for MBCT at posttreatment (27.6% versus 1.7%, χ2 = 13.34, p < .001) and 3-months follow-up (31.0% versus 5.2%, χ2 = 10.92, p = .001).
Conflict of interest	None declared
Risk of bias	Some concerns
Summary of findings	Findings indicated that MBCT significantly improved symptoms of BDD, emotion dysregulation, and executive function relative to TAU over time.

Note. BABS: Brown Assessment of Beliefs Scale; BAI: Beck Anxiety Inventory; BDD-YBOCS: Yale-Brown Obsessive Compulsive Scale Modified for BDD; BDI-II: Beck Depression Inventory – Second Edition; BRIEF-A: Behaviour Rating Inventory of Executive Functioning – Adult Version; CANTAB: Cambridge Neuropsychological Test Automated Battery; COPS: Cosmetic Procedures Screening Questionnaire; DERS: Difficulties in Emotion Regulation Scale; MAAS: Mindful Attention and Awareness Scale.

Self-guided digital interventions

Title of paper	**An internet-based controlled trial of interpretation bias modification versus progressive muscle relaxation for body dysmorphic disorder**
Full citation	Wilver, N. L., & Cougle, J. R. (2019). An internet-based controlled trial of interpretation bias modification versus progressive muscle relaxation for body dysmorphic disorder. *Journal of Consulting and Clinical Psychology, 87*(3), 257–269. https://doi.org/10.1037/ccp0000372
Level of evidence	Level II
Design	Randomised controlled trial (RCT)
Format	Digital intervention, with no therapist guidance
Participants	Participants were 50 adults with a primary diagnosis of BDD based on DSM-IV criteria and were equally split across the experimental (*n* = 25) and control (*n* = 25) conditions.
Demographic characteristics	Mean age of participants was 28.5 (*SD* = 9.3) with 84% females and 14% males. Ethnicity was primarily White (58%) as well as Black, Hispanic, Asian, and Other.
Treating clinician type	Self-assisted
Intervention	Internet-based interpretation bias modification (IBM)
Study groups	Intervention group: IBM Control group: active control (PMR)
Outcome(s) measured	Severity of BDD symptoms as measured by the BDD-YBOCS, and insight regarding inaccurate beliefs as measured by the BABS. Interpretation bias was measured by the WSAP and IQ. Depressive symptom severity was measured by the BDI and anxiety symptom severity by the BAI.
Procedure	Participants were randomly assigned to either the IBM or PMR conditions and completed a total of eight sessions (two sessions per week) of either intervention over four consecutive weeks. Each session was expected to last approximately 15-25 minutes, and the total expected time spent in sessions was matched for time between conditions.
Follow up	Yes; 3 months
Statistics summary	Intent-to-treat (ITT) multiple regression models were used to analyze the main effects of condition on outcomes. A reliable change index (RCI) was also computed from posttreatment to follow-up. Both conditions showed clinically significant improvement (IBM = 64%, PMR = 52%) and significant within-group treatment effects at follow-up (IBM *d* = 1.52; PMR *d* = 1.58). However, there were no significant differences between conditions regarding BDD symptom severity.
Conflict of interest	Not specified
Risk of bias	High
Summary of findings	Internet-based interpretation bias modification (IBM) significantly improved BDD symptoms at posttreatment and follow-up, however, did not outperform PMR in treating BDD symptoms.

Note. BABS: Brown Assessment of Beliefs Scale; BAI: Beck Anxiety Inventory; BDD-YBOCS: Yale-Brown Obsessive Compulsive Scale Modified for BDD; BDI: Beck Depression Inventory; WSAP: Word Sentence Association Paradigm.

Title of paper	**Therapist guided internet based cognitive behavioural therapy for body dysmorphic disorder: Single blind randomised controlled trial**
Full citation	Enander, J., Ivanov, V. Z., Andersson, E., Mataix-Cols, D., Ljótsson, B., & Rück, C. (2014). Therapist-guided, internet-based cognitive-behavioural therapy for body dysmorphic disorder (BDD-NET): A feasibility study. *BMJ Open*, *4*(9), e005923. https://doi.org/10.1136/bmjopen-2014-005923
Level of evidence	Level II
Design	RCT
Follow-up	3 months
Format	Online (clinician-guided)
Participants	94 adults diagnosed with BDD. The mean ages of participants in the two groups were 34 and 31 years, and 85.1% were female.
Treating clinician(s)	Clinical psychology students supervised by a clinical psychologist
Intervention(s)	Online CBT (*n* = 47)
Comparison group(s)	Online supportive therapy (*n* = 47)
Procedure	Participants were randomly allocated to clinician-guided online CBT or online supportive therapy. The online intervention consisted of eight modules delivered over 12 weeks with contact via email to a designated clinician. Clinicians spent a median of 13 minutes per week per participant, providing feedback on homework assignments and general support throughout the intervention. Participants assigned to supportive therapy received unlimited access to a clinician over email. Clinicians spent a median of 6 minutes per participant per week responding to emails.
Summary of findings	Significant and large between-group effect sizes were found in favour of the online CBT group on the primary outcome measure of BDD symptom severity, both at posttreatment and follow-up. Small to medium between-group effects were also demonstrated on secondary measures of depression and global functioning at posttreatment and follow-up in favour of the intervention group.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 107. Copyright 2018 by the Australian Psychological Society.

Body-focused repetitive behaviour disorders

SUMMARY OF EVIDENCE

Body-focused repetitive behaviour disorders (BFRBD) have been included in the current review for the first time. As such, the current systematic review has included articles on BFRBD published prior to 2018.

Most of the research undertaken in the field of BFRBD has not required participants to have a formal diagnosis of BFRBD to be included. This is in acknowledgement of low rates of diagnosis and access to services documented by the literature.[66] In line with this precedent, the inclusion criteria for this current review have been broadened to include studies where participants do not have a formal diagnosis of BFRBD.

The use of acceptance and commitment therapy in the treatment of BFRBD has largely been operationalised as acceptance-enhanced behaviour therapy, or ACT-enhanced behaviour therapy. Similarly, cognitive behaviour therapy is commonly used with behavioural strategies such as habit reversal training to treat BFRBD. As such, these intervention-specific variations have been included in the review.

Level II evidence[67] has been identified for the use of acceptance-enhanced behavioural therapy delivered both in person and via telehealth in the treatment of trichotillomania in adults. Level II evidence has also been identified in support of group cognitive behaviour therapy, as well as individual cognitive behaviour therapy which incorporates habit reversal training.

A number of studies have looked at the delivery of behavioural interventions in self-help formats. Level II evidence in relation to the use of a self-help manual across all body-focused repetitive behaviours showed some support for decoupling and decoupling in-sensu, however was inconclusive for habit reversal training delivered in this format. Level II evidence was also identified in relation to self-guided digital interventions; however, this too was inconclusive with varying results across the different behaviour subtypes.

[66] E.g. Schmotz, S., Weidinger, S., Markov, V., Penney, D., & Moritz, S. (2023). Self-help for body-focused repetitive behaviors: A randomized controlled trial. *Journal of Obsessive-Compulsive and Related Disorders*, *38*, 100810. https://doi.org/10.1016/j.jocrd.2023.100810

[67] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of BFRBD in adults."

Acceptance and commitment therapy

Title of paper	**Telepsychotherapy for trichotillomania: A randomized controlled trial of ACT enhanced behavior therapy**
Full citation	Lee, E. B., Haeger, J. A., Levin, M. E., Ong, C. W., & Twohig, M. P. (2018). Telepsychotherapy for trichotillomania: A randomized controlled trial of ACT enhanced behavior therapy. *Journal of Obsessive-Compulsive and Related Disorders*, *18*, 106-115. https://doi.org/10.1016/j.jocrd.2018.04.003
Level of evidence	Level II
Design	Randomised controlled trial (RCT)
Format	Individual, telehealth (phone)
Participants	A total of *n* = 33 participants were recruited for the study, with *n* = 12 in the intervention group and *n* = 10 in the control group. Participants were eligible for recruitment if they met the DSM-5 criteria for trichotillomania.
Demographic characteristics	The mean age of the sample was 32.5 years (*SD* = 8.3) and 86.4% were female. The study was conducted in the USA and the majority of participants were White (95.5%).
Treating clinician type	Trained mental health professionals (therapists / advanced graduate students)
Intervention	AEBT
Study groups	Intervention group: AEBT Control group: Waitlist control
Outcome(s) measured	Trichotillomania symptom severity as measured by the MGH-HPS.
Procedure	The AEBT treatment was comprised of 10 weekly one-hour sessions. The treatment followed an AEBT manual for trichotillomania which blends habit reversal training with ACT-based behavioural and cognitive approaches. All sessions were delivered via telephone, with participants in their homes and therapists in a university clinic. Treatment adherence was independently assessed and reviewed. The waitlist control completed the AEBT treatment after 12 weeks had elapsed, allowing for combined follow-up measures to be obtained.
Follow up	Yes; three months
Statistics summary	Intent-to-treat ANCOVA analyses were utilised to compare outcome scores in the AEBT group to waitlist control at post-treatment. At post-treatment, scores on the MGH-HPS scale were significantly lower in the intervention group compared to control, $F(1,18) = 19.627$, $p < .001$, $\omega^2 = .473$. Combined follow-up measures across the two groups indicated nonsignificant score increases from post-treatment to follow-up (slope estimate = -1.95, *SE* = 1.34, $t(57.19)$, $p = .152$).
Conflict of interest	None declared
Risk of bias	High
Summary of findings	These findings indicate that AEBT delivered via telehealth results in significantly lower levels of hair pulling severity from pre- to post-treatment when compared to a waitlist control. Combined follow up analyses across both groups indicate maintenance on treatment gains at three months.

Note. MGH-HPS: Massachusetts General Hospital Hair Pulling scale.

Title of paper	Acceptance-enhanced behavior therapy for trichotillomania in adults: A randomized clinical trial
Full citation	Woods, D. W., Ely, L. J., Bauer, C. C., Twohig, M. P., Saunders, S. M., Compton, S. N., Espil, F. M., Neal-Barnett, A., Alexander, J. R., Walther, M. R., Cahill, S. P., Deckersbach, T., & Franklin, M. E. (2022). Acceptance-enhanced behavior therapy for trichotillomania in adults: A randomized clinical trial. *Behaviour Research and Therapy*, *158*, 104187. https://doi.org/10.1016/j.brat.2022.104187 **Follow-up study** Barber, K. E., Woods, D. W., Ely, L. J., Saunders, S. M., Compton, S. N., Neal-Barnett, A., Franklin, M. E., Capriotti, M. R., Conelea, C. A., & Twohig, M. P. (2024). Long-term follow-up of acceptance-enhanced behavior therapy for trichotillomania. *Psychiatry Research*, *333*, 115767. https://doi.org/10.1016/j.psychres.2024.115767
Level of evidence	Level II
Design	Randomised controlled trial (RCT)
Format	Individual, face-to-face
Participants	A total of *n* = 85 participants were randomised into the two conditions (intervention *n* = 43; control *n* = 42). Inclusion criteria specified that all participants had to have a current DSM-IV-TR trichotillomania diagnosis.
Demographic characteristics	The mean age of participants was 35.4 years (*SD* = 12.7), and 91.8% were female. The majority of participants were White (82.4%), with the remainder identifying as Black, Asian/Pacific Islander, or Other. The study was conducted in the USA.
Treating clinician type	Trained mental health professionals (therapists with Masters or PhD level qualifications)
Intervention	Acceptance-enhanced behaviour therapy for trichotillomania (AEBT-TTM)
Study groups	Intervention group: AEBT-TTM Control group: active control – psychoeducation and supportive therapy (PST)
Outcome(s) measured	Trichotillomania symptom severity was measured using the CGI-I, CGI-S, NIMH-TSS (evaluator rated), and MGH-HPS scales (self-report).
Procedure	Both study groups comprised of 10, 60-min sessions over 12 weeks (the first 8 sessions were weekly, and sessions 9-10 fortnightly). The intervention group (AEBT-TTM) was based on a treatment manual that covered psychoeducation, habit reversal training plus stimulus control, acceptance-based components, and relapse prevention. The PST control condition focused on educational material related to trichotillomania. Treatment integrity and fidelity to both conditions was rated by independent reviewers.
Follow up	Yes; 6 months (as detailed in separate publication)
Statistics summary	Intention-to-treat regression analyses were used to analyse results. At post-treatment, 64% (95% CI 48-78%) of the AEBT-TTM group were classified as clinical responders on the CGI-I, compared to 38% (95% CI 24-54%) of the PST group (a pairwise comparison showed this difference to be statistically significant, $p < .02$). The AEBT-TTM group had significantly lower scores at post-treatment on the NIMH-TSS (0.59, 95% CI [0.15, 1.04]) and MGH-HPS (0.46, 95% CI [0.05, 0.86]). There were no significant differences between groups calculated at the 6-month follow up.
Conflict of interest	Yes (Professional, financial - two researchers are authors of the treatment manual and receive book royalties)
Risk of bias	Low
Summary of findings	Results indicate that AEBT-TTM is more efficacious than active control in the treatment of trichotillomania at post-treatment. A 6-month follow up study has found that although treatment gains were maintained, the difference in outcome measures between the two groups at this time point was non-significant.

Note. CGI-I: Clinical Global Impressions – Improvement; CGI-S: Clinical Global Impressions – Severity; NIMH-TSS: National Institute of Mental Health Trichotillomania Symptom Severity Scale; MGH-HPS: Massachusetts General Hospital – Hair Pulling Scale.

Cognitive behaviour therapy

Title of paper	A placebo-controlled trial of cognitive-behavioral therapy and clomipramine in trichotillomania
Full citation	Ninan, P. T., Rothbaum, B. O., Marsteller, F. A., Knight, B. T., & Eccard, M. B. (2000). A placebo-controlled trial of cognitive-behavioral therapy and clomipramine in trichotillomania. *The Journal of Clinical Psychiatry*, *61*(1), 47-50. https://doi.org/10.4088/JCP.v61n0111
Level of evidence	Level II
Design	Randomised controlled trial (RCT)
Format	Individual, face-to-face
Participants	A total of *n* = 23 participants were recruited for the study, with *n* = 16 completing (*n* = 7 in CBT group, *n* = 10 in clomipramine group, *n* = 6 in control group). Participants were eligible for recruitment if they had trichotillomania as determined by the Structured Clinical Interview for DSM-III-R (SCID-R).
Demographic characteristics	The mean age of the sample was 33.38 years (*SD* = 9.09) and 81.3% were female.
Treating clinician type	Trained mental health professionals (psychiatrists, clinical psychologists)
Intervention	CBT / Habit Reversal Training (HRT)
Study groups	Intervention groups: 1. CBT / HRT 2. Clomipramine Control group: Placebo
Outcome(s) measured	Trichotillomania symptom severity as measured by the TSS and TIS (primary outcomes) and CGI-I (secondary outcome).
Procedure	The CBT/HRT program was made of three components: information gathering, habit reversal training, and relaxation/cognitive training. The program was delivered in 9 weekly 45-minute sessions. Participants in the clomipramine and placebo groups met weekly with a psychiatrist for approximately 20mins, with sessions offering general encouragement and support without any cognitive or behavioural therapy components.
Follow up	No
Statistics summary	A repeated-measures ANOVA analysis and post hoc (Scheffé) comparison of the different treatments was completed. Across treatments, both TSS and TIS scores were significantly reduced from pre-treatment to post-treatment (TSS: $F = 11.0$, $df = 2,12$; $p = .002$; TIS: $F = 7.6$, $df = 2,13$; $p = .006$). Post hoc analysis indicated that those in the CBT treatment group had significantly lower scores ($p < .05$) on both the TSS and TIS scales than the placebo and clomipramine groups.
Conflict of interest	None declared
Risk of bias	High
Summary of findings	These findings support the use of CBT/HRT in the treatment of trichotillomania when compared to both placebo control and pharmacotherapy. However, authors note the small sample size of the current study and emphasise the need for further research with larger sample sizes to increase statistical power and generalisability of the findings.

Note. TSS: Trichotillomania Severity Scale; TIS: Trichotillomania Impairment Scale; CGI-I: Clinical Global Impressions-Improvement Scale.

Title of paper	**Self-help for body-focused repetitive behaviors: A randomized controlled trial**
Full citation	Schmotz, S., Weidinger, S., Markov, V., Penney, D., & Moritz, S. (2023). Self-help for body-focused repetitive behaviors: A randomized controlled trial. *Journal of Obsessive-Compulsive and Related Disorders*, *38*, 100810. https://doi.org/10.1016/j.jocrd.2023.100810 **Follow-up study** Moritz, S., Hoyer, L., & Schmotz, S. (2024). Two-year follow-up of habit reversal training and decoupling in a sample with body-focused repetitive behaviors. *Cognitive Therapy and Research*, *48*(1), 75-81. https://doi.org/10.1007/s10608-023-10434-0
Level of evidence	Level II
Design	Randomised controlled trial (RCT)
Format	Self-help manual
Participants	A total of *n* = 391 participants were randomised across the four conditions (HRT manual *n* = 101; DC manual *n* = 99; DC-is manual *n* = 94, waitlist control *n* = 97). Inclusion criteria specified that all participants had to have at least one self-reported body-focused repetitive behaviour. Specific behaviours reported by participants included dermatillomania (skin picking), onychophagia (nail biting), trichotillomania (hair pulling), and cavitadaxia (lip/cheek biting).
Demographic characteristics	The mean age and percentage of female participants in each group was 31 years (*SD* = 17.27), 78% in the waitlist control; 28.03 years (*SD* = 21.76), 84% in the HRT condition; 30.03 years (*SD* = 17.13), 80% in the DC condition; and 28.63 years (*SD* = 22.28), 92% in the DC-is condition. No cultural specifics were provided, however the study was based in Germany.
Treating clinician type	Not applicable
Intervention	Habit Reversal Training (HRT); Decoupling (DC); Decoupling-in sensu (DC-is)
Study groups	Intervention groups: 1. HRT 2. DC 3. DC-is Control group: passive (waitlist control)
Outcome(s) measured	Body-focused repetitive behaviour disorder symptom severity was measured using the GBS-36.
Procedure	The self-help manuals associated with each intervention group were sent as PDF files via email. All included psychoeducation and behaviourial trigger identification before providing an explanation of the specific technique (including examples and photographs). In HRT, the individual is instructed to interrupt their behavioural habit with a "rigid/frozen" (e.g. clenched fist) action. In DC, the individual is instructed to use an alternative behaviour with acceleration and tension. In DC-is, the movement towards the behaviour is imagined and the alternative behaviour is performed as per DC. Assessments were conducted online across the four groups, and post-treatment measures were conducted after six weeks. Participants in the intervention groups rated the extent to which they used the manual on a 7-point Likert scale.
Follow up	Yes; 2 years (as detailed in separate publication)
Statistics summary	Intention-to-treat mixed ANOVAs were used to analyse results. At post-treatment, the DC and DC-is groups had significantly lower GBS-36 total scores compared to control (DC: p <.001, d = .580; DC-is: p = .001, d = .509). The HRT group showed a similar trend compared to control, however this was non-significant. The DC group showed significantly lower GBS-36 total scores compared to the HRT group (p = .047, d = .274). A similar trend was observed when comparing DC-is to HRT, however this effect was not significant. The 2-year follow-up completion rate across groups was 54.6%. Treatment gains were maintained for all experimental conditions. At follow-up, the decoupling group still showed significantly greater improvement in scores compared to the control group (last observation carried forward: p = .004; complete cases: p = .015).
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	Results indicate that treatment for body-focused repetitive behaviours can be delivered through self-help techniques. Findings suggest that decoupling and decoupling-in sensu, considered here as potential variants of habit reversal training, may have a greater improvement in scores compared to control than habit reversal training.

Note. GBS-36: Generic Body-Focused Repetitive Behaviour Scale-36.

Title of paper	**Group treatment for trichotillomania: Cognitive-behavioral therapy versus supportive therapy**
Full citation	Toledo, E. L., De Togni Muniz, E., Brito, A. M., de Abreu, C. N., & Tavares, H. (2015). Group treatment for trichotillomania: Cognitive-behavioral therapy versus supportive therapy. *Journal of Clinical Psychiatry*, *76*(4), 447-455. https://doi.org/10.4088/JCP.13m08964
Level of evidence	Level II
Design	Randomised controlled trial (RCT)
Format	Group, face-to-face
Participants	A total of n = 44 participants were included (*n* = 24 allocated to each group, with *n* =22 completers per group). All participants had been diagnosed with trichotillomania according to DSM-IV criteria.
Demographic characteristics	The mean age of the sample was 32 years (*SD* = 9.7) and 86.4% were female. The study was conducted in Brazil and all outcome measure scales were adapted and translated to Portuguese.
Treating clinician type	Trained mental health professionals (psychotherapists)
Intervention	Group CBT (GCBT)
Study groups	Intervention group: GCBT Control group: Supportive Group Therapy (SGT)
Outcome(s) measured	The primary outcomes were trichotillomania symptom severity measured by the MGH-HPS. Secondary outcomes included symptoms of depression (BDI) and anxiety (BAI), and levels of social adjustment (SAS-SR).
Procedure	Both GCBT and SGP groups received 22 weekly group sessions. The GCBT program protocol was delivered from a standardized manual which covered the following themes: psychoeducation, cognitions, behaviours, self-monitoring, social skills training, and relapse prevention. There were no habit reversal training components in this protocol. The SGT control protocol was delivered as a non-directive intervention based on empathic listening, validation, and encouragement in facing stressors, with no direct information about trichotillomania.
Follow up	No
Statistics summary	A repeated-measures ANOVA analysis was completed. Both groups scored significantly lower on the MGH-HPS (F = 23.762, p <.001) and the BDI (F=6.6579, p = .003) at post-treatment compared to pre-treatment. The GCBT group had significantly lower scores on the MGH-HPS at post-treatment compared to the SGT group (F = 3.545m p <.038). No significant differences in pre-treatment versus post-treatment measures were identified within or between groups on the BAI and SAS-SR.
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	These findings indicate that both GCBT and SGT can have efficacy in reducing symptoms of trichotillomania. GCBT was more effective than SGT (active control).

Note. BAI: Beck Anxiety Inventory; BDI: Beck Depression Inventory; MGH-HPS: Massachusetts General Hospital Hairpulling Scale; SAS-SR: Social Adjustment Scale – Self Report.

Self-guided digital interventions

Title of paper	**Self-help to reduce body-focused repetitive behaviors via video or website? A randomized controlled trial**
Full citation	Schmotz, S., Dilekoglu, E., Hoyer, L., Baumeister, A., & Moritz, S. (2024). Self-help to reduce body-focused repetitive behaviors via video or website? A randomized controlled trial. *Cognitive Therapy and Research*, *48*(1), 94-106. https://doi.org/10.1007/s10608-023-10456-8
Level of evidence	Level II
Design	Randomised controlled trial (RCT)
Format	Digital, no therapist guidance
Participants	A total of *n* = 217 participants with self-reported body-focused repetitive behaviours were recruited for the study. There was *n* = 74 in the self-help website condition (*n* = 51 completers), *n* = 73 in the self-help videos condition (*n* = 55 completers) and *n* = 70 in the control condition (*n* = 49 completers).
Demographic characteristics	The mean age and percentage of female participants in each group was 31.73 years (*SD* = 8.10), 89% in the website condition; 32.62 years (*SD* = 9.16), 86% in the videos condition; and 33.19 years (*SD* = 9.56), 89% in the control condition. No cultural specifics were provided, however the study was based in Germany.
Treating clinician type	Not applicable
Intervention	Self-help website
Study groups	Intervention groups: 1. Self-help website 2. Self-help videos Control group: passive (waitlist control)
Outcome(s) measured	Trichotillomania symptom severity as measured by the GBS-45.
Procedure	The self-help videos condition comprised of a website containing a series of videos that explain and demonstrate habit reversal training (HRT), decoupling (DC), and decoupling in-sensu (DC-is). The self-help website condition included all videos plus the techniques described in text format and psychoeducation on body-focused repetitive behaviours. Assessments were conducted online across the three groups, and post-treatment measures were conducted after six weeks.
Follow up	No
Statistics summary	Intention-to-treat mixed ANOVAs were used to analyse results. At post-treatment, there was no significant difference in GBS-45 total scores between the three groups. There was a significant difference in GBS Onychophagia (nail-biting) scores favouring the video intervention compared to both website (p = .008 for severity; p = .001 for impairment) and control conditions (p < .001 for severity; p = .006 for impairment). The GBS impairment scale for 'other BFRBs' showed a significant difference in favour of the two intervention groups compared to control (p = .043 for video condition, p = .005 for website condition).
Conflict of interest	Yes; professional (two authors developed the self-help techniques, videos and website)
Risk of bias	Low
Summary of findings	While no significant differences were found between groups on total GBS-45 scores, outcomes focused on specific behaviours indicated a greater improvement in the video condition for onychophagia (nail-biting) compared to both waitlist and the website condition. Compared to control, both the website and video conditions showed greater improvement in impairment related to 'other BFRBs' (i.e. not trichotillomania, nail biting, dermatillomania, or lip/cheek biting).

Note. GBS-36: Generic Body-Focused Repetitive Behaviour Scale-36.

Hypochondriasis

SUMMARY OF EVIDENCE

Level I evidence[68] was identified in support of the use of cognitive behaviour therapy and psychoeducation for the treatment of hypochondriasis in adults. Level II evidence was identified in support of acceptance and commitment therapy (group-based), mindfulness-based cognitive therapy, and self-guided digital interventions.

[68] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of hypochondriasis in adults.

Acceptance and commitment therapy

Title of paper	**Acceptance and commitment group therapy (ACT-G) for health anxiety: A randomized controlled trial**
Full citation	Eilenberg, T., Fink, P., Jensen, J. S., Rief, W., & Frostholm, L. (2016). Acceptance and commitment group therapy (ACT-G) for health anxiety: A randomized controlled trial. *Psychological Medicine, 46*(1), 103–115. https://doi.org/10.1017/S0033291715001579
Level of evidence	Level II
Design	RCT
Follow-up	3 and 6 months
Format	Group
Participants	126 adults diagnosed with severe health anxiety and assessed as having hypochondriasis. The mean age of participants in the treatment and comparison groups was 37 and 35.5 years respectively. 70.6% of participants were female.
Treating clinician(s)	Not reported
Intervention(s)	ACT (*n* = 63)
Comparison group(s)	Waitlist control (*n* = 63)
Procedure	Participants were randomly allocated to manualised group ACT or waitlist control. Treatment involved nine weekly 3-hour group therapy sessions, with an additional booster session 1 month after the final session.
Summary of findings	Compared with waitlist, a large between-group effect size in favour of ACT was found for the primary outcome measure of illness worry at posttreatment, with treatment effects maintained at 6-month follow-up. Participants in the ACT group also demonstrated significantly greater improvement on secondary measures of emotional distress and mental health-related quality of life, with small to medium effect sizes observed across outcomes at follow-up.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 105.

Cognitive behaviour therapy

Title of paper	Cognitive behaviour therapy for health anxiety: A systematic review and meta-analysis
Full citation	Cooper, K., Gregory, J. D., Walker, I., Lambe, S., & Salkovskis, P. M. (2017). Cognitive behaviour therapy for health anxiety: A systematic review and meta-analysis. *Behavioural and Cognitive Psychotherapy, 45*(2), 110–123. https://doi.org/10.1017/S1352465816000527
Level of evidence	Level I
Design	Systematic review and meta-analysis (14 studies)
Follow-up	6 and 12 months' follow-up data were available
Format	Individual, group, online (guided and unguided)
Participants	1,544 adults with clinical or subclinical hypochondriasis. Eleven of the 14 studies included participants meeting diagnostic criteria for hypochondriasis. The mean ages across studies ranged from 34 to 68.7 years, and 62.4% were female.
Treating clinician(s)	Not reported
Intervention(s)	CBT, psychoeducation
Comparison group(s)	Waitlist, TAU, pharmacotherapy, placebo, other psychological therapy, psychosocial support
Procedure	Systematic review and meta-analysis of RCTs published between 1979 and 2014 investigating the efficacy of CBT for clinical and subclinical hypochondriasis in adults
Summary of findings	Compared with pooled control conditions on health anxiety measures, large treatment effect sizes were found in favour of CBT at posttreatment, 6 months' follow-up (based on seven comparisons), and 12-month follow-up (based on six comparisons). When subgroup analyses were conducted according to comparison group, a large effect size remained compared with waitlist, and a medium to large effect size was found compared with TAU and other active treatments.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 102. Copyright 2018 by the Australian Psychological Society.

Title of paper	**Cognitive-behavioral therapy for hypochondriasis/health anxiety: A meta-analysis of treatment outcome and moderators**
Full citation	Olatunji, B. O., Kauffman, B. Y., Meltzer, S., Davis, M. L., Smits, J. A., & Powers, M. B. (2014). Cognitive-behavioral therapy for hypochondriasis/health anxiety: A meta-analysis of treatment outcome and moderators. *Behaviour Research and Therapy*, *58*, 65–74. https://doi.org/10.1016/j.brat.2014.05.002
Level of evidence	Level I
Design	Meta-analysis (13 studies)
Follow-up	Details of follow-up periods not reported
Format	Not reported
Participants	1,081 adults diagnosed with hypochondriasis or with clinical levels of health anxiety. The mean ages ranged from 35 to 68.9 years.
Treating clinician(s)	Not reported
Intervention(s)	CBT
Comparison group(s)	Waitlist, TAU, psychological placebo, pill placebo
Procedure	Meta-analysis of RCTs published between 1966 and 2014 investigating the effectiveness of CBT and moderators of treatment of hypochondriasis or health anxiety in adults. The number of treatment sessions ranged from three to 16.
Summary of findings	On primary and secondary outcome measures, CBT led to significantly better treatment outcomes compared with pooled control conditions, with a large effect size at posttreatment. The treatment effect was reduced to a small effect size at follow-up. A significant relationship was also found between number of treatment sessions and effect size (based on nine studies), with more sessions associated with larger effect sizes at posttreatment.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 103. Copyright 2018 by the Australian Psychological Society.

Title of paper	**Exposure-based cognitive–behavioural therapy via the internet and as bibliotherapy for somatic symptom disorder and illness anxiety disorder: Randomised controlled trial**
Full citation	Hedman, E., Axelsson, E., Andersson, E., Lekander, M., & Ljótsson, B. (2016). Exposure-based cognitive-behavioural therapy via the internet and as bibliotherapy for somatic symptom disorder and illness anxiety disorder: Randomised controlled trial. *The British Journal of Psychiatry, 209*(5), 407–413. https://doi.org/10.1192/bjp.bp.116.181396
Level of evidence	Level II
Design	RCT
Follow-up	6 months
Format	Online (clinician guided and unguided) and self-help (bibliotherapy)
Participants	132 adults with a DSM-5 diagnosis of somatic symptom disorder or illness anxiety disorder (89.4% met DSM-IV criteria for hypochondriasis). The mean ages of the groups ranged from 35.4 to 41.5 years, and 74.2% were female.
Treating clinician(s)	Psychologists (for the clinician-guided condition)
Intervention(s)	Clinician guided online CBT (*n* = 32), unguided online CBT (*n* = 33), bibliotherapy (*n* = 34)
Comparison group(s)	Waitlist control (*n* = 33)
Procedure	Participants were randomly allocated to one of four conditions: clinician-guided online CBT, unguided online CBT, unguided bibliotherapy, or waitlist control. All active treatments had the same content and duration of treatment (12 text-based modules across 12 weeks), but differed in terms of degree of clinician guidance and format (internet versus self-help book). The main component of the treatments was systematic exposure to health anxiety-related situations or events, in combination with response prevention. Participants in the clinician-guided condition received correspondence over email from a designated clinician who provided feedback on homework tasks and general guidance as needed for progressing through treatment.
Summary of findings	Participants in the unguided online CBT group completed significantly fewer treatment modules than did those in the clinician–guided group. Large between-group effect sizes were found for all active treatment conditions compared with waitlist control on the primary outcome measure of health anxiety. Large within-group treatment effects were demonstrated for all active conditions compared with waitlist at posttreatment and follow-up, with the largest effect for the clinician-guided condition and the smallest for bibliotherapy.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 103. Copyright 2018 by the Australian Psychological Society.

Title of paper	**Metacognitive therapy in the treatment of hypochondriasis: A systematic case series**
Full citation	Bailey, R., & Wells, A. (2014). Metacognitive therapy in the treatment of hypochondriasis: A systematic case series. *Cognitive Therapy and Research, 38*(5), 541–550. https://doi.org/10.1007/s10608-014-9615-y
Level of evidence	Level IV
Design	Case series, with pretest and posttest
Follow-up	6 months
Format	Individual
Participants	Four adults diagnosed with hypochondriasis. The mean age of participants was 46.7 years, and three participants were female.
Treating clinician(s)	PhD psychology graduate under supervision by a clinical psychologist
Intervention(s)	Metacognitive therapy
Comparison group(s)	None
Procedure	Participants were assigned to a no-treatment baseline phase for 3 to 4 weeks prior to beginning treatment to observe the stability in the outcome measures. The manualised metacognitive therapy intervention consisted of weekly 1-hour sessions. Participants received between six and nine individual therapy sessions.
Summary of findings	All measures were stable during the no-treatment baseline phase. From baseline to posttreatment, all participants demonstrated significant improvements on measures of hypochondriacal symptom severity, anxiety, and depression. Treatment gains were maintained at follow-up.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 104. Copyright 2018 by the Australian Psychological Society.

Mindfulness-based cognitive therapy

Title of paper	**A randomized clinical trial of mindfulness-based cognitive therapy versus unrestricted services for health anxiety (hypochondriasis)**
Full citation	McManus, F., Surawy, C., Muse, K., Vazquez-Montes, M., & Williams, J. M. (2012). A randomized clinical trial of mindfulness-based cognitive therapy versus unrestricted services for health anxiety (hypochondriasis). *Journal of Consulting and Clinical Psychology, 80*(5), 817–828. https://doi.org/10.1037/a0028782
Level of evidence	Level II
Design	RCT
Follow-up	12 months
Format	Group
Participants	74 adults diagnosed with hypochondriasis. The mean age of participants in the treatment and comparison groups was 41.3 and 43.9 years, respectively. 78.4% of participants were female.
Treating clinician(s)	Not reported
Intervention(s)	MBCT plus unrestricted usual services (*n* = 36)
Comparison group(s)	TAU (*n* = 38)
Procedure	Participants were randomly allocated to either MBCT in addition to TAU, or TAU alone. The manualised MBCT intervention consisted of weekly 2-hour sessions delivered over an 8-week period. Participants attended a mean of 6.5 intervention sessions.
Summary of findings	Compared with TAU alone, a medium between-group effect size in favour or MBCT plus TAU was found on the primary outcome measure of health anxiety at both posttreatment and follow-up. General levels of anxiety and depression did not differ between the groups at any

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 105. Copyright 2018 by the Australian Psychological Society.

Psychoeducation

Title of paper	Current directions in the treatment of hypochondriasis
Full citation	Taylor, S., Asmundson, G. J. G., & Coons, M. J. (2005). Current directions in the treatment of hypochondriasis. *Journal of Cognitive Psychotherapy, 19*(3), 285–304. https://doi.org/10.1891/jcop.2005.19.3.285
Level of evidence	Level I
Design	Nil to 12 months
Follow-up	Individual, group
Format	448 adults diagnosed with hypochondriasis or with subclinical hypochondriasis. The mean ages ranged from 24 to 48 years, and 63.9% were female.
Participants	Not reported
Treating clinician(s)	Psychoeducation, CBT
Intervention(s)	Pharmacotherapy (fluoxetine), waitlist control, TAU
Comparison group(s)	Meta-analysis of controlled and uncontrolled studies comparing psychosocial and pharmacological treatments for hypochondriasis in adults. Participants received between six and 17 treatment sessions, across a range of 6 to 21 weeks.
Procedure	The pre- to post-treatment effect sizes for measures of hypochondriasis suggest that CBT (based on four studies) and fluoxetine (based on two studies) tended to yield the largest effects for treatment completers with full hypochondriasis. For mixed samples, psychoeducation (based on two studies) and CBT (based on one study) yielded the largest effect sizes compared with waitlist controls and TAU. For studies reporting follow-up data, results indicated that CBT (based on four studies) had the largest effect sizes in studies of full hypochondriasis, and psychoeducation (based on two studies) and CBT (based on one study) had the largest effect sizes in studies of mixed full hypochondriasis and abridged hypochondriasis.
Summary of findings	Nil to 12 months

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 104. Copyright 2018 by the Australian Psychological Society.

Self-guided digital interventions

Title of paper	**Efficacy of internet-delivered acceptance and commitment therapy for severe health anxiety: Results from a randomized, controlled trial**
Full citation	Hoffmann, D., Rask, C. U., Hedman-Lagerlöf, E., Jensen, J. S., & Frostholm, L. (2021). Efficacy of internet-delivered acceptance and commitment therapy for severe health anxiety: Results from a randomized, controlled trial. *Psychological Medicine, 51*(15), 2685-2695. https://doi.org/10.1017/s0033291720001312
Level of evidence	Level II
Design	RCT
Format	Digital Intervention, with therapist guidance.
Participants	101 adults self-referred to a Danish university hospital and diagnosed with a principal diagnosis of severe health anxiety according to the ICD-10 diagnostic criteria, empirically based diagnostic criteria established by Fink et al. (2004)[69] and a WI-7 score >21.4.
Demographic characteristics	Internet-delivered acceptance and commitment therapy (iACT): mean age 37.2 ± 9.7 years , range 19–61 years, 64% females. Internet-delivered discussion forum (iFORUM): mean age: 42.3 ±9.6 years, range 20–63 years, 67% females.
Treating clinician type	Trained mental health professionals and student (4 psychologists and a trainee psychology student provided the written clinical guidance)
Intervention	iACT vs iFORUM
Study groups	Intervention: iACT, *n* = 53; active control: iFORUM; *n* = 48.
Outcome(s) measured	Changes in self-reported health anxiety symptoms as measured by the WI-7 (primary outcome) and the SHAI (secondary outcome, among others).
Procedure	The iACT program is a clinician-guided, self-help program based on an existing, empirically supported manual for group-based ACT. It consists of seven modules opened consecutively over 12 weeks. The iFORUM program consisted of seven discussion forums opened consecutively over 12 weeks with a new topic related to health anxiety.
Follow up	Yes, 6 months.
Statistics summary	Statistical analyses using ITT and a linear mixed model showed a significant interaction effect between group and time on the WI-7 between baseline and 6-month follow-up ($\chi 2(5)= 39.97$, $p < .001$). The mean improvement was in favour of iACT , with a standardised between-group effect size $d = 0.80$, 95% CI [0.38,1.23]. At follow-up, 35% of the iACT participants were no longer clinical cases vs.16% for iFORUM (*RR* = 2.17, 95% CI [1.00,4.70], $p = .050$).
Conflict of interest	None declared
Risk of bias	High (due to lack of reporting of results at three additional end points as per trial protocol: 4 and 8 weeks into the treatment and after the end of treatment)
Summary of findings	Twelve weeks of clinician-guided iACT led a to greater reduction in self-reported symptoms of health anxiety than an Internet-delivered discussion forum at 6-month follow-up. Improvements were also evident on symptoms of illness worry and depression, and psychological inflexibility. Clinician-guided iACT can be a highly effective, acceptable, and accessible treatment for patients with health anxiety, with minimal adverse effects.

Note. ITT: intention to treat; RR: risk ratio; SHAI: Health Anxiety Inventory Short-form; WI-7: Whiteley-7 Index.

[69] Fink, P., Ornbol, E., Toft, T., Sparle, K. C., Frostholm, L., & Olesen, F. (2004). A new, empirically established hypochondriasis diagnosis. *The American Journal of Psychiatry, 161*(9), 1680–1691. https://doi.org/10.1176/appi.ajp.161.9.1680

Substance use disorder

SUMMARY OF EVIDENCE

This review identified Level I evidence[70] in support of acceptance and commitment therapy, cognitive behaviour therapy (including contingency management), motivational interviewing, psychodynamic therapy, and self-guided digital interventions in the treatment of substance use disorder in adults. (Upon expert review, motivational interviewing was added to the intervention list for this chapter). Level I evidence was also found in relation to interpersonal psychotherapy in treating cocaine use disorder, however findings were inconclusive with only a few studies evaluated.

Level II evidence was identified in support of family-based interventions, mindfulness-based relapse prevention, and hypnotherapy. Level II evidence was also found in relation to eye movement desensitisation and reprocessing, however findings suggest that it may not provide additional effectiveness when added to routine treatment in patients with alcohol use disorder.

Level III evidence was identified in relation to psychoeducation, with mixed findings on its effectiveness in relapse prevention.

Level IV evidence was found to support the use of dialectical behaviour therapy skills training as a stand-alone intervention for adults with alcohol use disorder and concurrent substance use disorder.

Guidelines provided by WHO (2023) offer a strong recommendation for cognitive behaviour therapy and contingency management in treating cocaine and stimulant dependence, and a conditional recommendation for digital interventions in drug use disorders. They also offer a strong recommendation for brief interventions with individualised feedback and advise on substance reduction for cannabis and/or psychostimulants use. Guidelines from NICE (2024) additionally recommend the use of, where appropriate to the needs of the service user, behavioural couples therapy, community reinforcement approach, social behaviour network therapy, and cognitive behaviour relapse prevention-based therapy.

It should be noted that while pharmacotherapy was outside the scope of the current literature review, it is a first-line treatment for some substance use disorders and is often recommended in conjunction with psychosocial interventions.

[70] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of substance use disorder in adults.

Acceptance and commitment therapy

Title of paper	**Psychological flexibility-based interventions versus first-line psychosocial interventions for substance use disorders: Systematic review and meta-analyses of randomized controlled trials**
Full citation	Ii, T., Sato, H., Watanabe, N., Kondo, M., Masuda, A., Hayes, S. C., & Akechi, T. (2019). Psychological flexibility-based interventions versus first-line psychosocial interventions for substance use disorders: Systematic review and meta-analyses of randomized controlled trials. *Journal of Contextual Behavioral Science, 13*, 109-120. https://doi.org/10.1016/j.jcbs.2019.07.003
Level of evidence	Level I
Design	Systematic review and meta-analysis (10 studies, with 4 studies focused on ACT)
Delivery format	Individual (3 studies) / group (1 study), face-to-face
Participants	A total of 655 adults (173 across the ACT studies) diagnosed with substance used disorder (SUD) according to DSM-IV/DSM-5 or ICD criteria.
Demographic characteristics	Mean participant age ranged from 30.4 to 48.3 years, with an overall range of 25-60 years of age. The percentage of males ranged from 32% to 72%, and studies included between 13% to 68% non-Whites participants
Treating clinician type	Trained mental health professionals (therapist), student (master's level)
Intervention	ACT
Outcome(s) measured	The primary outcome measured was substance discontinuation (defined as less than one use per week). Secondary outcomes included dropout rates, improvements in substance dependence, depressive symptoms, anxiety symptoms, psychological flexibility, and quality of life.
Procedure	A systematic review and meta-analysis were conducted to compare the effectiveness of psychological flexibility-based interventions (PF) to first-line psychosocial interventions for SUD (e.g. brief motivational interventions, 12-step groups). The search strategy included RCTs identified in electronic databases searched from inception to July 2016, as well as through scanning reference lists. Sensitivity and subgroup analyses were further conducted with a focus on ACT.
Follow up	No
Statistics summary	A random-effects meta-analysis model was used to analyse the data, with sensitivity and subgroup analyses further conducted. In terms of substance discontinuation, there was no significant subgroup difference between ACT and first-line psychosocial interventions (*RR* = 1.34, 95% CI [0.92, 1.96], p = .13). In terms of dropout rates, there were also no significant subgroup differences between ACT and first-line psychosocial interventions (*RR* = 1.14, 95% CI [0.85, 1.53], p = .39). There was no significant heterogeneity found in the ACT studies (chi-squared test = 1.29, p = .53, I^2 = 0%)
Conflict of interest	Yes (financial)
Risk of bias	Low
Summary of findings	Findings indicated that ACT is comparable to first-line psychosocial interventions (e.g. brief motivational interventions, 12-step groups) in terms of dropout rates and substance discontinuation for adults with SUDs.

Cognitive behaviour therapy

Title of paper	**Comparative efficacy and acceptability of psychosocial interventions for individuals with cocaine and amphetamine addiction: A systematic review and network meta-analysis**
Full citation	De Crescenzo, F., Ciabattini, M., D'Alò, G. L., De Giorgi, R., Del Giovane, C., Cassar, C., Janiri, L., Clark, N., Ostacher, M. J., & Cipriani, A. (2018). Comparative efficacy and acceptability of psychosocial interventions for individuals with cocaine and amphetamine addiction: A systematic review and network meta-analysis. *PLoS medicine, 15*(12), e1002715. https://doi.org/10.1371/journal.pmed.1002715
Level of evidence	Level I
Design	Systematic review and network meta-analysis (50 studies, with 22 studies focused on CBT)
Delivery format	Not specified
Participants	A total of 6,942 (609 in CBT conditions; 285 in CBT/CM conditions) adults diagnosed with cocaine and/or amphetamine addiction according to DSM or ICD criteria.
Demographic characteristics	Overall mean age was 36.8 years, and 35.9% of all participants were women. Majority of studies recruited participants from North America (42 trials), with six trials from Europe, one from Latin America, and another from Oceania.
Treating clinician type	Not specified
Intervention	CBT, CBT+CM
Outcome(s) measured	Primary outcomes were efficacy (proportion of participants abstinent as assessed by urinalysis) and acceptability (proportion of participants who dropped out from the study) of interventions at posttreatment. Secondary outcomes included efficacy and acceptability at 12 weeks and at the longest follow-up, as well as the longest duration of abstinence.
Procedure	A systematic review and network meta-analysis were conducted to compare the effectiveness of all available psychosocial interventions in the treatment of cocaine and/or amphetamine addiction. The search strategy included RCTs identified in electronic databases searched from inception to April 2018, as well as in international registers, reference lists of retrieved articles, and key conference proceedings.
Follow up	Yes; 12 weeks, long-term (longest duration of study follow-up)
Statistics summary	Pairwise meta-analyses using a random-effects model were used to estimate pooled odds ratios and standardized mean differences. Random-effects network meta-analyses were used to assess direct and indirect comparisons. CBT alone was better accepted than TAU (*NNT* 10.5, 95% CI [5.8, 53.6]), however not superior for abstinence on any outcome measures. Both CM alone and the combination of CBT plus CM were superior to CBT alone (*OR* 1.88, 95% CI [1.52, 2.85], p = .003 and *OR* 2.08, 95% CI [1.28, 3.33]), p = .002). The common heterogeneity *SD* for the coherence model was 0.46 for abstinence and 0.21 for dropout at end of treatment.
Conflict of interest	Not specified
Risk of bias	Low
Summary of findings	Findings indicated that CBT alone was more acceptable than TAU, however not superior for abstinence on any outcome measures in individuals with cocaine and/or amphetamine addiction. CBT was also shown to be less effective compared with CM alone and with CBT plus CM.

Note. CM: Contingency Management; CRA: Community Reinforcement Approach; NNT: Number Needed to Treat.

Title of paper	**A meta-analysis of cognitive-behavioral therapy for alcohol or other drug use disorders: Treatment efficacy by contrast condition**
Full citation	Magill, M., Ray, L., Kiluk, B., Hoadley, A., Bernstein, M., Tonigan, J. S., & Carroll, K. (2019). A meta-analysis of cognitive-behavioral therapy for alcohol or other drug use disorders: Treatment efficacy by contrast condition. *Journal of Consulting and Clinical Psychology, 87*(12), 1093. https://doi.org/10.1037/ccp0000447
Level of evidence	Level I
Design	Meta-analysis (30 studies)
Delivery format	Individual (53%) / group (44%) / mixed (3%), face-to-face
Participants	The median sample size was 102 participants with a range of 39 to 952 participants across studies. Participants were adults with alcohol or other drug use disorders, with the primary substance targets being alcohol (k = 15), marijuana (k = 3), opiates (k = 2), stimulants (k = 6) and polydrug (k = 6).
Demographic characteristics	The mean age was 37 (SD = 6) across studies and they consisted of 30% females on average. Sixty eight percent of participants were White, followed by 36% Black and 12% Latino/a.
Treating clinician type	Not specified
Intervention	CBT
Outcome(s) measured	Outcomes were selected based on a decisional hierarchy in the following order: 1) biological assay measures, 2) measures of drug use frequency or quantity, 3) sample proportions, and 4) other outcomes (e.g. ASI)
Procedure	A meta-analysis was conducted to assess the efficacy of CBT for alcohol or other drug use disorders against three levels of experimental contrast (minimal, non-specific therapy, specific therapy). The search strategy included RCTs identified in electronic databases searched from inception to June 2018, as well as in a bibliographic search of systematic reviews and meta-analyses of CBT.
Follow up	Yes; 6 months and 8+ months posttreatment
Statistics summary	A random effects meta-analysis model was used to estimate effect sizes. In contrast to minimal treatment, pooled effect size for frequency outcomes was significant at early follow-up (g = .58, 95% CI [0.15, 1.01], p = .009, I^2 = 59%) and at late follow-up (g = .44, 95% CI [0.02, 0.86], p = .039, I^2 = 0%). The pooled effect size for quantity outcomes was also significant at early follow-up (g = .67, 95% CI [0.41, 0.98], p < .001, I^2 = 0%). In contrast to non-specific therapy (e.g. TAU), the pooled effect size for frequency outcomes was significant at early follow-up (g = .18, 95% CI [0.02, 0.35], p = .04, I^2 = 45%), but not late follow-up (p = .49). For quantity outcomes at early follow-up, the pooled effect was significant (g = .42, 95% CI [0.03, 0.81], p = .034, I^2 = 0%). In contrast to other specific therapies, the effect sizes were non-significant for frequency and quantity outcomes.
Conflict of interest	Not specified
Risk of bias	Low
Summary of findings	Findings indicated that CBT was more effective than no treatment, minimal treatment, and non-specific controls in the treatment of adults with SUD, both at posttreatment and follow-up. However, CBT was not more effective compared with other treatment modalities.

Note. ASI: Addiction Severity Index.

Dialectical behaviour therapy

Title of paper	**The therapeutic role of emotion regulation and coping strategies during a stand-alone DBT skills training program for alcohol use disorder and concurrent substance use disorders**
Full citation	Cavicchioli, M., Movalli, M., Vassena, G., Ramella, P., Prudenziati, F., & Maffei, C. (2019). The therapeutic role of emotion regulation and coping strategies during a stand-alone DBT skills training program for alcohol use disorder and concurrent substance use disorders. *Addictive Behaviors, 98*, 106035. https://doi.org/10.1016/j.addbeh.2019.106035
Level of evidence	Level IV
Design	One group pretest-posttest design
Delivery format	Group, face-to-face
Participants	Participants were 108 adults diagnosed with alcohol use disorder (AUD) according to DSM-5 criteria, admitted to a hospital in Milan, Italy.
Demographic characteristics	Mean age was 48.4 (*SD* = 9.61) years and ranged from 24 to 75 years. The sample consisted of 59.3% males and 40.7% females.
Treating clinician type	Not specified
Intervention	DBT-ST
Outcome(s) measured	Consecutive days of abstinence (CDA) as measured by weekly toxicological screenings, severity of AUD and CO-SUDs (ASI, SPQ), difficulties in emotion regulation (DERS), and coping strategies (DBT-WCCL).
Procedure	Participants received a three-month program of DBT-ST consisting of two phases. The intensive phase consisted of five sessions per week for the first month, and the post-intensive phase consisted of two sessions per week for the remaining two months. The total number of sessions was thirty-six, and each session lasted three hours, for a total of 108 hours.
Follow up	No
Statistics summary	Paired *t*-tests were used to evaluate changes in outcome measures, and Cohen's *d* were estimated as effect size measures. An intent-to-treat (ITT) approach was applied. Significant large decreases were observed for CDA (t = 21.90, p <.001), SPQ alcohol subscale (t = 5.94, p <.001) and DERS total score (t = 8.63 p <.001). Moderate improvements in SPQ prescription (t = 4.92, p <.001) and illicit (t = 4.00, p <.001) drugs subscale, and well as in DBT-WCCI DSS dimension (t = 4.48, p <.001) were also observed.
Conflict of interest	None declared
Risk of bias	Moderate
Summary of findings	Findings supported the use of DBT-ST as a stand-alone intervention for the treatment of adults with AUD and concurrent SUDs. Improvements in difficulties with emotion regulation (DERS) played a mediating role on abstinence maintenance.

Note: ASI: Addiction Severity Index; DBT-ST: Dialectical Behaviour Therapy Skills Training; DBT-WCCL: DBT Way of Coping Checklist; DERS: Difficulties in Emotion Regulation Scale; SPQ: Shorter PROMIS Questionnaire.

Eye movement desensitisation and reprocessing

Title of paper	**Addiction-focused eye movement desensitization and reprocessing therapy as an adjunct to regular outpatient treatment for alcohol use disorder: Results from a randomized clinical trial**
Full citation	Markus, W., Hornsveld, H. K., Burk, W. J., de Weert–van Oene, G. H., Becker, E. S., & DeJong, C. A. (2020). Addiction-focused eye movement desensitization and reprocessing therapy as an adjunct to regular outpatient treatment for alcohol use disorder: Results from a randomized clinical trial. *Alcoholism: Clinical and Experimental Research, 44*(1), 272-283. https://doi.org/10.1111/acer.14249
Level of evidence	Level II
Design	Randomised controlled trial (RCT)
Delivery format	Group, face-to-face
Participants	Participants were 109 adults with a primary DSM-IV-TR diagnosis of alcohol use disorder (AUD) recruited from six outpatient addiction care sites in the Netherlands. Fifty-five participants were randomly allocated to the experimental group (AF-EMDR + TAU) and 54 to the control group (TAU)
Demographic characteristics	Mean age for participants was 47.1 (*SD* = 11.6), and males constituted 68.8% of the total sample. Most participants identified as Dutch (96.3%).
Treating clinician type	Trained mental health professional (clinical psychologist)
Intervention	Addiction-focused EMDR (AF-EMDR)
Study groups	Intervention group: AF-EMDR + TAU Control group: Passive (TAU)
Outcome(s) measured	Primary outcome measures were changes in clinician-rated drinking behaviour (TLFB), changes in participant-rated harmful alcohol use (AUDIT), and changes in biomarker levels (CDT and CGT). Secondary outcome measures included changes in participant-rated craving (PACS) and quality of life (CRA-HS, EQ-5D)
Procedure	Participants were randomly assigned to TAU only or TAU plus AF-EMDR. Participants had already received or had just started with TAU. AF-EMDR therapy was delivered as a maximum of seven weekly 90-minute sessions using the PEIA manual. TAU was Community Reinforcement Approach (CRA) treatment delivered individually on a weekly basis.
Follow up	Yes; 1 and 6 months
Statistics summary	Linear mixed models with an intent-to-treat basis were used to analyse the data. Sensitivity analyses were further performed. Participants in both AF-EMDR and TAU groups reported decreases in cravings (PACS) and increases in quality of life (EQ-5D) and happiness (CRA-HS). No group interaction effects were found for any of the outcomes measured. RCI calculations showed a slightly higher proportion of AF-EMDR participants experiencing reduced cravings, while more TAU participants showed improvements in alcohol consumption.
Conflict of interest	Yes (financial)
Risk of bias	Low
Summary of findings	Findings indicated that AF-EMDR did not provide additional effectiveness when added to TAU in improving outcomes among outpatient adults with chronic AUD.

Note. AF-EMDR: Addiction-Focused Eye Movement Desensitisation and Reprocessing; CRA: Community Reinforcement Approach; CRA-HS: Community Reinforcement Approach Happiness Scale; EQ-5D: EuroQol-5 dimensions; RCI: Reliable Change Index.

Family-based interventions

Title of paper	**A randomized controlled trial of family intervention for co-occurring substance use and severe psychiatric disorders**
Full citation	Mueser, K. T., Glynn, S. M., Cather, C., Xie, H., Zarate, R., Smith, L. F., Clark, R. E., Gottlieb, J. D., Wolfe, R., & Feldman, J. (2013). A randomized controlled trial of family intervention for co-occurring substance use and severe psychiatric disorders. *Schizophrenia Bulletin*, *39*(3), 658–672. https://doi.org/10.1093/schbul/sbr203
Level of evidence	Level II
Design	RCT
Follow-up	6 to 36 months
Format	Family
Participants	108 adults with cooccurring substance use and psychiatric disorders, and their families. The mean age of the client group was 33.6 years, and 70.4% were male.
Treating clinician(s)	Clinicians with advanced training in clinical psychology
Intervention(s)	Family intervention for dual disorders (*n* = 52)
Comparison group(s)	Family education (*n* = 56)
Procedure	Participants were randomly allocated to one of two manualised family-based interventions: family intervention for dual disorders and a briefer family education intervention. Family education was provided in single-family sessions and involved 1-hour sessions over 6 to 8 weeks. The family intervention sessions were provided on a declining contact basis, with weekly sessions for the first 3 months, biweekly sessions for the subsequent 6 months, and monthly sessions thereafter.
Summary of findings	Over the study period, participants in both groups demonstrated significant improvements across outcome measures, including degree of substance use, overall psychiatric symptom severity, and global functioning. There were no significant differences between groups in substance use severity, with the exception of men in the family intervention program demonstrating fewer days of drinking over the course of the study compared with those in family education.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 71. Copyright 2018 by the Australian Psychological Society.

Hypnotherapy

Title of paper	**Effect of hypnotherapy in alcohol use disorder compared with motivational interviewing: A randomized controlled trial**
Full citation	Shestopal, I., & Bramness, J. G. (2019). Effect of hypnotherapy in alcohol use disorder compared with motivational interviewing: A randomized controlled trial. *Addictive Disorders & their Treatment, 18*(3), 169-175. https://doi.org/10.1097/ADT.0000000000000170
Level of evidence	Level II
Design	Randomised controlled trial (RCT)
Delivery format	Individual, face-to-face
Participants	Participants were thirty-one adult patients diagnosed with AUD admitted to an inpatient treatment program in Norway. Participants were randomly assigned to the hypnotherapy group (n = 16) or control group (n = 15).
Demographic characteristics	Mean age of participants was 52 (SD = 14.1) years in the control group and 54.2 (SD = 11.6) in the hypnotherapy group. The control and hypnotherapy groups included 7% and 19% females, respectively.
Treating clinician type	Trained mental health professional (psychiatrist)
Intervention	Hypnotherapy
Study groups	Intervention group: hypnotherapy plus TAU Control group: active (MI plus TAU)
Outcome(s) measured	Alcohol use and related problems were measured using the AUDIT and TLFB. Mental distress was measured using the HSCL-25, and traumatic life experiences were measured using the TLEQ.
Procedure	Participants were randomly assigned to receive hypnotherapy + TAU (experimental group) or MI + TAU (control group). TAU consisted of a 6-week long program involving 5 hours of group therapy 5 days a week, a 2–3-day long family visit (including a family therapy session), group activities (e.g. walks in nature), and informal activities (e.g. group discussions). From the second week of the program, MI or hypnotherapy were delivered as 1-hour individual therapy over 5 weeks (total 5 hours).
Follow up	Yes; 1 year
Statistics summary	Simple bivariate analyses using intent-to-treat approaches were used to analyse the data. Both groups showed significant reductions in alcohol consumption over the previous month (control group, 296 units, 95% CI [186, 406] units; intervention group, 341 units, 95% CI [101, 582] units). No significant differences between groups were found at follow-up. A non-significant change in AUDIT scores at follow-up was found to be greater in the hypnotherapy group (p = .09)
Conflict of interest	Yes (financial)
Risk of bias	Low
Summary of findings	Findings indicated that hypnotherapy was at least as effective as MI, or marginally better, in improving outcomes at 1-year follow-up among inpatient adults with AUD. However, the small advantage for hypnotherapy was rendered non-significant and should be interpreted with caution.

Note. MI: Motivational Interviewing; TAU: Treatment as Usual.

Interpersonal psychotherapy

Title of paper	**Psychosocial interventions in stimulant use disorders: A systematic review and qualitative synthesis of randomized controlled trials**
Full citation	De Giorgi, R., Cassar, C., Loreto D'alò, G., Ciabattini, M., Minozzi, S., Economou, A., Tambelli, R., Lucchese, F., Saulle, R., Amato, L., Janiri, L., & De Crescenzo, F. (2018). Psychosocial interventions in stimulant use disorders: A systematic review and qualitative synthesis of randomized controlled trials. *Rivista di Psichiatria*, *53*(5), 233–255. https://doi.org/10.1708/3000.30003
Level of evidence	Level I
Design	Systematic review (91 studies, with 3 studies focused on IPT)
Delivery format	Individual, face-to-face
Participants	Participants were adults diagnosed with stimulant use disorder according to DSM-III/IV/V or ICD-9/10. Across the 3 IPT studies, 466 participants with cocaine dependence were included.
Demographic characteristics	Mean age for the IPT studies was 31.2 years, with an average of 71% male participants.
Treating clinician type	Not specified
Intervention	IPT
Outcome(s) measured	Rates of abstinence
Procedure	A systematic review and qualitative synthesis of all psychosocial interventions for stimulant use disorders was conducted. The search strategy included RCTs identified in electronic databases searched from inception, as well as through hand-searches of reference lists in retrieved articles.
Follow up	Yes; 52 weeks (1/3 studies)
Statistics summary	Qualitative synthesis was used to described and evaluate the study findings. One study reported significant improvements in abstinence for the IPT group compared to CBT in patients with severe SUD. Another study by the same authors disconfirmed this result.
Conflict of interest	None declared
Risk of bias	High
Summary of findings	Findings for the effectiveness of IPT in the treatment of adults with SUD (cocaine use disorder) were inconclusive. However, only a small number of studies focused on IPT (k = 3) were included in the review.

Mindfulness-based cognitive therapy / Mindfulness-based stress reduction

Title of paper	**Relative efficacy of mindfulness-based relapse prevention, standard relapse prevention, and treatment as usual for substance use disorders: A randomized clinical trial**
Full citation	Bowen, S., Witkiewitz, K., Clifasefi, S. L., Grow, J., Chawla, N., Hsu, S. H., Carroll, H. A., Harrop, E., Collins, S. E., Lustyk, M. K., & Larimer, M. E. (2014). Relative efficacy of mindfulness-based relapse prevention, standard relapse prevention, and treatment as usual for substance use disorders: A randomized clinical trial. *JAMA Psychiatry*, *71*(5), 547–556. https://doi.org/10.1001/jamapsychiatry.2013.4546
Level of evidence	Level II
Design	RCT
Follow-up	3-, 6-, and 12-month follow-up
Format	Group
Participants	286 adults who had completed initial chemical dependency treatment for substance use disorders. The mean ages of the three groups ranged from 37.2 to 39.1 years, and 71.5% were male.
Treating clinician(s)	Clinical psychologists
Intervention(s)	Mindfulness-based relapse prevention (MBRP; *n* = 103)
Comparison group(s)	Standard relapse prevention (*n* = 88), TAU (n = 95)
Procedure	The intervention occurred during the standard 12-month period of after-care treatment. Participants were randomly allocated to one of three conditions: MBRP, standard relapse prevention, or TAU. The MBRP program, based on MBCT and MBSR, consisted of eight weekly 2-hour group sessions of 6–10 participants. The standard relapse prevention group matched the MBRP condition in time, format, group size, and scope of assigned homework. TAU consisted of abstinence-based and process-oriented weekly or twice-weekly group discussions of 90-minute duration.
Summary of findings	At 3-month follow-up, there were no significant differences between any groups on drug use days, any drug use, heavy drinking days, or any heavy drinking. At 6-month follow-up, the two relapse prevention groups reported 31% fewer days of heavy drinking and a significantly higher probability of abstinence from drug use compared with the TAU group. There were no significant differences between standard relapse prevention and MBRP groups at 6-month follow-up. At 12-month follow-up, compared with the standard relapse prevention group, the MBRP group reported 31% fewer drug-use days and a significantly higher probability of not engaging in any heavy drinking.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 71. Copyright 2018 by the Australian Psychological Society.

Motivational interviewing

Title of paper	Motivational interviewing for cannabis use disorders: A systematic review and meta-analysis
Full citation	Calomarde-Gómez, C., Jiménez-Fernández, B., Balcells-Oliveró, M., Gual, A., & López-Pelayo, H. (2021). Motivational interviewing for cannabis use disorders: A systematic review and meta-analysis. *European Addiction Research, 27*(6), 413-427. https://doi.org/10.1159/000515667
Level of evidence	Level I
Design	Systematic review and meta-analysis (40 studies, with 24 studies focused on adults)
Delivery format	Individual, face-to-face
Participants	Total of 5,323 adults (ranging from 33 to 731 participants across 24 studies) with cannabis use disorder (CUD).
Demographic characteristics	Not specified
Treating clinician type	Not specified
Intervention	Motivational interviewing (MI)
Outcome(s) measured	Abstinence rates, reduction in frequency of use (days of use in past month), reduction in quantity of use (joints per day in last month), and reduction in CUD symptoms, as measured by ASSIST, SDS, or DSM-IV-TR.
Procedure	A systematic review and meta-analysis were conducted to evaluate the effectiveness of MI in CUD. The search strategy included RCTs, or open-label studies identified in electronic databases published until September 2019.
Follow up	No
Statistics summary	Meta-analyses were conducted, with the end point for primary outcomes determined as month 3. MI was efficacious in achieving abstinence (OR = 3.84, 95% CI [2.40, 6.16], $p < .001$, $I^2 = 0\%$) and in reducing frequency and quantity of use. Compared to the control group, adults receiving MI consumed less joints per day (mean difference = -0.69 joints/day, 95% CI [-0.84, -0.53], $p < .001$; heterogeneity test Q = 39.09, $p < .001$) and consumed on less days per month (mean difference = -3.9 days/month, 95% CI [-7,47, -0.34], $p = 0.032$; heterogeneity test Q = 84.95, $p < .001$).
Conflict of interest	None declared
Risk of bias	High
Summary of findings	Findings indicated that MI was effective in reducing cannabis use and achieving abstinence among adults with CUD, especially for patients with no prior history of psychotic disorder. However, MI did not show efficacy in reducing CUD symptoms (e.g. tolerance).

Note. ASSIST: Alcohol, Smoking and Substance Involvement Screening Test; SDS = Severity of Dependence Scale.

Psychodynamic therapy

Title of paper	Psychodynamic therapies for the treatment of substance addictions: A PRISMA meta-analysis
Full citation	Zuccon, M., Topino, E., Musetti, A., & Gori, A. (2023). Psychodynamic therapies for the treatment of substance addictions: A PRISMA meta-analysis. *Journal of Personalized Medicine*, *13*(10), 1469. https://doi.org/10.3390/jpm13101469
Level of evidence	Level I
Design	Systematic review and meta-analysis (16 studies)
Delivery format	Individual/group, face-to-face
Participants	Total participants included 1,521 adults with a diagnosis of substance use disorder (SUD) and/or in active treatment for SUD.
Demographic characteristics	Mean age ranged from 26 to 50.5 across studies (overall age range 18 to 60), with the percentage of female participants ranging from 0% to 80% across studies.
Treating clinician type	Not specified
Intervention	Psychodynamic therapy (PDT)
Outcome(s) measured	Substance use (as measured by reported use or abstinence), other symptomatic conditions (as measured by pre-post evaluation of psychological problems), and participation (including frequency of participation and completion of treatment).
Procedure	A systematic review and meta-analysis were conducted to compare the effectiveness of psychodynamic therapies with other interventions in the treatment of SUD in adults. The search strategy included relevant studies identified in electronic databases searched from 1970 to 2022, as well as in grey literature research and reference lists. Interventions were categorised according to the main type of drug used, forming three groups including alcohol users, cocaine users, and opioid users.
Follow up	No
Statistics summary	A random-effects model was used, with bias-corrected standardized mean differences (Hedge's g) selected for effect size calculations. Regarding alcohol, no significant differences were found between treatments for all three outcomes, including substance use (g = -0.10, p = .59; I^2 = 50.52, p = .07), participation (g = -0.27, p = .16; I^2 = 0.00, p = .92) and other symptomatic conditions (g = -0.16, p = .28; I^2 = 0.00, p = .76). Regarding cocaine, only two outcomes could be evaluated, both showing insignificant differences between treatments (substance use: g = 0.28, p = .06; I^2 = 40.02, p = .20 and participation: g = 0.17, p = .68, I^2 = 78.17, p = .03). In regard to opiates, a small favourable effect was found for non-dynamic treatments on the measure of participation (g = 0.38, p = .01; I^2 = 0.00, p = .60), while no differences were found for substance use (g = -0.03, p = .89; I^2 = 66.17, p = .03), and other symptomatic conditions (g = -0.24 p = .12; I^2 = 0.00, p = .65).
Conflict of interest	None declared
Risk of bias	High
Summary of findings	Findings showed that psychodynamic interventions are empirically supported treatments but are not superior to other psychological interventions in the treatment of adults with substance use disorders.

Psychoeducation

Title of paper	**Psychoeducation program for substance use disorder: Effect on relapse rate, social functioning, perceived wellness, and coping**
Full citation	Kargin, M., & Hicdurmaz, D. (2020). Psychoeducation program for substance use disorder: Effect on relapse rate, social functioning, perceived wellness, and coping. *Journal of Psychosocial Nursing and Mental Health Services, 58*(8), 39-47. https://doi.org/10.3928/02793695-20200624-03
Level of evidence	Level III
Design	Quasi randomized controlled trial
Delivery format	Group, face-to-face
Participants	Participants were ninety-two outpatient individuals who received SUD treatment and had undergone detoxification. Participants were equally randomised to the intervention group (n = 46) and control group (n = 46).
Demographic characteristics	The intervention group had a mean age was 23.1 (SD = 3.8) and included 97% males. The control group had a mean age of 23.1 (SD = 4.5) and included 79% males. The study was conducted in Türkiye.
Treating clinician type	Trained health professional (psychiatric nurse)
Intervention	Psychoeducation (relapse prevention)
Study groups	Intervention groups: psychoeducation + TAU Control group: passive (TAU)
Outcome(s) measured	Substance relapse was assessed using urine samples. Additional outcomes measured included the PIF, SFS, PWS, and WOCS.
Procedure	Participants were randomly assigned to receive routine treatment (TAU) or routine treatment plus a relapse prevention psychoeducation program. The psychoeducation program consisted of ten weekly group sessions (5 groups comprising 10 to 12 participants) held for an average 120 minutes each. Participants in the control group receive routine treatment alone and comprised five groups of 10-12 participants.
Follow up	Yes; 3 months
Statistics summary	Chi-square tests and one-way analysis of variance were used to analyse the data. Odds ratios (OR) were used to evaluate effect sizes. The relapse rate in the psychoeducation group was significantly lower than in the control group (0% vs 31% respectively, p = .002), however the difference was not significant at follow-up (3.4% vs 20.7% respectively, p = .10). The psychoeducation group led to significantly improved scores at posttreatment and follow-up compared with controls on the SFS (p = .02) and PWS (p = .05), as well as on three WOCS subscales following treatment (p < .05)
Conflict of interest	Not specified
Risk of bias	Moderate
Summary of findings	Findings indicated that a relapse prevention psychoeducation program was effective in preventing relapse in adult SUD compared with TAU controls.

Note. PIF: Personal Information Form; PWS: Perceived Wellness Scale; SFS: Social Functioning Scale; WOCS: Ways of Coping Scale.

Title of paper	**Are we just talking in circles? Impact of psychoeducation on disease knowledge and relapse in severe alcohol use disorder**
Full citation	Maurage, P., Boudehent, C., Ferrié, L., Cabé, N., & Pitel, A. L. (2024). Are we just talking in circles? Impact of psychoeducation on disease knowledge and relapse in severe alcohol use disorder. *Alcohol: Clinical and Experimental Research*. https://doi.org/10.1111/acer.15375
Level of evidence	Level III
Design	Non-randomised quasi-experimental study
Delivery format	Group, face-to-face
Participants	The first experiment included 66 recently detoxified adult in patients with severe alcohol use disorder (sAUD) and 102 healthy controls (HC). The second experiment included 23 recently detoxified adult inpatients with sAUD and 17 HC.
Demographic characteristics	In Experiment 1, the mean age was 45.7 (*SD* = 10.1) years in the sAUD group and 45.5 (*SD* = 8.2) years in the HC group, with 20% females in the sAUD group and 42% in the HC group. In Experiment 2, the mean age was 52.5 (*SD* = 9.0) years in the sAUD group and 52.2 (*SD* = 7.9) years in the HC group, with 22% females in the sAUD group and 53% in the HC group.
Treating clinician type	Not specified
Intervention	Psychoeducation
Study groups	Intervention group: psychoeducation Control group: healthy controls (no intervention)
Outcome(s) measured	Baseline and improvements in knowledge regarding alcohol-related topics (as measured by self-reported questionnaires), episodic memory and executive functions (as measured by the FCSRT, CVLT, MCST, and WAIS-III), and relapse rates following discharge (as observed by clinicians or self-reported by patients during follow-up).
Procedure	The study involved two experimental procedures to assess the impact of psychoeducation on patients with sAUD. In both experiments, participants completed a 1-week psychoeducation program which comprised 12 activities each lasting around 1 hour. In Experiment 1, changes in participant knowledge regarding sAUD were measured, as well as their cognitive abilities and treatment outcomes. In Experiment 2, changes in participant knowledge regarding non-alcohol substances was measured, as well as their motivation to change and general verbal knowledge.
Follow up	No
Statistics summary	Pearson's correlations were used to assess the relationship between patient's alcohol-related knowledge and treatment outcomes. Between-group analysis was used to compare sAUD patients who achieved initial vs early remission (according to DSM-5). In Experiment 1, treatment outcome did not correlate with knowledge scores at treatment entry (r = 0.17, p = .31) nor discharge (r = -0.19, p = .29), and the learning score did not correlate with treatment outcome (r = 0.19, p = .28). Additionally, no significant between-group differences were found regarding questionnaire performance at treatment entry (t = 0.02, p = .98), discharge (t = 0.22, p = .83), nor on the learning score (t = 1.28, p = .21).
Conflict of interest	None declared
Risk of bias	Moderate
Summary of findings	Findings indicated that psychoeducation increased alcohol-related knowledge, but it did not increase the likelihood of abstinence or controlled low consumption after discharge in adult patient with severe alcohol use disorder.

Note. CVLT: California Verbal Learning Test; FCSRT: Free and Cued Selective Reminding Test; MCST: Modified Card Sorting Test; WAIS-III: Wechsler Adult Intelligence Scale.

Self-guided digital interventions

Title of paper	**Effectiveness of smartphone interventions as continuing care for substance use disorders: A systematic review**
Full citation	Ramadas, E., de Lima, M. P., Caetano, T., Lopes, J., & Dixe, M. D. A. C. R. (2023). Effectiveness of smartphone interventions as continuing care for substance use disorders: A systematic review. *Acta Psychologica, 235*, 103898. https://doi.org/10.1016/j.actpsy.2023.103898
Level of evidence	Level I
Design	Systematic review (5 studies)
Delivery format	Digital intervention, with no therapist guidance
Participants	A total of 928 adults (ranging from 38 to 349 across studies) diagnosed with alcohol use disorder or alcohol dependence who completed an inpatient or outpatient treatment for SUD.
Demographic characteristics	The mean age ranged from 38 (*SD* = 10) to 53 (*SD* = 9) across studies, and the proportion of male participants ranged from 61% to 83%. Two studies were conducted in the USA, one in Taiwan, one in Denmark, and another in Sweden.
Treating clinician type	Self-assisted
Intervention	Smartphone intervention
Outcome(s) measured	Alcohol consumption as measured by the TLFB, urine toxicology, and abstinence rates. Problematic substance uses as measured by the SIP-R, AUDIT, SADD, and ASI
Procedure	A systematic review was conducted to assess the effectiveness of app-based smartphone interventions as an alternative to traditional forms of continuing care for individuals who have completed treatment for SUD. The search strategy included experimental and quasi-experimental studies identified in electronic databases search from inception, and through hand searches of potentially relevant studies
Follow up	Yes; 6 months
Statistics summary	A narrative approach structured around data types and outcomes of interest was used to evaluate the findings. Two out of four studies reported significant differences in terms of alcohol use outcomes in favour of a smartphone intervention compared with aftercare as usual. Two studies comparing smartphone-based intervention to TAU found no significant differences in drinking or craving outcomes. One study found no significant differences between a smartphone application and an active control (CET).
Conflict of interest	None declared
Risk of bias	High
Summary of findings	Findings suggested that app-based smartphone interventions lead to better recovery outcomes and might be effective alternatives to traditional forms of continuing care for adults with SUDs. The results should be interpreted with caution given the small number of studies and high risk of bias present.

Note. ASI: Addiction Severity Index; AUDIT: Alcohol Use Disorder Identification Test; CET: Cue Exposure Therapy; SADD: Short Alcohol Dependence Data; SIP-R: Short Inventory of Problems – Revised.

Title of paper	**Randomized clinical trial of computerized and clinician-delivered CBT in comparison with standard outpatient treatment for substance use disorders: Primary within-treatment and follow-up outcomes**
Full citation	Kiluk, B. D., Nich, C., Buck, M. B., Devore, K. A., Frankforter, T. L., LaPaglia, D. M., Muvvala, S. B., & Carroll, K. M. (2018). Randomized clinical trial of computerized and clinician-delivered CBT in comparison with standard outpatient treatment for substance use disorders: Primary within-treatment and follow-up outcomes. *American Journal of Psychiatry, 175*(9), 853-863. https://doi.org/10.1176/appi.ajp.2018.17090978
Level of evidence	Level II
Design	Randomised controlled trial (RCT)
Delivery format	Digital intervention, with minimal therapist monitoring
Participants	Participants were 137 adults who met DSM-IV-TR criteria for substance abuse or dependence, randomly assigned to CBT4CBT (n = 38), CBT (n = 49), and TAU (n = 50).
Demographic characteristics	Mean age was 35.9 (SD = 12) years, and the sample was predominantly male (75%). Participants identified as African American (49%), Caucasian (34%), and 8% as Latino/Latina.
Treating clinician type	Trained mental health professional (doctoral level)
Intervention	Computer-based CBT (CBT4CBT)
Study groups	Intervention groups: computer-based CBT, clinician-delivered CBT Control group: Passive (TAU)
Outcome(s) measured	Primary outcome measure was change in self-reported frequency of substance use (as measured by frequency of any drug use, by week, from baseline through week 12). Secondary outcomes included urine toxicology screens, CBT knowledge, and treatment satisfaction.
Procedure	Participants were randomly assigned to receive computer-based CBT (CBT4CBT) with weekly monitoring, weekly clinician-delivered CBT, or TAU. Participants receiving computer-based CBT completed one module each week as well as brief (~10 minutes) in-person weekly clinical monitoring over 12 weeks. Participants in TAU received standard weekly group and/or individual therapy.
Follow up	Yes; 6 months
Statistics summary	Intent-to-treat random effects regression and chi-square models were used to analyse the data. Computer-based CBT showed significantly greater reductions in frequency of any drug or alcohol use compared with TAU (t [1, 996] = -2.26, p = .024), and these effects were sustained at 6-month follow-up (t [1, 1040] = -2.02, p = .04). Computer-based CBT also showed significantly higher proportion of drug-negative urine samples compared with TAU at 3-month follow-up (60.9% vs 33.3%; X^2 = 4.0, p = .04), however not at 6-month follow-up (p = .11).
Conflict of interest	Yes (financial)
Risk of bias	High
Summary of findings	Findings indicated that computer-based CBT with minimal clinical monitoring is an effective and durable intervention relative to standard treatment for adults with substance abuse or dependence.

Psychotic disorders

SUMMARY OF EVIDENCE

Psychological interventions for psychotic disorders are often delivered in conjunction with pharmacotherapy, typically antipsychotic medication,[71] and the treatment focus is often related to specific symptoms or outcomes (e.g. hallucinations and delusions, negative symptoms, relapse prevention, or general functioning).

In targeting overall symptoms of psychosis, Level I evidence[72] has been identified in support of cognitive behaviour therapy (group and individual formats), family-based interventions, psychoeducation (group and individual formats), and mindfulness-based psychoeducation (group format).

Cognitive behaviour therapy is also supported by Level I evidence for the specific outcomes of negative symptoms, delusions and hallucinations, and psychotic symptoms that have not responded to antipsychotic medication.

In relapse prevention, Level I evidence for the use of cognitive behaviour therapy, family-based interventions, and psychoeducation has also been identified. Level I evidence has also been identified for the use of cognitive behaviour therapy and mindfulness interventions for the outcome of improving social functioning.

Level II evidence has been identified in support of acceptance and commitment therapy (group format) and emerging self-guided digital interventions.

Level I evidence was inconclusive for acceptance and commitment therapy (individual format).

Guidelines provided by NICE (2014), RANZCP (2016), American Psychiatric Association (2021) and WHO (2023) support the use of cognitive behaviour therapy, psychoeducation and family-based interventions as adjunctive psychosocial treatments to pharmacotherapy. A recent NICE (2024) early value assessment has also supported the use of a number of digital interventions. In addition to this, the RANZCP (2016) describes acceptance and commitment therapy and mindfulness-based approaches as emerging therapies in the area of psychosis and also recommend solution-focused interventions as part of a recovery-oriented practice approach.

[71] Galletly, C., Castle, D., Dark, F., Humberstone, V., Jablensky, A., Killackey, E., Kulkarni, J., McGorry, P., Nielssen, O., & Tran, N. (2016). Royal Australian and New Zealand college of psychiatrists clinical practice guidelines for the management of schizophrenia and related disorders. *Australian & New Zealand Journal of Psychiatry, 50*(5), 410-472. https://doi.org/10.1177/0004867416641195

[72] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of psychotic disorders in adults.

Acceptance and commitment therapy

Title of paper	**The safety and efficacy of acceptance and commitment therapy against psychotic symptomatology: A systematic review and meta-analysis**
Full citation	Brown, E., Shrestha, M., & Gray, R. (2021). The safety and efficacy of acceptance and commitment therapy against psychotic symptomatology: A systematic review and meta-analysis. *Brazilian Journal of Psychiatry, 43*(3), 324-336. https://doi.org/10.1590/1516-4446-2020-0948
Level of evidence	Level I
Design	Systematic review and meta-analysis (8 studies, with 6 studies providing outcomes on psychotic symptoms)
Delivery format	Individual (7 studies), Group (1 study)
Participants	Total sample of *n* = 274 participants were included in the meta-analysis (k=6). A diagnosis of schizophrenia or other psychotic disorder was required for inclusion
Demographic characteristics	All participants were over the age of 18 years. No mean age across the sample was provided. Studies were conducted in the USA, Australia, Sweden, Canada, and the UK.
Treating clinician type	Trained mental health professional (psychologist)
Intervention	ACT
Outcome(s) measured	Severity of psychotic symptoms as measured by the BPRS and PANSS.
Procedure	A systematic review and meta-analysis was conducted to investigate the efficacy of ACT in the treatment of schizophrenia and other related psychotic disorders. Subgroup analyses were completed for different control types. The database search covered all publication dates until February 2020.
Follow up	No
Statistics summary	The standardised mean difference was calculated to determine the effect of ACT against comparators. The pooled effect size across the 6 trials that reported psychotic symptom outcomes was small and non-significant (Hedge's *g* = -0.21, 95% CI [-0.60, 0.18]) with moderate heterogeneity (I^2 > 50%).
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	These findings report inadequate evidence for the efficacy of ACT in the treatment of psychotic symptomatology. The authors note that this is inconsistent with a previous meta-analysis conducted and suggest this inconsistency may have been due to errors in data extraction.

Note. BPRS: Brief Psychiatric Rating Scale; PANSS: Positive and Negative Syndrome Scale.

Title of paper	**The effect of online group based acceptance and commitment therapy on psychotic symptoms and functioning levels of individuals with early psychosis**
Full citation	Ozer, D., & Dissiz, M. (2024). The effect of online group based acceptance and commitment therapy on psychotic symptoms and functioning levels of individuals with early psychosis. *Schizophrenia Research*, *267*, 55-64. https://doi.org/10.1016/j.schres.2024.03.018
Level of evidence	Level II
Design	Randomised controlled trial (RCT)
Delivery format	Group, online
Participants	Total sample size of *n* = 53 participants, with *n* = 26 allocated to the intervention group and *n* = 27 allocated to the control group. All participants had received a diagnosis of schizophrenia or other psychotic disorders according to DSM-5 within the last three years.
Demographic characteristics	The mean age of participants was 23.26 years (*SD* = 3.88) and 23.55 years (*SD* = 3.82) in the intervention and control groups, respectively. Percentage of females in the study were 23.1% in the intervention group and 29.6% in the control group. The study was conducted in Turkey.
Treating clinician type	Trained mental health professional
Intervention	Group ACT
Study groups	Intervention group: Group ACT Control group: Inactive (no intervention)
Outcome(s) measured	Severity of psychotic symptomatology as measured by the PANSS and SFAS.
Procedure	The intervention group was divided into three groups (one group of 10 participants and two groups of 8 participants). The group ACT program was delivered online for 8 sessions twice a week, lasting 60-90 minutes in total. Themes covered by the program included contextual self and cognitive dissociation, values and values-based behaviour, being in the present moment, creative despair, and closing. No intervention was provided to the control group, however they received the program once all data had been collected.
Follow up	Yes; 3 months
Statistics summary	The Mann-Whitney *U* test was performed to provide comparisons between groups. Total scores on the PANSS test were significantly lower in the intervention group when compared to the control group at both post-test (*U* = 131.500, *p* = 0.000) and follow-up (*U* = 156.500, *p* = 0.001). Analyses of PANSS sub-dimensions indicated no significant difference between groups on the negative symptoms dimension. Total scores on the SFAS test were significantly higher in the intervention group compared to the control group at both post-test (*U* = 94.500, *p* = 0.000) and follow-up (*U* = 89.000, *p* = 0.000).
Conflict of interest	None declared
Risk of bias	Some concerns
Summary of findings	The current findings support the efficacy of online group ACT in reducing psychotic symptoms and increasing functionality levels in individuals with early psychosis.

Note. PANSS: Positive and Negative Syndrome Scale; SFAS: Social Functioning Assessment Scale.

Cognitive behaviour therapy

Title of paper	**Psychosocial and psychological interventions for relapse prevention in schizophrenia: A systematic review and network meta-analysis**
Full citation	Bighelli, I., Rodolico, A., Garcia-Mieres, H., Pitschel-Walz, G., Hansen, W. P., Schneider-Thoma, J., Siafis, S., Wu, H., Wang, D., Salanti, G., Furukawa, T. A., Barbui, C., & Leucht, S. (2021). Psychosocial and psychological interventions for relapse prevention in schizophrenia: A systematic review and network meta-analysis. *The Lancet Psychiatry*, *8*(11), 969-980. https://doi.org/10.1016/S2215-0366%2821%2900243-1
Level of evidence	Level I
Design	Systematic review and network meta-analysis (72 studies, with 9 studies focused on CBT)
Delivery format	Not specified
Participants	Total sample of *n* = 10,364 participants with schizophrenia or related disorders.
Demographic characteristics	Of the total sample that provided information on sex, 40.8% were female. The mean age of participants across the pooled sample was not provided and the authors were not able to obtain data on ethnicity.
Treating clinician type	Not specified
Intervention	CBT
Outcome(s) measured	The primary outcome was relapse as defined by operationalized criteria, psychiatric hospital admission, and clinical judgement. Secondary outcomes included psychotic symptomatology, quality of life, adherence and overall functioning (measures not specified).
Procedure	A systematic review and network meta-analysis was conducted to investigate the efficacy of CBT and other psychosocial/psychological interventions in prevention of relapse in schizophrenia. The database search covered all publication dates until 14 April 2020.
Follow up	Yes (6 months; 12 months; longer than 12 months)
Statistics summary	Random-effects pairwise meta-analyses and a network meta-analysis in a frequentist framework were conducted. The network meta-analysis of the primary outcome (relapse) at 12 months was conducted with 63 studies (*n* = 9010). Relapse rates were lower for those who received CBT when compared to those who received treatment as usual (OR = 0.45, 95% CI [0.27, 0.75]), with a 20% relapse rate in the CBT group compared to 35% in the treatment group. No difference in the effect of CBT compared to treatment as usual was found at the 6-month or longer than 12-month timepoints.
Conflict of interest	Yes (Professional; financial)
Risk of bias	Low
Summary of findings	These findings support the efficacy of CBT as a long-term treatment option for reducing the risk of relapse in schizophrenia.

Title of paper	**Psychological interventions to reduce positive symptoms in schizophrenia: Systematic review and network meta-analysis**
Full citation	Bighelli, I., Salanti, G., Huhn, M., Schneider-Thoma, J., Krause, M., Reitmeir, C., Wallis, S., Schwermann, F., Pitschel-Walz, G., Barbui, C., Furukawa, T. A., & Leucht, S. (2018). Psychological interventions to reduce positive symptoms in schizophrenia: Systematic review and network meta-analysis. *World Psychiatry*, *17*(3), 316-329. https://dx.doi.org/10.1002/wps.20577
Level of evidence	Level I
Design	Systematic review and network meta-analysis (53 studies, with 40 studies focused on CBT)
Delivery format	Not specified
Participants	Total sample of *n* = 4,068 participants with schizophrenia or related disorders presenting with positive symptoms.
Demographic characteristics	The mean age of the total sample was 37.4 years. Of the participants who reported on gender classification, 59.9% were men. Information related to ethnicity was not provided.
Treating clinician type	Not specified
Intervention	CBT
Outcome(s) measured	The primary outcome was change in positive symptoms as measured by the positive subscales of the PANSS or BPRS, or other published scales.
Procedure	A systematic review and network meta-analysis was conducted to investigate the efficacy of CBT and other psychosocial interventions for people with current positive symptoms of schizophrenia. The database search covered all publication dates until 10 January 2018.
Follow up	No
Statistics summary	Random-effects pairwise meta-analyses and a network meta-analysis in a frequentist framework were conducted. The network meta-analysis showed a significant reduction of positive symptoms in favour of CBT when compared to inactive control (*SMD* = -0.29, 95% CI [-0.55, -0.03]), treatment as usual (*SMD* = -0.30, 95% CI [-0.45, -0.14]), and supportive therapy (*SMD* = -0.47, 95% CI [0.58, 0.95]).
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	These findings support the efficacy of CBT in the treatment of positive symptoms in people with schizophrenia.

Note. BPRS: Brief Psychiatric Rating Scale; PANSS: Positive and Negative Syndrome Scale.

Title of paper	**Effects of psychological treatments on functioning in people with schizophrenia: A systematic review and meta-analysis of randomized controlled trials**
Full citation	Bighelli, I., Wallis, S., Reitmeir, C., Schwermann, F., Salahuddin, N. H., & Leucht, S. (2023). Effects of psychological treatments on functioning in people with schizophrenia: A systematic review and meta-analysis of randomized controlled trials. *European Archives of Psychiatry and Clinical Neuroscience*, *273*(4), 779-810. https://doi.org/10.1007/s00406-022-01526-1
Level of evidence	Level I
Design	Systematic review and meta-analysis (58 studies, with 30 studies focused on CBT)
Delivery format	Individual and group, face to face
Participants	Total sample of *n* = 5,048 participants with *n* = 2,657 in the studies focused on CBT. Inclusion criteria specified the need for a diagnosis of schizophrenia, schizophreniform, or schizoaffective disorder.
Demographic characteristics	Demographic information related to age, gender or ethnicity were not provided. All included participants were adults.
Treating clinician type	Not specified
Intervention	CBT
Outcome(s) measured	The primary outcome was level of functioning as measured by a validated rating scale such as the GAF or the SFS.
Procedure	A systematic review and meta-analysis was conducted to investigate the efficacy of psychological interventions in improving functioning in people with schizophrenia related disorders. The database search covered all publication dates until January 2020, and used the Study Register of the Cochrane Schizophrenia Group from January 2020 to September 2021.
Follow up	No
Statistics summary	Random-effects pairwise meta-analyses were conducted. Across all studies related to CBT (*k* = 30), CBT was associated with a greater improvement in functioning scores (*SMD* = -0.26, 95% CI [-0.39, -0.12], I^2 = 62%). With regard to specific comparator types, a significant effect in favour of CBT was found in relation to TAU (*SMD* = -0.36, 95% CI [-0.55, -0.16]), supportive therapy (*SMD* = 0.26, 95% CI [0.26, 95% CI [-0.50, -0.01]), and psychoeducation (*SMD* = -0.95, 95% CI [-1.73, -0.16]). The confidence intervals for comparisons with inactive control, cognitive remediation, waitlist, family intervention and psychodynamic therapy include the possibility of no difference.
Conflict of interest	Yes (Professional)
Risk of bias	Unclear
Summary of findings	These findings suggest the efficacy of CBT in improving functioning in patients with schizophrenia, however the authors note that risk of bias, heterogeneity and possible publication bias may reduce confidence in these estimates.

Note. GAF: Global Assessment of Functioning; SFS: Social Functioning Scale.

Title of paper	**Psychosocial and behavioural interventions for the negative symptoms of schizophrenia: A systematic review of efficacy meta-analyses**
Full citation	Cella, M., Roberts, S., Pillny, M., Riehle, M., O'Donoghue, B., Lyne, J., Tomlin, P., Valmaggia, L., & Preti, A. (2023). Psychosocial and behavioural interventions for the negative symptoms of schizophrenia: A systematic review of efficacy meta-analyses. *The British Journal of Psychiatry*, *223*(1), 321-331. https://doi.org/10.1192/bjp.2023.21
Level of evidence	Level I
Design	Systematic review of meta-analyses (31 reviews, with 10 reviews focused on CBT)
Delivery format	Not specified
Participants	Total sample of *n* = 33,141 participants with a diagnosis of schizophrenia or schizoaffective disorder.
Demographic characteristics	The age of participants ranged from 18 to 78 years (no mean provided). Demographic characteristics related to gender or ethnicity were not provided.
Treating clinician type	Not specified
Intervention	CBT
Outcome(s) measured	Severity of negative symptoms as measured predominately by the PANSS, SANS, and BPRS.
Procedure	A systematic review of efficacy meta-analyses was conducted to investigate the efficacy of psychosocial and behavioural interventions in the treatment of negative symptoms of schizophrenia. The database search covered publication dates from January 1980 to June 2022.
Follow up	Yes
Statistics summary	No quantitative data analysis was conducted, and findings of the systematic review were summarised. The review notes that overall, the 10 reviews focused on the efficacy of CBT founds small-to-moderate effect sizes in favour of CBT in reducing negative symptoms when compared with treatment as usual. No difference between CBT and other psychological treatments was noted, with the exception of one review which found a small effect favouring CBT over other psychological treatments at follow-up.
Conflict of interest	None declared
Risk of bias	Unclear
Summary of findings	These findings provide support for the efficacy of CBT in the treatment of negative symptoms when compared to treatment as usual. The authors highlight the need for further research in this area.

Note. BPRS: Brief Psychiatric Rating Scale; PANSS: Positive and Negative Syndrome Scale; SANS: Scale for the Assessment of Negative Symptoms.

Title of paper	Cognitive behavioural therapy (group) for schizophrenia
Full citation	Guaiana, G., Abbatecola, M., Aali, G., Tarantino, F., Ebuenyi, I. D., Lucarini, V., Li, W., Zhang, C., & Pinto, A. (2022). Cognitive behavioural therapy (group) for schizophrenia. *Cochrane Database of Systematic Reviews, 2022*(7), CD009608. https://doi.org/10.1002/14651858.CD009608.pub2
Level of evidence	Level I
Design	Systematic review and meta-analysis (24 studies)
Delivery format	Group (face to face / online not specified)
Participants	Total sample of *n* = 1900 participants with schizophrenia or related disorders.
Demographic characteristics	The mean age of participants across the pooled sample was not provided. Studies were conducted in the USA, China, the UK, Turkey and Germany.
Treating clinician type	Not specified
Intervention	Group CBT for psychosis (CBTp)
Outcome(s) measured	Severity of psychotic symptoms as measured by the AHRS, BPRS, PANSS, PSYRATS, SANS, SAPS and SCL-90-R; and global functioning as measured by the GAF, PSP, and SDSS.
Procedure	A systematic review and meta-analysis was conducted to investigate the efficacy of group CBTp in the treatment of schizophrenia when compared to standard care of other psychosocial interventions. The database search covered all publication dates until 10 February 2021.
Follow up	No
Statistics summary	A random-effects model was used for analyses. Group CBTp may result in a greater reduction in total PANSS scores when compared to active controls (*k* = 12, *n* = 1036; MD = -3.73, 95% CI [-4.63, -2.83], I^2 = 5%; low quality evidence), however there was little to no effect on PANSS positive or PANSS negative symptom scores when analysed separately. Group CBTp showed some advantage over active controls on global functioning as indicated by improvement of scores on the GAF (*k* = 5, *n* = 254; MD = -3.61, 95% CI [-6.37, -0.84], I^2 = 0%; moderate-certainty evidence).
Conflict of interest	Yes (Professional; relevant authors excluded from editorial process of review where appropriate)
Risk of bias	Low
Summary of findings	These findings suggest that group CBTp may be more effective than standard care or other psychosocial interventions in improving scores related to overall mental state and global functioning, however authors emphasise that due to low sample size and other factors, no firm conclusions can be made regarding the efficacy of group CBTp as a treatment for schizophrenia.

Note. AHRS: Auditory Hallucinations Rating Scale; BPRS: Brief Psychiatric Rating Scale; GAF: Global Assessment of Functioning; PANSS: Positive and Negative Syndrome Scale; PSP: Personal and Social Performance Scale; PSYRATS: Psychotic Symptom Rating Scale; SANS: Scale for the Assessment of Negative Symptoms; SAPS: Scale for the Assessment of Positive Symptoms; SCL-90-R: Symptom Checklist-90-Revised' SDSS: Social Disability Screening Schedule.

Title of paper	**Cognitive behavioural therapy added to standard care for first-episode and recent-onset psychosis**
Full citation	Mayer, S. F., Corcoran, C., Kennedy, L., Leucht, S., & Bighelli, I. (2024). Cognitive behavioural therapy added to standard care for first-episode and recent-onset psychosis. *Cochrane Database of Systematic Reviews, 2024*(3), CD015331. https://doi.org/10.1002/14651858.CD015331.pub2
Level of evidence	Level I
Design	Systematic review and meta-analysis (28 studies)
Delivery format	Individual and group, face to face and online
Participants	Total sample of *n* = 2498 participants with first episode or recent-onset psychosis.
Demographic characteristics	The mean age of participants across the pooled sample was not provided. Studies were conducted in the UK, Australia, Spain, Denmark, China, Ireland, Netherlands, Portugal, Norway, the USA.
Treating clinician type	Not specified
Intervention	CBT
Outcome(s) measured	Severity of psychotic symptoms as measured by the BPRS, PANSS (positive and negative), SANS and SAPS.
Procedure	A systematic review and meta-analysis was conducted to investigate the efficacy of CBT in the treatment of first episode or recent-onset psychosis. Subgroup analyses were completed for standard CBT, CBT delivered in conjunction with third-wave therapies, and specialised CBT-based programs. The database search covered all publication dates until 6 March 2022.
Follow up	Yes (up to 12 months)
Statistics summary	For continuous outcomes, the mean difference between groups was estimated and used to calculate effect size measures (standardised mean difference) when trials used outcome scales of considerable similarity. In the subgroup focusing only on standard CBT (k = 11, n = 775), CBT was associated with greater reduction in symptoms compared to control (*SMD* = -0.19, 95% CI [-0.35, -0.04], I^2 = 9%).
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	The authors conclude that CBT may be a beneficial addition to standard care for people with first-episode or early onset psychosis.

Note. BPRS: Brief Psychiatric Rating Scale; PANSS: Positive and Negative Syndrome Scale; SANS: Scale for the Assessment of Negative Symptoms; SAPS: Scale for the Assessment of Positive Symptoms.

Title of paper	**Psychological and psychosocial interventions for treatment-resistant schizophrenia: A systematic review and network meta-analysis**
Full citation	Salahuddin, N. H., Schütz, A., Pitschel-Walz, G., Mayer, S. F., Chaimani, A., Siafis, S., Priller, J., Leucht, S., & Bighelli, I. (2024). Psychological and psychosocial interventions for treatment-resistant schizophrenia: A systematic review and network meta-analysis. *The Lancet Psychiatry*, *11*(7), 545-553. https://doi.org/10.1016/S2215-0366(24)00136-6
Level of evidence	Level I
Design	Systematic review and network meta-analysis (52 studies, with 35 focused on CBTp)
Delivery format	Not specified
Participants	Total sample of *n* = 5034 participants with *n* = 1835 participants in the studies focused on CBTp. All participants had a diagnosis of schizophrenia or related disorders and were treatment resistant as per the inclusion criteria of individual studies.
Demographic characteristics	The mean age of participants across the pooled sample was 38.05 years (range 23.10 – 48.5) and 66.8% of participants with gender indicated were male. Ethnicity data was not commonly reported across included studies.
Treating clinician type	Not specified
Intervention	CBT for psychosis (CBTp)
Outcome(s) measured	Severity of overall psychotic symptoms as measured by the BPRS, PANSS, and the Schizophrenia Change Scale.
Procedure	A systematic review and network meta-analysis was conducted to investigate the efficacy of psychological and psychosocial interventions for patients with treatment-resistant schizophrenia. The database search covered all publication dates until 31 July 2023 (dates vary between databas sources).
Follow up	No
Statistics summary	Random-effects pairwise meta-analyses and a network meta-analysis in a frequentist framework was used. CBTp was found to be more efficacious than standard care in reducing overall symptoms (*SMD* = -0.22, 95% CI [-0.35, -0.09]). With regard to symptom subtypes, a large reduction in positive symptoms was found (*SMD* = -0.31, 95% CI [-0.43, -0.19]) and there was a less clear effect on negative symptoms (*SMD* = -0.14, 95% CI [-0.29, 0.01]).
Conflict of interest	Yes (Professional)
Risk of bias	Low
Summary of findings	These findings support the use of CBTp to reduct overall symptoms in people with treatment-resistant schizophrenia. A stronger effect was noted for the reduction in positive symptoms than for negative symptoms.

Note. BPRS: Brief Psychiatric Rating Scale; PANSS: Positive and Negative Syndrome Scale.

Family-based interventions

Title of paper	**A network meta-analysis of psychological interventions for schizophrenia and psychosis: Impact on symptoms**
Full citation	Mc Glanaghy, E., Turner, D., Davis, G. A., Sharpe, H., Dougall, N., Morris, P., Prentice, W., & Hutton, P. (2021). A network meta-analysis of psychological interventions for schizophrenia and psychosis: Impact on symptoms. *Schizophrenia Research*, *228*, 447-459. https://doi.org/10.1016/j.schres.2020.12.036
Level of evidence	Level I
Design	Systematic review and network meta-analysis (90 studies, with 4 studies focused on family therapy)
Delivery format	Individual (3 studies), group (6 studies)
Participants	Total sample of *n* = 8,440 participants with schizophrenia, psychosis or related disorders. There was *n* = 312 participants in the family therapy articles.
Demographic characteristics	The mean age of the total sample was not provided, however as per inclusion criteria all participants were adults. Approximately 39% of the total sample were female and the studies included were conducted in a range of countries including the UK, USA, and China.
Treating clinician type	Not specified
Intervention	Family therapy (FT)
Outcome(s) measured	The primary outcome was psychotic symptom severity as measured by the BRPS and PANSS.
Procedure	A systematic review and network meta-analysis was conducted to investigate which psychological intervention(s) were most likely to reduce symptoms of schizophrenia/psychosis. The database search covered all publication dates until the end of 2016.
Follow up	No
Statistics summary	A random effects model using a frequentist approach was used in the analysis. Family therapy showed a significant reduction in scores compared to both TAU1 (*SMD* = -0.48, 95% CI [-0.86, -0.10]) and TAU2 (*SMD* = -0.35, 95% CI [-0.66, -0.03]). Compared to TAU2, family therapy had a SUCRA score of 56.2 and 0 probability of being best in rank order.
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	These findings provide preliminary evidence that family therapy is more effective than treatment as usual in reducing symptoms of schizophrenia and psychosis, however the authors note the need for more RCTs and meta-analysis to obtain more conclusive evidence.

Note. BPRS: Brief Psychiatric Rating Scale; PANSS: Positive and Negative Syndrome Scale.

Title of paper	**Family interventions for relapse prevention in schizophrenia: A systematic review and network meta-analysis**
Full citation	Rodolico, A., Bighelli, I., Avanzato, C., Concerto, C., Cutrufelli, P., Mineo, L., Schneider-Thoma, J., Siafis, S., Signorelli, M. S., Wu, H., Wang, D., Furukawa, T. A., Pitschel-Walz, G., Aguglia, E., & Leucht, S. (2022). Family interventions for relapse prevention in schizophrenia: A systematic review and network meta-analysis. *The Lancet Psychiatry*, *9*(3), 211-221. https://doi.org/10.1016/S2215-0366(21)00437-5
Level of evidence	Level I
Design	Systematic review and network meta-analysis (90 studies focused on 11 different family therapy models)
Delivery format	Not specified
Participants	Total sample of *n* = 10,340 participants with schizophrenia spectrum disorders.
Demographic characteristics	The median age of the total sample was 31 years (range 14-65) and 34.6% were female. Ethnicity data was not available.
Treating clinician type	Not specified
Intervention	Systemic-oriented family interventions; Psychoeducational approaches to family with/without the patient; Integrated interventions (separate interventions for patients and the whole family)
Outcome(s) measured	The primary outcome was relapse at 12 months, as defined by operationalised criteria, psychiatric hospital admissions, or clinical judgement (in that order).
Procedure	A systematic review and network meta-analysis was conducted to investigate and compare the efficacy of different family interventions in preventing relapse in schizophrenia. The search covered dates from database inception to 20 January 2020 and 15 July 2021 (PubMed only).
Follow up	No
Statistics summary	A random-effects pairwise meta-analysis and network meta-analysis in a frequentist framework was used, and odds ratios (ORs) were calculated for binary outcomes. All family intervention types except for crisis-oriented interventions and family psychoeducation (2 sessions or less) significantly reduced relapse rate at 12 months when compared to TAU. For the remaining interventions, ORs compared to TAU ranged from 0.18 (95% CI [0.12, 0.27) for family psychoeducation alone, to 0.63 (95% CI [0.43, 0.94]) for community-based interventions involving family members.
Conflict of interest	Yes (professional; financial)
Risk of bias	Low
Summary of findings	These findings support the use of almost all family intervention models in preventing relapse in schizophrenia. The authors make special mention of family psychoeducation alone (i.e. without behavioural or skills training) as a cost-effective intervention that showed higher superiority than more complex family intervention models.

Psychoeducation

Title of paper	**Psychosocial and psychological interventions for relapse prevention in schizophrenia: A systematic review and network meta-analysis**
Full citation	Bighelli, I., Rodolico, A., Garcia-Mieres, H., Pitschel-Walz, G., Hansen, W. P., Schneider-Thoma, J., Siafis, S., Wu, H., Wang, D., Salanti, G., Furukawa, T. A., Barbui, C., & Leucht, S. (2021). Psychosocial and psychological interventions for relapse prevention in schizophrenia: A systematic review and network meta-analysis. *The Lancet Psychiatry*, *8*(11), 969-980. https://doi.org/10.1016/S2215-0366%2821%2900243-1
Level of evidence	Level I
Design	Systematic review and network meta-analysis (72 studies, with 9 studies focused on patient psychoeducation)
Delivery format	Not specified
Participants	Total sample of *n* = 10,364 participants with schizophrenia or related disorders.
Demographic characteristics	Of the total sample that provided information on sex, 40.8% were female. The mean age of participants across the pooled sample was not provided and the authors were not able to obtain data on ethnicity.
Treating clinician type	Not specified
Intervention	Psychoeducation (for patients)
Outcome(s) measured	The primary outcome was relapse as defined by operationalized criteria, psychiatric hospital admission, and clinical judgement. Secondary outcomes included psychotic symptomatology, quality of life, adherence and overall functioning (measures not specified).
Procedure	A systematic review and network meta-analysis was conducted to investigate the efficacy of patient psychoeducation and other psychosocial/psychological interventions in prevention of relapse in schizophrenia. The database search covered all publication dates until 14 April 2020.
Follow up	Yes (6 months; 12 months; longer than 12 months)
Statistics summary	Random-effects pairwise meta-analyses and a network meta-analysis in a frequentist framework were conducted. The network meta-analysis of the primary outcome (relapse) at 12 months was conducted with 63 studies (*n* = 9010). Relapse rates were lower for those who received psychoeducation when compared to those who received treatment as usual (*OR* = 0.63, 95% CI [0.42, 0.94]), with a 25% relapse rate in the psychoeducation group compared to 35% in the treatment group.
Conflict of interest	Yes (Professional; financial)
Risk of bias	Low
Summary of findings	These findings support the efficacy of patient psychoeducation as a long-term treatment option for reducing the risk of relapse in schizophrenia.

Title of paper	Group therapy for schizophrenia: A meta-analysis
Full citation	Burlingame, G. M., Svien, H., Hoppe, L., Hunt, I., & Rosendahl, J. (2020). Group therapy for schizophrenia: A meta-analysis. *Psychotherapy*, *57*(2), 219-236. https://doi.org/10.1037/pst0000293
Level of evidence	Level I
Design	Systematic review and meta-analysis (52 studies, with 9 studies focused on group psychoeducation)
Delivery format	Group, face to face
Participants	Total sample of *n* = 4,156 participants diagnosed with a schizophrenia spectrum disorder using standardised diagnostic criteria (e.g. DSM or ICD).
Demographic characteristics	The mean age of the total sample was 34 years, and 63.3% of participants were male. Studies in the psychoeducation subgroup were conducted in Finland, Switzerland, China, Hong Kong, Taiwan, and the USA.
Treating clinician type	Trained mental health professionals (therapists)
Intervention	Group psychoeducation
Outcome(s) measured	Severity of psychotic symptoms as measured by the BRPS and PANSS.
Procedure	A systematic review and meta-analysis was conducted to investigate the efficacy of psychological interventions provided in a group format for the treatment of schizophrenia. Subgroup analyses were conducted for different types of interventions including psychoeducation. The database search covered publication dates from 1990 to 2018.
Follow up	Yes; up to 2 years
Statistics summary	A random-effects model was used to compute Hedge's *g* effect sizes. Group psychoeducation had a significant effect on outcome measures compared to TAU and active control was statistically significant (Hedge's *g* = 0.30, 95% CI [0.01, 0.59], *p* = 0.040). Heterogeneity quantifications specific to this subgroup were not provided.
Conflict of interest	None declared
Risk of bias	High
Summary of findings	These findings support the use of group psychoeducation for patients in the treatment of schizophrenia spectrum disorders.

Note. BPRS: Brief Psychiatric Rating Scale; PANSS: Positive and Negative Syndrome Scale.

Title of paper	**A network meta-analysis of psychological interventions for schizophrenia and psychosis: Impact on symptoms**
Full citation	McGlanaghy, E., Turner, D., Davis, G. A., Sharpe, H., Dougall, N., Morris, P., Prentice, W., & Hutton, P. (2021). A network meta-analysis of psychological interventions for schizophrenia and psychosis: Impact on symptoms. *Schizophrenia Research*, *228*, 447-459. https://doi.org/10.1016/j.schres.2020.12.036
Level of evidence	Level I
Design	Systematic review and network meta-analysis (90 studies, with 13 studies focused on psychoeducation and 3 studies focused on mindfulness-based psychoeducation)
Delivery format	Psychoeducation: Individual (6 studies), group (8 studies) Mindfulness-based psychoeducation: Group (3 studies)
Participants	Total sample of *n* = 8,440 participants with schizophrenia, psychosis or related disorders. There was *n* = 482 participants in the psychoeducation articles and *n* = 130 in the mindfulness-based psychoeducation articles.
Demographic characteristics	The mean age of the total sample was not provided, however as per inclusion criteria all participants were adults. Approximately 39% of the total sample were female and the studies included were conducted in a range of countries including the UK, USA, and China. All studies on mindfulness-based psychoeducation were conducted in China.
Treating clinician type	Not specified
Intervention	Psychoeducation and mindfulness-based psychoeducation
Outcome(s) measured	The primary outcome was psychotic symptom severity as measured by the BRPS and PANSS.
Procedure	A systematic review and network meta-analysis was conducted to investigate which psychological intervention(s) were most likely to reduce symptoms of schizophrenia/psychosis. The database search covered all publication dates until the end of 2016.
Follow up	No
Statistics summary	A random effects model using a frequentist approach was used in the analysis. Psychoeducation showed a significant reduction in scores compared to both TAU1 (*SMD* = -0.70, 95% CI [-0.99, -0.41]) and TAU2 (*SMD* = -0.56, 95% CI [-0.79, -0.34]). Compared to TAU2, psychoeducation had a SUCRA score of 56.6 and 0.1 probability of being best in rank order. Mindfulness-based psychoeducation showed a significant reduction in scores compared to both TAU1 (*SMD* = -0.98, 95% CI [-1.40, -0.57]) and TAU2 (*SMD* = -0.85, 95% CI [-1.21, -0.49]). Compared to TAU2, mindfulness-based psychoeducation had a SUCRA score of 91.8 and 26.4 probability of being best in rank order.
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	These findings provide preliminary evidence that psychoeducation (general and mindfulness-based) is more effective than treatment as usual in reducing symptoms of schizophrenia and psychosis, however the authors note the need for further RCTs and meta-analyses to obtain more conclusive evidence. The authors also note that the findings related to mindfulness-based psychoeducation are based on studies that have only been conducted in China, and they recommend further research in other cultural contexts to ascertain the generalisability of these findings.

Note. BPRS: Brief Psychiatric Rating Scale; PANSS: Positive and Negative Syndrome Scale.

Self-guided digital interventions

Title of paper	**Efficacy of a smartphone app in enhancing medication adherence and accuracy in individuals with schizophrenia during the COVID-19 pandemic: Randomized controlled trial**
Full citation	Chen, H. H., Hsu, H. T., Lin, P. C., Chen, C. Y., Hsieh, H. F., & Ko, C. H. (2023). Efficacy of a smartphone app in enhancing medication adherence and accuracy in individuals with schizophrenia during the COVID-19 pandemic: Randomized controlled trial. *JMIR Mental Health*, *10*(1), e50806. https://doi.org/10.2196/50806
Level of evidence	Level II
Design	Randomised controlled trial (RCT)
Delivery format	Digital, minimal guidance
Participants	Total sample size of *n* = 105 participants, with *n* = 35 allocated to the intervention group and *n* = 59 allocated to the control group (*n* = 11 from the intervention group did not complete the study). All participants had received with schizophrenia by a psychiatrist using the DSM-5.
Demographic characteristics	The mean age of participants was 41.29 years (*SD* = 10.5) and 50.45 years (*SD* = 11.4) in the intervention and control groups, respectively. Percentage of females in the study were 42.9% in the intervention group and 52.5% in the control group. The study was conducted in Taiwan.
Treating clinician type	Not applicable
Intervention	MedAdhere smartphone app
Study groups	Intervention group: MedAdhere App plus TAU Control group: TAU
Outcome(s) measured	Primary outcomes included the medication adherence rate and psychotic symptomatology as measured by the PANSS.
Procedure	The intervention group used the MedAdhere app on their smartphone for 12 weeks. Participants could ask researchers questions and the team could contact the participant if abnormalities were detected. The app used AI and camera features to verify medication ingestion and provided digital gold coins as rewards. The app was also programmed to trigger an alarm for the participant if the medication was taken at the wrong time or dosage. Both groups attended a day centre where daily activities and daytime medication were supported by staff. No intervention was supported for nighttime medication.
Follow up	No
Statistics summary	The medication adherence rate was calculated as a percentage. The intervention group adherence was 90% at 8-weeks, and 94.72% at 12-weeks, compared to 63.89% at 8-weeks and 64.43% at 12-weeks for the control group. The generalised estimating equation was used to compare change in outcome measures between the two groups. At 8-weeks, the intervention group scores on the PANSS were significantly lower than control on positive symptoms (β = -1.95, *SE* = 0.23, *p* = .02), negative symptoms (β = -1.99, *SE* = 0.36, *p* = .007), and general psychopathology (β = -0.3, *SE* = 0.15, *p* < .001). At 12-weeks, however, the difference between groups was only significant for general psychopathology scores (β = -4.37, *SE* = 0.18, *p* = .02).
Conflict of interest	None declared
Risk of bias	High
Summary of findings	The current findings support the efficacy of the MedAdhere app in improving medication adherence in people with schizophrenia. Results regarding improvement in psychotic symptomatology were greater at 8-weeks than at the completion of the intervention at 12-weeks.

Note. PANSS: Positive and Negative Syndrome Scale.

Title of paper	**Online social cognition training in schizophrenia: A double-blind, randomized, controlled multi-site clinical trial**
Full citation	Nahum, M., Lee, H., Fisher, M., Green, M. F., Hooker, C. I., Ventura, J., Jordan, J. T., Rose, A., Kim, S. J., Haut, K. M., Merzenich, M. M., Vinogradov, S. (2021). Online social cognition training in schizophrenia: A double-blind, randomized, controlled multi-site clinical trial. *Schizophrenia Bulletin*, *47*(1), 108-117. https://doi.org/10.1093/schbul/sbaa085
Level of evidence	Level II
Design	Randomised controlled trial (RCT)
Delivery format	Digital, minimal guidance
Participants	Total sample size of *n* = 147 participants, with *n* = 76 allocated to the intervention group (*n* = 55 completers) and *n* = 71 allocated to the control group (*n* = 53 completers). All participants were clinically stable adults with schizophrenia.
Demographic characteristics	The mean age of participants was 42.5 years (*SD* = 13.9) and 43.27 years (*SD* = 11.5) in the intervention and control groups, respectively. Percentage of males in the study were 69.7% in the intervention group and 69% in the control group. Participants were recruited from numerous sites around the USA.
Treating clinician type	Not applicable
Intervention	Computer-based social cognition training
Study groups	Intervention group: SocialVille training program Control group: Active control training program
Outcome(s) measured	The primary outcome measure was a composite social cognition score of combined measures (ER40, PROID, PFMT, MSCEIT, EA) and the UPSA-2.
Procedure	The intervention program and active control were both internet-based and required participants to complete 7 unique exercises/games on each 42-minute training session over 8-12 weeks. Post-training assessments were conducted at 16 weeks. The SocialVille program focused on affect and social cue perception, theory of mind, self-referential style, and empathy and were designed to improve social information processing. The active control games were designed to provide cognitive stimulation in an expectation-matched format but without social content or individualised progression. Both groups had access to a training coach which provided weekly telephone support on program training and completion.
Follow up	No
Statistics summary	An intent-to-treat analysis showed greater change over time in the experimental group than the control group on the composite SC score (b = 2.81, $\|z\|$ = 5.78, p < .001, 95% CI [1.86, 3.76]) but not on the UPSA-2.
Conflict of interest	None declared
Risk of bias	Some concerns
Summary of findings	The current findings support the efficacy of a computer-based social cognition training program on improving social cognition in people with schizophrenia, however results were mixed regarding secondary measures related to functional capacity, social functioning, quality of life, and motivation.

Note. EA: Empathy Accuracy Task; ER40: Penn Emotional Recognition Test; MSCEIT: Mayer-Salovey-Caruso Emotional Intelligence Test; PFMT: Penn Faces Memory Test; PROID: Prosody Identification Test; UPSA-2: UCSD Performance-Based Skills Assessment.

Dissociative disorders

SUMMARY OF EVIDENCE

Substantial revisions in the categorisation of dissociative disorders were made in the ICD-11 to align with evolving theoretical developments in the literature.[73] This review covered the complete list of dissociative disorders as outlined in the ICD-11 framework, including their subtypes. Specifically, literature on dissociative neurological symptom disorders,[74] dissociative amnesia, trance disorders, dissociative identity disorders, and depersonalisation-derealisation disorder were investigated.

There was a paucity of published studies examining the efficacy of psychological interventions for dissociative disorders in adults found in this review. In specific reference to dissociative identity disorder, it is acknowledged that due to the complex and long-term nature of therapy, this diagnosis is often researched through qualitative and single case study designs which are not within scope of the current review.

Level III evidence[75] was found in support of cognitive behaviour therapy in the treatment of depersonalisation-derealisation disorder. Level IV evidence has been identified in support of acceptance and commitment therapy and psychodynamic psychotherapy in the treatment of functional neurological disorder in adults. Level IV evidence was also found in support of psychodynamic therapy in treating adults with a diagnosis of dissociative disorder presenting with dissociative amnesia and depersonalisation.

Level I evidence in relation to cognitive behaviour therapy did not demonstrate efficacy in the treatment of conversion disorders in adults. Level IV evidence was found in relation to psychoeducation however results were inconclusive.

[73] Herpertz-Dahlmann, B. (2021). The classification of dissociative disorders and bodily distress disorder: A comparison of ICD-10 and ICD-11. *Zeitschrift für Kinder- und Jugendpsychiatrie und Psychotherapie, 49*(6), 417–420. https://doi.org/10.1024/1422-4917/a000745

[74] Under the DSM-5-TR framework, dissociative neurological symptom disorders are classified under the somatic symptom and related disorders (also formerly known as 'conversion disorders'). The neuropsychiatry literature often uses the term 'functional neurological disorder' to refer to dissociative neurological symptom disorders.

[75] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of dissociative disorders in adults.

Acceptance and commitment therapy

Title of paper	**A case series of acceptance and commitment therapy (ACT) for reducing symptom interference in functional neurological disorders**
Full citation	Graham, C. D., O'Hara, D. J., & Kemp, S. (2018). A case series of acceptance and commitment therapy (ACT) for reducing symptom interference in functional neurological disorders. *Clinical Psychology and Psychotherapy*, *25*(3), 489–496. https://doi.org/10.1002/cpp.2174
Level of evidence	Level IV
Design	Case series
Format	Individual, in-person
Participants	Eight participants who had a diagnosis of functional neurological disorder (FND) diagnosed by a neurologist
Demographic characteristics	Participant age ranged from 18 to 65 years, with FND symptoms of arm tremor, leg weakness/paralysis, propriospinal myoclonus, paraesthesia, visual disturbance, and syncope. No other demographic characteristics were reported.
Treating clinician type	Trained mental health professional (clinical psychologist)
Intervention	Acceptance and commitment therapy (ACT)
Outcome(s) measured	Functional impairment was measured by the WSAS. Other outcomes measures was mood disturbance measured by the CORE-10 and psychological flexibility measured by the AAQ-II
Procedure	Participants were offered eight one-hour ACT sessions delivered weekly or fortnightly in a routine clinical practice. They were offered extra sessions on a case-to-case basis.
Follow up	No
Statistics summary	A reliable change index and clinically significant change scores were calculated from pre-post scores based on normative data. The mean functional impairment pre-intervention score was 24.7 (*SD* = 7.9). The mean treatment effect was *d* = 1.02. Five out of eight participants indicated reliable improvement, with two indicating clinical recovery. Cohen's *d* indicated large magnitude of improvement in functional impairment (*d* = 1.02).
Conflict of interest	None declared
Risk of bias	Serious
Summary of findings	This case series shows support for the effectiveness of ACT in reducing symptom interference in adults with functional neurological disorder.

Note. AAQII: Acceptance and Action Questionnaire II; CORE-10: The Clinical Outcomes in Routine Evaluation—10; WSAS: Work and Social Adjustment Scale.

Cognitive behaviour therapy

Title of paper	Psychosocial interventions for conversion and dissociative disorders in adults
Full citation	Ganslev, C. A., Ganslev, C. A., Storebø, O. J., Callesen, H. E., Ruddy, R., & Søgaard, U. (2020). Psychosocial interventions for conversion and dissociative disorders in adults. *Cochrane Database of Systematic Reviews*, *2020*(7), CD005331–CD005331. https://doi.org/10.1002/14651858.CD005331.pub3
Level of evidence	Level I
Design	Systematic review and meta-analysis of 17 RCTs (with twelve studies focused on CBT)
Format	Not specified
Participants	894 participants with a diagnosis of conversion or dissociative disorder according to DSM or ICD criteria (*n* = 165 participants with conversion disorder under ICD-10 criteria in CBT studies)
Demographic characteristics	The age ranged from 18 – 80 years with a 3:1 female to male ratio. Mean age was not reported. Studies were conducted in Europe, Middle East, and the USA.
Treating clinician type	Not specified
Intervention	Cognitive behaviour therapy
Outcome(s) measured	The primary outcome was reduction in the physical signs measured by monthly seizure count or by SF-36, SDQ-20, PMDRS, and CGI. The secondary outcome was level of functioning as measured by GAF, FIM, and WSAS.
Procedure	This meta-analysis investigated the efficacy of psychological interventions in the treatment of adult conversion or dissociative disorder. The treatment lasted between a few hours to four months. The certainty of evidence was evaluated using the GRADE approach. The search covered the inception of databases until July 2019.
Follow up	No
Statistics summary	Due to heterogeneity in data, a pooled measure of reduction in seizure frequency was not conducted. In all three studies, CBT did not reduce seizure frequency compared to standard medical care (TAU). A random-effects meta-analysis showed that CBT did not improve level of functioning compared to TAU, *k* = 2, *SMD* = 0.44 higher (1.69 lower to 2.57 higher), I^2 = 91%.
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	This review found no support that CBT effectively reduces physical signs of dissociative seizures nor improves the level of functioning in adults with conversion disorder. The reviewers highlight that the included studies do not provide sufficient information to draw definitive conclusions about any psychological intervention including CBT.

Note. CGI: Clinical Global Impression; FIM: Functional Independence Measure; GAF: Global Assessment of Functioning; PMDRS; Psychogenic Movement Disorder Scale; SF-36: 36-item Short-Form Survey; SDQ-20: Somatoform Dissociation Questionnaire; WSAS: Work and Social Functioning Scale.

Title of paper	**Cognitive behaviour therapy (CBT) for depersonalization derealization disorder (DDD): A self-controlled cross-over study of waiting list vs. active treatment**
Full citation	Hunter, E. C. M., Wong, C. L. M., Gafoor, R., Lewis, G., & David, A. S. (2023). Cognitive behaviour therapy (CBT) for depersonalization derealization disorder (DDD): A self-controlled cross-over study of waiting list vs. active treatment. *Cognitive Behaviour Therapy, 52*(6), 672–685. https://doi.org/10.1080/16506073.2023.2255744
Level of evidence	Level III
Design	Self-controlled cross-over study
Format	Individual, face to face
Participants	36 adult participants with a diagnosis depersonalization-derealisation disorder (DDD) according to DSM-5 criteria
Demographic characteristics	The mean age was 38.7 (*SD* = 13.4) years, with 61% being male and 69% of White ethnicity. The study was conducted in United Kingdom.
Treating clinician type	Trained mental health professional (clinical psychologist)
Intervention	Cognitive behaviour therapy
Outcome(s) measured	The three outcomes were depersonalization symptoms measured by the CDS, as well as depressive and anxiety symptoms measured by the BDI and BAI.
Procedure	A self-controlled cross-over study was conducted to investigate the efficacy of CBT in treating DDD in adults. Participants were offered weekly or fortnightly CBT sessions. The treatment lasted between 8 – 40 sessions (*M* = 18.1) over a mean of 17.3 months (*SD* = 13.4, range 5 – 56).
Follow up	No
Statistics summary	Hierarchical longitudinal analysis controlled for gender, age, and ethnicity found no baseline score differences between improvers and non-improvers. In treatment completers during the waiting period, the mean depersonalization score was 154.20 (*SD* = 63.15), β = -4.25, 95% CI [-16.59, 8.09], *d* = -0.07. During treatment, the mean depersonalization score was 135.06 (*SD* = 69.01), β = -35.99, 95% CI [-48.45, -23.52], *d* = -0.52, indicating clinically significant treatment-related changes in depersonalization scores compared to the waiting period.
Conflict of interest	None declared
Risk of bias	Moderate
Summary of findings	This review found CBT adapted for DDD effectively reduced depersonalisation symptoms, along with depression and anxiety symptoms in a sample of adults with chronic DDD. The researchers note that due to a small sample size, lack of randomization, and potential inconsistencies in treatment delivery, the results cannot be generalised widely.

Note. BAI: Beck Anxiety Inventory; BDI: Beck Depression Inventory; CDS: Cambridge Depersonalisation Scale.

Psychodynamic psychotherapy

Title of paper	Lipid levels in dissociative disorders: Effects of psychodynamic psychotherapy
Full citation	Damsa, C., Lazignac, C., Miller, N., Maris, S., Adam, E., & Rossignon, K. (2014). Lipid levels in dissociative disorders: Effects of psychodynamic psychotherapy. *Psychiatric Quarterly*, *85*(3), 369–376. https://doi.org/10.1007/s11126-014-9297-3
Level of evidence	Level IV
Design	Case series
Follow-up	None
Format	Individual
Participants	32 adults diagnosed with a dissociative disorder. The mean age of participants was 38.2 years, and 27 participants were female.
Treating clinician(s)	Psychiatrist
Intervention(s)	Psychodynamic therapy
Comparison group(s)	None
Procedure	Participants received weekly 1-hour therapy sessions over 8 weeks. Primary outcomes included participants' scores on the Dissociative Experiences Scale and Clinical Global Impression and Improvement Scale.
Summary of findings	A significant reduction in participants' Dissociative Experiences Scale scores from baseline to posttreatment was reported. Furthermore, 83% of patients met the study's criteria for success posttreatment. Treatment was considered a success if patients experienced a 20% or more reduction on the Dissociative Experiences Scale or 30% or more reduction on the Clinical Global Impression and Improvement Scale posttreatment.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 119. Copyright 2018 by the Australian Psychological Society.

Title of paper	Systematic review of psychotherapy for adults with functional neurological disorder
Full citation	Gutkin, M., McLean, L., Brown, R., & Kanaan, R. A. (2021). Systematic review of psychotherapy for adults with functional neurological disorder. *Journal of Neurology, Neurosurgery, and Psychiatry*, *92*, 36-44. https://doi.org/10.1136/jnnp-2019-321926
Level of evidence	Level IV
Design	Systematic review of 19 studies (with seven studies focused on psychodynamic psychotherapy)
Format	Individual, face to face
Participants	1,060 participants with a diagnosis of functional neurological disorder (FND) according to a neurologist
Demographic characteristics	Participant demographics not reported. Of the seven studies on PDT, three were specifically on dissociative seizures, two on symptoms of motor disturbance, and two on all FND subtypes.
Treating clinician type	Not specified
Intervention	Psychodynamic psychotherapy-based interventions (PDT)
Outcome(s) measured	The relevant outcome was physical symptoms measured by the PHQ-15, PMDRS, SF-36, SDQ-20, and seizure frequency. Other outcomes include mental health symptoms and functioning.
Procedure	This systematic review investigated the efficacy of psychological interventions in the treatment of FND in adults. The study focused on comparing cognitive-behavioural and psychodynamic interventions. The database search covered controlled and uncontrolled studies from January 1980 to June 2020.
Follow up	Yes, from nil to 65 months
Statistics summary	At post-treatment, participants in the psychodynamic interventions yielded positive results for all outcomes, including physical symptoms. The median effect size for all outcomes across psychodynamic studies were d = 0.69 with a range from −1.68 to 2.08.
Conflict of interest	None declared
Risk of bias	Unclear
Summary of findings	This review found positive clinical outcomes for using PDT and CBT interventions in treating various functional neurological disorders in adults. However, reviewers noted a lack of high-quality controlled PDT studies and high variability within the subtypes of FND. This resulted in inconclusive evidence regarding the efficacy of PDT and preventing meaningful comparisons with CBT.

Note . PHQ-15: Patient Health Questionnaire; PMDRS: Psychogenic Movement Disorders Rating Scale; SF-36: 36-Item Short Form Survey; SDQ-20: Somatoform Dissociation Questionnaire.

Psychoeducation

Title of paper	Report on a psychoeducational intervention for psychogenic non-epileptic seizures in Argentina
Full citation	Sarudiansky, M., Pablo Korman, G., Lanzillotti, A. I., Areco Pico, M. M., Tenreyro, C., Paolasini, G. V., Wolfzun, C., Kochen, S., D'Alessio, L., & Myers, L. (2020). Report on a psychoeducational intervention for psychogenic non-epileptic seizures in Argentina. *Seizure, 80,* 270–277. https://doi.org/10.1016/j.seizure.2020.04.008
Level of evidence	Level IV
Design	Case series
Format	Group, face to face
Participants	12 participants with a diagnosis of psychogenic non-epileptic seizures (PNES) according to a neuropsychological and psychiatric review
Demographic characteristics	The age range of participants was 18 -57 years (M = 30.8, SD = 14.1) with 83% being female. The study was conducted in Argentina.
Treating clinician type	Trained mental health professionals (psychologist)
Intervention	Psychoeducation
Outcome(s) measured	The relevant outcomes were reduction in seizure frequency and dissociative symptoms measured by the DES-M. Other outcomes measured were illness perception, depression, anxiety, and PTSD symptoms measured by the B-IPQ, STAI, BDI-II, and PDS-5 respectively.
Procedure	Participants who received a PNES diagnosis in an inpatient setting were invited to a three-session psychoeducational program. Those who consented received fortnightly 2-hour sessions, and completed psychometric assessment on the first and last day of treatment.
Follow up	No
Statistics summary	At post-treatment, seizure frequency increased in five participants, whilst decreasing for the other five participants. Wilcoxon signed-rank test showed There is no significant change on dissociation symptom scores for from pre-treatment to post-treatment, Z = -0.79, p = .432. Statistically positive outcomes for state anxiety, depression, and illness perception was found.
Conflict of interest	None declared
Risk of bias	Serious
Summary of findings	The study concluded that there is preliminary evidence supporting the efficacy of a brief group psychoeducational intervention in the treatment of PNES in adults. This review provides novel results for a South American population and produced similar results reported in Western studies.

Note. BDI-II: Beck Depression Inventory - Second Edition; B-IPQ: Brief Illness Perception Questionnaire; DES-M: Dissociative Experiences Scale; PDS-5: Posttraumatic Stress Disorder Diagnostic Scale; STAI: The State-Trait Anxiety Inventory.

Anorexia nervosa

SUMMARY OF EVIDENCE

Psychological interventions for anorexia nervosa in adults are usually combined with nutritional and dietary education and may involve multidisciplinary services to monitor physical health.

For the purposes of this review, the inclusion criteria was broadened to include studies with participants who had been diagnosed with atypical anorexia and/or other specified feeding or eating disorder (previously known as eating disorder not otherwise specified) who exhibit symptoms of anorexia nervosa but may not meet all diagnostic criteria. Studies whose participants were all female have been included to reflect research trends in the field of eating disorders. (Upon expert review, specialist supportive clinical management was added to the intervention list for this chapter. The Maudsley Model of Anorexia Treatment for Adults has been included under family-based interventions).

Level I evidence[76] was identified in support of cognitive behaviour therapy, family-based interventions, and psychodynamic psychotherapies in the treatment of adults with acute anorexia, with Level IV evidence specific to enhanced cognitive behaviour therapy for adults with severe and extreme subtypes of anorexia.

Level IV evidence was also found in support of dialectical behaviour therapy and specialist supportive clinical management.

Level II evidence in relation to self-guided digital intervention (internet-based CBT relapse prevention following inpatient treatment) found no significant difference in clinical outcomes between the intervention and no-treatment control group.

Guidelines provided by NICE (2017; updated 2020) make recommendations for individual cognitive behaviour therapy for eating disorders, family-based interventions, and specialist supportive clinical management. Additional recommendations have been made in relation to eating-disorder-focused focal psychodynamic therapy if first-line treatments are contraindicated. The American Psychiatric Association (2023) includes recommendations related to interpersonal psychotherapy and Experienced Carers Helping Others (ECHO).

[76] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of anorexia nervosa in adults.

Cognitive behaviour therapy

Title of paper	**Enhanced cognitive behavior therapy for severe and extreme anorexia nervosa: An outpatient case series**
Full citation	Calugi, S., Sartirana, M., Frostad, S., & Dalle Grave, R. (2021). Enhanced cognitive behavior therapy for severe and extreme anorexia nervosa: An outpatient case series. *The International Journal of Eating Disorders*, *54*(3), 305–312. https://doi.org/10.1002/eat.23428
Level of evidence	Level IV
Design	Case series
Format	Face to face, individual
Participants	30 participants with a diagnosis of severe or extreme anorexia nervosa according to DSM-5 criteria.
Demographic characteristics	The participant age range was between 17 – 48 years. The mean age was 22.4 years (*SD* = 7.9), with 100% being white and all but one being female. The study was conducted in Italy.
Treating clinician type	Trained mental health professional (clinical psychologist)
Intervention	Enhanced cognitive behaviour therapy (CBT-E)
Study groups	Not applicable
Outcome(s) measured	Relevant primary outcome measures include remission, reduction in eating disorder psychopathology including EDE-Q. Other outcomes include emotional distress and functional impairment secondary to eating disorder, measured by the BSI and CIA respectively.
Procedure	Participants were offered 40 weekly manualised CBT-E sessions as well as a presciption of daily supplements based on individual deficits. Outcomes were measured at the end of treatment and at 20 and 60 week follow-up for completers, however a physician continued to check medical stability and weight change every four weeks.
Follow up	Yes, 60 weeks
Statistics summary	Repeated-measures mixed effect model for treatment completers found a significant change in eating disorder psychopathology, $F = 15.1$, $p < .001$, Cohen's $f = 1.03$, and change in BMI, $F = 27.2$, $p < .001$, Cohen's $f = 1.43$ at post-treatment. No significant changes were found from post-treatment to follow-up. The results also showed the same trend in the intent-to-treat analysis where data had undergone a multiple imputation procedure.
Conflict of interest	None declared
Risk of bias	Moderate
Summary of findings	The study supports the effectiveness of CBT-E for adults with severe and extreme anorexia in increasing BMI and decreasing eating disorder symptoms as well as functional impairments, with gains maintained at follow-up. The researchers highlighted that the positive results of this study may be influenced by the extensive experience of the clinicians and the emphasis of CBT-E on engaging participants in receiving treatment.

Note. BMI: Body Mass Index; BSI: Brief Symptom Inventory, Italian Version; CIA: Clinical Impairment Questionnaire; EDE-Q: Eating Disorder Examination-Questionnaire.

Title of paper	**Comparative efficacy and acceptability of psychological interventions for the treatment of adult outpatients with anorexia nervosa: A systematic review and network meta-analysis**
Full citation	Solmi, M., Wade, T. D., Byrne, S., Del Giovane, C., Fairburn, C. G., Ostinelli, E. G., De Crescenzo, F., Johnson, C., Schmidt, U., Treasure, J., Favaro, A., Zipfel, S., & Cipriani, A. (2021). Comparative efficacy and acceptability of psychological interventions for the treatment of adult outpatients with anorexia nervosa: A systematic review and network meta-analysis. *The Lancet. Psychiatry*, *8*(3), 215–224. https://doi.org/10.1016/S2215-0366(20)30566-6
Level of evidence	Level I
Design	Systematic review and network meta-analysis of 16 studies (with 13 studies included in the network meta-analysis)
Format	Individual and group, face to face
Participants	1047 adult outpatients with acute anorexia nervosa under the DSM or ICD criteria
Demographic characteristics	The mean age of participants was 25.3 years (*SD* = 4.0), with 97.4% being female. The mean BMI was 16.2 kg/m² (*SD* = 0.7). Studies were conducted in Australia, Germany, New Zealand, UK and the USA.
Treating clinician type	Trained mental health professionals (not specified)
Intervention	Cognitive behaviour therapy and enhanced cognitive behaviour therapy
Outcome(s) measured	Relevant primary outcomes included changes to BMI and changes to eating disorder psychopathology measured by the EDE and other validated scales (not specified).
Procedure	A systematic review and network meta-analysis evaluated the efficacy of pharmacological or psychological interventions in treating adults in outpatient settings with acute anorexia nervosa. Treatment ranged from 12 – 52 sessions. Confidence in results was assessed using the CINeMA. The search covered RCTs from inception to March 2020.
Follow up	Yes, at least 52 weeks
Statistics summary	Standardised mean difference and odds ratio were calculated for continuous and binary outcomes respectively. Change in BMI in the CBT groups did not significantly differ to TAU (Specialist Supportive Clinical Management), *SMD* = 0.22, 95% CI [–0.25, 0.69], nor in eating disorder symptoms, *SMD* = 0.15, 95% CI [–0.12, 0.41].
Conflict of interest	Yes; professional and financial
Risk of bias	Low
Summary of findings	This review found no significant differences in BMI or eating disorder symptoms between CBT, other NICE-recommended treatments, and treatment as usual. However, all included interventions are associated with modest improvements in the clinical course of adults with anorexia nervosa. It is important to note when interpreting these findings that 'treatment as usual' in this case represents Specialist Supportive Clinical Management (SSCM), which is considered a first-line treatment for this population.

Note. BMI: Body Mass Index; CINeMA: Confidence in Network Meta-Analysis; EDE-Q: Eating Disorder Examination Questionnaire.

Dialectical behaviour therapy

Title of paper	**Radically open dialectical behavior therapy for anorexia nervosa: A multiple baseline single-case experimental design study across 13 cases**
Full citation	Isaksson, M., Ghaderi, A., Ramklint, M., & Wolf-Arehult, M. (2021). Radically open dialectical behavior therapy for anorexia nervosa: A multiple baseline single-case experimental design study across 13 cases. *Journal of Behavior Therapy and Experimental Psychiatry*, *71*, 101637–101637. https://doi.org/10.1016/j.jbtep.2021.101637
Level of evidence	Level IV
Design	Single case experimental design with multiple baselines
Format	Face to face, combination of group and individual
Participants	13 patients with a diagnosis of anorexia nervosa (AN) / atypical AN, a BMI above 16, and significant overcontrol tendencies based on a psychometric cut-off
Demographic characteristics	The participant age range was between 18 – 45 (*Mdn* = 15) years, with 100% being female. The study was conducted in Sweden.
Treating clinician type	Trained mental health professional (clinical psychologists)
Intervention	Radically open dialetical behaviour therapy (RO DBT)
Study groups	Not applicable
Outcome(s) measured	Relevant primary outcome measures include remission, reduction in eating disorder psychopathology including EDE-Q, as well as increase of BMI. Secondary outcomes included adaptive control strategies, psychosocial functioning, quality of life, and social connectedness measured by the VAS-FC, CIA, BBQ and SSPS respectively.
Procedure	Participants completed 40 weeks of intervention with ten weeks in the first phase targeted by engagement and orientation to RO DBT, and 30 weekly sessions of individual intervention as well as group skills training sessions.
Follow up	Yes, six months
Statistics summary	At post-treatment, eight of 13 patients (62%) were in full remission, 4 were in partial remission, and 1 had deteriorated. The Reliable Change Index showed improvements in BMI scores for 11 participants (z = 0.23) and in ED psychopathology scores for nine participants (z = -0.74). The adjusted Tau-U effect size was medium for both BMI, τ = 0.62, p <.001, 95%CI [0.46, 0.79] and and ED psychopathology, τ = -0.55, p <.001, 95%CI [-0.71, -0.38].
Conflict of interest	None declared
Risk of bias	Moderate
Summary of findings	The study supports the efficacy of RO DBT in treating adults with overcontrolled anorexia nervosa. However, researchers caution against generalising results at a group level due to the small sample size. They also emphasise the need for individualized intervention options to target the disorder's specific underlying mechanisms such as overcontrol.

Note. BMI: Body Mass Index; BBQ: Brunnsviken Brief Quality of Life Scale; CIA: Clinical Impairment Questionnaire; EDE-Q: Eating Disorder Examination-Questionnaire; SSPS: Social Safeness and Pleasure Scale, VAS-FC: Visual Analogue Scales for measuring Flexible Control.

Family-based interventions

Title of paper	**Comparative efficacy and acceptability of psychological interventions for the treatment of adult outpatients with anorexia nervosa: A systematic review and network meta-analysis**
Full citation	Solmi, M., Wade, T. D., Byrne, S., Del Giovane, C., Fairburn, C. G., Ostinelli, E. G., De Crescenzo, F., Johnson, C., Schmidt, U., Treasure, J., Favaro, A., Zipfel, S., & Cipriani, A. (2021). Comparative efficacy and acceptability of psychological interventions for the treatment of adult outpatients with anorexia nervosa: A systematic review and network meta-analysis. *The Lancet. Psychiatry*, *8*(3), 215–224. https://doi.org/10.1016/S2215-0366(20)30566-6
Level of evidence	Level I
Design	Systematic review and network meta-analysis of 16 studies (with 13 studies included in the network meta-analysis)
Format	Individual and group, face to face
Participants	1047 adult outpatients with acute anorexia nervosa under the DSM or ICD criteria
Demographic characteristics	The mean age of participants was 25.3 years (*SD* = 4.0), with 97.4% being female. The mean BMI was 16.2 kg/m² (*SD* = 0.7). Studies were conducted in Australia, Germany, New Zealand, UK and the USA.
Treating clinician type	Trained mental health professionals (not specified)
Intervention	Maudsley Model of Anorexia Treatment for Adults (MANTRA)
Outcome(s) measured	Relevant primary outcomes included changes to BMI and changes to eating disorder psychopathology measured by the EDE and other validated scales (not specified).
Procedure	A systematic review and network meta-analysis evaluated the efficacy of pharmacological or psychological interventions in treating adults in outpatient settings with acute anorexia nervosa. Treatment ranged from 12 – 52 sessions. Confidence in results was assessed using the CINeMA. The search covered RCTs from inception to March 2020.
Follow up	Yes, at least 52 weeks
Statistics summary	Standardised mean difference and odds ratio were calculated for continuous and binary outcomes respectively. At post-treatment according to primary nodes, MANTRA was favoured against TAU (Specialist Supportive Clinical Management) at reducing eating disorder symptoms, *SMD* = 0.12, 95% CI [–0.16, 0.39]. Conversely, TAU was favoured against MANTRA at improving BMI mean difference, *SMD* = -0.17, 95% CI [–0.73, 0.39]. Neither result was statistically significant.
Conflict of interest	Yes; professional and financial
Risk of bias	Low
Summary of findings	This review found no significant differences in BMI or eating disorder symptoms between MANTRA and other interventions. However, all included interventions including MANTRA is associated with modest improvements in the clinical course of adults with anorexia nervosa. It is also important to note when interpreting these findings that 'treatment as usual' in this case represents Specialist Supportive Clinical Management (SSCM), which is considered a first-line treatment for this population.

Note. BMI: Body Mass Index; CINeMA: Confidence in Network Meta-Analysis; EDE-Q: Eating Disorder Examination Questionnaire.

Psychodynamic psychotherapy

Title of paper	**Comparative efficacy and acceptability of psychological interventions for the treatment of adult outpatients with anorexia nervosa: A systematic review and network meta-analysis**
Full citation	Solmi, M., Wade, T. D., Byrne, S., Del Giovane, C., Fairburn, C. G., Ostinelli, E. G., De Crescenzo, F., Johnson, C., Schmidt, U., Treasure, J., Favaro, A., Zipfel, S., & Cipriani, A. (2021). Comparative efficacy and acceptability of psychological interventions for the treatment of adult outpatients with anorexia nervosa: A systematic review and network meta-analysis. *The Lancet. Psychiatry*, *8*(3), 215–224. https://doi.org/10.1016/S2215-0366(20)30566-6
Level of evidence	Level I
Design	Systematic review and network meta-analysis of 16 studies (with 13 studies included in the network meta-analysis)
Format	Individual and group, face to face
Participants	1047 adult outpatients with acute anorexia nervosa under the DSM or ICD criteria
Demographic characteristics	The mean age of participants was 25.3 years (*SD* = 4.0), with 97.4% being female. The mean BMI was 16.2 kg/m² (*SD* = 0.7). Studies were conducted in Australia, Germany, New Zealand, UK and the USA.
Treating clinician type	Trained mental health professionals (not specified)
Intervention	Psychodynamic-oriented psychotherapies
Outcome(s) measured	Relevant primary outcomes included changes to BMI and changes to eating disorder psychopathology measured by the EDE and other validated scales (not specified).
Procedure	A systematic review and network meta-analysis evaluated the efficacy of pharmacological or psychological interventions in treating adults in outpatient settings with acute anorexia nervosa. Treatment ranged from 12 – 52 sessions. Confidence in results was assessed using the CINeMA. The search covered RCTs from inception to March 2020.
Follow up	Yes, at least 52 weeks
Statistics summary	Standardised mean difference and odds ratio were calculated for continuous and binary outcomes respectively. At post-treatment according to primary nodes, psychodynamic psychotherapies was favoured against TAU (Specialist Supportive Clinical Management) at reducing eating disorder symptoms, *SMD* = 0.10, 95% CI [–0.19, 0.39], as well as improving BMI, *SMD* = 0.45, 95% CI [–0.17, 1.07]. However, neither result was statistically significant. At longest follow-up according to primary nodes, psychodynamic psychotherapies significantly outperformed TAU (*SMD* = 0.31, 95% CI [0.05, 0.57]).
Conflict of interest	Yes; professional and financial
Risk of bias	Low
Summary of findings	This review found mixed evidence that psychodynamic psychotherapies were significantly superior to TAU. However, all included interventions including psychodynamic psychotherapies were associated with modest improvements in the clinical course of adults with anorexia nervosa. It is also important to note when interpreting these findings that 'treatment as usual' in this case represents Specialist Supportive Clinical Management (SSCM), which is considered a first-line treatment for this population.The inconclusive results were attributed to significance bias in past studies, potential contamination of treatment as usual due to therapist background, and a lack of individual-level data.

Note. BMI: Body Mass Index; CINeMA: Confidence in Network Meta-Analysis; EDE-Q: Eating Disorder Examination Questionnaire.

Specialist supportive clinical management

Title of paper	**Evidence of effectiveness of specialist supportive clinical management for anorexia nervosa in routine clinical practice: Outcomes from a clinical case series**
Full citation	Purvis, F., Thorpe, A., Turner, H., & Lawrence, P. (2023). Evidence of effectiveness of specialist supportive clinical management for anorexia nervosa in routine clinical practice: Outcomes from a clinical case series. *The International Journal of Eating Disorders*, *56*(10), 1941–1946. https://doi.org/10.1002/eat.24022
Level of evidence	Level IV
Design	Case series
Format	Individual, face to face
Participants	45 adults diagnosed with anorexia nervosa (AN), AN-partial remission, or atypical AN according to DSM-5 criteria
Demographic characteristics	The age of participants ranged from 18 – 56 years (*M* = 27.7, *SD* = 11.3). The average BMI at the start of treatment was 16.78 kg/m^2 (range = 12.60 – 20.10). The study was conducted in the UK.
Treating clinician type	Trained mental health professional (specialist nurse)
Intervention	Specialist supportive clinical management (SSCM)
Outcome(s) measured	Relevant primary outcome includes eating disorder symptoms measured by the EDE and ED-15. Other outcomes measured were mood and anxiety symptoms measured by GAD-7 and PHQ-9.
Procedure	Participants were adults referred to an outpatient service who met the eligibility criteria and have chosen SSCM after being provided treatment options. Those who participated received six sessions, which can be extended to up to 20 sessions, generally on a weekly basis. Participants attended an average of 9.32 sessions.
Follow up	None
Statistics summary	The BMI mean change difference was an increase of .52 kg/m^2 (95% CI [0.03, 0.74]), with paired-samples t-test revealing a significant change with a small effect size from start to end of treatment $t(33) = 2.22$, $p = .034$, $d = 0.386$. EDE-Q scores also significantly improved at post-treatment, $t(31) = 6.06$, $p < .001$, $d = 1.09$, with medium to large effect size.
Conflict of interest	None declared
Risk of bias	Moderate
Summary of findings	This review found preliminary evidence for the effectiveness of SSCM in treating adult anorexia in routine clinical practice. Some of the major limitations of the study were being underpowered in detecting changes in BMI, as well as having only one therapist who implemented the intervention.

Note. ED-15: Eating Disorder-15; EDE-Q: Eating Disorder Examination Questionnaire; GAD-7: Generalized Anxiety Disorder Assessment; PHQ-9: Patient Health Questionnaire.

Self-guided digital interventions

Title of paper	Internet-based relapse prevention for anorexia nervosa: Nine-month follow-up
Full citation	Fichter, M. M., Quadflieg, N., & Lindner, S. (2013). Internet-based relapse prevention for anorexia nervosa: Nine-month follow-up. *Journal of Eating Disorders, 1*(1), 23–23. https://doi.org/10.1186/2050-2974-1-23
Level of evidence	Level II
Design	Randomised controlled trial (RCT)
Follow-up	Yes, nine months
Format	Digital intervention, with no therapist guidance
Participants	210 women diagnosed with anorexia nervosa, with a mean age of 24 years. All participants received approximately 90 days of inpatient treatment prior to commencing the relapse prevention intervention.
Treating clinician(s)	Not reported
Intervention(s)	CBT relapse prevention program (*n* = 92)
Comparison group(s)	No-treatment control (*n* = 118)
Procedure	Women who had completed inpatient treatment were randomly allocated to online CBT or a no-treatment control group. The internet intervention consisted of nine monthly internet-based CBT relapse-prevention sessions supported by automated emails and text messages.
Summary of findings	Fifty-two percent of participants in the intervention group completed all nine relapse prevention sessions. No significant differences in BMI or eating disorder psychopathology were reported between the intervention and control groups. However, when compared with partial completers (i.e., fewer than eight sessions completed) and the control group, participants who completed the entire web-based intervention exhibited significant increases in BMI posttreatment and at follow-up

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 76. Copyright 2018 by the Australian Psychological Society.

Bulimia nervosa

SUMMARY OF EVIDENCE

For the purposes of this review, the inclusion criteria was broadened to include studies with participants who had been diagnosed with other specified feeding or eating disorder (previously known as eating disorder not otherwise specified) who exhibit symptoms of bulimia nervosa but may not meet all diagnostic criteria. Studies whose participants were all female have been included to reflect research trends in the field of eating disorders.

Level I evidence[77] was identified in support of cognitive behaviour therapy (individual and group) and interpersonal psychotherapy for the treatment of adults with bulimia nervosa.

Level II evidence in support of dialectical behaviour therapy was found, and Level IV evidence was identified in support of psychoeducation.

Level I evidence was found in relation to self-guided digital interventions (internet-delivered cognitive behaviour therapy) however did not find a significant difference between intervention and control conditions in reducing clinical symptoms. Level III evidence was found in relation to psychodynamic/analytic therapy; however, the evidence was not sufficient to establish its effectiveness.

Guidelines provided by the American Psychiatric Association (2023) recommend eating-disorder-focused cognitive behaviour therapy in conjunction with pharmacotherapy either initially or if there is minimal response to psychotherapy. The guidelines further recommend eating disorder focused family-based treatment for emerging adults who have an involved caregiver. Guidelines provided by NICE (2017; updated in 2020) recommend guided self-help which use cognitive behaviour self-help materials and are supplemented with brief supportive sessions. If guided self-help is unacceptable, contraindicated, or ineffective after four weeks, the NICE guidelines recommend group or individual eating-disorder-focused cognitive behaviour therapy.

[77] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of bulimia nervosa in adults.

Cognitive behaviour therapy

Title of paper	Treatments for bulimia nervosa: A network meta-analysis
Full citation	Slade, E., Keeney, E., Mavranezouli, I., Dias, S., Fou, L., Stockton, S., ... & Kendall, T. (2018). Treatments for bulimia nervosa: A network meta-analysis. *Psychological medicine, 48*(16), 2629-2636. https://doi.org/10.1017/S0033291718001071
Level of evidence	Level I
Design	Systematic review and network meta-analysis (21 studies, with 16 studies that included CBT)
Delivery format	Individual / group, face to face
Participants	Overall, participants included 1,828 adults who met DSM-IV diagnostic criteria for bulimia nervosa (BN). The group CBT-ED treatment arm included 68 participants, and the individual CBT-ED treatment arm included 377 participants.
Demographic characteristics	Mean age ranged from 19.8 to 28.4 across samples, with majority of studies including only female participants or having samples composed of at least 90% females. The studies were conducted in the US, Austria, UK, Sweden, Canada and Germany,
Treating clinician type	Not specified
Intervention	Individual CBT-ED, group CBT-ED
Outcome(s) measured	Full remission defined as either the abstinence of bulimia-related symptoms over a minimum 2-week period or as no longer meeting DSM-IV criteria for BN.
Procedure	A systematic review and network meta-analysis (NMA) were conducted to compare the effectiveness of all psychological, pharmacological and combination therapies used to treat adults with BN. The NMA was used to inform the updated NICE guidelines for eating disorders. The search strategy included RCTs identified in electronic databases searched from inception to July 2016.
Follow up	No
Statistics summary	Fixed and random effects NMA models were conducted, and relative effects were reported as odds ratios (OR). Individual CBT-ED (OR 3.89, 95% CrI [1.19, 14.02] and group CBT-ED (OR 7.67, 95% CrI [1.51, 55.66] were significantly better at achieving full remission compared with waitlist controls. However, high uncertainty for group CBT-ED effectiveness was indicated by very wide credible intervals. In the random effects model, moderate to high between-trial heterogeneity was observed (τ = 0.43, 95% CrI [0.04, 0.93])
Conflict of interest	Yes (financial)
Risk of bias	Low
Summary of findings	Results suggested that both group and individual CBT-ED were more effective in achieving full remission compared to other treatments for adults with BN. Furthermore, individual CBT-ED showed the most reliable evidence and appeared to be the most effective option to achieve remission.

Note. CrI: Credible Interval; CBT-ED: Cognitive Behaviour Therapy specific to Eating Disorders; NICE: National Institute for Health and Care Excellence.

Title of paper	**The efficacy of cognitive-behavioural therapy for eating disorders: A systematic review and meta-analysis**
Full citation	Linardon, J., Wade, T. D., De la Piedad Garcia, X., & Brennan, L. (2017). The efficacy of cognitive-behavioral therapy for eating disorders: A systematic review and meta-analysis. *Journal of Consulting and Clinical Psychology, 85*(11), 1080. https://doi.org/10.1037/ccp0000245
Level of evidence	Level I
Design	Systematic review and meta-analysis (79 studies, with 37 studies included on bulimia nervosa)
Follow-up	Details of follow-up periods were not reported
Format	Individual, group, online, self-help (bibliotherapy)
Participants	Individuals diagnosed with bulimia nervosa, anorexia nervosa, or binge eating disorder. All but one study included in the bulimia nervosa studies included adult samples. The mean age and gender of participants was not reported.
Treating clinician(s)	Not reported
Intervention(s)	CBT
Comparison group(s)	Inactive control (e.g., waitlist, TAU), active control (i.e., a non-CBT psychological treatment), pharmacotherapy
Procedure	Systematic review and meta-analysis of RCTs on the efficacy of CBT for the treatment of eating disorders. Subgroup analyses were undertaken on type of eating disorder, treatment format, comparison condition, follow-up period (less than 12 months vs more than 12 months), and type of CBT treatment. Most included studies on bulimia nervosa were individually delivered.
Summary of findings	For the bulimia nervosa studies, compared with inactive and active controls, clinician-led CBT (individual or group format) was significantly more effective at posttreatment on measures of remission, binge/purge frequency and cognitive symptomatology. Posttreatment effect sizes were large for binge/purge frequencies and small for cognitive symptoms compared with inactive control. CBT was also significantly more effective than being in an active control group. However, effect sizes for all outcome measures were small. One study demonstrated a large effect size in favour of CBT compared with inactive control at shortterm follow-up for binge/purge frequency. At long-term follow-up, a small effect size in favour of CBT compared with active control was found (based on 10 studies). Based on nine guided self-help studies, medium effect sizes were found in favour of CBT compared with inactive control on remission rate and cognitive symptoms posttreatment.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 79. Copyright 2018 by the Australian Psychological Society.

Dialectical behaviour therapy

Title of paper	**An adaptive randomized trial of dialectical behaviour therapy and cognitive behavior therapy for binge-eating**
Full citation	Chen, E. Y., Cacioppo, J., Fettich, K., Gallop, R., McCloskey, M. S., Olino, T., & Zeffiro, T. A. (2017). An adaptive randomized trial of dialectical behavior therapy and cognitive behavior therapy for binge-eating. *Psychological Medicine, 47*(4), 703-717. https://doi.org/10.1017/S0033291716002543
Level of evidence	Level II
Design	RCT
Follow-up	6 and 12 months
Format	Individual and group
Participants	109 women diagnosed with bulimia nervosa or binge eating disorder, with a mean age of 38.2 years
Treating clinician(s)	Psychology master's-level clinicians
Intervention(s)	DBT (*n* = 36)
Comparison group(s)	CBT (*n* = 31), guided self-help (n = 42)
Procedure	Individuals who had previously undergone a guided CBT-based self-help program with an initial weak response to treatment were randomly allocated to DBT or CBT. Those who had a good response to the guided self-help treatment continued treatment of up to 24 weekly 20- to 30-minute sessions with a clinician and were compared with the randomised groups. The DBT and CBT groups received weekly manualised sessions comprising a 2-hour group therapy session, a 1-hour individual session, 2 hours with a consultation team, and availability of 24-hour phone coaching over 6 months.
Summary of findings	For the primary outcome measure of binge eating frequency, large within-group effect sizes were found for all three groups from baseline to posttreatment. Reduction in binge eating frequency during treatment was significantly faster for the guided self-help group compared with DBT and CBT, although effect sizes were small. Treatment gains significantly diminished at 12-month follow-up for all groups but were more effectively maintained in DBT compared with guided self-help, demonstrated by a small to medium effect size. There were no significant between-group differences at 6 and 12-month follow-up.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 80. Copyright 2018 by the Australian Psychological Society.

Title of paper	**Appetite-focused dialectical behavior therapy for the treatment of binge eating with purging: A preliminary trial**
Full citation	Hill, D. M., Craighead, L. W., & Safer, D. L. (2011). Appetite-focused dialectical behavior therapy for the treatment of binge eating with purging: A preliminary trial. *International Journal of Eating Disorders, 44*(3), 249-261. https://doi.org/10.1002/eat.20812
Level of evidence	Level II
Design	RCT
Follow-up	None
Format	Individual
Participants	32 women with a diagnosis of bulimia nervosa (81% of sample) or subclinical bulimia nervosa. The mean age of participants was 21.9 years.
Treating clinician(s)	Clinical psychologists
Intervention(s)	DBT (*n* = 18)
Comparison group(s)	Delayed treatment control (*n* = 14)
Procedure	Participants were randomly assigned to either DBT or a 6-week delayed treatment group. The manualised and adapted appetite-focused DBT (DBT-AF) treatment comprised 12 individual sessions over 12 weeks; the first six sessions were of 90-minutes duration, and the final six were 1-hour sessions.
Summary of findings	At mid-treatment (6 weeks), participants in the DBT group reported lower past-month frequency of objective binge episodes and lower frequency of purges compared with the control group, with large effect sizes observed. Compared with the control group, medium to large effect sizes in favour of the DBT group were also found for eating disorder psychopathology, positive affect, and depression at mid-treatment. For the most part, large within-group effect sizes were found for the DBT group from baseline to posttreatment on all outcome measures.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 81. Copyright 2018 by the Australian Psychological Society.

Interpersonal psychotherapy

Title of paper	Interpersonal psychotherapy for eating disorders: Current perspectives
Full citation	Miniati, M., Callari, A., Maglio, A., & Calugi, S. (2018). Interpersonal psychotherapy for eating disorders: Current perspectives. *Psychology Research and Behavior Management, 11,* 353-369. https://doi.org/10.2147/PRBM.S120584
Level of evidence	Level I
Design	Systematic review (37 studies, with 14 studies focused on bulimia nervosa)
Delivery format	Individual, face to face
Participants	Participants were 502 adults who met diagnostic criteria for bulimia nervosa (BN) and were included in a RCT study.
Demographic characteristics	Not specified
Treating clinician type	Not specified
Intervention	Interpersonal psychotherapy (IPT)
Outcome(s) measured	Changes in body mass index (BMI), number of binge-purge episodes and general psychiatric features of BN as measured by validated scales (e.g. BITE, EDE, CIA).
Procedure	A systematic review was conducted to evaluate the efficacy of IPT in treating eating disorders. The search strategy included studies identified in electronic databases searched from 1990 and 2018. Only RCTs and their respective follow-up studies were included in the systematic review.
Follow up	Yes; ranging from 4 months to 6 years
Statistics summary	Qualitative synthesis was used to described and evaluate the findings from RCTs with IPT for BN. IPT was shown to be efficacious in the mid-term and long-term period in the treatment of BN. When administered as monotherapy, IPT had lower outcomes than CBT and its enhanced version, CBT-E.
Conflict of interest	None declared
Risk of bias	High
Summary of findings	Findings indicated that IPT was efficacious in treating adults with BN in the mid and longer term, however it showed lower outcomes compared with CBT and CBT-E. Overall, the authors suggested that IPT might be a reasonable, cost-effective alternative to CBT in treating adults with BN.

Note. BITE: Bulimic Investigatory Test Edinburgh; CIA: Clinical Impairment Assessment Questionnaire; EDE: Eating Disorder Examination; CBT-E: Enhanced Cognitive-Behaviour Therapy.

Psychodynamic therapy

Title of paper	**Outcomes in people with eating disorders: A transdiagnostic and disorder-specific systematic review, meta-analysis, and multivariable meta-regression analysis**
Full citation	Solmi, M., Monaco, F., Højlund, M., Monteleone, A. M., Trott, M., Firth, J., Carfagno, M., Eaton, M., De Toffol, M., Vergine, M., Meneguzzo, P., Collantoni, E., Gallicchio, D., Stubbs, B., Girardi, A., Busetto, P., Favaro, A., Carvalho, A. F., Steinhausen, H. C., & Correll, C. U. (2024). Outcomes in people with eating disorders: A transdiagnostic and disorder-specific systematic review, meta-analysis, and multivariable meta-regression analysis. *World Psychiatry, 23*(1), 124-138. https://doi.org/10.1002/wps.21182
Level of evidence	Level III
Design	Systematic review and meta-analysis (412 studies, with 5 studies focused on psychodynamic therapy for bulimia nervosa)
Delivery format	Not specified
Participants	Participants were 23,197 adults (338 in the psychodynamic studies) with a diagnosis of bulimia nervosa
Demographic characteristics	Mean age ranged from 23.8 to 27.3 across studies, with the percentage of females ranging from 90% to 100%.
Treating clinician type	Not specified
Intervention	Psychodynamic/analytic therapy
Outcome(s) measured	Overall outcomes including recovery (defined as the absence of eating disorder (ED) symptoms or "good outcomes" assessed by a validated scale), improvement and relapse, all-cause and ED-related hospitalization and chronicity (defined as continued presence of an ED diagnosis or "poor outcome" assessed by a validated scale).
Procedure	A systematic review and meta-analysis were conducted to explore clinically relevant outcomes of specific eating disorders over different follow-up times. The search strategy included studies identified in electronic databases searched from 1980 to 2021, as well as through manual online searches. Subgroup and meta-regression analyses were further conducted.
Follow up	Yes; up to 130 weeks
Statistics summary	Random-effects meta-analyses of the frequency of clinical outcomes were conducted, including subgroup and sensitivity analyses. In terms of psychodynamic/analytic therapy for bulimia nervosa, overall recovery occurred in 42% of participants (95% CI [25, 61], I^2 = 88%, n = 221), and the chronicity rate was 42% (95% CI [33, 52], I^2 = 50%, n = 197). Mortality occurred in 0% of participants (95% CI [0.00, 1.00], I^2 = 0%, n = 157) as assessed by observational studies only.
Conflict of interest	Not specified
Risk of bias	Low
Summary of findings	Findings indicated that psychodynamic therapy was associated with higher recovery rates compared with other treatments for adults with bulimia nervosa. However, the authors did not suggest that psychodynamic therapy is an effective treatment for adults with bulimia nervosa.

Psychoeducation

Title of paper	**The effect of pre-treatment psychoeducation on eating disorder pathology among patients with anorexia nervosa and bulimia nervosa**
Full citation	Tatham, M., Athanasia, E., Dodd, J., & Waller, G. (2016). The effect of pre-treatment psychoeducation on eating disorder pathology among patients with anorexia nervosa and bulimia nervosa. *Advances in Eating Disorders, 4*(2), 167-175. https://doi.org/10.1080/21662630.2016.1172975
Level of evidence	Level IV
Design	Case series with pre- and post-test
Follow-up	None
Format	Group
Participants	97 adults with a diagnosis of bulimia nervosa (n = 43) or anorexia nervosa (n = 54). 93.8% of participants were female. The age of participants was not reported.
Treating clinician(s)	Not reported
Intervention(s)	Psychoeducation
Comparison group(s)	None
Procedure	Prior to being seen for individual therapy, all participants undertook a four-session psychoeducation group intervention consisting of weekly 90-minute sessions, followed by one 30-minute individual review session. Participants were grouped according to eating disorder diagnosis, and scores were compared for each diagnostic group separately.
Summary of findings	Significant differences from pre- to post-treatment were found for the 43 participants with bulimia nervosa. Significant improvements were demonstrated for all but one of the eating disorder psychopathology subscales at posttreatment. The effect sizes were all within the small to medium range. There were no significant changes in levels of bingeing or purging.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 81. Copyright 2018 by the Australian Psychological Society.

Self-guided digital interventions

Title of paper	**The effectiveness of internet-delivered cognitive behavioural therapy for those with bulimic symptoms: A systematic review**
Full citation	Pittock, A., Hodges, L., & Lawrie, S. M. (2018). The effectiveness of internet-delivered cognitive behavioural therapy for those with bulimic symptoms: A systematic review. *BMC Research Notes, 11*, 1-6. https://doi.org/10.1186/s13104-018-3843-2
Level of evidence	Level I
Design	Systematic review (5 studies)
Delivery format	Digital intervention, with therapist guidance
Participants	Total participants included 594 adults (ranging from 62 to 196 participants across studies) with a diagnosis of bulimia nervosa (BN) or eating disorders not otherwise specified with bulimic characteristics (EDNOS-BN).
Demographic characteristics	Mean age ranged from 23.7 to 31 years across studies, and only one study included male patients. Studies were conducted in Germany, Spain, USA, UK, Austria and the Netherlands.
Treating clinician type	Not specified
Intervention	Internet-delivered cognitive behavioural therapy (iCBT)
Outcome(s) measured	Reduction in binge eating, self-induced vomiting and purging following treatment and at follow-up.
Procedure	A systematic review was conducted to establish whether iCBT is effective in the treatment of adults with BN and subthreshold presentations. The database search included studies identified in electronic databases searched from inception to April 2018. All included studies were RCTs, except for one controlled study.
Follow up	Yes; 6 to 18 months
Statistics summary	Effect sizes were calculated as a standardized mean difference and corrected using Hedge's *g*. Three studies found large effect sizes in binge eating and purging reduction within their iCBT groups. One study showed iCBT was superior to waitlist and bibliotherapy in reducing purging post treatment (g = 0.88, 95% CI [0.36, 1.34], $p < .05$ and g = 0.67, 95% CI [0.19, 1.15], $p < .05$, respectively), and another study found iCBT to be superior to waitlist in reducing self-induced vomiting (g = 0.77, 95% CI [1.37, 7.89], $p < .05$). Only one study found iCBT to be superior on the EDE when compared with waitlist controls (g = 1.23, 95% CI [0.70, 1.74], $p < .05$), with the effects sustained at 6-month follow-up (g = 0.97, 95% CI [0.38, 1.53], $p < .05$).
Conflict of interest	None declared
Risk of bias	High
Summary of findings	Findings indicated that iCBT was somewhat effective in reducing harmful behaviours, however not significantly better than controls, with an average dropout rate of 34%. The authors concluded there is a lack of evidence to show iCBT has positive effects on disordered eating behaviour in adults with BN.

Binge eating disorder

SUMMARY OF EVIDENCE

In a departure from this review's eligibility criteria, studies whose participants were all female or had obesity as a comorbidity have been included in this chapter. This accounts for the large body of eating disorder research evidence for these populations and the ambiguous and evolving medical definition of obesity.

Level I evidence[78] was identified in support of cognitive behaviour therapy, dialectical behaviour therapy, interpersonal psychotherapy, and self-guided digital interventions in the treatment of adult populations diagnosed with binge eating disorder. Level II evidence was found in support of mindfulness-based stress reduction and psychoeducation, Level III in support of emotion-focused therapy, and Level IV evidence in support of acceptance and commitment therapy.

Guidelines provided by the American Psychiatric Association (2023), NEDC (2022), and RANZCP (2014) endorse the use of cognitive behavioural therapy as a first-line treatment, with some guidelines also providing recommendations for interpersonal psychotherapy and dialectical behaviour therapy. Guidelines provided by NICE (2017; updated in 2020) recommend a guided self-help program which uses cognitive behaviour self-help materials and are supplemented with brief supportive sessions. If guided self-help is unacceptable, contraindicated, or ineffective after four weeks, the NICE guidelines recommend group or individual eating-disorder-focused cognitive behaviour therapy.

[78] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of binge eating disorder in adults.

Acceptance and commitment therapy

Title of paper	A pilot study of an acceptance-based behavioral treatment for binge eating disorder
Full citation	Juarascio, A. S., Manasse, S. M., Espel, H. M., Schumacher, L. M., Kerrigan, S., & Forman, E. M. (2017). A pilot study of an acceptance-based behavioral treatment for binge eating disorder. *Journal of Contextual Behavioral Science, 6*(1), 1–7. https://doi.org/10.1016/j.jcbs.2016.12.003
Level of evidence	Level IV
Design	Case series with pretest and posttest
Follow-up	3 months
Format	Group
Participants	19 women diagnosed with BED, with a mean age of 38.3 years
Treating clinician(s)	Clinical psychologists and clinical psychology doctoral students supervised by a psychologist
Intervention(s)	Acceptance-based behaviour therapy
Comparison group(s)	None
Procedure	The intervention involving core elements of behavioural therapy for binge eating and acceptance-based strategies was delivered weekly over 10 weeks to three groups of five to seven participants. The first two sessions were 120 minutes each, and the remaining sessions were 90 minutes.
Summary of findings	At mid-treatment (Week 5), 56% of participants achieved early remission of binge eating symptoms, which increased to 59% at posttreatment and 60% at 3-month follow-up. Measures of binge frequency, global eating disorder symptomatology, depression, and quality-of-life all improved significantly from baseline to posttreatment, with treatment effects maintained at follow-up.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 87.

Cognitive behaviour therapy

Title of paper	**Rates of abstinence following psychological or behavioral treatments for binge-eating disorder: Meta-analysis**
Full citation	Linardon, J. (2018). Rates of abstinence following psychological or behavioral treatments for binge-eating disorder: Meta-analysis. *International Journal of Eating Disorders, 51*(8), 785-797. https://dx.doi.org/10.1002/eat.22897
Level of evidence	Level I
Design	Meta-analysis (39 RCT; 65 treatment conditions, *N* = 41 for CBT)
Format	Individual, group; face-to-face, Internet-based.
Participants	2,340 adult participants diagnosed with BED
Demographic characteristics	Participants' mean ages ranged between 21and 52 years. There was one study on adolescent participants (age not specified). Females represented between 67% and 100% of the study samples. When reported (20 studies), ethnicity was mostly Caucasian (76%-97%, 19 studies) or Latino (100%, 1 study).
Treating clinician type	Not specified
Intervention	CBT
Outcome(s) measured	Post-treatment and follow-up abstinence rates as measured by self–report diary recall, EDE interview, self–report EDE–Q, semi–structured interview, Eating–behavior IV (self–report), QEWP, and SCID. Definitions and measurements of abstinence varied across studies; most trials (k = 25; 64%) defined abstinence as the complete cessation of binge eating within the past 28 days.
Procedure	This meta-analysis estimated the prevalence of patients with BED who achieved binge eating abstinence following psychological or behavioral treatments. Databases and international clinical trials registries were searched during December 2018. Subgroup analyses were conducted across treatments for delivery mode, abstinence definition, assessment method, number of treatment sessions, trial quality, and patient demographics.
Follow up	Yes, 3 to 48 months.
Statistics summary	In ITT samples, the total weighted percentage of participants who achieved abstinence was 46.5% ($N_{conditions}$ = 41, 95% CI [41.1, 52.0], I^2 = 74%) at post-treatment and 42.9% ($N_{conditions}$ = 26, 95% CI [36.3,49.8], I^2 = 75%) at follow-up. Abstinence rates were 48.4% in clinician-led ($N_{conditions}$ = 29, 95% CI [42.4,54.5], I^2 = 68%) and 42.5% in guided self-help treatments ($N_{conditions}$ = 12, 95% CI [32.5,53.2], I^2 = 81%) at post-treatment, with a similar trend at follow-up.
Conflict of interest	Not specified
Risk of bias	Unclear
Summary of findings	Findings showed that less than half of participants who were allocated to CBT achieved abstinence at post-treatment (46%) and 3 to 48 months after treatment (43%). Clinician-led group treatments appeared to produce higher rates of abstinence than guided self-help treatments at post-treatment and follow-up. By contrast, interpersonal psychotherapy was associated with the highest abstinence estimates at both post-treatment (63%) and follow-up (54%) and mindfulness with the lowest abstinence estimates at both post-treatment (18%) and follow up (22%). Caution is warranted in interpreting these findings as observed estimates were based on within-groups effect sizes.

Note. EDE: Eating Disorder Examination; EDE–Q: Eating Disorder Questionnaire; QEWP: Questionnaire on Eating and Weight Patterns; ITT: Intention-to-treat; SCID: Structured Clinical Interview.

Dialectical behaviour therapy

Title of paper	**Dialectical behaviour therapy improves emotion dysregulation mainly in binge eating disorder and bulimia nervosa: A systematic review and meta-analysis.**
Full citation	Rozakou-Soumalia, N., Darvariu, S., & Sjogren, J. M. (2021). Dialectical behaviour therapy improves emotion dysregulation mainly in binge eating disorder and bulimia nervosa: A systematic review and meta-analysis. *Journal of Personalized Medicine, 11*(9), 931. https://doi.org/10.3390/jpm11090931
Level of evidence	Level I
Design	Systematic review and meta-analysis (*N* = 11 studies, *n* = 8 BED studies)
Format	Not specified
Participants	669 adult participants diagnosed with an eating disorder (ED) or atypical ED (69% BED, 1% subclinical/subclinical BED, 13% BN, 2% subclinical BN, 3% AN, and 12% EDNOS). Participants who were under 12 years old or pregnant or participants with substance abuse were excluded.
Demographic characteristics	Participants' age ranged between 18 and 65 years. When reported, study sample's mean ages ranged between 22.3 (*SD* = 6.3) and 52.2 (*SD* = 10.6) years. Most studies considered exclusively female participants; the few studies including males had predominantly women participants (more than 85%). Most studies were conducted in the USA (*n* = 6) and the remaining were from the Netherlands, Iran, Spain, and Canada.
Treating clinician type	Not specified
Intervention	DBT
Outcome(s) measured	The primary outcome was emotion regulation (ER). Secondary outcomes included ED psychopathology as measured by severity of symptoms (EDE-Q, BES) and frequency of binge-eating as measured by OBEs.
Procedure	This systematic review and meta-analysis investigated the effect of DBT on emotion dysregulation, general psychopathology, and BMI in participants with ED, when compared to active therapy and waitlist controls. Electronic databases and a clinical trial registry were searched on 7 December 2020. Subgroup analyses based on comparison group, gender, ED type, and ER outcome were performed.
Follow up	Yes; some studies included a follow-up period which ranged from 3 months to 6 years).
Statistics summary	A random-effects meta-analysis showed a greater pooled effect of DBT on symptom severity (g = - 0.90, p = .002, 95% CI [-1.45, -0.34]; I^2 = 86%, p < .001) and OBE (*MD* = - 0.27, 95% CI [-0.45,-0.09], p = 0.003; I^2 = 85%, p < .001) compared to the control group. Across EDs, DBT had higher effects on ED psychopathology but not OBE when compared with waitlist than active therapy controls.
Conflict of interest	None declared
Risk of bias	Unclear
Summary of findings	The findings from this systematic review and meta-analysis indicate that DBT led to greater improvement in ED symptom severity and frequency of binge-eating, as well as emotion dysregulation and BMI, in adults diagnosed with BED than waitlist and active therapy controls. Across EDs, the effects of DBT were greater on symptom severity when compared with waitlist than active therapy but not on frequency of binge-eating. Limitations included the small number of studies and high variability between studies.

Note. AN: Anorexia Nervosa; BES: Binge Eating Scale; BMI: Body Mass Index; BN: Bulimia Nervosa; EDE-Q: Eating Disorder Examination-Questionnaire; EDNOS.: Eating Disorder Not Otherwise Specified; OBE: Objective Binge Episodes.

Emotion-focused therapy

Title of paper	**The rate and shape of change in binge eating episodes and weight: An effectiveness trial of emotionally focused group therapy for binge-eating disorder**
Full citation	Compare, A., & Tasca, G. A. (2016). The rate and shape of change in binge eating episodes and weight: An effectiveness trial of emotionally focused group therapy for binge-eating disorder. *Clinical Psychology & Psychotherapy, 23*(1), 24–34. https://doi.org/10.1002/cpp.1932
Level of evidence	Level III
Design	Nonrandomised comparative study with concurrent control
Follow-up	6 months
Format	Group
Participants	126 adults diagnosed with BED. The mean ages of participants in the two treatment groups were 50.8 and 51.1 years, and 54% were female
Treating clinician(s)	Clinical psychologists
Intervention(s)	EFT (*n* = 63)
Comparison group(s)	EFT and dietary counselling (*n* = 63)
Procedure	Participants were assigned to the treatment condition based on consensus among treating clinicians. The EFT treatment was a manualised program delivered via 20 weekly 60- to 90-minute group therapy sessions. Four groups of 10–15 people per group were treated over a 5-month period. The combined therapy group received an additional 12 weekly 1-hour individual dietary counselling sessions in the first 3 months, followed by eight weekly 30-minute group sessions (in addition to EFT sessions) for the final 2 months.
Summary of findings	Binge eating episodes decreased significantly over the 20 sessions of therapy for both treatment conditions, with no between-group differences. Change in weight within both conditions was also significant from baseline to posttreatment; however, the rate of change was more rapid for the combined-treatment condition. Participants with an earlier response to treatment were more likely to have improved binge eating and weight outcomes at 6-month follow-up.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 87. Copyright 2018 by the Australian Psychological Society.

Interpersonal psychotherapy

Title of paper	**Rates of abstinence following psychological or behavioral treatments for binge-eating disorder: Meta-analysis**
Full citation	Linardon, J. (2018). Rates of abstinence following psychological or behavioral treatments for binge-eating disorder: Meta-analysis. *International Journal of Eating Disorders, 51*(8), 785-797. https://dx.doi.org/10.1002/eat.22897
Level of evidence	Level I
Design	Meta-analysis (39 RCT; 65 treatment conditions, *N* = 3 for IPT)
Format	Individual, group; face-to-face, Internet-based.
Participants	2,340 adult participants diagnosed with BED
Demographic characteristics	Participants' mean ages ranged between 21and 52 years. There was one study on adolescent participants (age not specified). Females represented between 67% and 100% of the study samples. When reported (20 studies), ethnicity was mostly Caucasian (76%-97%, 19 studies) or Latino (100%, 1 study).
Treating clinician type	Not specified
Intervention	IPT
Outcome(s) measured	Post-treatment and follow-up abstinence rates as measured by self–report diary recall, EDE interview, self–report EDE–Q, semi–structured interview, Eating–behavior IV (self–report), QEWP, and SCID. Definitions and measurements of abstinence varied across studies; most trials (*k* = 25; 64%) defined abstinence as the complete cessation of binge eating within the past 28 days.
Procedure	This meta-analysis estimated the prevalence of patients with BED who achieved binge eating abstinence following psychological or behavioral treatments. Databases and international clinical trials registries were searched during December 2018. Subgroup analyses were conducted across treatments for delivery mode, abstinence definition, assessment method, number of treatment sessions, trial quality, and patient demographics.
Follow up	Yes, 3 to 48 months.
Statistics summary	In ITT samples, the total weighted percentage of participants who achieved abstinence was 63.1% ($N_{conditions}$ =3, 95% CI [49.2,75.1], I^2= 63%) at post-treatment and 53.7% ($N_{conditions}$ = 2, 95% CI [33.5,72.7], I^2 = 0%) at follow-up. In completer samples, the total weighted percentage of participants who achieved abstinence was 73.8% ($N_{conditions}$ = 1, 95% CI [63.1,82.2], I^2= 0%) at post-treatment and 77.8% ($N_{conditions}$ = 1, 95% CI [63.4, 87.6], I^2 = 0%) at follow-up.
Conflict of interest	Not specified
Risk of bias	Unclear
Summary of findings	Findings showed that over 63% of participants who were allocated to ITP achieved abstinence at post-treatment and 54% of them still did three to 48 months after treatment. Interpersonal psychotherapy was associated with the highest abstinence estimates of all the psychological and behavioural treatments investigated (mostly CBT). Caution is warranted in interpreting these findings as observed estimates were based on within-groups effect sizes.

Note. EDE: Eating Disorder Examination; EDE–Q: Eating Disorder Questionnaire; QEWP: Questionnaire on Eating and Weight Patterns; ITT: Intention-to-treat; SCID: Structured Clinical Interview.

Mindfulness-based stress reduction

Title of paper	**Mindfulness-based eating awareness training (MB-EAT) for binge eating: A randomized clinical trial**
Full citation	Kristeller, J., Wolever, R.Q. & Sheets, V. (2014). Mindfulness-Based Eating Awareness Training (MB-EAT) for binge eating: A randomized clinical trial. *Mindfulness 5*, 282–297. https://doi.org/10.1007/s12671-012-0179
Level of evidence	Level II
Design	RCT
Follow-up	1 and 4 months
Format	Group
Participants	150 adults diagnosed with BED (66.7%) or who partially met the diagnostic criteria. The mean age of participants was 46.6 years, and 88% were female.
Treating clinician(s)	Not reported
Intervention(s)	Mindfulness-based eating awareness training (*n* = 53)
Comparison group(s)	CBT-based psychoeducation (*n* = 50), waitlist control (*n* = 47)
Procedure	140 participants were randomly allocated to a mindfulness-based intervention (a program based on MBSR), a psychoeducational CBT-based program, or a waitlist control. Due to logistical constraints, 10 participants were not assigned to conditions by means of randomisation. Participants in both active groups received a manualised 12-session group intervention comprising nine weekly sessions and, following these, three booster sessions once per month. In both treatment conditions, sessions were of 90 minutes' duration, except for sessions one (1 hour) and six (2 hours).
Summary of findings	Large within-group treatment effects were found for both active conditions from baseline to follow-up on most outcome measures, including binge eating and depression. Large between-group treatment effects were also found in favour of the active groups compared with waitlist control on binge eating. Of those meeting BED diagnostic criteria at baseline, 80% and 82% of those in the mindfulness-based and psychoeducation groups, respectively, no longer met BED criteria at 1-month follow-up, compared with 38% of those in the waitlist group. At 4-month follow-up, 95% and 76% of participants in the mindfulness-based and psychoeducation groups respectively no longer met diagnostic criteria for BED; however, these rates were not statistically different to the waitlist group (48%).

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 86. Copyright 2018 by the Australian Psychological Society.

Psychoeducation

Title of paper	**Mindfulness-based eating awareness training (MB-EAT) for binge eating: A randomized clinical trial**
Full citation	Kristeller, J., Wolever, R.Q. & Sheets, V. (2014). Mindfulness-based eating awareness training (MB-EAT) for binge eating: A randomized clinical trial. *Mindfulness, 5*, 282–297. https://doi.org/10.1007/s12671-012-0179
Level of evidence	Level II
Design	RCT
Follow-up	1 and 4 months
Format	Group
Participants	150 adults diagnosed with BED (66.7%) or who partially met the diagnostic criteria. The mean age of participants was 46.6 years, and 88% were female.
Treating clinician(s)	Not reported
Intervention(s)	Mindfulness-based eating awareness training (*n* = 53)
Comparison group(s)	CBT-based psychoeducation (*n* = 50), waitlist control (*n* = 47)
Procedure	140 participants were randomly allocated to a mindfulness-based intervention (a program based on MBSR), a psychoeducational CBT-based program, or a waitlist control. Due to logistical constraints, 10 participants were not assigned to conditions by means of randomisation. Participants in both active groups received a manualised 12-session group intervention comprising nine weekly sessions and, following these, three booster sessions once per month. In both treatment conditions, sessions were of 90 minutes' duration, except for sessions one (1 hour) and six (2 hours).
Summary of findings	Large within-group treatment effects were found for both active conditions from baseline to follow-up on most outcome measures, including binge eating and depression. Large between-group treatment effects were also found in favour of the active groups compared with waitlist control on binge eating. Of those meeting BED diagnostic criteria at baseline, 80% and 82% of those in the mindfulness-based and psychoeducation groups, respectively, no longer met BED criteria at 1-month follow-up, compared with 38% of those in the waitlist group. At 4-month follow-up, 95% and 76% of participants in the mindfulness-based and psychoeducation groups respectively no longer met diagnostic criteria for BED; however, these rates were not statistically different to the waitlist group (48%).

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 86. Copyright 2018 by the Australian Psychological Society.

Self-guided digital interventions

Title of paper	**The efficacy of ehealth interventions for the treatment of adults diagnosed with full or subthreshold binge eating disorder: Systematic review and meta-analysis.**
Full citation	Moghimi, E., Davis, C., & Rotondi, M. (2021). The efficacy of ehealth interventions for the treatment of adults diagnosed with full or subthreshold binge eating disorder: Systematic review and meta-analysis. *Journal of Medical Internet Research*, *23*(7), e17874. https://dx.doi.org/10.2196/17874
Level of evidence	Level I
Design	Systematic review and meta-analysis (*N* = 3 RCTs)
Format	Digital intervention, with therapist guidance.
Participants	293 adult participants diagnosed with BED or subthreshold BED (*n* = 31)
Demographic characteristics	Participants' mean age ranged from 35.1 (*SD* = 9.9) to 40.2 (*SD* = 11.4) years. Most participants (98%) were female.
Treating clinician type	Trained mental health professional (clinical psychologists), trained health professional (therapists with a Bachelor of Science in nursing or social work or a Master of Science in psychology)
Intervention	Internet-based cognitive behavioral therapy (iCBT) and Internet-guided self-help based on CBT vs waitlist control
Outcome(s) measured	Study outcomes were frequency of binge episodes as measured by the OBE, BMI, and ED psychopathology as measured by the EDE-Q.
Procedure	This systematic review and meta-analysis investigated the effectiveness of eHealth treatments in adults diagnosed with full or subthreshold BED. Electronic databases were searched until February 2019.
Follow up	No
Statistics summary	A random-effect meta-analysis showed a greater pooled effect of the treatment group compared with the waitlist group on OBE (*SMD* = -0.77; 95% CI [-1.38, -1.16], p = .01; I^2 = 77%, p = .04) and on the EDE-Q Total score (*SMD* = -0.71, 95% CI [-1.20, -0.22], p < .01; I^2 = 77%, p = .01), as well as the on the EDE-Q shape concerns and weight concerns subscales.
Conflict of interest	Yes (one author is developing a mobile app that tracks psychological well-being and screens for pathological overeating in individuals who are looking to lose weight).
Risk of bias	High
Summary of findings	The results of these meta-analysis demonstrated the efficacy of Internet-based CBT and Internet-guided self-help based on CBT when compared together to waitlist in reducing binge episodes, eating disorder psychopathology, and shape and weight concern in adults diagnosed with BED. There was no significant difference in BMI between the eHealth interventions and controls. These findings provide promising results for the use of internet-based cognitive behavioral therapy for binge eating disorder treatment which may provide a more accessible and cost-effective treatment option. However, these findings warrant caution due to the limited number of studies included and limited participant pool, and the high heterogeneity in the meta-analysis results for the outcomes of interest.

Note. BMI: Body Mass Index; EDE-Q: Eating Disorder Examination-Questionnaire; OBE: Objective Binge Episodes.

Insomnia disorders

SUMMARY OF EVIDENCE

The current review identified Level I evidence[79] in support of cognitive behaviour therapy for insomnia disorders delivered in individual, group, face-to-face, telehealth/videoconferencing, and guided bibliotherapy formats. Level I evidence was also identified in support of self-guided digital interventions and, more specifically, cognitive behaviour therapy for insomnia delivered in a self-guided digital format.

Level I evidence was found in support of mindfulness-based stress reduction when delivered in a group format, and Level II evidence in support of group acceptance and commitment therapy was also identified.

Guidelines provided by the Australasian Sleep Association (2017) list cognitive behaviour therapy for insomnia (CBT-I) as a first-line treatment for insomnia disorders in adults. These guidelines also highlight the importance of improving access to cognitive behaviour therapy for insomnia, which is bolstered by reviews supporting the use of digital interventions for insomnia. The use of mindfulness-based therapy when used in combination with behavioural therapies was acknowledged as a field of emerging evidence at the time of guideline publication.

[79] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of insomnia disorders in adults.

Acceptance and commitment therapy

Title of paper	**Acceptance and Commitment Therapy (ACT) improves sleep quality, experiential avoidance, and emotion regulation in individuals with insomnia-results from a randomized interventional study**
Full citation	Zakiei, A., Khazaie, H., Rostampour, M., Lemola, S., Esmaeili, M., Dürsteler, K., Brühl, A. B., Sadeghi-Bahmani, D., & Brand, S. (2021). Acceptance and commitment therapy (ACT) improves sleep quality, experiential avoidance, and emotion regulation in individuals with insomnia-results from a randomized interventional study. *Life, 11*(2). https://doi.org/10.3390/life11020133
Level of evidence	Level II
Design	Randomised controlled trial (RCT)
Format	Group, face to face
Participants	A sample size of *n* = 40 participants was randomised, with *n* = 20 in the intervention group (*n* = 17 completing) and *n* = 20 in the control group (*n* = 18 completing). All participants had insomnia, as assessed by self-reports and a structured clinical interview based on DSM-5 criteria.
Demographic characteristics	The mean age of participants was 41.45 years (*SD* = 8.66) and 41.47 years (*SD* = 7.48) in the intervention and control groups, respectively. The percentage of females across both groups was 62.9%. The study was conducted in Iran.
Treating clinician type	Trained mental health professionals (clinical psychologist and ACT-certified psychotherapist; active control groups conducted by a social worker)
Intervention	Group ACT (GACT)
Study groups	Intervention group: GACT Control group: Active (weekly group meetings)
Outcome(s) measured	Severity of insomnia symptoms as measured by the PSQI and DBAS.
Procedure	The GACT component was comprised of 60-70 min weekly sessions over 8 weeks. Each group consisted of 8-9 participants and followed therapy manuals. Session content included values work, mindfulness, reducing experiential avoidance, promoting cognitive defusion and homework exercises. The control group underwent the same frequency and duration of group sessions, however the group discussions focused only on daily activities and problems, with no treatment elements intended to be therapeutic.
Follow up	Yes; 12 weeks
Statistics summary	A series of ANCOVAs for repeated measures was used to compare group differences in the PSQI and DBAS over time. As participants in the intervention group scored significantly lower PSQI scores than the intervention group at baseline, PSQI at baseline was introduced as a covariate. The time x group interaction indicated that the intervention group had significantly lower scores over time compared to the control group on both PSQI (F (2,64) = 27.01, p < .001, η^2 = .458) and the DBAS (F (2,64) = 207.82, p < .001, η^2 = .867).
Conflict of interest	None declared
Risk of bias	High
Summary of findings	These findings support the efficacy of group ACT in the treatment of insomnia when compared to control. The improvements in insomnia symptoms relative to the control group were maintained at follow-up.

Note. DBAS: Dysfunctional Beliefs and Attitudes about Sleep; PSQI: Pittsburgh Sleep Quality Index.

Cognitive behaviour therapy

Title of paper	**Comparative efficacy of onsite, digital, and other settings for cognitive behavioral therapy for insomnia: A systematic review and network meta-analysis**
Full citation	Simon, L., Steinmetz, L., Feige, B., Benz, F., Spiegelhalder, K., & Baumeister, H. (2023). Comparative efficacy of onsite, digital, and other settings for cognitive behavioral therapy for insomnia: A systematic review and network meta-analysis. *Scientific Reports*, *13*(1), 1929. https://doi.org/10.1038/s41598-023-28853-0
Level of evidence	Level I
Design	Systematic review and network meta-analysis (52 studies)
Format	Individual; group, face-to-face; videoconferencing; self-guided
Participants	Total sample size of *n* = 12,544 participants who had been diagnosed with insomnia disorder as per the DSM or other consistent criteria.
Demographic characteristics	The total sample had a mean age of 43.4 years, and 70.6% were female. Demographic information related to cultural context or countries the studies were conducted in was not specified.
Treating clinician type	Trained mental health professionals (psychologists, therapists, students); other health professionals (nurses; sleep medicine experts); other (sleep coaches)
Intervention	CBT
Outcome(s) measured	Insomnia severity as measured by the AIS, ISI, ISQ, SCI, and the insomnia subscale of the SLEEP-50.
Procedure	A systematic review and network meta-analysis of RCTs was conducted to investigate the effectiveness of CBT across various delivery formats in the treatment of insomnia. The database search covered 1987 (the publication date of DSM-III-R) to 23 November 2021.
Follow up	No
Statistics summary	Random-effect frequentist meta-analyses were conducted. Large effect sizes in favour of the intervention group were found for CBT delivered face-to-face (*SMD* = -1.27, 95% CI [-1.70, -0.84]), in groups (*SMD* = -1.00, 95% CI [-1.42, -0.59]), via videoconferencing (*SMD* = -.128, 95% CI [-2.06, -0.50), and guided bibliotherapy (-0.99, 95% CI [-1.18, 0.38]). Substantial heterogeneity was reported (I^2 = 95.5%).
Conflict of interest	Yes (Professional)
Risk of bias	Low
Summary of findings	This network meta-analysis supports the efficacy of CBT in reducing severity of insomnia symptoms when delivered in a range of synchronously delivered formats, including face-to-face, videoconferencing (telehealth), group, and guided bibliotherapy.

Note. AIS: Athens Insomnia Scale; ISI: Insomnia Severity Index; ISQ: Insomnia Symptom Questionnaire; SCI: Sleep Condition Indicator.

Mindfulness-based stress reduction

Title of paper	**Effects of mindfulness-based stress reduction on sleep quality and mental health for insomnia patients: A meta-analysis**
Full citation	Chen, T.-L., Chang, S.-C., Hsieh, H.-F., Huang, C.-Y., Chuang, J.-H., & Wang, H.-H. (2020). Effects of mindfulness-based stress reduction on sleep quality and mental health for insomnia patients: A meta-analysis. *Journal of Psychosomatic Research*, *135*. https://doi.org/10.1016/j.jpsychores.2020.110144
Level of evidence	Level I
Design	Systematic review and meta-analysis (7 studies)
Format	Group, face-to-face
Participants	Total sample size of *n* = 497 participants who had been diagnosed with insomnia disorder as per the DSM, ICSD-3, CCMD-3, or scored above a cut-off on the PSQI (1 study).
Demographic characteristics	Demographic information regarding mean age and gender distribution of the total sample was not provided. The included studies were conducted in the USA and China.
Treating clinician type	Not specified
Intervention	MBSR
Outcome(s) measured	Insomnia severity as measured by the PSQI.
Procedure	A systematic review and meta-analysis of RCTs was conducted to investigate the effectiveness of a 6-8 week group MBCT program in the treatment of insomnia. The database search covered inception to August 2019.
Follow up	No
Statistics summary	The random-effects model was used to conduct the meta-analysis. Analysis outcomes indicated that scores on the PSQI showed significant improvement in the MBSR group when compared to control (*SMD* = -0.69, 95% CI [-1.12, -0.26], Z = 3.16, p = .002; I^2 =76%).
Conflict of interest	None declared
Risk of bias	High
Summary of findings	This meta-analysis provides preliminary support for the use of MBSR in the treatment of insomnia. Authors note several limitations, including the small number of studies available, lack of follow-up data, and the fact that all studies included were only conducted in the USA and China, making generalisability to other cultural contexts uncertain.

Note. CCMD: Chinese Classification of Mental Disorders; ICSD: International Classification of Sleep Disorders; PSQI: Pittsburgh Sleep Quality Index.

Self-guided digital interventions

Title of paper	**Digital cognitive behavioral therapy for insomnia on depression and anxiety: A systematic review and meta-analysis**
Full citation	Lee, S., Oh, J. W., Park, K. M., Lee, S., & Lee, E. (2023). Digital cognitive behavioral therapy for insomnia on depression and anxiety: A systematic review and meta-analysis. *NPJ Digital Medicine*, *6*(1), 52. https://doi.org/10.1038/s41746-023-00800-3
Level of evidence	Level I
Design	Systematic review and meta-analysis (22 studies)
Format	Digital interventions, guided and unguided
Participants	Total sample size of *n* = 10,486 adults participants with a formal diagnosis of insomnia or self-reported symptoms consistent with the DSM, ICD, or International Classification of Sleep Disorders.
Demographic characteristics	The mean age of the dCBT-I group sample was 43.8±8.7 years, and for the control group sample, 43.6±8.3 years. Details related to gender were not provided. Included studies were conducted in Europe and the United States.
Treating clinician type	Unspecified
Intervention	Digital CBT for insomnia (dCBT-I)
Outcome(s) measured	Sleep outcomes as measured by the ISI, SCI, and PSQI.
Procedure	A systematic review and meta-analysis of RCTs was conducted to investigate the effectiveness of dCBT-I in the treatment of insomnia. Subgroup analyses were conducted for studies in which the intervention was totally self-assisted. The database search covered inception to 15th January, 2022.
Follow up	No
Statistics summary	Pairwise meta-analyses were used to calculate the overall between-group standard mean differences. A significant effect favouring the intervention group was found for sleep outcomes (*SMD* = -0.76, 95% CI [-0.95, -0.57], $p < 0.001$; $I^2 = 90.59$). A subgroup analysis of the *k* = 14 studies focused on totally self-assisted dCBT-I also find a significant effect favouring the intervention group for sleep outcomes (*SMD* = -0.81, 95% CI [-1.04, -0.59], $p < 0.001$; $I^2 = 92.69$).
Conflict of interest	None declared
Risk of bias	High
Summary of findings	These findings support the efficacy of dCBT-I in the treatment of insomnia and indicate that the reduction in insomnia symptoms is still significantly greater for dCBT-I compared to control when it is delivered with no therapist guidance.

Note. ISI: Insomnia Severity Index; SCI: Sleep Condition Indicator; PSQI: Pittsburgh Sleep Quality Index.

Title of paper	**eHealth-based psychosocial interventions for adults with insomnia: Systematic review and meta-analysis of randomized controlled trials**
Full citation	Deng, W., van der Kleij, R. M. J. J., Shen, H., Wei, J., Brakema, E. A., Guldemond, N., Song, X., Li, X., van Tol, M. J., Aleman, A., & Chavannes, N. H. (2023). eHealth-based psychosocial interventions for adults with insomnia: Systematic review and meta-analysis of randomized controlled trials. *Journal of Medical Internet Research*, *25*, e39250. https://doi.org/10.2196/39250
Level of evidence	Level I
Design	Systematic review and meta-analysis (37 studies)
Format	Digital interventions, guided and unguided
Participants	Total sample size of *n* = 13,227 participants who had been diagnosed with insomnia disorder as per the DSM or International Classification of Sleep Disorders (ICSD) or had self-reported symptoms of insomnia.
Demographic characteristics	The total sample had a mean age of 46.3 years (*SD* = 5.6), and 71% were female. Included studies were conducted in the USA, the Netherlands, Australia, Japan, Sweden, the UK, Norway, Switzerland, Canada, China, Ireland, and Finland.
Treating clinician type	Not specified
Intervention	Self-guided digital interventions
Outcome(s) measured	Insomnia severity as measured by the ISI and PSQI.
Procedure	A systematic review and meta-analysis of RCTs was conducted to investigate the effectiveness of eHealth-based interventions in the treatment of insomnia. Subgroup analyses were conducted for both clinical and subclinical populations. The database search covered inception to 16 February 2021 and for PubMed, 6 December 2021.
Follow up	Yes (ranging from 1-12 months)
Statistics summary	A random-effects model was used to calculate Hedge's *g* effect sizes. In the subgroup analysis which focused only on patients with clinically diagnosed insomnia, a significant effect on symptom severity in favour of the intervention group when compared to inactive control conditions was found (Hedge's *g* = -1.15, 95% CI [-1.32, -0.97], $p < .001$; $I^2 = 72\%$).
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	This meta-analysis supports the efficacy of eHealth-based interventions in the treatment of insomnia when compared to inactive control conditions.

Note. ICSD: International Classification of Sleep Disorders; ISI: Insomnia Severity Index; PSQI: Pittsburgh Sleep Quality Index.

Bodily distress disorder

SUMMARY OF EVIDENCE

The diagnosis of bodily distress disorder first appeared in the ICD-11 (2022). This diagnosis is captured by different diagnostic categories and terminologies across the DSM-IV, DSM-5, and ICD-10, reflecting changes over time in the conceptualisation of the disorder. The research on bodily distress disorder presented below includes somatic symptom disorder (DSM-5), somatisation disorder (DSM-IV, ICD-10), and undifferentiated somatoform disorder (DSM-IV), acknowledging differences in symptom duration, symptom numbers and specificity, and the presence or absence of "excessive attention" in the diagnostic criteria.

Consistent with ICD-11 classification, the research presented below does not include medically unexplained/persistent (physical/somatic) symptoms, pain-related conditions (e.g., chronic pain, fibromyalgia), chronic fatigue syndrome, functional gastrointestinal disorders, functional neurological disorders, hypochondriasis/illness anxiety disorder, and body dysmorphic disorder. Research on functional neurological disorders is covered in the chapter related to dissociative disorders.

Level I evidence[80] was identified in support of cognitive behaviour therapy and Level II evidence was identified in support of mindfulness-based stress reduction combined with medication to treat adults with bodily distress disorder.

Level II evidence found in relation to self-guided digital interventions (specifically, internet-based emotional awareness and expression therapy) was inconclusive.

[80] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of bodily distress disorder in adults.

Cognitive behaviour therapy

Title of paper	**Non-pharmacological interventions for somatoform disorders and medically unexplained physical symptoms (MUPS) in adults**
Full citation	van Dessel, N., den Boeft, M., van der Wouden, J. C., Kleinstäuber, M., Leone, S. S., Terluin, B., Numans, M. E., van der Horst, H. E., & van Marwijk, H. (2014). Non-pharmacological interventions for somatoform disorders and medically unexplained physical symptoms (MUPS) in adults. *The Cochrane Database of Systematic Reviews, 2014*(11), CD011142. https://doi.org/10.1002/14651858.CD011142.pub2
Level of evidence	Level I
Design	Systematic review (21 studies) and meta-analysis (19 studies) of RCTs and cluster RCTs
Follow-up	2 weeks to 2 years
Format	Individual, group
Participants	2,658 adults with medically unexplained physical symptoms (nine studies) or who met diagnostic criteria for somatisation disorder or somatoform disorder (three studies), somatisation symptoms (five studies), or bodily distress syndrome (four studies). The mean age was 43 years in all included studies, ranging from 35 to 49 years. Most studies comprised more females than males.
Treating clinician(s)	Not reported
Intervention(s)	CBT, mindfulness-based interventions, psychodynamic therapy
Comparison group(s)	Wait list, TAU, enhanced or structured care, alternative therapy
Procedure	Systematic review and meta-analysis of RCTs and cluster RCTs published up to November 2013 to assess the effectiveness of nonpharmacological interventions for somatoform disorders and medically unexplained physical symptoms in adults. Across studies, the mean number of sessions ranged from one to 13 over a period of 1 day to 9 months.
Summary of findings	Psychological therapies as a whole were found to be more effective than TAU and waitlist in terms of the reduction of symptom severity, but effect sizes were small. For the studies in which CBT was investigated, compared with TAU or waitlist, CBT was shown to be significantly more effective in reducing the severity of somatic symptoms at posttreatment, with a small to medium treatment effect. Results were maintained up to 1 year follow-up. The overall quality of the evidence was considered to be low.

Note. Most (74%) of the participants of the 10 CBT studies included in the comparison of CBT vs. usual care or waiting list were not diagnosed with MUPS[81]. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 109. Copyright 2018 by the Australian Psychological Society.

[81] Note added by the 2024 review researchers.

Mindfulness-based stress reduction

Title of paper	**Effect of mindfulness-based stress reduction program on psychological symptoms, quality of life, and symptom severity in patients with somatic symptom disorder**
Full citation	Zargar, F., Rahafrouz, L., & Tarrahi, M. J. (2021). Effect of mindfulness-based stress reduction program on psychological symptoms, quality of life, and symptom severity in patients with somatic symptom disorder. *Advanced Biomedical Research, 10*, 9. https://doi.org/10.4103/abr.abr_111_19
Level of evidence	Level II
Design	Randomised controlled trial
Format	Group, face-to-face
Participants	40 participants diagnosed with somatic distress disorder based based on a clinical interview (intervention group: *n* = 20; control group: *n* = 20)
Demographic characteristics	Mean age: 37.1 years (*SD*= 8.3) years. Females: 62.2%. Participants were patients referred to a psychosomatic clinic and a hospital psychiatry clinic in Iran.
Treating clinician type	Not specified
Intervention	MBSR
Study groups	Intervention group: venlafaxine with an 8-week MBSR program Control group: venlafaxine
Outcome(s) measured	Somatic symptom disorder symptom severity as measured by the PHQ-15; depression, anxiety, and stress symptoms as measured by the DASS; and health-related quality of life as measured by the SF-36.
Procedure	Participants were randomly divided into two groups. The intervention group was treated with venlafaxine and participated in eight weekly two-hour sessions of the MBSR program. The control group was treated with venlafaxine alone. Venlafaxine was started at 37.5 mg daily and gradually increased to 150 mg daily.
Follow up	No
Statistics summary	Paired samples two-tailed t-tests showed a statistically significant difference (reduction) in pre- and post-intervention PHQ-15 mean score for the intervention group but not for the control group ($p < .001$). Independent samples two-tailed t-tests revealed a statistically significant difference in the post-intervention PHQ-15 mean scores between the intervention group ($M = 1.95$, $SD = 2.01$) and the control group ($M = 10.27$, $SD = 2.16$), $t = 0.87$, $p < .001$ (no effect size provided).
Conflict of interest	None declared
Risk of bias	High
Summary of findings	MBSR in combination with venfalaxine reduced the severity of symptoms of somatic symptom disorder, depression, anxiety and stress whereas venfalaxine alone did not. MBSR in combination with venfalaxine is superior to venfalaxine alone in the treatment of somatic symptom disorder in adult populations. However, interpretation of this finding warrants caution due to the study's small sample size.

Note. PH-15: DASS: Depression Anxiety Stress Scale; Patient Health Questionnaire Physical Symptom; SF-36: 36-Item Short-Form Survey.

Self-guided digital interventions

Title of paper	**Internet-based emotional awareness and expression therapy for somatic symptom disorder: A randomized controlled trial**
Full citation	Maroti, D., Lumley, M. A., Schubiner, H., Lilliengren, P., Bileviciute-Ljungar, I., Ljotsson, B., & Johansson, R. (2022). Internet-based emotional awareness and expression therapy for somatic symptom disorder: A randomized controlled trial. *Journal of Psychosomatic Research, 163*, 111068. https://doi.org/10.1016/j.jpsychores.2022.111068
Level of evidence	Level II
Design	Randomised controlled trial
Format	Digital intervention, with therapist guidance.
Participants	74 participants diagnosed with somatic symptom disorder (SSD) and with a total PHQ-15 score ≥ 5 and a symptom duration ≥ 6 months. Only patients with SSD symptoms not judged part of a somatic disease or structural pathology were included in the trial. This is a deviation from the DSM-5 diagnosis of SSD, which can include patients with a range of medical conditions.
Demographic characteristics	Participants' age range was 23-64 years and mean age *M* = 42.9 (*SD* = 10.4). Female represented 82.4% of the sample. The participants lived in Sweden.
Treating clinician type	Trained mental health professional (psychiatrist, psychologists); student (psychology master's).
Intervention	Internet-based emotional awareness and expression therapy (I-EAET), a newly developed treatment for SSD targeting emotional processing of trauma and conflict as a mechanism of symptom change.
Study groups	Intervention group: I-EAET Control group: waitlist (WL)
Outcome(s) measured	Primary outcomes were severity of somatic symptoms and pain intensity as measured respectively by the PHQ-15 and the BPI-4. Secondary outcomes were functional impairment, and symptoms of depression, anxiety, post-traumatic stress disorder, insomnia, and daytime sleepiness as measured respectively by the SDS, PHQ-9, GAD-7, PCL-5, ISI, and ESS. Emotional processing was assessed as a potential mediator with the EPS-25.
Procedure	I-EAET is a 10-week, self-guided, internet-based set of 10 modules accompanied by weekly electronic written contact with a therapist who provides feedback or guidance. The 10 modules are divided into five steps that include psychoeducation, developing a self-compassionate mindset, and engaging in emotional exposure and expression.
Follow up	Yes, 4 months post-treatment
Statistics summary	Linear mixed models using ITT showed statistically significant differences in somatic symptom severity between groups at posttreatment and follow-up, with a greater reduction in the I-EAET group (d = 0.44 and d = 0.46, respectively). However, differences were not significant after applying a Bonferroni-Holm correction. Response rates (improvement ≥50% from baseline) were significantly different between the I-EAET (21%) and WL groups (3%) at follow-up ($\chi^2(1, N = 67) = 5.32$, $p = 0.02$) but not posttreatment.
Conflict of interest	Yes, for three of the authors (financial and/or commercial relationships).
Risk of bias	High
Summary of findings	There was insufficient evidence to conclude that I-EAET reduces somatic symptoms. However, I-EAET may be a promising treatment for SSD because I-EAET recipients exhibited higher response rates (defined as symptom improvement ≥50% from baseline) than the waitlist controls at follow-up. Interpretation of these findings warrant caution due to limited statistical power. The sample was predominantly female and self-referred, had high socioeconomic status and education, and was experienced with psychological treatment, which limitsthe generalisability of findings.

Note. BPI-4: Brief Pain Inventory; EPS-25: Emotional Processing Scale; ESS: Epworth Sleepiness Scale; GAD-7: Generalized Anxiety Disorder-7; ITT: intention-to-treat; ISI: Insomnia Severity Index; PCL-5: PTSD Checklist version 5; PHQ-9: Patient Health Questionnaire-9; PHQ-15: Patient Health Questionnaire-15; SDS: Sheehan Disability Scale.

Borderline personality disorder

SUMMARY OF EVIDENCE

The current review has identified Level I evidence[82,83] in support of dialectical behaviour therapy and schema therapy in the treatment of borderline personality disorder in adults. Level II evidence was identified in support of group-based acceptance and commitment therapy, as well as Level IV supportive of mindfulness-based cognitive therapy.

Level I evidence in relation to cognitive behaviour therapy, interpersonal psychotherapy, and transference-focused psychotherapy was inconclusive, with the need for further research to strengthen findings highlighted.

[82] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of borderline personality disorder in adults.

[83] As per research methodology, the article with the highest level of evidence, lowest risk of bias rating and most recent publication date was selected for write-up. A 2023 meta-analysis comprising of 43 studies met this criteria for a number of the interventions listed and the summary tables below focus on the statistical outcomes and findings specific to each intervention covered by that meta-analysis.

Acceptance and commitment therapy

Title of paper	**Acceptance and commitment therapy group treatment for symptoms of borderline personality disorder: A public sector pilot study**
Full citation	Morton, J., Snowdon, S., Gopold, M., & Guymer, E. (2012). Acceptance and commitment therapy group treatment for symptoms of borderline personality disorder: A public sector pilot study. *Cognitive and Behavioral Practice, 19*(4), 527–544. https://doi.org/10.1016/j.cbpra.2012.03.005
Level of evidence	Level II
Design	Pilot RCT
Follow-up	13 weeks
Format	Group
Participants	41 adult outpatients with four or more of the nine BPD DSM-IV diagnostic criteria (participants met on average six criteria). The mean ages of participants in the two groups were 35.6 and 34 years, and 92.7% were female.
Treating clinician(s)	Not reported
Intervention(s)	ACT plus TAU (*n* = 21)
Comparison group(s)	TAU control (*n* = 20)
Procedure	Participants were randomly allocated to either a brief group-based ACT intervention consisting of 12 x 2-hour weekly therapy sessions, or TAU which typically consisted of medication management, low-key support, and crisis support if needed. Participants in the TAU group were offered the ACT intervention after 13 weeks.
Summary of findings	Significantly greater improvements from baseline to posttreatment were found for the intervention group when compared with the control group on the primary outcome measure, self-rated BPD symptoms. This was associated with a large within-group effect size. Secondary outcome measures of anxiety and hopelessness also improved significantly more for the ACT group compared with the control group, with small and large within-group effect sizes respectively. Based on data from 10 participants, treatment gains were maintained at follow-up for the intervention group.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 111. Copyright 2018 by the Australian Psychological Society.

Cognitive behaviour therapy

Title of paper	**Which psychotherapy is most effective and acceptable in the treatment of adults with a (sub)clinical borderline personality disorder? A systematic review and network meta-analysis**
Full citation	Setkowski, K., Palantza, C., van Ballegooijen, W., Gilissen, R., Oud, M., Cristea, I. A., Noma, H., Furukawa, T. A., Arntz, A., van Balkom, A. J. L. M., & Cuijpers, P. (2023). Which psychotherapy is most effective and acceptable in the treatment of adults with a (sub)clinical borderline personality disorder? A systematic review and network meta-analysis. *Psychological Medicine, 53*(8), 3261–3280. https://doi.org/10.1017/S0033291723000685
Level of evidence	Level I
Design	Systematic review and meta-analysis of 43 RCTs (5 studies included a CBT comparison group)
Format	Combination of individual and group, face to face and with adjunct telehealth
Participants	3,273 adults diagnosed with BPD according to DSM or ICD criteria (239 participants in CBT studies)
Demographic characteristics	The mean age of participants ranged from 20.4 – 45.7 years, with 80.4% being female. Where reported, studies were conducted in Europe, the USA, and Iran
Treating clinician type	Not reported
Intervention	Cognitive behavioural therapy
Outcome(s) measured	Primary outcomes were overall BPD symptom severity measured by BIS, BPDSI, CGI-BPD and others, as well as suicidal behaviour, measured by rates of suicide attempts, CSHI, SHI, PHI, and others.
Procedure	A systematic review and network meta-analysis compared the efficacy of psychological interventions in treating BPD in adults. In particular, effectiveness in treating overall BPD symptoms and suicidal behaviour was compared. SUCRA comparisons were made. Treatment ranged from 3 – 312 sessions (*mdn* = 52.0). The search covered RCTs from inception until January 2022.
Follow up	Yes, from 12 – 260 weeks
Statistics summary	Pairwise meta-analysis with substantial heterogeneity (I^2 = 90%) revealed that CBT did not significantly reduce BPD symptoms against TAU at post-treatment (*k* = 2, *SMD* = -0.47, 95% CI [-1.95, 1.00]). Network meta-analysis of 43 comparisons also produced inconclusive results. SUCRA ranking of 11 interventions showed CBT to be the 9th most effective for reducing BPD symptoms and 4th most effective for reducing suicidal behaviours.
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	The authors found no clear evidence that cognitive behavioural therapy is more effective than treatment as usual or other psychotherapies for treating BPD in adults. They recommend conducting higher quality RCTs with more direct evidence to strengthen the findings.

Note. BIS: Barratt Impulsiveness Scale; BPDSI: Borderline Personality Disorder Severity Index; CGI-BPD: Clinical Global Impression – Borderline Personality Disorder; CSHI: Columbia Suicide History Interview; SHI: Self-Harm Inventory; PHI: Parasuicide History Interview.

Dialectical behaviour therapy

Title of paper	**Which psychotherapy is most effective and acceptable in the treatment of adults with a (sub)clinical borderline personality disorder? A systematic review and network meta-analysis**
Full citation	Setkowski, K., Palantza, C., van Ballegooijen, W., Gilissen, R., Oud, M., Cristea, I. A., Noma, H., Furukawa, T. A., Arntz, A., van Balkom, A. J. L. M., & Cuijpers, P. (2023). Which psychotherapy is most effective and acceptable in the treatment of adults with a (sub)clinical borderline personality disorder? A systematic review and network meta-analysis. *Psychological Medicine*, *53*(8), 3261–3280. https://doi.org/10.1017/S0033291723000685
Level of evidence	Level I
Design	Systematic review and meta-analysis of 43 RCTs (19 studies included a DBT comparison group)
Format	Combination of individual and group, face to face and with adjunct telehealth
Participants	3,273 adults diagnosed with BPD according to DSM or ICD criteria (687 participants in DBT studies)
Demographic characteristics	The mean age of participants ranged from 20.4 – 45.7 years, with 80.4% being female. Where reported, studies were conducted in Europe, the USA, and Iran
Treating clinician type	Not reported
Intervention	Dialectical behaviour therapy
Outcome(s) measured	Primary outcomes were overall BPD symptom severity measured by BIS, BPDSI, CGI-BPD and others, as well as suicidal behaviour, measured by rates of suicide attempts, CSHI, SHI, PHI, and others.
Procedure	A systematic review and network meta-analysis compared the efficacy of psychological interventions in treating BPD in adults. In particular, effectiveness in treating overall BPD symptoms and suicidal behaviour was compared. SUCRA comparisons were made. Treatment ranged from 3 – 312 sessions (*mdn* = 52.0). The search covered RCTs from inception until January 2022.
Follow up	Yes, from 7 – 260 weeks
Statistics summary	Network meta-analysis with 11 nodes and 43 comparisons revealed that DBT significantly reduced BPD symptoms compared to TAU at post-treatment (*SMD* = 0.42, 95% CI [0.11, 1.73]). SUCRA ranking of 11 interventions showed DBT to be significantly more effective than TAU for reducing BPD symptoms. This result was not shown for suicidal behaviours, and no significant difference was found.
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	The review found support for the efficacy of DBT in reducing severity of BPD symptoms against treatment as usual. There is also support that within-group comparison for psychological interventions reduced suicidal behaviours, however this result was not significant when compared to treatment as usual. The authors found no clear evidence favouring one psychotherapy over another for BPD in adults and recommended conducting moderator analyses to identify who can optimally benefit from different psychotherapies.

Note. BIS: Barratt Impulsiveness Scale; BPDSI: Borderline Personality Disorder Severity Index; CGI-BPD: Clinical Global Impression – Borderline Personality Disorder; CSHI: Columbia Suicide History Interview; SHI: Self-Harm Inventory; PHI: Parasuicide History Interview.

Interpersonal psychotherapy

Title of paper	**Which psychotherapy is most effective and acceptable in the treatment of adults with a (sub)clinical borderline personality disorder? A systematic review and network meta-analysis**
Full citation	Setkowski, K., Palantza, C., van Ballegooijen, W., Gilissen, R., Oud, M., Cristea, I. A., Noma, H., Furukawa, T. A., Arntz, A., van Balkom, A. J. L. M., & Cuijpers, P. (2023). Which psychotherapy is most effective and acceptable in the treatment of adults with a (sub)clinical borderline personality disorder? A systematic review and network meta-analysis. *Psychological Medicine*, *53*(8), 3261–3280. https://doi.org/10.1017/S0033291723000685
Level of evidence	Level I
Design	Systematic review and meta-analysis of 43 RCTs (2 studies included an IPT comparison group)
Format	Combination of individual and group, face to face and with adjunct telehealth
Participants	3,273 adults diagnosed with BPD according to DSM or ICD criteria (49 participants in IPT studies)
Demographic characteristics	The mean age of participants ranged from 20.4 – 45.7 years, with 80.4% being female. Where reported, studies were conducted in Europe, the USA, and Iran
Treating clinician type	Not reported
Intervention	Interpersonal psychotherapy
Outcome(s) measured	Primary outcome was overall BPD symptom severity measured by BIS, BPDSI, CGI-BPD
Procedure	A systematic review and network meta-analysis compared the efficacy of psychological interventions in treating BPD in adults. In particular, effectiveness in treating overall BPD symptoms and suicidal behaviour was compared. SUCRA comparisons were made. Treatment ranged from 3 – 312 sessions (*mdn* = 52.0). The search covered RCTs from inception until January 2022.
Follow up	Yes, from 26 – 104 weeks
Statistics summary	Network meta-analysis with 11 nodes and 43 comparisons revealed that IPT did not significantly reduce BPD symptoms compared to TAU at post-treatment (*SMD* = 0.52, 95% CI [-0.20, 1.23]). SUCRA ranking could not make meaningful inferences due to wide CIs. Statistical analysis on suicidal behaviour for IPT could not be conducted due to insufficient studies, and the same applies to the sensitivity analysis.
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	The authors found no clear evidence that interpersonal psychotherapy is more effective than treatment as usual or other psychotherapies for treating BPD in adults. They recommend conducting higher quality RCTs with more direct evidence to strengthen the findings.

Note. BIS: Barratt Impulsiveness Scale; BPDSI: Borderline Personality Disorder Severity Index; CGI-BPD: Clinical Global Impression – Borderline Personality Disorder.

Mindfulness-based cognitive therapy

Title of paper	**A feasibility study of mindfulness-based cognitive therapy for individuals with borderline personality disorder**
Full citation	Sachse, S., Keville, S., & Feigenbaum, J. (2011). A feasibility study of mindfulness-based cognitive therapy for individuals with borderline personality disorder. *Psychology and Psychotherapy, 84*(2), 184–200. https://doi.org/10.1348/147608310X516387
Level of evidence	Level IV
Design	Case series
Follow-up	None
Format	Group
Participants	22 adults diagnosed with BPD. The mean age of participants was 39 years, and 86.4% were female.
Treating clinician(s)	Not reported
Intervention(s)	Mindfulness-based cognitive therapy
Comparison group(s)	None
Procedure	All participants received the manualised MBCT intervention adapted for individuals with BPD, which consisted of eight weekly 2-hour group therapy sessions. Participants attended a mean of 4.9 sessions, with 72.7% of the sample considered treatment completers (attended at least four sessions).
Summary of findings	Participants significantly improved on measures of attentional control from pre- to posttreatment, with small to medium effect sizes. For those who completed treatment, significant reductions were found from pre- to post-treatment on depressive symptoms. Individuals who demonstrated improvements in mindfulness also showed significant improvements on frequency of experiencing symptoms of physical dissociation.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 113. Copyright 2018 by the Australian Psychological Society.

Psychodynamic psychotherapy

Title of paper	**Which psychotherapy is most effective and acceptable in the treatment of adults with a (sub)clinical borderline personality disorder? A systematic review and network meta-analysis**
Full citation	Setkowski, K., Palantza, C., van Ballegooijen, W., Gilissen, R., Oud, M., Cristea, I. A., Noma, H., Furukawa, T. A., Arntz, A., van Balkom, A. J. L. M., & Cuijpers, P. (2023). Which psychotherapy is most effective and acceptable in the treatment of adults with a (sub)clinical borderline personality disorder? A systematic review and network meta-analysis. *Psychological Medicine*, *53*(8), 3261–3280. https://doi.org/10.1017/S0033291723000685
Level of evidence	Level I
Design	Systematic review and meta-analysis of 43 RCTs (3 studies focused on TFP)
Format	Combination of individual and group, face to face and with adjunct telehealth
Participants	3,273 adults diagnosed with BPD according to DSM or ICD criteria (128 participants in transference-focused psychotherapy groups)
Demographic characteristics	The mean age of participants ranged from 20.4 – 45.7 years, with 80.4% being female. Where reported, studies were conducted in Europe, the USA, and Iran
Treating clinician type	Not reported
Intervention	Transference-focused psychotherapy (TFP)
Outcome(s) measured	Primary outcome was overall BPD symptom severity measured by BIS, BPDSI, DSM-IV for BPD, and others, as well as suicidal behaviour measured by CISSB and others.
Procedure	A systematic review and network meta-analysis compared the efficacy of psychological interventions in treating BPD in adults. In particular, effectiveness in treating overall BPD symptoms and suicidal behaviour was compared. SUCRA comparisons were made. Treatment ranged from 3 – 312 sessions (*mdn* = 52.0). The search covered RCTs from inception until January 2022.
Follow up	Not reported (for studies focused on TFP)
Statistics summary	Network meta-analysis with 11 nodes and 43 comparisons revealed that TFP did not significantly reduce BPD symptoms compared to TAU at post-treatment (*SMD* = 0.55, 95% CI [-0.06, 1.16]). SUCRA ranking could not make meaningful inferences due to wide CIs. Furthermore, no psychotherapy was identified to be significantly superior than TAU in reducing suicidal behaviour.
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	The authors found no clear evidence that transference-focused psychotherapy is more effective than treatment as usual or other psychotherapies for treating BPD in adults. They recommend conducting higher quality RCTs with more direct evidence to strengthen the findings.

Note. BIS: Barratt Impulsiveness Scale; BPDSI: Borderline Personality Disorder Severity Index; CISSB: Cornell Interview for Suicidal and Self-Harming Behaviour – Self Report; DSM-IV for BPD: DSM Diagnostic Criteria for Borderline Personality Disorder.

Schema therapy

Title of paper	**Which psychotherapy is most effective and acceptable in the treatment of adults with a (sub)clinical borderline personality disorder? A systematic review and network meta-analysis**
Full citation	Setkowski, K., Palantza, C., van Ballegooijen, W., Gilissen, R., Oud, M., Cristea, I. A., Noma, H., Furukawa, T. A., Arntz, A., van Balkom, A. J. L. M., & Cuijpers, P. (2023). Which psychotherapy is most effective and acceptable in the treatment of adults with a (sub)clinical borderline personality disorder? A systematic review and network meta-analysis. *Psychological Medicine*, *53*(8), 3261–3280. https://doi.org/10.1017/S0033291723000685
Level of evidence	Level I
Design	Systematic review and meta-analysis of 43 RCTs (3 studies included schema therapy)
Format	Combination of individual and group, face to face and with adjunct telehealth
Participants	3,273 adults diagnosed with BPD according to DSM or ICD criteria (87 participants in transference-focused psychotherapy groups)
Demographic characteristics	The mean age of participants ranged from 20.4 – 45.7 years, with 80.4% being female. Where reported, studies were conducted in Europe, the USA, and Iran
Treating clinician type	Not reported
Intervention	Schema therapy
Outcome(s) measured	Primary outcome was overall BPD symptom severity measured by BPDSI, BSL-23 and DIB-R, as well as suicidal behaviour measured by BPDSI
Procedure	A systematic review and network meta-analysis compared the efficacy of psychological interventions in treating BPD in adults. In particular, effectiveness in treating overall BPD symptoms and suicidal behaviour was compared. SUCRA comparisons were made. Treatment ranged from 3 – 312 sessions (*mdn* = 52.0). The search covered RCTs from inception until January 2022.
Follow up	Yes; 26 weeks (for studies focused on schema therapy)
Statistics summary	Network meta-analysis with 11 nodes and 43 comparisons revealed that schema therapy significantly reduced BPD symptoms compared to TAU at post-treatment (*SMD* = 1.14, 95% CI [0.48, 1.80]). SUCRA ranking on suicidal behaviour revealed that schema therapy (SUCRA = 82.2%) and mixed interventions were ranked best out of 11 interventions, however no psychotherapy was significantly more beneficial than the other and in comparison to TAU.
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	The authors found some evidence that schema therapy was more effective than TAU in reducing BPD symptoms at post-treatment, and some evidence that it is more effective than other active treatments such as CBT and DBT, however the results are only based on three trials and should therefore be interpreted with caution.

Note: BPDSI: Borderline Personality Disorder Severity Index; BSL-23: Borderline Symptom List: DIB-R: Diagnostic Interview for Borderline Personality Disorders Revised.

Attention deficit hyperactivity disorder

SUMMARY OF EVIDENCE

Level I evidence[84] was identified in support of cognitive behaviour therapy, mindfulness-based cognitive therapy, and self-guided digital interventions in the treatment of attention deficit hyperactivity disorder (ADHD) in adults. Level I evidence was also found in relation to dialectical behaviour therapy, hypnotherapy, and psychoeducation.

Guidelines provided by AADPA (2022) and NICE (2019) outline a series of recommendations focused on multimodal treatment which may include psychosocial interventions, lifestyle changes, ADHD coaching, and pharmacotherapy.

[84] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of ADHD in adults.

Cognitive behaviour therapy

Title of paper	**Efficacy of cognitive behavioral therapy combined with pharmacotherapy versus pharmacotherapy alone in adult ADHD: A systematic review and meta-analysis**
Full citation	Li, Y., & Zhang, L. (2024). Efficacy of cognitive behavioral therapy combined with pharmacotherapy versus pharmacotherapy alone in adult ADHD: A systematic review and meta-analysis. *Journal of Attention Disorders, 28*(3), 279–292. https://doi.org/10.1177/10870547231214969
Level of evidence	Level I
Design	Systematic review and meta-analysis (n= 6 RCTs)
Delivery format	Individual and group, face-to-face.
Participants	416 participants diagnosed with ADHD based on DSM-IV criteria, irrespective of disease severity or the presence of comorbidities or complications, that had received pharmacological treatment for ADHD.
Demographic characteristics	Mean age: 33.23 (*SD* = 11.28). The participants lived in Iceland, China, Switzerland, and the United States. Females: 56.25%.
Treating clinician type	Not specified
Intervention	CBT or a CBT-based R&R2ADHD (a CBT based group program) with pharmacotherapy vs. pharmacotherapy with SCM, TAU, or NC, which did not improve patients' adverse cognition. Intervention duration range: 8-15weeks.
Outcome(s) measured	Primary outcomes: ADHD symptom severity as measured by mean score scales such as the CAARS, ADHD-SR, RATE, and K-SADS.
Procedure	This review investigated the efficacy and efficacy duration of CBT combined with pharmacotherapy compared to pharmacotherapy alone in adults with ADHD. Electronic databases were searched from the inception of the database up to 29 July 2023. Subgroup analysis by country, level of economic development level, and follow-up timepoint were conducted.
Follow up	Yes, 3 months, 6months and 9 months.
Statistics summary	A fixed-effects model meta-analysis (p = 0.33, I^2 = 12%) showed that CBT combined with pharmacotherapy was more effective than pharmacotherapy alone in improving ADHD symptoms at the end of treatment (*SMD* = −0.43, 95% CI [−0.60, −0.27], p < .001). A random-effects model meta-analysis (I^2 = 56%, p = .02) showed similar results at follow-up (*SMD* = −0.45, 95% CI [-0.70,−0.19], p = .001), with significant differences at three-month follow-up only.
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	Findings from this meta-analysis indicate that CBT combined with pharmacotherapy is more effective than pharmacotherapy alone in improving ADHD symptoms, with gains maintained after three months. In developing countries, however, there was no difference in efficacy between CBT combined with pharmacotherapy than pharmacotherapy alone. CBT combined with pharmacotherapy was also superior to pharmacotherapy alone in improving social functioning, antisocial symptoms, symptoms of depression, anxiety, inattention, and emotional control but not hyperactivity-impulsivity symptoms both at end of treatment and follow-up. Limitations include the use of different medications across studies, possibly at different dosages, and limited follow-up data.

Note. ADHD-SR: ADHD Self-Rating Behaviour Questionnaire; CAARS: Conners' Adult DHD Rating Scale; K-SADS: Kiddie Schedule for Affective Disorders and Schizophrenia; NC: nonpharmacological consultation; SCM: with standard clinical management; RATE: RATE-S Scale; TAU: treatment as usual.

Dialectical behaviour therapy

Title of paper	**Long-term efficacy of psychosocial treatments for adults with attention-deficit/hyperactivity disorder: A meta-analytic Review**
Full citation	López-Pinar, C., Martínez-Sanchís, S., Carbonell-Vayá, E., Fenollar-Cortés, J., & Sánchez-Meca, J. (2018). Long-term efficacy of psychosocial treatments for adults with attention-deficit/hyperactivity disorder: A meta-analytic Review. *Frontiers in Psychology, 9*, 638. https://doi.org/10.3389/fpsyg.2018.00638
Level of evidence	Level I
Design	Meta-analysis (*n* = 12 studies, with *n* = 3 studies focused on DBT)
Delivery format	Group, and combined group and individual, face-to-face.
Participants	Up to 680 participants of a total of 1,073 participants assessed pre-treatment. Participants met DSM-IV or DSM-5 criteria for ADHD in adults. Most participants (63.70%) were taking medication for ADHD during the intervention. Participants with psychotic disorders, bipolar disorder, severe active addictions at the time of treatment, or clinically significant personality disorders (Axis II) but not Axis I comorbid disorders were excluded.
Demographic characteristics	Mean age: 34.4 years. Males: 50.72%.
Treating clinician type	Not specified
Intervention	DBT vs waitlist and active controls. Number of session range: 8-14.
Outcome(s) measured	Primary outcome measure: ADHD symptom severity as measured by ADHD symptom severity scales (three self-report measures and one measure using a blind assessor).
Procedure	This review investigated whether therapeutic gains from psychosocial treatments are maintained at follow-up in adults with ADHD. It also explored the influence of variables, such as therapeutic approach, medication status, or type of control group, influence the maintenance of gains. Electronic databases were searched from inception until 4 September 2017.
Follow up	Yes, 3 months after the end of treatment.
Statistics summary	Moderator analyses showed that DBT had significantly or marginally significantly lower effect size estimates than CBT, MBCT and BFB, and that there was insufficient evidence to conclude that DBT had a meaningful effect on total ADHD symptoms (χ^2= 16.47, p < .01; *SMD* = 0.14, 95% CI [-0.33, 0.60]), inattention (χ^2 = 8, p = .05; *SMD* = 0.21, 95% CI [-0.30, 0.73]), and hyperactivity/impulsivity (χ^2 = 32.96, p < .01; *SMD* = 0.06, 95% CI [-0.13, 0.26]).
Conflict of interest	None declared.
Risk of bias	Low
Summary of findings	Findings from this meta-analysis suggest that DBT was less effective than CBT, MCBT and BFB in reducing ADHD symptoms. However, these results must be interpreted with extreme caution because of the small sample size. There was insufficient evidence to conclude that DBT had a meaningful effect on total and inattention and hyperactivity/impulsivity ADHD symptoms.

Note. BFB: Biofeedback; CBT: Cognitive behaviour therapy; MBCT: Mindfulness-based cognitive therapy.

Hypnotherapy

Title of paper	Non-pharmacological interventions for adult ADHD: A systematic review
Full citation	Nimmo-Smith, V., Merwood, A., Hank, D., Brandling, J., Greenwood, R., Skinner, L., Law, S., Patel, V., & Rai, D. (2020). Non-pharmacological interventions for adult ADHD: A systematic review. *Psychological Medicine, 50*(4), 529–541. https://doi.org/10.1017/S0033291720000069
Level of evidence	Level I
Design	Systematic review (n = 32 studies, with n = 2 focused on hypnotherapy) Studies were excluded if the primary intervention was being used as a medicine, including dietary supplementation and homeopathy.
Delivery format	Group, face-to-face.
Participants	2,251 participants with ADHD or hyperkinetic disorder diagnosed according to the established diagnostic criteria (e.g. DSM-III-R, DSM-IV, DSM-5 or ICD-10; n = 39 participants in hypnotherapy studies)
Demographic characteristics	Mean age range for hypnotherapy studies: 32 to 39 years. Mean proportion of female range for hypnotherapy studies: 60% to 67%.
Treating clinician type	Not specified
Intervention	Hypnotherapy vs. CBT or unspecified control
Outcome(s) measured	Improvement in the core behavioural symptoms of ADHD, improvement in symptoms of functional impairment and comorbid conditions, as measured by the ASRS, BADDS, SCL-90 SCL-16, CGI, and the BDI, QLESQ.
Procedure	This study reviewed the effectiveness of all nonpharmacological treatments for adult ADHD. Electronic databases were searched in May 2018. The narrative synthesis for hypnotherapy consisted of two small RCTs investigating the effects of 10 weekly sessions of group hypnotherapy on ADHD symptoms.
Follow up	No
Statistics summary	One study found improvements in hypnotherapy vs. CBT in total SCL-90 scores at 3- and 6-month follow-up ($F(2,30) = 4.10$, $p = 0.03$, $\eta p^2 = 0.215$), a trend towards an improvement in SCL-16 scores, and no significant differences for BADDS or CGI over the follow-up period. The other study showed improvements in total BADDS scores for hypnotherapy vs. control ($F(1,17) = 4.53$, $p = 0.05$, $\eta p^2 = 0.21$) and no significant differences in ASRS or SCL-90 and SCL-16 scores.
Conflict of interest	None declared but for one author (sponsored to attend and present at events by pharmaceutical companies)
Risk of bias	Unclear
Summary of findings	Results from systematic review suggest that hypnotherapy may improve clinician-rated but not self-rated ADHD symptoms, and that effects do not appear to be maintained overtime. These findings warrant considerable caution because they are based on two studies with very small sample size and a high risk of bias.

Note. ASRS: ADHD Self-Report Scale; BADDS: Brown Attention Deficit Disorder Scale; BDI: Beck Depression Inventory, CGI: Clinical Global Impression Scale; QLESQ ; SCL-16 and SCL-90: Symptom Check List.

Mindfulness-based cognitive therapy

Title of paper	**Effectiveness of cognitive behavioural-based interventions for adults with attention-deficit/hyperactivity disorder extends beyond core symptoms: A meta-analysis of randomized controlled trials**
Full citation	Liu, C. I., Hua, M. H., Lu, M. L., & Goh, K. K. (2023). Effectiveness of cognitive behavioural-based interventions for adults with attention-deficit/hyperactivity disorder extends beyond core symptoms: A meta-analysis of randomized controlled trials. *Psychology and Psychotherapy, 96*(3), 543–559. https://doi.org/10.1111/papt.12455
Level of evidence	Level I
Design	Systematic review and meta-analysis (*n* = 28 RCTs, with *n* = 4 RCTs focused on MBCT)
Delivery format	Individual and group, face-to-face.
Participants	Participants meeting DSM-IV or DMS-5 criteria for ADHD. Most participants received (stable) ADHD medication during interventions (treatment condition: 60.19%; control condition: 62.81%)
Demographic characteristics	Mean age: 34.0 years (*SD* = 10.9). Females: 47.85%.
Treating clinician type	Not specified
Intervention	Mindfulness-based cognitive therapy (MBCT) adapted from MBCT used for the treatment of depressive disorders (6 to 12 weekly sessions) vs. TAU or waitlist
Outcome(s) measured	Primary outcome: ADHD symptomatology as measured by the CAARS.
Procedure	This meta-analysis assessed the efficacy of a range of CBT approaches (including MBCT) in adults with ADHD in reducing the core and emotional symptoms of ADHD. Electronic databases were searched on 17 January 2022 and in June 2022. Subgroup analyses were conducted for different treatment protocols, treatment settings and treatment controls.
Follow up	No
Statistics summary	Subgroups analyses showed that MBCT was more effective than controls in reducing self-reported symptoms of ADHD (*SMD* = - 0.79 95% CI [-1.247, -0.34, *p* < .001).Traditional CBT (*SMD* = - 0.71 95% CI [-0.99, -0.43]), *p* < .001), iCBT (*SMD* = - 0.94 95% CI [-1.47, -0.41], *p* < .001), and DBT (*SMD* = - 0.55 95% CI [-0.99, -0.11], *p* = .01) were also superior to controls in reducing self-reported symptoms of ADHD.
Conflict of interest	None declared
Risk of bias	High
Summary of findings	This meta-analysis offers some support for the efficacy of MBCT in treating adults with ADHD. MBCT was equally effective in reducing core ADHD symptoms as traditional CBT, iCBT, and DBT but traditional CBT outperformed other approaches in reducing emotional symptoms among adults with ADHD. Because of the small number of studies addressing MBCT, results are limited in their generalisability.

Note. CAARS: Conners' Adult ADHD Ratings Scale; iCBT: internet-based CBT.

Self-guided digital interventions

Title of paper	Efficacy of online intervention for ADHD: A meta-analysis and systematic review
Full citation	Shou, S., Xiu, S., Li, Y., Zhang, N., Yu, J., Ding, J., & Wang, J. (2022). Efficacy of online intervention for ADHD: A meta-analysis and systematic review. *Frontiers in Psychology, 13*, 854810. https://doi.org/10.3389/fpsyg.2022.854810
Level of evidence	Level I
Design	Systematic review and meta-analysis (n = 6 RCTs, with n = 2RCTs focused on adult ADHD)
Delivery format	Digital interventions with and without therapist guidance
Participants	261 participants (N = 102 adults) with ADHD
Demographic characteristics	Adults participants' mean age: 37.3 and 33.8 years.
Treating clinician type	Not specified
Intervention	Digital intervention (guided online intervention using smartphones vs. waitlist, iCBT vs. waitlist)
Outcome(s) measured	Primary outcome measures: ADHD symptomatology as measured by the ASRS and the ADHD CSS.
Procedure	This systematic review and meta-analysis aimed to evaluate the efficacy of online interventions in the treatment of ADHD. Electronic databases were searched with no time limit on 1 December 2021. Subgroup analyses were conducted for age (adults vs minors), intervention target ("patients" vs. "educators") for both attention and social function scores.
Follow up	No
Statistics summary	Random-effects analyses showed that digital interventions were more efficacious than waitlist controls in improving attention scores in adults (*SMD* = - 0.64, 95%CI [-1.20, -0.09]). The between-study heterogeneity variance was estimated at τ2 = 0.15, with I^2 = 61%.
Conflict of interest	None declared
Risk of bias	High
Summary of findings	The results from this systematic review and meta-analysis indicate that online interventions may be effective in improving attention in adults diagnosed with ADHD. However, these findings warrant caution because the meta-analysis on adult ADHD included one study with a population of elementary school children.

Note. ADHD CSS: ADHD Current Symptoms Scale; ASRS: Adult ADHD Self-Report Scale; iCBT: Internet-based Cognitive Behaviour Therapy.

Psychoeducation

Title of paper	**Effects and feasibility of psychological interventions to reduce inattention symptoms in adults with ADHD: A systematic review**
Full citation	Scholz, L., Werle, J., Philipsen, A., Schulze, M., Collonges, J., & Gensichen, J. (2023). Effects and feasibility of psychological interventions to reduce inattention symptoms in adults with ADHD: A systematic review. *Journal of Mental health, 32*(1), 307–320. https://doi.org/10.1080/09638237.2020.1818189
Level of evidence	Level I
Design	Systematic review (n = 19 RCTs, with n = 3 focusing on psychoeducation)
Delivery format	Group, face-to-face.
Participants	Participants meeting DSM-5 or ICD-10 criteria for AD(H)D/Hyperkinetic Disorder in adults diagnosed by a specialist (N = 153 for psychoeducation). The percentage of patients taking ADHD medication varied widely across the different studies. In one of the psychoeducation studies, the sample included both inpatients and outpatients and 72.5% of the participants had psychiatric comorbidities and 15% were taking ADHD medication.
Demographic characteristics	The average age in the intervention groups ranged from 20.2 to 41.0 years.
Treating clinician type	Trained mental health professional (psychologists, psychiatrists, psychiatric therapists)
Intervention	Psychoeducation vs. active control (mindfulness, CBT)
Outcome(s) measured	Primary outcome: ADHD inattention symptoms.
Procedure	The primary aim of this systematic review was to evaluate the effects of psychological interventions on inattention symptoms in adults with ADHD. Electronic databases were searched during November 2018. All psychoeducation sessions were held in a weekly group format with an average total duration of 21.3 hours (range 20-24 hours)
Follow up	No
Statistics summary	There were no significant differences on observer-rated or self-rated treatment outcomes between psychoeducation and an active control for any of the three studies included (observer rated: *SMD* = -0.09, 95% CI [-0.71, 0.53]; *SMD* = 0.01, 95% CI [-0.45, 0.47]; self-rated: *SMD* = -0.53, 95% CI [-1.16, 0.10]; *SMD* = 0.02, 95% CI [-0.44, 0.47]; *SMD* = -0.15 95% CI [-0.85; 0.54]).
Conflict of interest	None reported except for one author (on advisory board, lecturer for and recipient of grants from pharmaceutical companies, and author of books on ADHD).
Risk of bias	Low
Summary of findings	This systematic review found no evidence that psychoeducation is efficacious in reducing ADHD attention symptoms. However, psychoeducation was compared with active control groups, including CBT which often contains a psychoeducational component. Despite limited evidence, educative elements of psychoeducation may be beneficial and feasible to adults with ADHD in outpatient care settings.

Mental disorders: Children and adolescents

Depression

SUMMARY OF EVIDENCE

This review identified Level I evidence[85] in support of cognitive behaviour therapy and interpersonal psychotherapy in the treatment of depression in children and adolescents. Level II evidence was found to support the use of play therapy in treating depression in children aged 5 to 9 years.

Level I evidence in relation to self-guided digital interventions and family-based interventions reported insufficient evidence, highlighting the need for more studies and improved quality of research in this area.

Guidelines provided by the RANZCP (2020), AACAP (2023), APA (2019), and NICE (2019) support the use of cognitive behaviour therapy and interpersonal psychotherapy in the treatment of depression in children and adolescents. All referenced guidelines except for the NICE (2019) guidelines reported insufficient evidence supporting the efficacy of family-based interventions.

[85] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of depression in children and adolescents.

Cognitive behaviour therapy

Title of paper	**Cognitive behavioural therapy and medication for treatment of adolescent depression: A network meta-analysis**
Full citation	Dardas, L. A., Xu, H., Franklin, M. S., Scott, J., Vance, A., van de Water, B., & Pan, W. (2023). Cognitive behavioural therapy and medication for treatment of adolescent depression: A network meta-analysis. *Behavioural and Cognitive Psychotherapy*, *51*(3), 230–245. https://doi.org/10.1017/S1352465822000662
Level of evidence	Level I
Design	Systematic review and/or meta-analysis (14 studies)
Delivery format	Individual
Participants	2216 adolescents diagnosed with a major depressive episode
Demographic characteristics	Participants age ranged from 9-18 year (*M* = 15.0 years) with 57.3% being female. Studies were primarily based in the US.
Treating clinician type	Not reported
Intervention	Cognitive behaviour therapy for adolescents
Outcome(s) measured	The three primary outcomes were duration of depressive episode, internalizing and externalizing symptoms as measured by CDRS-R, HoNOSCA, CES-D, CBCL-D, YSR, HDRS, CBQ, RADS, CDI, and RDQ.
Procedure	A network meta-analysis was conducted to evaluate the short- and long-term efficacy of CBT, CBT with medications, or medications only to the treatment of adolescent depression. Participants received between 5-19 sessions of intervention lasting 50 – 105 minutes. The search covered RCTS published from inception until July 2022.
Follow up	Yes; 8 studies completed follow-up ranging from 3 to 23 months
Statistics summary	A network meta-analyses was conducted for 14 studies with 35 comparisons for the three outcomes in both durations. Short- and long-term effects showed no significant differences between intervention and control groups for reducing depressive episodes and symptoms, nor in improving short-term global functioning. However, long-term findings favored CBT over CBT with medication (*d* = -0.89, 95% CI [-1.51, -0.27]) and medication alone (*d* = -0.94, 95% CI [-1.61, -0.28]). Higher p-scores for CBT (1.00) versus CBT with medication (0.31) and medication only (0.19) supported this outcome.
Conflict of interest	None declared
Risk of bias	High
Summary of findings	None of the treatments - CBT, CBT with medication, and medication alone - proved superior in reducing depressive episodes and internalising and externalizing symptoms in adolescent depression. However, CBT demonstrated a significantly greater effect on long-term global functioning improvement compared to CBT with medication and medication alone.

Note. CBCL-D: Child Behaviour Checklist – Depression; CBQ: Conflict Behaviour Questionnaire; CDI: Children's Depression Inventory; CDRS; Children's Depression Rating Scale; CES-D: Centre for Epidemiological Studies Depression Scale; HDRS: Hamilton Depression Rating Scale; HoNOSCA: Health of the Nation Outcome Scale for Children and Adolescents; RADS: Reynolds Adolescent Depression Scale; RDQ: Responses to Depression Questionnaire; YSR: Youth Self-Report.

Title of paper	**A meta-analysis of group cognitive behavioral therapy (CBT) interventions for adolescents with depression**
Full citation	Keles, S., & Idsoe, T. (2018). A meta-analysis of group cognitive behavioral therapy (CBT) interventions for adolescents with depression. *Journal of Adolescence*, *67*, 129-139. https://doi.org/10.1016/j.adolescence.2018.05.011
Level of evidence	Level I
Design	Systematic review and meta-analysis (23 studies)
Format	Group, face-to-face
Participants	5649 participants with adolescent depression
Demographic characteristics	The mean age of the sample was 15.51 years (*SD* = 0.67), and 62.83% of the sample was female.
Treating clinician type	Trained mental health professional, other professional (e.g., nurse or teacher), student (e.g., clinical psychology graduate student)
Intervention	Group CBT
Outcome(s) measured	Depression symptoms measured by the CDI, CES-D, S-MFQ, and BDI.
Procedure	A systematic review and meta-analysis of RCT studies that tested the effectiveness of face-to-face group CBT on adolescent depression (ages 13 to 18) was conducted. The included time frame was from the beginning of the databases until January 2017.
Follow up	Yes; 19 studies completed follow up ranging from 1 month to 2 years
Statistics summary	A meta-analysis was conducted and standardized mean differences were used to calculate effect sizes. Although the effect sizes are low, statistical analyses returned significant differences between group CBT and control at both post-treatment (*SMD* = -0.28, 95% CI [-0.36, -0.19]) and follow-up (*SMD* = -0.21, 95% CI [-0.30, -0.11]). Significant heterogeneity in effect size was noted at post-intervention across studies and lower within studies (Q = 137.60, p < .001, I^2_{Level2} = 23.03% and I^2_{Level3} = 28.24%).
Conflict of interest	Not specified
Risk of bias	High
Summary of findings	This systematic review and meta-analysis of studies indicates that group CBT has a positive effect on symptoms of adolescent depression when compared to control conditions.

Note. BDI: Beck Depression Inventory; CDI: Children's Depression Inventory; CES-D: Centre for Epidemiological Studies Depression Scale; S-MFQ: Short Mood and Feelings Questionnaire.

Family-based interventions

Title of paper	**Effectiveness of family-based therapy for depressive symptoms in children and adolescents: A systematic review and meta-analysis**
Full citation	van Aswegen, T., Samartzi, E., Morris, L., van der Spek, N., de Vries, R., Seedat, S., & van Straten, A. (2023). Effectiveness of family-based therapy for depressive symptoms in children and adolescents: A systematic review and meta-analysis. *International Journal of Psychology, 58*(6), 499-511. https://dx.doi.org/10.1002/ijop.12926
Level of evidence	Level I
Design	Systematic review and meta-analysis (12 studies)
Format	Family, face-to-face
Participants	1044 participants with a diagnosis of either major depressive disorder or dysthymia, or with a score above a cut-off point on a standardised self-report measure
Demographic characteristics	Participants ranged from 3 to 18 years across all 12 studies (no pooled mean age was reported). Of the 11 studies that reported the percentage of female participants (n = 978), the pooled percentage of female participants was 59.4%. Studies were conducted in the USA, Finland, UK, Greece, Australia, and Norway.
Treating clinician type	Trained mental health professionals
Intervention	Systemic Behavior Family Therapy (SBFT), Family-Based Interpersonal Therapy (FB-IPT), Family-Focused Treatment for Child Depression (FFT-CD), Systems Integrative Family Therapy (SIFT), Attachment-Based Family Therapy (ABFT), BEST MOOD program, and Parent-Child Interaction Therapy Emotion Development (PCIT-ED)
Outcome(s) measured	The primary outcomes of interest were depression symptom severity as measured by the K-SADS, CDRS, CDI, BDI-II, SMFQ, GRID-HAM-D, HAM-D, and PAPA.
Procedure	A systematic review and meta-analysis of RCT studies was conducted to examine the effectiveness of family-based therapy compared to control conditions in reducing depressive symptoms in children and adolescents up to 18 years of age.
Follow up	Follow-up details not specified in summary table or synthesis.
Statistics summary	A meta-analysis was conducted to evaluate the effect of the family-based therapy. When family-based therapy was compared to non-active controls, the pooled effect size was not significant (g = 0.46, 95% CI [-0.09 to 1.01]) and heterogeneity was high (I^2 = 81.1%, 95% CI [49.7 to 92.7]). When family-based therapy was compared to active controls, the pooled effect size was also not significant (g = 0.22 95% CI [-0.05 to 0.50]) with a moderate level of heterogeneity I^2 = 64.3% (95% CI [26.9 - 82.5]).
Conflict of interest	Not specified
Risk of bias	Low
Summary of findings	This systematic review and meta-analysis does not support the effectiveness of family-based therapy compared to both active and non-active control conditions and outlines the need for more randomised controlled trials in this area.

Note. BDI: Beck Depression Inventory; CDI: Children's Depression Inventory; CDRS: Children's Depression Rating Scale; HAM-D: Hamilton Depression Scale; K-SADS: Kiddie Schedule for Affective Disorders and Schizophrenia for School-Age Children; PAPA: Preschool Age Psychiatric Assessment; SMFQ: Short Mood and Feelings Questionnaire.

Interpersonal psychotherapy

Title of paper	**Effectiveness comparisons of various psychosocial therapies for children and adolescents with depression: A bayesian network meta-analysis**
Full citation	Liang, J., Li, J., Wu, R., Li, J., Qian, S., Jia, R., Wang, Y., Qian, Y., & Xu, Y. (2021). Effectiveness comparisons of various psychosocial therapies for children and adolescents with depression: A bayesian network meta-analysis. *European Child & Adolescent Psychiatry*, *30*(5), 685–697. https://doi.org/10.1007/s00787-020-01492-w
Level of evidence	Level I
Design	Meta-analysis of 32 RCTs (6 studies on interpersonal psychotherapy)
Delivery format	Not specified
Participants	2677 children and adolescents who have been formally diagnosed with depression (*n* = 268 for interpersonal psychotherapy)
Demographic characteristics	Children and adolescents ranged from 7-18 years, 65.07% being female. Studies were primarily conducted in Europe and America, followed by Asia and Oceania. For studies pertaining to interpersonal psychotherapy, age ranged 11 - 18 years, with 59.7% - 85.4% being female. Studies were conducted in the US and Taiwan.
Treating clinician type	Not specified
Intervention	Interpersonal psychotherapy
Study groups	Not applicable
Outcome(s) measured	The primary outcomes of interest were depression symptom severity as measured by psychometric scales (not specified)
Procedure	A Bayesian network meta-analysis to investigate the efficacy of psychosocial interventions on the treatment of depression in children and adolescents and compare them with each other. For interpersonal therapy, treatment lasted between 6-16 sessions (one did not report). The search covered RCTs conducted from inception until 1st October 2018
Follow up	Not reported
Statistical strength / effect sizes	A Bayesian network meta-analysis, comprising 13 comparisons, revealed mild heterogeneity (I^2 = 55.9%, p = 0.000). Three interventions - interpersonal psychotherapy (*SMD* = −1.38, 95% CrI [−2.5, −0.20]), cCBT, and CBT – significantly favoured against the active control group. Ranking interventions by efficacy probability via SUCRA showed interpersonal psychotherapy as most likely to be the best for depressive outcomes in children and adolescents (SUCRA = 84.91%, 95% CrI [0.50, 1.00]) followed by cCBT (SUCRA = 81.49%, 95% CrI [0.33, 1.00]), then CBT (SUCRA = 76.92%, 95% CrI [0.42, 1.00])
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	This Bayesian network meta-analysis indicated that interpersonal psychotherapy yielded the highest probability of being the most effective treatment compared to nine other psychosocial interventions. Study limitations include missing data which affect the validity of the meta-analysis.

Play therapy

Title of paper	Child-centered play therapy and childhood depression: An effectiveness study in schools
Full citation	Burgin, E. E., & Ray, D. C. (2022). Child-centered play therapy and childhood depression: An effectiveness study in schools. *Journal of Child and Family Studies, 31*(1), 293-307. https://doi.org/10.1007/s10826-021-02198-6
Level of evidence	Level II
Design	Randomised controlled trial (RCT)
Delivery format	Individual
Participants	71 children who was assessed to be above the clinical cut-off of 64 on the Sluggish Cognitive Tempo (SCT) domain from the Direct Observation Form (DOF).
Demographic characteristics	Participants were aged 5 -9 years old (M = 6.21, SD = 1.09), with 69% being male. 28.2% were Hispanic, 26.8% Caucasian, 21.1% biracial, 19.7% Black, and 4.2% Asian.
Treating clinician type	Trained mental health professionals (counsellors)
Intervention	Manualized child-centred play therapy
Study groups	Intervention group: Child-centred play therapy Control group: Passive control (waitlist)
Outcome(s) measured	Depressive symptoms were clustered and measured by the MFQ and DOF
Procedure	Children were randomly assigned to the CCPT group or the waitlist control. Participants completed 16 CCPT bi-weekly sessions over eight weeks. Treatment lasted for 30 minutes. The sessions were conducted in a controlled playroom set-up.
Follow up	Not reported
Statistics summary	A 2 x 2 MANOVA was completed to compare the intervention and control group and the clustered depressive outcomes. The result was significant, $F(1, 59) = 5.589$, $p = 0.006$, *partial* $\eta^2 = 0.159$ with a large effect size, suggesting that the depression scores of those in the intervention group was significantly lower than those in the control group from baseline to post-test. Secondary analysis of MFQ-P and DOF separately were also significant.
Conflict of interest	None declared
Risk of bias	Some concerns
Summary of findings	CCPT shows efficacy in treating children with clinically significant depressive symptoms. The researchers also note the ethnoculturally diverse sample and the adequate power of the study, increasing the generalizability of their findings to school settings. However, absence of follow-up data which leaves long-term efficacy of CCPT unexplored.

Note. DOF: Direct Observation Form, Sluggish Cognitive Tempo Scale; MFQ: Mood and Feelings Questionnaire.

Self-guided digital interventions

Title of paper	**Internet-and mobile-based anxiety and depression interventions for children and adolescents: Efficacy and negative effects - a systematic review and meta-analysis**
Full citation	Dülsen, P., & Baumeister, H. (2024). Internet-and mobile-based anxiety and depression interventions for children and adolescents: Efficacy and negative effects - a systematic review and meta-analysis. *European Child & Adolescent Psychiatry*, 1-21. https://doi.org/10.1007/s00787-024-02404-y
Level of evidence	Level I
Design	Systematic review and meta-analysis (16 studies, with 6 studies focused on depression)
Delivery format	Digital intervention, combination of no therapist guidance and minimal therapist guidance
Participants	Total sample size of 1465 participants with 292 participants in the depression subgroup. Participants had to be aged 18 or under with clinically relevant symptoms of depression and/or anxiety to meet inclusion.
Demographic characteristics	The mean age was 14.05 years (*SD* = 2.56). Most studies had a higher proportion of female participants. Studies in the depression subgroup were conducted in China, Sweden, Iran, and Canada.
Treating clinician type	Trained mental health professional, self-assisted
Intervention	Internet- and mobile- based interventions (IMIs) based on cognitive behaviour therapy (iCBT), psychodynamic therapy (IPDT), and Life Enrichment and Appreciation Program (LEAP)
Outcome(s) measured	The primary outcomes of interest in the depression subgroup were depression symptom severity as measured by the CES-D, QIDS-SR, CDRS-R, and BDI-II
Procedure	A systematic review and meta-analysis of RCT studies that tested the effectiveness of IMIs for depression and anxiety in children and adolescents was conducted. The included time frame was from the beginning of the databases until 7 June 2022.
Follow up	No
Statistics summary	A random effects meta-analysis was conducted and effect sizes for continuous variables were reported as Hedge's *g*. No significant improvement on depression outcomes was found compared to active control groups (*g* = -0.53, 95% CI [-1.17, 0.12], *p* = 0.08), with substantial heterogeneity (I^2=81.5%). Non-significant results were also found when compared with passive controls (*g* = -0.74, 95% CI [-4.22, 2.75], *p* = 0.23), with moderate heterogeneity (I^2=40.2%).
Conflict of interest	Yes (financial)
Risk of bias	Low
Summary of findings	The findings of this meta-analysis do not indicate a significant benefit of IMIs targeting depression when compared to both active and passive control groups. The authors highlight the need for a higher number of RCTs in this area to provide more conclusive evidence in this area.

Note. BDI: Beck Depression Inventory; CDRS: Children's Depression Rating Scale; CES-D: Centre for Epidemiological Studies Depression Scale; QIDS-SR: Quick Inventory of Depressive Symptomatology Self-Report.

Bipolar disorder

SUMMARY OF EVIDENCE

This review expanded the inclusion criteria to include children who are at high risk of developing bipolar disorder to reflect the literature. This is defined to be youth diagnosed with depression and a family history of bipolar disorder. Similar to the adult population, psychological interventions for bipolar disorder in young people are typically delivered in conjunction with pharmacotherapy.

The review identified Level II evidence[86] in support of child and family-focused cognitive behaviour therapy. Level II evidence was found in support of family-focused therapy for youth (9-17 years) diagnosed or at high-risk of developing bipolar disorder. Level II evidence was found in support of family psychoeducation in treating bipolar in children ages 8-12 years. Level III evidence was found in support of adolescent and family-focused cognitive behaviour therapy for adolescents aged 15 to 18 years.

Level II evidence in relation to individual dialectical behaviour therapy for diagnosed adolescents found it ineffective in reducing core diagnostic symptoms, but effective in reducing suicidal attempts, particularly in adolescents with higher suicidal risk.

Guidelines provided by NICE (2020), RANZCP (2020) and WHO (2023) recommend family-focused approaches, cognitive behaviour therapy, and psychoeducation. Importantly, the NICE (2020) guidelines cautioned against formally diagnosing bipolar disorder in children and adolescents, whilst still recommending treatment options for the syndrome. Furthermore, the WHO (2023) guidelines lack specific recommendations for youth with bipolar disorder but provide recommendations for youth experiencing depression and/or anxiety who have a parent with a mental health condition. These recommendations are applicable to youth at high-risk of bipolar disorder.

[86] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of bipolar disorder in children and adolescents.

Dialectical behavioural therapy

Title of paper	Dialectical behavior therapy for adolescents with bipolar disorder: A randomized clinical trial
Full citation	Goldstein, T. R., Merranko, J., Rode, N., Sylvester, R., Hotkowski, N., Fersch-Podrat, R., Hafeman, D. M., Diler, R., Sakolsky, D., Franzen, P., & Birmaher, B. (2024). Dialectical behavior therapy for adolescents with bipolar disorder: A randomized clinical trial. *JAMA Psychiatry*, *81*(1), 15–24. https://doi.org/10.1001/jamapsychiatry.2023.339
Design	Randomised controlled trial (RCT)
Level of evidence	Level II
Delivery format	Individual, with the family unit, face to face
Participants	100 Adolescents aged 12-18 years with a DSM-5 diagnosis of bipolar disorder I, II or not otherwise specified (DBT group *n* = 47, control group *n* = 53)
Demographic characteristics	The mean age of participants was 16.1 (*SD* = 1.6) years, with 85% being female. 1% was Asian, 17% were Black, 6% were multiracial, 74% were White, and 2% were another race.
Treating clinician type	Trained mental health professional (therapist)
Intervention	Dialectical behavioural therapy with pharmacotherapy
Study groups	Intervention group: DBT with pharmacotherapy Control group: Active control (standard of care psychotherapy with pharmacotherapy)
Outcome(s) measured	Depression and mania / hypomania symptom severity was measured by depression and mania scales in KSADS-P and ALIFE. Other primary outcomes include rates of suicide attempt measured by C-SSRS and ALIFE.
Procedure	The intervention consisted of two modalities, including 18 individual DBT sessions and 18 family skills training sessions involving the whole family unit. The sessions were delivered biweekly over one year.
Follow up	No
Statistics summary	Mixed linear Poisson regressions of the 3-way interaction between group, time, and mean mania/hypomania and depression scores were not significant across all outcome measures including K-SADS depression score (*IRR* = 0.22, 95% CI [-0.07, 0.52], *p* = .13) and K-SADS mania score (*IRR* = 0.02, 95% CI [-0.19, 0.22], *p* = .86). This suggests DBT does not reduce manic and depressive symptoms better than the control group over time.
Conflict of interest	Yes (financial)
Risk of bias	High
Summary of findings	This study found no significant evidence that DBT was more effective than active controls in reducing bipolar symptoms in adolescents. Notably, the DBT group had significantly lower suicidal attempts compared to control. The authors suggest that adolescents with BD at high risk of suicidal behaviour may benefit from DBT.

Note. ALIFE: Adolescent Longitudinal Follow-Up Evaluation; C-SSRS: Columbia-Suicide Severity Rating Scale Paediatric Version; KSADS-P: Kiddie Schedule for Affective Disorders and Schizophrenia for School-Aged Children – Parent Version.

Family-based interventions

Title of paper	**Adolescent and family-focused cognitive-behavioral therapy for pediatric bipolar disorders: An open trial and individual trajectories study in routine psychiatric care**
Full citation	Bäckström, B., Rask, O., & Knutsson, J. (2023). Adolescent and family-focused cognitive behavioral therapy for pediatric bipolar disorders: An open trial and individual trajectories study in routine psychiatric pare. *Child Psychiatry and Human Development, 55*, 1502–1513. https://doi.org/10.1007/s10578-023-01504-1
Level of evidence	Level III
Design	Uncontrolled real-world clinical trial
Delivery format	Group, face to face
Participants	45 adolescents who have been diagnosed with bipolar I, II or NOS according to DSM 5 criteria, and 61 parents.
Demographic characteristics	Adolescent mean age was 16.2 (*SD* = 1.2) years, ranging from 15 – 18 years with 84% being female.
Treating clinician type	Trained mental health professional (therapist)
Intervention	Adolescent and family-focused CBT (AFF-CBT) with psychopharmacotherapy
Study groups	Not applicable
Outcome(s) measured	Relevant primary outcomes were mania and depressive symptoms, measured by the CMRS-p and MADRS-S respectively, and psychosocial functioning measured by SDQ and CGAS.
Procedure	Participants were grouped between 3-7 people. Treatment consisted of 15 weekly sessions lasting 150 minutes, with a booster session conducted three months after the 15th session.
Follow up	Yes, six months
Statistics summary	Paired samples t-test and Cohen's *d* were used to assess significance and magnitude of treatment outcomes. Parent-rated psychosocial functioning showed significant improvement with medium effect at post-treatment (p = .002, d = 0.39). Additionally, self-rated manic symptoms significantly improved (p < .001, d = 0.60) but not depressive symptoms (p = .286, d = 0.18).
Conflict of interest	None declared
Risk of bias	Serious
Summary of findings	In this review, group AFF-CBT in a group format is effective in improving psychosocial functioning and reducing manic symptoms in adolescents with bipolar disorder. This effect remains stable after six months. However, no evidence was found of reducing depressive symptoms. The findings suggest the value of actively involving family members with treatment.

Note. CGAS: Children's Global Assessment Scale; CMRS-P: The Child Mania Rating Scale-Parent Version; MADRS-S: and Montgomery-Åsberg Depression Rating; SDQ: Strength and Difficulties Questionnaire.

Title of paper	**Impact of multifamily psychoeducational psychotherapy in treating children aged 8 to 12 years with mood disorders**
Full citation	Fristad, M. A., Verducci, J. S., Walters, K., & Young, M. E. (2009). Impact of multifamily psychoeducational psychotherapy in treating children aged 8 to 12 years with mood disorders. *Archives Of General Psychiatry, 66*(9), 1013–1021. https://doi.org/10.1001/archgenpsychiatry.2009.112
Level of evidence	Level II
Design	RCT
Follow-up	18 months
Format	Group
Participants	165 preadolescent children aged 8 to 12 (mean age 9.9 years) with a diagnosed bipolar spectrum disorder (BPSD; 70% of participants) or depressive disorder (30%). Approximately three-quarters of participants were male.
Treating clinician(s)	Doctoral-level clinicians who had completed specific training and weekly group supervision
Interventions	Multifamily psychoeducational therapy in addition to TAU
Comparison group(s)	Waitlist and TAU
Procedure	Participants were randomly assigned to either the multifamily psychoeducational therapy intervention group (n = 78) or waitlist control (n = 87). In the intervention group, children and at least one parent attended 8 x 90-minute psychoeducation sessions. Parents and children attended separate group sessions. The primary outcome measure was overall mood symptoms.
Summary of findings	At 12 months' follow-up, the intervention group had significantly reduced mood symptom severity compared with waitlist control, generating a medium effect size. Further analysis was performed on the waitlist control group as they began receiving multifamily psychoeducational therapy after 12 months, and that group was reassessed at 18 months. The treatment effect did not attain statistical significance, which the authors speculate was due to the intervention requiring more than 6 months to be effective. The high levels of attrition may also have affected the treatment response for the waitlist control group. Risk of developing BPSD was significantly lower in the intervention group (16%) compared with waitlist control (60%).

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 133. Copyright 2018 by the Australian Psychological Society.

Title of paper	**Child- and family-focused cognitive-behavioral therapy for pediatric bipolar disorder: A randomized clinical trial**
Full citation	West, A. E., Weinstein, S. M., Peters, A. T., Katz, A. C., Henry, D. B., Cruz, R. A., & Pavuluri, M. N. (2014). Child- and family-focused cognitive-behavioral therapy for pediatric bipolar disorder: A randomized clinical trial. *Journal of the American Academy of Child and Adolescent Psychiatry, 53*(11), 1168–1178.e1. https://doi.org/10.1016/j.jaac.2014.08.013
Level of evidence	Level II
Design	RCT
Follow-up	6 months
Format	Individual, with the child, parent(s) and/or family
Participants	69 children aged 7 to 13 (mean age 9.2 years, 42% female) with a bipolar spectrum disorder diagnosis in accordance with DSM-IV-TR criteria. Participants were required to be stabilised on medication
Treating clinician(s)	Clinical psychology pre- and post-doctoral trainees, who completed a 3 hour training session specific to the intervention
Interventions	Adjunctive child- and family-focused CBT
Comparison group(s)	TAU
Procedure	The intervention comprised 12 manualised weekly sessions, each 60 to 90 minutes in length. The control condition comprised 12 unstructured weekly sessions. The primary outcome measures were parent-rated symptom severity and clinician-rated global functioning.
Summary of findings	Child- and family-focused CBT was effective in reducing mania symptoms at posttreatment, with a medium to large effect size. Participants in the child- and family-focused CBT group experienced further reduction in mania symptoms at follow-up, but this long-term trajectory did not significantly differ from that of controls. Child- and family-focused CBT resulted in higher bipolar improvement rates than seen in controls, both at posttreatment (88% vs 21%) and follow-up (93% vs 46%). However, this effect is likely to be an overestimate given that baseline symptoms for the control group were significantly higher than were those for the CBT group. Depression symptom severity was significantly reduced in the child- and family- focused CBT group compared with controls on parent-reported measures at posttreatment and at follow-up, and the effect size was medium. In terms of global psychosocial functioning, there was no significant effect at posttreatment, but a small to medium effect at follow-up. Treatment comparability was affected by attendance rates and drop-out rates: TAU participants completed an average of 11.3 sessions compared with 6.9 sessions for the TAU group, and less than half of the TAU participants (48.5%) completed treatment, compared with 88.2% of child- and family-focused CBT participants.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 131. Copyright 2018 by the Australian Psychological Society.

Title of paper	**Early intervention for symptomatic youth at risk for bipolar disorder: A randomized trial of family-focused therapy**
Full citation	Miklowitz, D. J., Schneck, C. D., Singh, M. K., Taylor, D. O., George, E. L., Cosgrove, V. E., Howe, M. E., Dickinson, L. M., Garber, J., & Chang, K. D. (2013). Early intervention for symptomatic youth at risk for bipolar disorder: A randomized trial of family-focused therapy. *Journal of the American Academy of Child and Adolescent Psychiatry*, *52*(2), 121–131. https://doi.org/10.1016/j.jaac.2012.10.007
Level of evidence	Level II
Design	RCT
Follow-up	1 year
Format	Individual, with the child, parent(s), and/or siblings
Participants	40 children and adolescents aged 9 to 17 (mean age 12.3 years) who had both: a) a current diagnosis of a bipolar disorder-not otherwise specified (NOS), major depressive disorder or cyclothymic disorder, and b) a first-degree relative with bipolar disorder I or II. Half of all participants were diagnosed with bipolar disorder-NOS at baseline.
Treating clinician(s)	Trained clinicians who had completed a workshop on a high-risk version of family-focused therapy
Interventions	Family-focused therapy – high-risk version
Comparison group(s)	Psychoeducation
Procedure	Participants were randomly allocated to either the family-focused therapy or psychoeducation group. Family-focused therapy consisted of 12 x 1-hour sessions across a period of 4 months (eight weekly, four biweekly), and the psychoeducation group had one or two sessions. However, additional "crisis sessions" were arranged as required. The primary outcome measures were mood symptoms.
Summary of findings	Across the 1-year study timeframe, the family-focused intervention was significantly more effective in reducing mania symptoms than was the control condition, with a medium effect size. This effect held when controlling for the type of diagnosis (bipolar disorder-NOS, MDD or cyclothymic disorder) at baseline. Participants in the family-focused therapy group recovered from baseline mood (depressive and hypomanic) symptoms in an average of 13 weeks, significantly faster than the 21.3 weeks for controls. The authors noted that the treatment effect was more pronounced in families with high expressed emotion

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 132. Copyright 2018 by the Australian Psychological Society.

Title of paper	**Pharmacotherapy and family-focused treatment for adolescents with bipolar I and II disorders: A 2-year randomized trial**
Full citation	Miklowitz, D. J., Schneck, C. D., George, E. L., Taylor, D. O., Sugar, C. A., Birmaher, B., Kowatch, R. A., DelBello, M. P., & Axelson, D. A. (2014). Pharmacotherapy and family-focused treatment for adolescents with bipolar I and II disorders: A 2-year randomized trial. *The American Journal of Psychiatry*, *171*(6), 658–667. https://doi.org/10.1176/appi.ajp.2014.13081130
Level of evidence	Level II
Design	RCT
Follow-up	2-year follow-up
Format	Family
Participants	145 adolescents diagnosed with bipolar I or II disorder. The mean age of participants was 15.6 years, and 54.5% were female.
Treating clinician(s)	Not reported
Interventions	Family-focused treatment (FFT) plus pharmacotherapy (*n* = 72)
Comparison group(s)	Enhanced care plus pharmacotherapy (*n* = 73)
Procedure	Participants were randomly assigned to pharmacotherapy plus FFT or to pharmacotherapy plus three weekly sessions of enhanced care (family psychoeducation). The FFT intervention consisted of 21 x 50-minute family therapy sessions delivered over a 9-month period (12 weekly, six biweekly, then every 3 months) that included psychoeducation, communication enhancement training, and problem-solving skills training. Families receiving the FFT received a mean of 15.4 therapy sessions.
Summary of findings	Compared with those in the enhanced care group, adolescents in the FFT group demonstrated a significantly greater increase from year 1 to year 2 in the proportion of weeks without manic symptoms. There were no between-group differences for time to improvement or illness recurrence, or the proportion of weeks with illness.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 132. Copyright 2018 by the Australian Psychological Society.

Generalised anxiety disorder

SUMMARY OF EVIDENCE

This review identified Level II evidence[87] to support the use of cognitive behaviour therapy (individual and group) in the treatment of generalised anxiety disorder (GAD) in children and adolescents aged 7 to 17 years. It was noted that studies in the literature commonly grouped GAD with other anxiety disorders, while few studies conducted isolated analyses for GAD.

The RANZCP (2018) guidelines support the use of age-adapted cognitive behaviour therapy for children and adolescents with anxiety disorders. The guidelines specify that group-delivered cognitive behaviour therapy (face-to-face or digital) should be considered as a first-line treatment. The WHO (2023) guidelines support the use of psychosocial interventions that include cognitive behaviour therapy, psychoeducation, and family-focused approaches for the prevention of anxiety disorders in children whose parents have mental health conditions.

[87] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of generalised anxiety disorder in children and adolescents.

Cognitive behaviour therapy

Title of paper	**Remission after acute treatment in children and adolescents with anxiety disorders: Findings from the CAMS**
Full citation	Ginsburg, G. S., Kendall, P. C., Sakolsky, D., Compton, S. N., Piacentini, J., Albano, A. M., Walkup, J. T., Sherrill, J., Coffey, K. A., Rynn, M. A., Keeton, C. P., McCracken, J. T., Bergman, L., Iyengar, S., Birmaher, B., & March, J. (2011). Remission after acute treatment in children and adolescents with anxiety disorders: Findings from the CAMS. *Journal of Consulting and Clinical Psychology, 79*(6), 806–813. https://doi.org/10.1037/a0025933
Level of evidence	Level II
Design	RCT incorporating CBT, pharmacological, and combination treatment conditions.
Follow-up	Nil
Format	Individual
Participants	488 children and adolescents aged 7 to 17 (50% female) with a diagnosis of GAD, separation anxiety disorder, and/or social phobia. These three diagnoses were grouped together due to previous evidence of strong comorbidity and similar response to both CBT and selective serotonin reuptake inhibitor (SSRI) treatment.
Treating clinician(s)	Clinicians with postgraduate or doctoral qualifications and experience treating anxiety in youth
Intervention(s)	CBT ("Coping Cat" protocol), which was adapted to the individuals' age and developmental level (n = 139)
Comparison group(s)	Pharmacological treatment (sertraline; n = 133), combination treatment (CBT + sertraline; n = 140), placebo (clinical management with pill placebo; n = 76)
Procedure	A multisite RCT study designed to measure remission rates for youth with anxiety disorders for CBT, pharmacological, and combination treatments. CBT participants attended 12 x 60 minute treatment sessions across the 12-week treatment period. Two additional sessions were attended by parents only.
Summary of findings	Results were pooled for participants with GAD, separation anxiety disorder, and social phobia diagnoses. There was no difference in remission rates between participants with a baseline diagnosis of GAD or separation anxiety disorder. Furthermore, participants with a diagnosis of social phobia were less likely to achieve remission than were those with GAD or separation anxiety disorder. At posttreatment, participants in the CBT and pharmacological interventions were more likely to no longer meet diagnosis when compared with placebo controls, based on small to medium effect sizes. On the same measure of remission, the combination treatment condition was more effective than the placebo condition (large effect size) and more effective than either pharmacological or CBT treatments alone (small/medium effect sizes). There was no measurable difference between CBT and pharmacological treatments with regard to diagnosis status at posttreatment.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 134. Copyright 2018 by the Australian Psychological Society.

Panic disorder

SUMMARY OF EVIDENCE

Level II evidence[88] was found in support of the use of cognitive behaviour therapy in adolescents aged 11 to 17 years with a diagnosis of panic disorder with or without agoraphobia. Level IV evidence was identified for the use of eye movement desensitisation and reprocessing in the treatment of panic disorder in adolescents.

Guidelines provided by the American Psychiatric Association (2010), RANZCP (2018), and AACAP (2020) recommend the use of age-adapted cognitive behaviour therapy (face-to-face and digital formats) as a first-line treatment for panic disorder in children and adolescents.

In this review, inclusion criteria included a requirement that panic disorder be the primary diagnosis when comorbidity existed among study participants (see methodology section for details). Panic disorder and agoraphobia are highly comorbid and were not classified as distinct disorders until the release of the DSM-5 (APA, 2013). Therefore, many articles based on clinical populations diagnosed pre-DSM-5 were excluded from this systematic review.

[88] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of panic disorder in children and adolescents.

Cognitive behaviour therapy

Title of item	**Moderators of intensive cognitive behavioral therapy for adolescent panic disorder: The roles of fear and avoidance**
Author(s) and source	Elkins, R. M., Gallo, K. P., Pincus, D. B., & Comer, J. S. (2016). Moderators of intensive CBT for adolescent panic disorder: The roles of fear and avoidance. *Child and Adolescent Mental Health, 21*(1), 30–36. https://doi.org/10.1111/camh.12122
Level of evidence	Level II
Design	RCT
Follow-up	6 weeks
Format	Individual, family
Participants	54 adolescents aged 11 to 17 (mean age 15.3 years) with a principal diagnosis of panic disorder with or without agoraphobia.
Treating clinician(s)	Doctoral candidates and doctoral fellows of clinical psychology
Intervention(s)	Panic Control Treatment for Adolescents (PCT-A; *n* = 37)
Comparison group(s)	Waitlist (*n* = 13)
Procedure	Follow-up analysis of an RCT by the same authors which aimed to determine the effectiveness of an intensive PCT-A intervention for adolescents with panic disorder. PCT-A was delivered over an 8-day period, with sessions up to 8 hours in length that included substantial parent involvement. Treatment elements included rapport building, psychoeducation, fear and avoidance hierarchy development, cognitive restructuring, and a variety of exposure techniques.
Summary of findings	There was a main treatment effect for PCT-A, with significant reductions in panic disorder severity at 6 weeks' follow-up compared with waitlist controls. Further analysis of moderating variables indicated that the treatment was most effective for adolescents with low or moderate levels of fear and avoidance. The authors suggested that adolescents with severe fear and avoidance may not be suited to a condensed or intense forms of PCT-A.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 136. Copyright 2018 by the Australian Psychological Society.

Title of item	Cognitive-behavioral treatment of panic disorder in adolescence
Author(s) and source	Pincus, D. B., May, J. E., Whitton, S. W., Mattis, S. G., & Barlow, D. H. (2010). Cognitive-behavioral treatment of panic disorder in adolescence. *Journal of Clinical Child and Adolescent, 39*(5), 638–649. https://doi.org/10.1080/15374416.2010.501288
Level of evidence	Level II
Design	RCT
Follow-up	3 to 6 months
Format	Individual, family
Participants	26 adolescents aged 14 to 17 (mean age 15.8 years) with a principal DSM-IV diagnosis of panic disorder with or without agoraphobia. Almost three-quarters (73%) of participants were female.
Treating clinician(s)	Doctoral level clinical psychologists or doctoral students in clinical psychology
Intervention(s)	Panic Control Treatment for Adolescents (PCT-A; *n* = 13)
Comparison group(s)	Self-monitoring condition (*n* = 13)
Procedure	This is the first RCT to determine the efficacy of PCT-A as a treatment for adolescents with panic disorder. The intervention was delivered across 11 x 50-minute weekly sessions and incorporated psychoeducation, cognitive restructuring, exposure techniques, skill review, and some parent involvement.
Summary of findings	At posttreatment, PCT-A was more effective in reducing clinical severity ratings of panic disorder than was the control condition (large effect size). Further treatment effects were found for measures of self-reported anxiety sensitivity, general anxiety, and depressive symptoms, all accompanied by large effect sizes. All treatment effects were maintained at both 3 and 6 months' follow-up.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 137. Copyright 2018 by the Australian Psychological Society.

Eye movement desensitisation and reprocessing

Title of paper	**Eye movement desensitization and reprocessing therapy in adolescents with panic disorder: A twelve-week follow-up study**
Full citation	Inci Izmir, S. B., Korkmazlar, U., & Ercan, E. S. (2023). Eye movement desensitization and reprocessing therapy in adolescents with panic disorder: A twelve-week follow-up study. *Clinical Child Psychology and Psychiatry*, *29*(3), 966-981. https://doi.org/10.1177/13591045231184757
Level of evidence	Level IV
Design	Interrupted time series
Format	Individual, face to face
Participants	Sample size of *n* = 30 participants
Demographic characteristics	The age of participants ranged from 14 to 17 years old, with a mean of 15.53 years (*SD* = .97). All participants were diagnosed with panic disorder (without agoraphobia) based on DSM-5 criteria. The study was conducted in Turkey.
Treating clinician type	Trained mental health professional (psychologist)
Intervention	EMDR
Study groups	Intervention group: EMDR therapy No control group
Outcome(s) measured	Panic disorder symptom severity was measured by the PAS, and the BAI was used to assess levels of anxiety. Secondary outcomes were the CGI-S, CGI-I, and K-SADS-PL.
Procedure	An eight-phase EMDR treatment comprised of standardised protocols and procedures was provided over 12 weeks (one session per week). Outcome were measured at pre-test, at 4 weeks, and at 12 weeks.
Follow up	No
Statistics summary	Repeated measure ANOVAs were performed to compare mean scores across time. Results showed significant differences in the mean PAS scores between baseline and the end of the treatment (F (1,29) = 1119.80, $p < .001$; *Partial* $\eta^2 = .98$).
Conflict of interest	None declared
Risk of bias	Moderate
Summary of findings	The findings of this study indicate that EMDR may be an effective treatment for panic disorder in adolescents, however due to the nature of the study design these findings should be interpreted with caution.

Note. BAI: Beck Anxiety Inventory; CGI-I: Clinical Global Impression – Improvement Scale; CGI-S: Clinical Global Impression Severity Scale; K-SADS-PL: Kiddie Schedule for affective Disorders and Schizophrenia for School-Age Children Present and Lifetime version; PAS: Panic and Agoraphobia Scale.

Social anxiety disorder

SUMMARY OF EVIDENCE

Level I evidence[89] was found in support of cognitive behaviour therapy in the treatment of social anxiety disorder in children and adolescents aged 7 to 18 years. Level II evidence was found in support of self-guided digital interventions (therapist-guided internet-delivered cognitive behaviour therapy, age 10 to17 years) and psychodynamic therapy.

Guidelines provided by RANZCP (2018) and NICE (2013) list age-adapted cognitive behaviour therapy as a first-line treatment. For young children, the involvement of parents or carers can support the effective delivery of the intervention, and for adolescents (typically aged 15 years and older) who have the cognitive and emotional capacity to undertake a treatment developed for adults, using psychological interventions that have been developed for adults is recommended.

[89] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of social anxiety disorder in children and adolescents.

Cognitive behaviour therapy

Title of paper	**Efficacy and acceptability of psychological interventions for social anxiety disorder in children and adolescents: A meta-analysis of randomized controlled trials**
Full citation	Yang, L., Zhou, X., Pu, J., Liu, L., Cuijpers, P., Zhang, Y., Zhang, H., Yuan, S., Teng, T., Tian, L., & Xie, P. (2019). Efficacy and acceptability of psychological interventions for social anxiety disorder in children and adolescents: A meta-analysis of randomized controlled trials. E*uropean Child & Adolescent Psychiatry*, *28*(1), 79-89. https://doi.org/10.1007/s00787-018-1189-x
Evidence level	Level I
Design	Meta-analysis of 17 RCTs (14 for CBT)
Delivery format	Mixed: group, individual, individual + group, internet-assisted.
Participants	1,134 patients with a primary clinical diagnosis of a current SAD according to standardised diagnostic criteria. 696 participants were randomised to psychological interventions (CBT, *n* = 593 (85%), BT, *n* = 103)) and 438 to control conditions (WL, *n* = 227; NT, *n* = 23; PBO, *n* = 188).
Demographic characteristics	The mean age of participants was 13.8 years (range 7–18 years), and more than half of participants (64.49%) were female.
Treating clinician type	Not specified.
Intervention	CBT
Outcome(s) measured	Efficacy as measured by mean change in anxiety symptom scores on the SAS, SCAS, SPAI-C and SPSQC; and acceptability as measured by dropouts for all reasons (primary outcomes). Remission of anxiety diagnosis as measured by the proportion of patients who no longer met the diagnostic criteria for SAD at post-intervention, and quality of life/functional improvement; and depressive symptoms measures (secondary outcomes).
Procedure	This meta-analysis aimed to evaluate the efficacy and acceptability of psychotherapy in children and adolescents with SAD. Subgroups included CBT and CT. PubMed, CENTRAL, Embase, Web of Science, PsycINFO, CINAHL, and ProQuest were searched. RCTs that compared psychological interventions for SAD with control conditions in children and adolescents were included.
Follow up	No
Statistics summary	Pairwise meta-analyses were performed by synthesising studies that compared the same interventions using a random effects model. Reduction in mean change in anxiety symptom score was greater for CBT than for control conditions, overall pooled *SMD* = -1.19, 95%CI [-1.72, -0.67] with very high heterogeneity. I^2 = 91% 95% CI [87-93] *p* = .96.
Conflict of interest	None declared
Risk of bias	Unclear
Summary of findings	CBT is probably efficacious in the treatment of SAD among children and adolescents when compared with active and passive controls. However, this finding should be interpreted with caution because of the high heterogeneity of trials and low literature quality. Subgroups analyses indicated that the type of control conditions and intervention programs contributed to this heterogeneity (waitlist control was significantly inferior to other controls, including psychological placebo and no treatment). However, the contribution of the type of intervention program to overall heterogeneity should be interpreted with caution due to a potential high risk of bias.

Note. SAS Social Anxiety Scale; SCAS: Spence Children's Anxiety Scale; SPAI-C: Social Phobia and Anxiety Inventory for Children; SPSQC; SPSQ Social Phobia Screening Questionnaire.

Psychodynamic therapy

Title of paper	**Cognitive-behavioral and psychodynamic therapy in adolescents with social anxiety disorder: A multicenter randomized controlled trial**
Full citation	Salzer, S., Stefini, A., Kronmuller, K. T., Leibing, E., Leichsenring, F., Henningsen, P., Peseschkian, H., Reich, G., Rosner, R., Ruhl, U., Schopf, Y., Steinert, C., Vonderlin, E., & Steil, R. (2018). Cognitive-behavioral and psychodynamic therapy in adolescents with social anxiety disorder: A multicenter randomized controlled trial. *Psychotherapy and Psychosomatics, 87*(4), 223-233. https://doi.org/10.1159/000488990
Evidence level	Level II
Design	Randomised controlled trial superiority trial
Delivery format	Individual, face to face.
Participants	108 university clinic outpatients with a diagnosis of SAD according to the German edition of the Kiddie-SADS-Present and Lifetime Version. SAD had to be the primary diagnosis according to the rating on the ADIS-IV. Participants were randomised to: CBT, n = 34; PDT n, = 35; and WL, n = 39.
Demographic characteristics	Age: M = 17.35 years, *SD* = 2.00; 71% females.
Treating clinician type	Trained mental health professional (held a degree as licensed psychotherapists or were in advanced psychotherapeutic training and regularly conducted CBT or PDT).
Intervention	Psychodynamic therapy
Study group	Intervention group(s): PDT, CBT. Control group: WL
Outcome(s) measured	Social anxiety symptoms as measured by the LSAS-CA total score (primary outcome). Response rate (defined as a reduction in LSAS-CA total score ≥31%), remission rate (defined as a LSAS-CA total score ≤30), and social anxiety symptoms as measured by the SPAI (secondary outcomes).
Procedure	Participants in the CBT and PDT groups received 25 individual 50-minute treatment sessions. In the first half of the treatment, 1 double session per week (CBT) or 2 sessions per week (PDT) were conducted in a period of about 4 weeks, and 1 session per week subsequently.
Follow up	Yes, 6 and 12 months after treatment termination.
Statistics summary	ANCOVA analyses showed that PDT was superior to WL on the LSAS-CA (p = .026, d = 0.53, 95% CI [0.06,1.00]. PDT was superior to WL for response rates (54% and 20% respectively; h = 0.72, p = 0.006; OR = 4.72, 95% CI [1.45,15.32]), remission rates (34% and 6% respectively; h = 0.74, p = 0.014; OR = 8.51, 95% CI [1.07,67.69]), and SPAI scores (p = 0.006, d = 0.66, 95% CI [0.19, 1.13]). ANCOVA analyses showed that both treatments were superior to WL in the LSAS-CA (CBT: p = .011, d = 0.61, 95% CI[0.14,1.08]; PDT: p = .0261, d = 0.53, 95% CI [0.06,1.00]. At the end of treatment, response rates were 66, 54, and 20% for CBT, PDT, and WL. The respective remission rates were 47, 34, and 6%. CBT and PDT were significantly superior to WL regarding remission (CBT: p = .001, h = 1.0; PDT: p = .014, h = 0.74), response (CBT: p = .001, h = 0.97; PDT: p = .006, h = 0.72), and the SPAI (CBT: p = .002, d = 0.75, 95% CI [0.27,1.22]; PDT: p = .006, d = 0.66, 95% CI [0.19,1.13].
Conflict of interest	None declared
Risk of bias	High
Summary of findings	Results from this study show that both PDT and CBT are efficacious in the treatment of social anxiety disorder in adolescents. Treatment effects were stable at 6- and 12-month follow-ups.

Note. LSAS-CA: Liebowitz Social Anxiety Scale for Children and Adolescents; SPAI: Social Phobia Anxiety Inventory.

Self-guided digital interventions

Title of paper	**Therapist-guided internet-delivered cognitive behavioral therapy vs internet-delivered supportive therapy for children and adolescents with social anxiety disorder: A randomized clinical trial**
Full citation	Nordh, M., Wahlund, T., Jolstedt, M., Sahlin, H., Bjureberg, J., Ahlen, J., Lalouni, M., Salomonsson, S., Vigerland, S., Lavner, M., Öst, L.-G., Lenhard, F., Hesser, H., Mataix-Cols, D., Högström, J., & Serlachius, E. (2021). Therapist-guided internet-delivered cognitive behavioral therapy vs internet-delivered supportive therapy for children and adolescents with social anxiety disorder: A randomized clinical trial. *JAMA Psychiatry, 78*(7), 705–713. https://doi.org/10.1001/jamapsychiatry.2021.0469
Evidence level	Level II
Design	Randomised controlled trial
Delivery format	Digital Intervention with therapist guidance
Participants	103 children and adolescents aged 10 to 17 years and with a principal diagnosis of SAD and their parents. ICBT: *n* = 51; ISUPPORT: *n*= 52.
Demographic characteristics	77% females, age in years *M* = 14.1, *SD* = 2.1, Swedish.
Treating clinician type	Trained mental health professional (clinical psychologists).
Intervention	Therapist-guided internet-delivered cognitive behavioral therapy (ICBT) vs. internet-delivered supportive therapy (ISUPPORT).
Study groups	Experimental group: therapist-guided internet-delivered cognitive behavioral therapy (ICBT). Active control: internet-delivered supportive therapy (ISUPPORT).
Outcome(s) measured	SAD symptom severity using the masked CSR derived from the ADIS-C. (primary outcome).
Procedure	Both ICBT and ISUPPORT included 10 online modules, 5 separate parental modules, three 20-30 minutes video call sessions with a therapist (at weeks 3, 5, and 7), asynchronous therapist support throughout the treatment and online materials. Assessments were conducted before and after treatment, and three months after the end of treatment.
Follow up	Yes, 3 months after the end of treatment.
Statistics summary	Intention-to-treat analyses including all randomised participants were conducted. Continuous variables were analysed with mixed-linear models. Between-groups effect sizes from baseline to end of treatment for CSR: *d* = 0.67; 95% CI [0.21,1.12], in favour of ICBT. Between-group effect sizes from baseline to 3-month follow-up: CSR: *d* = 0.67, 95% CI [0.21,1.12], *p* = 0.005; LSAS-C: *d* = 0.64, 95% CI [0.27,1.01], *p* = 0.001; LSAS-P: *d* = 0.83; 95% CI [0.43,1.22], *p* < .001.
Conflict of interest	Declared (financial)
Risk of bias	Low
Summary of findings	Internet-delivered cognitive behavioral therapy was significantly more efficacious than internet-delivered supportive therapy in reducing the severity of SAD symptoms in children and adolescents with SAD.

Note. CSR: Clinician Severity Rating; ADIS-C: Anxiety Disorder Interview Schedule Child Version.

Specific phobia

SUMMARY OF EVIDENCE

Level II evidence[90] was identified in support of the use of cognitive behaviour therapy (exposure therapy), psychoeducation, and self-guided digital interventions in the treatment of specific phobia in children and adolescents.

[90] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of specific phobia in children and adolescents.

Cognitive behaviour therapy

Title of paper	**Virtual reality one-session treatment of child-specific phobia of dogs: A controlled, multiple baseline case series**
Full citation	Farrell, L. J., Miyamoto, T., Donovan, C. L., Waters, A. M., Krisch, K. A., & Ollendick, T. H. (2021). Virtual reality one-session treatment of child-specific phobia of dogs: A controlled, multiple baseline case series. *Behavior Therapy*, *52*(2), 478–491. https://doi.org/10.1016/j.beth.2020.06.003
Level of evidence	Level IV
Design	Case series
Format	Individual, face to face (virtual reality)
Participants	8 children with a diagnosis of dog phobia according to DSM-5 criteria
Demographic characteristics	The age range for participants was 8-12 years (*M* = 8.9) with 50% being female and 100% from a Caucasian background
Treating clinician type	Trained mental health professional (therapist)
Intervention	Virtual reality one-session exposure therapy treating dog phobia
Outcome(s) measured	Outcomes measured include a diagnosis of specific phobia and severity measured by ADIS-P and CSR respectively.
Procedure	The intervention involved exposing participants to virtual reality (VR) stimuli depicting a dog within the treatment room environment. Participants were randomly assigned to undergo baseline checks lasting 2, 3, and 4 weeks respectively before receiving treatment (to control for time effect), followed by a one-month follow-up assessment.
Follow up	Yes; one month
Statistical strength / effect sizes	Wilcoxon rank-sum tests showed that no significant changes occurred in symptoms severity during baseline (Z = -.108, p = .41). Reliable change index (CRI) for CSR scores was calculated as a cut-off for assessing statistically reliable change in phobia severity scores which indicated 75% recover. Significant reductions on phobia symptoms were found from pretreatment to post-treatment and follow-up, $\chi^2(2)$ = 12.28, p = .001. (RCI = 1.91).
Conflict of interest	None declared
Risk of bias	Serious
Summary of findings	Virtual reality one-session exposure therapy showed preliminary evidence of efficacy in treating dog phobia in children. The within-subjects experimental control design is a methodological strength; however the study is underpowered which restricts the generalizability of the findings. Further research is needed to compare with other delivery formats and interventions.

Note. ADIS-P: Anxiety Disorders Interview Schedule (Parent Version); CSR: Clinician Severity Rating.

Title of paper	**One-session treatment of specific phobias in youth: A randomized clinical trial in the United States and Sweden**
Full citation	Ollendick, T. H., Ost, L. G., Reuterskiöld, L., Costa, N., Cederlund, R., Sirbu, C., Davis, T. E., & Jarrett, M. A. (2009). One-session treatment of specific phobias in youth: A randomized clinical trial in the United States and Sweden. *Journal of Consulting and Clinical Psychology, 77*(3), 504–516. https://doi.org/10.1037/a0015158
Level of evidence	Level II
Design	RCT
Follow-up	6 months
Format	Individual
Participants	196 children and adolescents (7 to 16 years) meeting the diagnostic criteria for a specific phobia
Treating clinician(s)	Clinicians with postgraduate qualifications and specific training in one-session treatment (in-vivo exposure)
Intervention(s)	Brief exposure-based therapy (*n* = 85)
Comparison group(s)	Education support therapy (*n* = 70), waitlist (*n* = 41)
Procedure	Participants were randomly allocated to one of three groups: Brief exposure-based therapy, education-support therapy, or waitlist control. Both treatments were maximised to 3 hours and manualised, but flexibly implemented.
Summary of findings	Both active conditions were more effective at reducing symptom severity than was being on a waitlist. However, treatment groups were not more effective than being on a waitlist on the behavioural approach test, self-report, or parent-report measures posttreatment. Posttreatment, in-vivo exposure was superior to education support, and at the 6-month follow-up participants receiving in-vivo exposure continued to do better than did those in education support.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 138. Copyright 2018 by the Australian Psychological Society.

Psychoeducation

Title of paper	**Brief psycho-social interventions in the treatment of specific childhood phobias: A controlled trial and a 1-year follow-up**
Full citation	Flatt, N., & King, N. (2010). Brief psycho-social interventions in the treatment of specific childhood phobias: A controlled trial and a 1-year follow-up. *Behaviour Change, 27*(3), 130–153. https://doi.org/10.1375/bech.27.3.130
Level of evidence	Level II
Design	RCT
Follow-up	1 year
Format	Individual
Participants	43 children and adolescents aged 7 to 17 years (mean age 11.2 years) with a DSM-IV diagnosis of specific phobia
Treating clinician(s)	A psychologist specialising in childhood anxiety and CBT techniques, assisted by psychology master's students
Intervention(s)	CBT (single-session exposure; *n* =17)
Comparison group(s)	Waitlist (*n* = 11), psychoeducation (The Child Confidence Program; *n* =15)
Procedure	RCT designed to evaluate the effectiveness of single-session exposure treatment and psychoeducation for the treatment of assorted specific phobias in children and adolescents. The exposure treatment was delivered in a single session of up to 3 hours and incorporated a hierarchy of behavioural exercises in conjunction with cognitive therapy techniques. The psychoeducation program consisted of educational information and supportive therapy with the aim of enhancing self-efficacy. Parents were minimally involved in both treatment groups.
Summary of findings	Single-session exposure (CBT) and psychoeducation were both more effective at reducing behavioural avoidance and increasing self-efficacy at postassessment when compared with results from waitlist controls (all large effect sizes). Furthermore, global functioning significantly improved for both treatment groups posttreatment. There were no significant between-group differences between the single-session exposure and psychoeducation interventions. Improvements with regard to behavioural avoidance and self-efficacy, but not functioning levels, were maintained at 1-year follow-up.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 139. Copyright 2018 by the Australian Psychological Society.

Self-guided digital interventions

Title of paper	**Internet-based cognitive behavioral therapy for children and adolescents with dental or injection phobia: Randomized controlled trial**
Full citation	Schibbye, R., Hedman-Lagerlöf, E., Kaldo, V., Dahllöf, G., & Shahnavaz, S. (2024). Internet-based cognitive behavioral therapy for children and adolescents with dental or injection phobia: Randomized controlled trial. *Journal of Medical Internet Research*, *26*(2), e42322–e42322. https://doi.org/10.2196/42322
Level of evidence	Level II
Design	Randomised controlled trial (RCT)
Delivery format	Digital intervention, with minimal therapist and parental guidance
Participants	A total of *n* = 33 children and adolescents with a diagnosis of dental or injection phobia according to DSM-4 and K-SADS-PL criteria (intervention group *n* = 17; waitlist control group *n* = 16)
Demographic characteristics	The age range of the participants was 8—15 years. The mean age was 11.2 (*SD* = 1.9) years and 64% were female. All participants spoke Swedish fluently.
Treating clinician type	Trained mental health professionals (clinical psychologists)
Intervention	Internet-based cognitive behaviour therapy
Study groups	Intervention group: Internet-based cognitive therapy with parental guidance Control group: Passive control (waitlist)
Outcome(s) measured	Relevant primary outcomes focused on diagnosis of specific phobias as measured by K-SADS-PL and PG-BAT. Secondary outcomes include measures on dental and injection anxiety measured by the CFCSS-DS, CNCD, IPSC, P-SEQ-DA, and SEQ-SP.
Procedure	The intervention consisted of audio and video recordings of 12 weekly web-based treatment modules, a dental tool kit, and a training module for parents in assisting their child with exposure assignments at home. Therapists give asynchronous feedback each time a module has been completed.
Follow up	No
Statistics summary	A chi-square test of independence showed that at post-treatment, there is a significant difference between the proportion of participants who no longer met criteria for specific phobias in the iCBT group, χ^2 (1, *n* = 17) = 8.4, *p* = .004). Moreover, the percentage of those who lost at least one diagnosis was significantly reduced in the i-CBT group, χ^2 (1, *N* = 33) = 15.5, *p* < .001. In the i-CBT group, 41% of participants no longer met diagnostic criteria for specific phobias at the post-treatment interview, compared to 0% of the participants in the control group.
Conflict of interest	None declared
Risk of bias	Some concerns
Summary of findings	Results indicated that internet-based cognitive behaviour therapy is efficacious in treating dental and injection phobia in children and adolescents, and that only minimal training is needed for parents. Researchers note the potential of iCBT to be implemented in routine dental care by dental personnel without training in CBT.

Note. CFCSS-DS: Children's Fear and Survey Schedule – Dental Subscale; CNCD: Children's Negative Cognitions in Dentistry Scale; IPSC: Injection Phobia Scale for Children; K-SADS-PL: Kiddie Schedule for Affective Disorders and Schizophrenia for School-Age Children–Present and Lifetime; P-SEQ-DA: P-SEQ-DA: Parental Self-Efficacy Questionnaire for Dental Anxiety; PG-BAT: Picture-Guided Behavioural Avoidance Test; SEQ-SP: Self-Efficacy Questionnaire for Phobic Situations.

Posttraumatic stress disorder

SUMMARY OF EVIDENCE

For the purposes of this review, we follow the categorisation of cognitive behaviour therapies with a trauma focus (CBT-T) by the International Society for Traumatic Stress Studies (ISTSS; 2020), which classifies variants such as cognitive therapy for PTSD, cognitive processing therapy, prolonged exposure, narrative exposure therapy, as well as manualised trauma-focused cognitive behaviour therapy (TF-CBT) under the same umbrella.

Level I evidence[91] was identified in support of individual cognitive behaviour therapies with a trauma focus as well as group trauma-focused cognitive behaviour therapy in the treatment of PTSD in children and adolescents. Level I evidence was also found in support of eye movement desensitisation and reprocessing and play therapy for both children and adolescents.

Guidelines provided by ISTSS (2020) and WHO (2023) recommend trauma-focused cognitive behaviour therapy and eye movement desensitisation and reprocessing as first-line treatments for children and adolescents with PTSD. Furthermore, Phoenix Australia (2021) also recommends self-guided digital interventions, modified narrative exposure therapy for children (KIDNET) and play therapy as potential psychological interventions for children and adolescents with PTSD or trauma exposure.[92] Additionally, they discourage the use of individual psychological debriefing within the initial three months following the traumatic event. Instead, they conditionally recommended for the use of child and family traumatic stress intervention.

[91] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of posttraumatic stress disorder in children and adolescents.
[92] The American Psychological Association's updated clinical practice guideline on PTSD is anticipated to be released in early 2025.

Cognitive behaviour therapy

Title of paper	**Efficacy and moderators of efficacy of cognitive behavioural therapies with a trauma focus in children and adolescents: An individual participant data meta-analysis of randomised trials**
Full citation	de Haan, A., Meiser-Stedman, R., Landolt, M. A., Kuhn, I., Black, M. J., Klaus, K., Patel, S. D., Fisher, D. J., Haag, C., Ukoumunne, O. C., Jones, B. G., Flaiyah, A. M., Catani, C., Dawson, K., Bryant, R. A., de Roos, C., Ertl, V., Foa, E. B., Ford, J. D., ... & Dalgleish, T. (2024). Efficacy and moderators of efficacy of cognitive behavioural therapies with a trauma focus in children and adolescents: An individual participant data meta-analysis of randomised trials. *The Lancet Child & Adolescent Health, 8*(1), 28-39. https://doi.org/10.1016/ S2352-4642(23)00253-5
Level of evidence	Level I
Design	Systematic review and meta-analysis (38 studies, with 25 studies included in the meta-analysis)
Delivery format	Individual, face to face
Participants	Total sample of 1,686 young people with a diagnosis of PTSD under ICD or DSM-5 criteria or clinically relevant PTSD symptoms above a validated clinical cut-off score
Demographic characteristics	The mean age of participants was 13.7 (*SD* = 3.0) years, ranging from 6 – 18 years, with 62.9% being female. Studies included participants from both high, middle, and low-income countries.
Treating clinician type	Not specified
Intervention	Cognitive behavioural therapies with a trauma focus (CBT-T)
Outcome(s) measured	The primary outcome was posttraumatic symptom severity at post-treatment, measured by validated scales (see article appendix). Further relevant secondary outcomes were PTSD symptoms at follow-up and presence of PTSD diagnosis post-treatment.
Procedure	A systematic review and meta-analysis were conducted to investigate the efficacy of CBT-T) in the treatment of PTSD in children and adolescents. CBT-T ranged from four to 30 sessions. The database search updated result from the 2018 NICE guidelines, covering RCTs from January 2018 to November 2019.
Follow up	Yes, 1-3 months, 4-6 months, and 7-12 months after treatment
Statistics summary	A one-stage random effects meta-analysis was conducted to compare CBT-TFs to control conditions using individual participant data. After adjusting for baseline PTSD symptom scores, CBT-T significantly reduced PTSD symptom severity compared to control (b =−13.17, 95% CI [−17.84, −8.50], p < .001, τ^2 = 103.72). This effect remained significant for all follow-up assessments, with effect size ranging from b = -12.09 – -9.72 (*SE* range 2.36 – 2.12), all p < .001.
Conflict of interest	Yes (professional and financial)
Risk of bias	Low
Summary of findings	This review shows support that CBT with a trauma focus are effective in treating PTSD in children and adolescents, with effects maintained up to 12 months. Secondary moderation analyses showed that the effect of treatment is magnified for young people with higher baseline PTSD symptom severity.

Title of paper	**The efficacy and acceptability of group trauma-focused cognitive behavior therapy for the treatment of post-traumatic stress disorder in children and adolescents: A systematic review and meta-analysis**
Full citation	Xie, S., Cheng, Q., Tan, S., Li, H., Huang, T., Xiang, Y., & Zhou, X. (2024). The efficacy and acceptability of group trauma-focused cognitive behavior therapy for the treatment of post-traumatic stress disorder in children and adolescents: A systematic review and meta-analysis. *General Hospital Psychiatry*, *86*, 127–134. https://doi.org/10.1016/j.genhosppsych.2023.11.012
Level of evidence	Level I
Design	Systematic review and meta-analysis of 11 RCTs
Delivery format	Group, face to face
Participants	Total sample of 1,942 children and adolescents (n = 1,857 with clinically relevant PTSD symptoms above a validated clinical cut-off score or a DSM or ICD-based diagnostic interview)
Demographic characteristics	The mean age of participants was 11.8 years, ranging from 7 – 18 years, with more than 50% being female in 45% of the studies. Studies included participants from Asia, North America, with some being cross-continental studies.
Treating clinician type	Not specified
Intervention	Group trauma-focused cognitive behaviour therapy
Outcome(s) measured	The relevant primary outcome was PTSD symptom severity at post-treatment measured by validated scales, including CATS, CPSS, CRIES, PSS and UCLA-RI. Depressive anxiety symptoms were also measured as secondary outcomes.
Procedure	A systematic review and meta-analysis were conducted to investigate the efficacy and acceptability of group-based trauma-focused cognitive behaviour therapy in the treatment of PTSD in children and adolescents. The control groups were passive, including treatment-as-usual, waitlist, and no treatment Subgroup analyses were such as trauma type, mean age, and psychiatric comorbidities were conducted. The database search covered RCTs from inception until April 2022.
Follow up	Yes, 12 months
Statistics summary	A random-effects meta-analysis of 11 studies showed that TF-CBT significantly reduced PTSD symptoms in children and adolescents compared to passive controls (SMD = -0.43, 95% CI [-0.65, -0.22]), with considerable heterogeneity (I^2 = 75%, p < .001). The result was maintained at follow-up. Subgroup analysis revealed that the effect was significant for those with clinically relevant PTSD symptoms but not those with a formal PTSD diagnosis (n = 118, SMD = -0.03, 95% CI [-0.39, -0.33]).
Conflict of interest	Not provided
Risk of bias	Low
Summary of findings	This review supports the effectiveness of group CBT-based interventions in treating posttraumatic stress symptoms in children and adolescents with clinically significant symptoms. The authors suggest that those with mild to moderate PTSD symptoms may especially benefit from TF-CBT. They recommend further research on group TF-CBT as a preliminary, more cost-effective option prior to the delivery of individual TF-CBT.

Note. CATS: Child and Adolescent Trauma Screen; CPSS: Child PTSD Symptom Scale; CRIES: Child Revised Impact of Events Scale; PSS: Post-traumatic Stress Scale; UCLA-PTSD-RI: University of California, Los Angeles, Posttraumatic Stress Disorder Reaction Index.

Eye movement desensitisation and reprocessing

Title of paper	**Research review: Psychological and psychosocial treatments for children and young people with post-traumatic stress disorder: A network meta-analysis**
Full citation	Mavranezouli, I., Megnin-Viggars, O., Daly, C., Dias, S., Stockton, S., Meiser-Stedman, R., Trickey, D., & Pilling, S. (2020). Research review: Psychological and psychosocial treatments for children and young people with post-traumatic stress disorder: A network meta-analysis. *Journal of Child Psychology and Psychiatry, 61*(1), 18–29. https://doi.org/10.1111/jcpp.13094
Evidence level	Level I
Design	Systematic review and network meta-analysis (32 RCTs included in the meta-analysis with 3 focused on EMDR)
Delivery format	Individual and group, face to face
Participants	1,960 participants with a diagnosis of PTSD or clinically important PTSD symptoms with a score above threshold of a validated scale (*n* = 129 in studies investigating EMDR).
Demographic characteristics	Participant age across all studies ranged from 6 -25 years. Mean age was not specified. Studies on EMDR included participants from 6-18 years, with 57-62% being female and studies conducted in Sweden and the Netherlands.
Treating clinician type	Not specified
Intervention	Eye movement desensitisation and reprocessing
Outcome(s) measured	Primary outcomes include PTSD symptom severity and remission. Supplementary material listed included clinician-administered scales such as CAPS-CA, ADIS-C, K-SADS, and CPTSDI
Procedure	A systematic review and network meta-analysis assessed the efficacy of psychosocial and psychological interventions for PTSD remission and symptom reduction in children and adolescents. The search covered RCTS published from inception until July 2022.
Follow up	Yes; nil to 4 months
Statistics summary	Bayesian random-effect network meta-analyses were conducted to assess change in PTSD symptom scores. Heterogeneity between 63 comparisons across 17 interventions was moderate to high (posterior median *SD* = 0.46, 95% CrI [0.10, 1.20]). At post-treatment, EMDR significantly reduced PTSD symptoms compared to waitlist, *n* = 85, *k* = 3, *SMD* = -0.99, 95% CrI [-1.76, -0.23], and had a mean order ranking of 10.14, 95% CrI [5, 15].
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	Support for the efficacy of EMDR in reducing PTSD symptoms in children and adolescents was found in this review, albeit with smaller effects when compared to other included interventions. Notably, long-term effects of EMDR were also analysed, however the result was not significant.

Note. ADIS-C: Anxiety Disorders Interview Schedule for Children for DSM–IV; CAPS-CA: Clinician-Administered PTSD Scale for Children and Adolescents for DSM–IV; CPTSDI: Children's PTSD Inventory; K–SADS: Schedule for Affective Disorders and Schizophrenia for School Age Children.

Title of paper	**A network meta-analysis of psychological interventions for children and adolescents after natural and man-made disasters**
Full citation	Xie, Y., Zhu, X., Wang, L., Wan, Z., Yang, J., Su, C., Duan, S., Xu, C., & Kan, B. (2024). A network meta-analysis of psychological interventions for children and adolescents after natural and man-made disasters. *BMC Psychiatry, 24*(1), 1–16. https://doi.org/10.1186/s12888-024-05924-8
Evidence level	Level I
Design	Systematic review and network meta-analysis (26 RCTs included in the meta-analysis with 3 studies focused on EMDR)
Delivery format	Individual and group, face to face
Participants	4,331 children and adolescents with clinically important PTSD and depression symptoms exposed to natural and man-made disasters
Demographic characteristics	Participant age across all studies ranged from 8.4 -16.3 years. Mean age was 12.7 years. One study was 100% female, another 100% male. The remaining ranged from 34 – 74% being females. 73% of studies were conducted in low/middle-income countries.
Treating clinician type	Combination of trained mental health professionals (psychologists, psychiatrists, counsellors) and other professionals (teachers)
Intervention	Eye movement desensitisation and reprocessing
Outcome(s) measured	Primary outcomes include PTSD symptom severity including CPSS, CRIES, UCLA-PTSD and others
Procedure	A systematic review and network meta-analysis assessed the effectiveness of psychological interventions in reducing PTSD symptoms in children and adolescents who were exposed to natural and man-made disasters. The search covered RCTS published from inception until June 2023.
Follow up	Yes; nil to 12 months
Statistics summary	A network meta-analysis showed EMDR was significantly more effective than passive control in reducing PTSD symptoms at post-treatment (*SMD* = −0.67, 95% CI [−1.17, −0.17]) and had the highest mean SUCRA ranking along with exposure therapy. At follow-up EMDR alone was ranked best in SUCRA ranking compared with other interventions
Conflict of interest	None declared
Risk of bias	Unclear
Summary of findings	This review concluded that EMDR is the most effective treatment in reducing PTSD and depressive symptoms in children and adolescents exposed to natural and man-made disasters. Further study was encouraged to make stronger conclusions.

Note. CPSS: Child PTSD Symptom Scale; CRIES: Child Revised Impact of Events Scale; UCLA-PTSD-RI: University of California, Los Angeles, Posttraumatic Stress Disorder Reaction Index.

Play therapy

Title of paper	**Research review: Psychological and psychosocial treatments for children and young people with post-traumatic stress disorder: A network meta-analysis**
Full citation	Mavranezouli, I., Megnin-Viggars, O., Daly, C., Dias, S., Stockton, S., Meiser-Stedman, R., Trickey, D., & Pilling, S. (2020). Research review: Psychological and psychosocial treatments for children and young people with post-traumatic stress disorder: A network meta-analysis. *Journal of Child Psychology and Psychiatry, 61*(1), 18–29. https://doi.org/10.1111/jcpp.13094
Evidence level	Level I
Design	Systematic review and network meta-analysis (32 studies included in the meta-analysis with 2 focused on play therapy)
Delivery format	Individual and group, face to face
Participants	1,960 participants with a diagnosis of PTSD or clinically important PTSD symptoms with a score above threshold of a validated scale (*n* = 162 in studies investigating play therapy)
Demographic characteristics	Participant age across all studies ranged from 6 -25 years. Mean age was not specified. Studies on EMDR included participants from 6-18 years, with 57-62% being female and studies conducted in Sweden and the Netherlands.
Treating clinician type	Not specified
Intervention	Play therapy
Outcome(s) measured	Primary outcomes include PTSD symptom severity and remission. Supplementary material listed included clinician-administered scales such as CAPS-CA, ADIS-C, K-SADS, and CPTSDI
Procedure	A systematic review and network meta-analysis assessed the efficacy of psychosocial and psychological interventions for PTSD remission and symptom reduction in children and adolescents. The search covered RCTS published from inception until July 2022.
Follow up	No
Statistics summary	A Bayesian random-effect network meta-analysis was conducted to assess PTSD symptom scores at post-treatment. Heterogeneity between 63 comparisons across 17 interventions was moderate to high (posterior median *SD* = 0.46, 95% CrI [0.10, 1.20]). Play therapy significantly reduced PTSD symptoms compared to waitlist, *n* = 83, *k* = 2, *SMD* = -1.35, 95% CrI [-2.48, -0.20], and had a mean order ranking of 7.60, 95% CrI [2, 14].
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	Play therapy showed efficacy in reducing PTSD symptoms and is supported as a prospective alternative to the higher-ranking TF-CBT in this review.[93] The researchers noted that the small sample of trial participants across most included interventions increase the uncertainty of findings.

Note. ADIS-C: Anxiety Disorders Interview Schedule for Children for DSM–IV; CAPS-CA: Clinician-Administered PTSD Scale for Children and Adolescents for DSM–IV; CPTSDI: Children's PTSD Inventory; K–SADS: Schedule for Affective Disorders and Schizophrenia for School Age Children.

[93] Cohen, J. A., Mannarino, A. P., & Deblinger, E. (2006). *Treating trauma and traumatic grief in children and adolescents*. Guilford Press.

Complex posttraumatic stress disorder

SUMMARY OF EVIDENCE

Following the formal recognition of complex posttraumatic stress disorder (C-PTSD) as a new diagnosis in the ICD-11, C-PTSD has been included in the current review for the first time. As such, the current systematic review has included articles on C-PTSD published prior to 2018 to capture the research which preceded the formal recognition of this diagnosis[94]

For the purposes of this review, the section on cognitive behaviour therapy includes studies on cognitive therapy, cognitive processing therapy, prolonged exposure and narrative exposure therapy. The inclusion of these therapies under of cognitive behaviour therapy is consistent with the categorisation used by the International Society for Traumatic Stress Studies' (ISTSS; 2020).

For the treatment of C-PTSD in children and adolescents, the current review identified Level II evidence[95] in support of trauma-focused cognitive behaviour therapy and Level IV evidence in support of cognitive processing therapy. A lack of established evidence specific to the treatment of C-PTSD was noted.

Guidelines provided by Phoenix Australia have highlighted the sparsity of research into treatment for C-PTSD across all populations including children and adolescents. The guidelines emphasise the importance of trauma-informed care and conclude that more research is needed for this relatively new diagnosis.

[94] For the purpose of exploring emerging literature specific to C-PTSD, this literature review has focused on research that has specifically used this diagnostic term and has excluded research on related symptom clusters or other descriptors used to describe this presentation. Those seeking a comprehensive understanding of the evidence related to these symptoms are encouraged to explore relevant research which may have used different terminology than that covered by the recently formalised C-PTSD diagnosis.

[95] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of C-PTSD in children and adolescents.

Cognitive behaviour therapy

Title of paper	**Complex PTSD as proposed for ICD-11: Validation of a new disorder in children and adolescents and their response to trauma-focused cognitive behavioral therapy**
Full citation	Sachser, C., Keller, F., & Goldbeck, L. (2017). Complex PTSD as proposed for ICD-11: Validation of a new disorder in children and adolescents and their response to trauma-focused cognitive behavioral therapy. *Journal of Child Psychology and Psychiatry, 58*(2), 160-168. https://doi.org/10.1111/jcpp.12640
Level of evidence	Level II
Design	Randomised controlled trial (secondary analysis)
Format	Individual (with caregiver involvement), face-to-face
Participants	Total of 155 children and adolescents aged 7-17 years with exposure to one or more traumatic event(s) and at least medium severity of PTSS
Demographic characteristics	Mean age was 13 (*SD* = 2.8) and the sample consisted of 72% females.
Treating clinician type	Trained mental health professionals (psychologists, psychiatrists, family therapists, social workers, psychotherapists).
Intervention	Trauma-focused cognitive behavioral therapy (TF-CBT)
Study groups	Intervention group: TF-CBT Control group: waiting list
Outcome(s) measured	Primary outcomes included posttraumatic stress symptoms and diagnostic status as assessed by the CAPS-CA and K-SADS. Secondary outcomes include psychosocial functioning (CGAS), cognitive distortions (CPTCI), symptoms of anxiety and depression (SCARED, CDI), behavioral problems (CBCL/4-18) and quality of life (ILK).
Procedure	Data from the original RCT (Goldbeck et al., 2016) was reanalyzed to test the construct validity of ICD-11 PTSD and C-PTSD in children and adolescents, and to assess the treatment outcomes of TF-CBT on C-PTSD.
Follow up	No; original RCT follow-up period was 4 months
Statistics summary	Dependent sample *t*-tests were calculated to compare baseline and posttreatment outcomes, with pre-post effect sizes calculated using Cohen's *d*. Pre-post Effect sizes were large for the CPTSD group (*d* = 1.37). Dependent samples *t*-tests showed significant improvements in all items of disturbances in self-organization, including medium effect sizes for problems in emotion regulation (*d* = 0.40 – 0.60) and large effects for negative self-concept and interpersonal problems (*d* = 0.87 – 1.16)
Conflict of interest	None declared
Risk of bias	Some concerns
Summary of findings	Findings provided empirical evidence of the ICD-11 CPTSD and PTSD distinction and demonstrated the effectiveness and low dropout rates of TF-CBT for children and adolescents with CPTSD.

Note. CAPS-CA: Clinician-Administered PTSD Scale for Children and Adolescents; K-SADS: Schedule of Affective Disorders and Schizophrenia for School-Age Children Revised for DSM IV; PTSS: Posttraumatic Stress Symptoms.

Title of paper	**Response of young patients with probable ICD-11 complex PTSD to treatment with developmentally adapted cognitive processing therapy (D-CPT)**
Full citation	Eilers, R., Rimane, E., Vogel, A., Renneberg, B., Steil, R., & Rosner, R. (2021). Response of young patients with probable ICD-11 complex PTSD to treatment with developmentally adapted cognitive processing therapy. *European Journal of Psychotraumatology, 12*(1), 1929024. https://doi.org/10.1080/20008198.2021.1929024
Level of evidence	Level IV
Design	Non-randomised experimental study
Format	Individual, face-to-face
Participants	44 participants diagnosed with abused-related DSM-IV PTSD (*n* = 19 fulfilled the criteria for probable CPTSD and *n* = 25 patients were in the non-CPTSD group). Participants were recruited among the treatment group of a multicenter RCT investigating the effectiveness of D-CPT for youth after childhood physical or sexual abuse (Rosner et al., 2019[96]). They had experienced childhood physical abuse (*n* = 33) and/or childhood sexual abuse (*n* = 37).
Demographic characteristics	Age range: 14-21 years; mean age: 17.73 (*SD* = 2.37). Females: 89%
Treating clinician type	Not specified
Intervention	Intensive CPT
Study groups	Intervention group 1: PTSD group Intervention group 2: CPTSD group
Outcome(s) measured	Clinician and self-rated post-traumatic stress symptom (PTSS) severity as measured respectively by the CAPS-CA and the UCLA-PTSD-RI.
Procedure	The treatment consisted of 30 sessions with six optional additional sessions (e.g., caregiver session or crisis intervention) over a period of 16 to 20 weeks. The treatment included emotion regulation training, intensive CPT with approximately 15 sessions during four weeks including written trauma accounts and cognitive processing of the trauma.
Follow up	Yes, 3, 6, and 12 months after the end of treatment.
Statistics summary	Multilevel models were performed with fixed effects of group and time, and their interaction. Treatment response was defined as a reduction ≥50% in the CAPS-CA score. Both groups showed similar symptom reduction between baseline and post-treatment for CAPS-CA (CPTSD: *d* = 2.16, non-CPTSD: *d* = 1.39) and UCLA-PTSD-RI (CPTSD: *d* = 1.80, non-CPTSD: *d* = 1.66). Response rates were similar and remained stable in both groups (CPTSD: 47.4%, non-CPTSD: 52.0% to 56.0%).
Conflict of interest	Yes (R.R. and R.S. received fees for workshops and presentations on PTSD treatment. R.R. received fees for coauthoring a book on cognitive processing therapy).
Risk of bias	Moderate
Summary of findings	Findings indicate that D-CPT effectively reduces PTSS in abused young patients with probable CPTSD. The lack of a valid and reliable diagnostic clinical interview for C-PTSD and the small sample size warrant caution when interpreting these findings.

Note. BSL-23: CAP-CA: Clinician-Administered PTSD Scale for Children and Adolescents for DSM-IV; UCLA-PTSD-RI: University of California Los Angeles PTSD Reaction Index for DSM-IV.

[96] Rosner, R., Rimane, E., Frick, U., Gutermann, J., Hagl, M., Renneberg, B., Schreiber, F., Vogel, A., & Steil, R. (2019). Effect of developmentally adapted cognitive processing therapy for youth with symptoms of posttraumatic stress disorder after childhood sexual and physical abuse: A randomized clinical trial. *JAMA psychiatry*, *76*(5), 484–491. https://doi.org/10.1001/jamapsychiatry.2018.4349

Obsessive-compulsive disorder

SUMMARY OF EVIDENCE

For the purposes of this review, the categorisation of cognitive behaviour therapy was expanded to incorporate exposure and response prevention for obsessive-compulsive related disorders.

Level I evidence[97] was identified in support of cognitive behaviour therapy including exposure and response prevention in the treatment of obsessive-compulsive disorder in children and adolescents. Level II evidence was identified in relation to self-guided digital interventions for adolescents aged 12 to17 years, however it was noted that two-thirds of participants were not responsive to online CBT.

[97] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of OCD in children and adolescents.

Cognitive behaviour therapy

Title of paper	**Efficacy and acceptability of cognitive-behavioral therapy and serotonin reuptake inhibitors for paediatric obsessive-compulsive disorder: A network meta-analysis**
Full citation	Cervin, M., McGuire, J. F., D'Souza, J. M., De Nadai, A. S., Aspvall, K., Goodman, W. K., Andren, P., Schneider, S. C., Geller, D. A., Mataix-Cols, D., & Storch, E. A. (2024). Efficacy and acceptability of cognitive-behavioral therapy and serotonin reuptake inhibitors for paediatric obsessive-compulsive disorder: A network meta-analysis. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, 65*(5)*, 594-609. https://doi.org/10.1111/jcpp.13934
Level of evidence	Level I
Design	Systematic review and network meta-analysis (30 studies, with 35 contrasts)
Format	Individual / group across face-to-face / videoconferencing / digital
Participants	Total sample of *n* = 2,057 participants that met DSM diagnostic criteria for OCD and had OCD as the primary or most treatment-demanding diagnosis
Demographic characteristics	The mean age of participants across interventions was 12.06 years (*SD* = 2.48) and 53% of participants were male. Most studies were conducted in the USA (*k* = 19), with the remaining in Sweden, Brazil, Australia, the Netherlands, and Germany.
Treating clinician type	Not specified
Intervention	CBT
Outcome(s) measured	Severity of OCD symptoms as measured by the Y-BOCS.
Procedure	A systematic review and network meta-analysis was conducted to investigate the efficacy of CBT and SRIs in the treatment of OCD across a variety of comparison types. The database search covered all publication dates until August 2021.
Follow up	No
Statistics summary	A frequentist meta-analysis utilizing a random-effects model was used. Analyses indicated that CBT delivered face-to-face was significantly more efficacious than iCBT, waitlist, relaxation training, and pill placebo (MD range: 3.95-11.10, CINeMA estimate of confidence: moderate). No significant difference was found between face-to-face CBT and SRIs (MD: 3.07 [-0.07, 6.20]; moderate), or between face-to-face CBT and a combination of SRIs and CBT (MD: 4.59 [2.70, 6.48]; low).
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	These findings support the use of in-person CBT in the treatment of pediatric OCD, when compared to waitlist and pill placebo. There is some indication that a combination of in-person CBT and SRIs may show the highest levels of efficacy, however the limited number of studies (5 comparisons in the current network meta-analysis) prevent strong conclusions being drawn. CBT delivered via videoconferencing appears to produce levels of efficacy equivalent to those achieved with in-person CBT, however more research is needed in the efficacy of CBT delivered via digital intervention (iCBT).

Note. Y-BOCS: Yale-Brown Obsessive-Compulsive Scale.

Title of paper	**Cognitive behavioural therapy with exposure and response prevention in the treatment of obsessive-compulsive disorder: A systematic review and meta-analysis of randomised controlled trials**
Full citation	Reid, J. E., Laws, K. R., Drummond, L., Vismara, M., Grancini, B., Mpavaenda, D., & Fineberg, N. A. (2021). Cognitive behavioural therapy with exposure and response prevention in the treatment of obsessive-compulsive disorder: A systematic review and meta-analysis of randomised controlled trials. *Comprehensive Psychiatry, 106,* 152223. https://doi.org/10.1016/j.comppsych.2021.152223
Level of evidence	Level I
Design	Systematic review and meta-analysis (36 studies, with 10 studies conducted on child/adolescent populations)
Format	Individual and group, face to face
Participants	Total sample of *n* = 2,020 participants with OCD. The total sample specific to the child/adolescent subgroup analysis was not provided.
Demographic characteristics	The mean age of participants in the studies focused on child/adolescent populations ranged from 5.81 years to 14.6 years.
Treating clinician type	Not specified
Intervention	CBT with ERP
Outcome(s) measured	Severity of OCD symptoms as measured by the Y-BOCS and DOCS.
Procedure	A systematic review and meta-analysis was conducted to investigate the efficacy of CBT with ERP in the treatment of OCD. Subgroup analyses were completed for adult and child/adolescent populations as well as moderating factors such as different comparator types. The database search covered all publication dates until April 2020.
Follow up	No
Statistics summary	Random-effects models were used in all analyses. The primary analysis investigating the change in OCD scores across all studies was significant (g = 0.74, 95% CI [0.51, 0.97]) with an I^2 value of 83.08. The subgroup analysis for the adult population was also significant (g = 1.09, 95% CI [0.60, 1.58]). Effect sizes remained significant when the comparators were either psychological placebo or waitlist, however analyses done on studies using active psychological interventions as the comparator revealed no significant differences.
Conflict of interest	Yes (financial/commercial/professional)
Risk of bias	Low
Summary of findings	These findings support the efficacy of CBT with ERP as an intervention for OCD in both children and adults, however no advantage of ERP was found when compared to other psychological treatments. The authors also noted concerns about the quality of published studies and the role of researcher allegiance which may reduce generalizability of findings.

Note. Y-BOCS: Yale-Brown Obsessive-Compulsive Scale; DOCS: Dimensional Obsessive-Compulsive Scale.

Self-guided digital interventions

Title of paper	**Therapist-guided, internet-delivered cognitive-behavioral therapy for adolescents with obsessive-compulsive disorder: A randomized controlled trial**
Full citation	Lenhard, F., Andersson, E., Mataix-Cols, D., Rück, C., Vigerland, S., Högström, J., Hillborg, M., Brander, G., Ljungström, M., Ljótsson, B., & Serlachius, E. (2017). Therapist-guided, internet-delivered cognitive-behavioral therapy for adolescents with obsessive-compulsive disorder: A randomized controlled trial. *Journal of the American Academy of Child and Adolescent Psychiatry*, *56*(1), 10–19.e2. https://doi.org/10.1016/j.jaac.2016.09.515
Level of evidence	Level II
Design	RCT
Follow-up	3 months
Format	Online (clinician and parent supported)
Participants	67 adolescents aged 12 to 17 (mean age 14.6 years) meeting DSM-5 criteria for OCD. Just under half (46%) of all participants were female.
Treating clinician(s)	Psychologists with experience in pediatric OCD and CBT
Intervention(s)	CBT (BarnInternetProjektet or BiP OCD; *n* = 33)
Comparison group(s)	Waitlist (*n* = 34)
Procedure	RCT designed to determine whether online CBT would be effective in reducing symptoms among adolescents with OCD. The intervention comprised 12 weekly online "chapters" consisting of psychoeducation (4 chapters), exposure response prevention (6 chapters), and relapse prevention (2 chapters). On average, clinicians spent 17.5 minutes per week reading patient exercises and providing individual feedback.
Summary of findings	CBT was more effective than waitlist in reducing OCD symptom severity among adolescents, with a medium to large effect size. Further within-group symptom reductions were reported at 3 months' follow-up, accompanied by a very large effect size. Based on clinician consensus, a quarter of CBT participants were classified as responders at posttreatment compared with none in the control group. The proportion of CBT responders increased to one-third at follow-up. Fifteen percent of those receiving CBT treatment no longer met criteria for OCD at posttreatment. This increased to 26% at follow-up. All controls continued to meet diagnostic criteria for OCD. An average of 8.5 chapters (out of 12) were completed, with approximately one quarter of participants completing all chapters. However, there was no significant relationship between number of completed chapters and symptom severity at posttreatment.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 143.

Body dysmorphic disorder

SUMMARY OF EVIDENCE

This review identified Level II evidence[98] in support of cognitive behaviour therapy for the treatment of body dysmorphic disorder in adolescents (12 to 18 years). This evidence is supported by a single pilot RCT, therefore results should be interpreted with caution.

Clinical guidelines provided by NICE (2005). recommend that all children and young people should be offered cognitive behaviour therapy (including exposure and response prevention) that involves family/carers and is adapted to the developmental age of the child.

[98] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of body dysmorphic disorder in children and adolescents.

Cognitive behaviour therapy

Title of paper	Long-term outcomes of cognitive-behavior therapy for adolescent body dysmorphic disorder
Full citation	Krebs, G., Fernández de la Cruz, L., Monzani, B., Bowyer, L., Anson, M., Cadman, J., Heyman, I., Turner, C., Veale, D., & Mataix-Cols, D. (2017). Long-term outcomes of cognitive-behavioral therapy for adolescent body dysmorphic disorder. *Behavior Therapy, 48*(4), 462–473. https://doi.org/10.1016/j.beth.2017.01.001
Level of evidence	Level II
Design	RCT with follow-up
Follow-up	12 months
Format	Individual, family
Participants	30 adolescents aged 12 to 18 (mean age 16 years) meeting DSM-IV diagnostic criteria for BDD had been involved in an initial pilot study in which they were allocated to either an intervention or control group. Twenty-six participants were part of a 12-month follow-up. A majority of participants (86.7%) were female.
Treating clinician(s)	Clinical psychologists with extensive CBT experience
Intervention(s)	Developmentally tailored CBT (*n* = 15)
Comparison group(s)	Control condition (psychoeducation and weekly telephone contact; *n* = 15)
Procedure	Pilot RCT to determine the efficacy of CBT for the treatment of adolescent BDD. CBT treatment consisted of 14 sessions delivered over 4 months, with psychoeducation and other sessions attended by parents.
Summary of findings	Compared with controls, the adolescents receiving CBT showed significant improvements on a measure of BDD symptoms at posttreatment (large effect size). These results were maintained at 2 months' follow-up and were accompanied by a large effect size. At the 12-month follow-up, 50% of the 26 participants were classified as responders and 23% as in remission. However, the authors noted that most patients continued to be symptomatic at 12 months, suggesting additional long-term treatment is warranted.

Note. Adapted from E*vidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 160. Copyright 2018 by the Australian Psychological Society.

Body-focused repetitive behaviour disorders

SUMMARY OF EVIDENCE

Body-focused repetitive behaviour disorders (BFRBD) have been included in the current review for the first time. As such, the current systematic review has included articles on BFRBD published prior to 2018.

The use of acceptance and commitment therapy in the treatment of BFRBD has largely been operationalised as acceptance-enhanced behaviour therapy, or ACT-enhanced behaviour therapy. Similarly, cognitive behaviour therapy is commonly used with behavioural strategies such as habit reversal training to treat BFRBD. As such, these variations have been included in the review.

The review identified Level IV evidence[99] in support of cognitive behaviour therapy in the treatment of trichotillomania in children and adolescents. However, this evidence has been regarded by the authors as preliminary given the small sample size and high risk of confounding variables inherent in the study design.

Level I evidence in relation to behavioural therapy for trichotillomania in children and adolescents was also identified, however its findings were inconclusive. The authors of that review have noted a sparsity of research into the area of BFRBD in children and adolescents and have highlighted the need for more controlled trials with larger sample sizes and greater statistical power.

[99] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of BFRBD in children and adolescents.

Cognitive behaviour therapy

Title of paper	**A systematic review of psychological and pharmacological interventions for the management of trichotillomania in children and adolescents**
Full citation	Adler, K. A., Adler, N. R., Moylan, S., & Kanaan, R. A. A. (2020). A systematic review of psychological and pharmacological interventions for the management of trichotillomania in children and adolescents. *Journal of Child and Family Studies*, *29*(4), 913-920. https://doi.org/10.1007/s10826-019-01678-0
Level of evidence	Level I
Design	Systematic review (6 studies, with 2 studies focused on behavioural therapy)
Format	Individual, face-to-face
Participants	There were *n* = 48 participants across the two studies that had been identified for behavioural therapy. For study inclusion, participants had to be under the age of 18 and have either a diagnosis of trichotillomania based on DSM criteria or a description of hair pulling that had persisted for at least 6 months and could not be explained by another primary diagnosis.
Demographic characteristics	The two studies focused on behavioural therapy had participants with an age range of 7 – 17 years. Demographic characteristics of the sample associated with this systematic review were not specified.
Treating clinician type	Mental health professional (trained therapist)
Intervention	Behavioural therapy (BT)
Outcome(s) measured	Trichotillomania symptom severity as measured by the NIMH-TSS.
Procedure	A systematic review was conducted to investigate the effectiveness of pharmacological and psychological interventions in the treatment of trichotillomania. Qualitative subgroup analyses were conducted for specific interventions. The database search included controlled trials published from 1990-2017.
Follow up	No.
Statistics summary	Of the two RCTs identified in this systematic review which focused on behavioural therapy, one showed a significant difference in NIMH-TSS scores favouring the intervention group. The other trial, however, did not find any statistical difference in scores between the behavioural therapy group and the control group.
Conflict of interest	None declared
Risk of bias	High
Summary of findings	The findings of this systematic review were inconclusive with regard to the efficacy of behavioural therapy in the treatment of trichotillomania in children. The authors note a sparsity of controlled trials in this population and note that the studies that do exist have low sample sizes and low power. The need for further research in this area to obtain more conclusive findings has been emphasised.

Note. NIMH-TSS: NIMH Trichotillomania Severity Scale.

Title of paper	**Pediatric trichotillomania: Descriptive psychopathology and an open trial of cognitive behavioral therapy**
Full citation	Tolin, D. F., Franklin, M. E., Diefenbach, G. J., Anderson, E., & Meunier, S. A. (2007). Pediatric trichotillomania: Descriptive psychopathology and an open trial of cognitive behavioral therapy. *Cognitive Behaviour Therapy*, *36*(3), 129-144. https://doi.org/10.1080/16506070701223230
Level of evidence	Level IV
Design	Interrupted time series
Format	Individual, face-to-face
Participants	A total of *n* = 22 participants were recruited for the study, with *n* = 14 completing. Participants were eligible for recruitment if they had a primary diagnosis of trichotillomania.
Demographic characteristics	The mean age of the sample was 12.6 years (*SD* = 3.0) and 77.3% were female. The study was conducted in the USA and 86.4% of the participants were White.
Treating clinician type	Trained mental health professionals (licensed psychologists)
Intervention	CBT
Study groups	Intervention group: CBT (No control)
Outcome(s) measured	Trichotillomania symptom severity as measured by the NIMH-TSS and NIMH-TIS (both clinician reported).
Procedure	The CBT program was separated in two phases. In the first phase, 8 weekly sessions were conducted and these focused on psychoeducation, behavioural training, relaxation strategies, cognitive restructuring, and relapse prevention. In the second phase, 4 bi-weekly sessions were conducted with brief 15-20min telephone contacts with the therapist. The second phase focused on review of strategies discussed and troubleshooting.
Follow up	Yes; up to 6 months
Statistics summary	An intention-to-treat repeated-measures ANOVA was conducted. For the NIMH-TSS, there was a significant effect of time in the direction of decreasing scores, $F(6,126) = 13.35$, $p < .001$, partial $\eta^2 = 0.389$. Scores on the NIMH-TIS showed the same significant effect of time, $F(6,126) = 11.45$, $p < 0.001$, $\eta^2 = 0.353$.
Conflict of interest	None declared
Risk of bias	Critical
Summary of findings	These findings provide preliminary support for the use of CBT in the treatment of trichotillomania in children and adolescents. However, higher quality studies with a larger sample size and use of control comparisons are needed for more definitive indication of efficacy.

Note. NIMH-TIS: National Institute of Mental Health Trichotillomania Symptom Impairment Scale; NIMH-TSS: National Institute of Mental Health Trichotillomania Symptom Severity Scale.

Substance use disorder

SUMMARY OF EVIDENCE

This review identified Level I evidence[100] in support of cognitive behaviour therapy (alone or in combination with motivational enhancement therapy), family-based therapy, and motivational interviewing for the treatment of substance use disorder in adolescents aged 12 to 18 years. (Upon expert review, motivational interviewing was added to the intervention list for this chapter).

Level III evidence specific to opioid use was found in support of cognitive behaviour therapy, alone or in combination with motivational enhancement therapy.

Guidelines provided by NICE (2024) recommend the use of individual cognitive behaviour therapy for children and adolescents aged 10 to 17 years with limited comorbidities and good social support. For those with significant comorbidities and/or limited social support, the guidelines recommend the use of multicomponent programs, such as multidimensional family-based interventions, brief strategic family-based interventions, functional family-based interventions, or multisystemic therapy.

[100] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of substance use disorders in children and adolescents.

Cognitive behaviour therapy

Title of paper	Cognitive-behavioral therapies for young people in outpatient treatment for nonopioid drug use
Full citation	Filges, T., & Jorgensen, A. M. K. (2018). Cognitive-behavioral therapies for young people in outpatient treatment for nonopioid drug use. *Research on Social Work Practice, 28*(3), 363-385. https://doi.org/10.1177/1049731516629 80
Level of evidence	Level I
Design	Systematic review and meta-analysis (7 studies)
Delivery format	Individual (2 studies) / group (5 studies), face-to-face
Participants	Total participants from all the studies included 953 youth enrolled in outpatient treatment for nonopioid drug use.
Demographic characteristics	Participants age ranged from 12 to 18 years, with the majority across all studies being White males.
Treating clinician type	Not specified
Intervention	CBT (with or without MET)
Outcome(s) measured	Abstinence or reduction in drug use as measured by biochemical test, self-report estimates (e.g. TLFB interview), and psychometric scales including the ASI, SPS, SFS, and PICS.
Procedure	A systematic review and meta-analysis were conducted to assess the relative effectiveness of CBT to alternative interventions for young people in treatment for nonopioid drug use. The search method included electronic databases, government and policy databanks, grey literature, and hand searches of relevant journals. All studies included in final analysis were RCTs.
Follow up	Yes; <6 months, 6-12 months, >12 months
Statistics summary	Random effects meta-analysis models were used for data analysis. Odds ratios and standardized mean differences were calculated to measure treatment effects. There was no statistically significant effect of CBT (with or without MET) on drug use frequency compared with a group of active treatments (ACRA, MDFT, CBOP, ACC) in the short, medium, or long term. Statistically significant heterogeneity was present in the short, medium, and long term, however not in the medium term for CBT alone. The meta-analysis of CBT with MET is inconclusive, and the one study analysing CBT alone was not statistically significant.
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	The review found insufficient evidence to indicate that CBT (with or without MET) is more effective than comparison interventions (ACRA, MDFT, CBOP, ACC). The findings should be interpreted with caution due to the small number of studies included.

Note. ACRA: Adolescent Community Reinforcement Approach; ACC: Assertive Continuing Care; ASI: Addiction Severity Index; CBOP: Chestnut Bloomington Outpatient; MDFT: Multidimensional Family Therapy; MET: Motivational Enhancement Therapy; SPS: Substance Problem Scale; SFS: Substance Frequency Scale; PICS: Personal Involvement with Chemicals Scale; TLFB: Timeline Follow-Back.

Title of paper	**Psychosocial treatment options for adolescents and young adults with alcohol use disorder: Systematic review and meta-analysis**
Full citation	Belay, G. M., Mak, Y. W., Wong, F. K. Y., Lam, K. K. W., Liu, Q., Yang, F., Mao, T., Wu, C. S. T., & Ho, K. Y. (2024). Psychosocial treatment options for adolescents and young adults with alcohol use disorder: Systematic review and meta-analysis. *Frontiers in Public Health*, *12*, 1371497. https://doi.org/10.3389/fpubh.2024.1371497
Level of evidence	Level I
Design	Systematic review and meta-analysis (12 studies, with 3 studies focused on CBT)
Delivery format	Group, face-to-face
Participants	Total of 3,578 (409 in the CBT studies) adolescents and young adults with a diagnosis of alcohol use disorder (AUD)
Demographic characteristics	Participant age ranged from 13 to 18 years of age and gender was not specified. The studies were conducted in the United States, England, Canada, Germany, Spain and Zambia.
Treating clinician type	Not specified
Intervention	CBT, CBT integrated with motivational enhancement therapy (MET)
Outcome(s) measured	Primary outcomes included frequency of alcohol use (i.e. drinking days per month), amount of alcohol consumed (i.e. average number of drinks consumed each week/day), and abstinence (i.e. percentage of days/weeks/months abstained from alcohol).
Procedure	A systematic review and meta-analysis were conducted to determine the effect of psychosocial interventions among adolescents and young adults with AUD. The search method included RCTs identified in electronic databases searched from inception to February 2023, as well as in reference lists of articles. Meta-analyses could only be performed for three MI studies due to considerable heterogeneity between studies.
Follow up	Yes; 12 months
Statistics summary	Effect sizes for each study were calculated and reported as Cohen's *d*. One study showed that CBT significantly reduced alcohol consumption at 6-month follow-up (-0.36, 95% CI [-0.61, -0.11]). Two studies showed significant reductions in frequency of alcohol use at 6-month follow-up, including from CBT alone (-0.57, 95% CI [-1.01, -0.14]) and from integrated CBT and MET (-0.71, 95% CI [-0.97, -0.45]).
Conflict of interest	None declared
Risk of bias	Unclear
Summary of findings	Findings indicated that CBT was mildly effective in reducing alcohol use frequency amongst adolescents with alcohol use disorder, however it was more effective when combined with MET. The findings should be interpreted with caution due to the small number of relevant studies and 'unclear' risk of bias.

Title of paper	**Addressing the opioid epidemic with behavioral interventions for adolescents and young adults: A quasi-experimental design**
Full citation	Davis, J. P., Prindle, J. J., Eddie, D., Pedersen, E. R., Dumas, T. M., & Christie, N. C. (2019). Addressing the opioid epidemic with behavioral interventions for adolescents and young adults: A quasi-experimental design. *Journal of Consulting and Clinical Psychology, 87*(10), 941. https://doi.org/10.1037/ccp0000406
Level of evidence	Level III
Design	Non-randomised experimental study
Delivery format	Face-to-face
Participants	A total of 252 adolescents (12-17 years) and 533 young adults (12-29 years) entering outpatient treatment for opioid use disorder, receiving the following treatments: MET/CBT (*n* = 142), CBT alone (*n* = 107), A-CRA (*n* = 298), and TAU (*n* = 238).
Demographic characteristics	Mean age for the overall sample was 20.5 (*SD* = 4.1) years, with 42.7% being female and 65% identifying as White.
Treating clinician type	Not specified
Intervention	CBT, CBT/MET
Study groups	Intervention groups: CBT, CBT combined with MET (CBT/MET), A-CRA Control groups: passive (TAU)
Outcome(s) measured	Opioid use was measured using retrospective self-reports and latency to opioid use following treatment initiation. Treatment fidelity and adherence were also measured.
Procedure	Data was obtained from 137 sites associated with the Centre for Substance Abuse Treatment that feed a national data set managed by the GAIN Coordinating Centre. Youth entering treatment completed the initial GAIN-I assessment before being referred to receive treatment for SUD. All participants completed the same GAIN follow-up assessments.
Follow up	Yes; 3, 6, 9 and 12 months
Statistics summary	A generalized boosted model using multiple regression tree logic was used to analyse the data. Standardized mean differences (Cohen's *d*) and hazard ratios (*HRs*) were calculated. Male adolescents assigned to TAU (*HR* = 2.55, 95% CI [1.29, 5.04]) or A-CRA (*HR* = 3.14, 95% CI [1.63, 6.04]) had a 155% and 214% increase in the hazard rate for latency to opioid, respectively, compared with male adolescents receiving MET/CBT or CBT alone. No differences were found between any treatment groups for female adolescents.
Conflict of interest	Not specified
Risk of bias	Low
Summary of findings	Findings indicated that CBT alone or in combination with MET led to better outcomes than passive (TAU) and active (A-CRA) controls in the treatment of opioid use disorder in male adolescents. No differences between treatment groups were found for female adolescents.

Note. A-CRA: Adolescent Community Reinforcement Approach; MET: Motivational Enhancement Therapy.

Family-based interventions

Title of paper	**Effects of multidimensional family therapy (MDFT) on nonopioid drug abuse: A systematic review and meta-analysis**
Full citation	Filges, T., Andersen, D., & Jørgensen, A. M. K. (2018). Effects of multidimensional family therapy (MDFT) on nonopioid drug abuse: A systematic review and meta-analysis. *Research on Social Work Practice, 28*(1), 68-83. https://doi.org/10.1177/1049731515608241
Level of evidence	Level I
Design	Systematic review and meta-analysis (5 studies)
Delivery format	Family
Participants	Participants from all studies included 1,239 (ranging from 83 to 450 in each study) youth enrolled in outpatient treatment for nonopioid drug use.
Demographic characteristics	Mean age ranged from 13.7 to 16.3 years with an overall age range from 12-18 years. The proportion of male participants ranged from 73% to 86% across studies. Four studies were conducted in the US, and one study was conducted in multiple European countries.
Treating clinician type	Not specified
Intervention	Multidimensional family therapy (MDFT)
Outcome(s) measured	Abstinence or reduction in drug abuse as measured by biochemical test, self-report estimates (e.g. TLFB interview), and psychometric scales (e.g. ASI). Secondary outcomes were also examined, for example family functioning, risk behaviour and other adverse effects.
Procedure	A systematic review and meta-analysis were conducted to assess the effects of MDFT on drug abuse reduction in young people being treated for nonopioid drug abuse. The search method included electronic databases, grey literature, hand searches of relevant journals and contact with international experts. All included studies were RCTs.
Follow up	Yes; 6 and 12 months
Statistics summary	Random effects statistical models were used for data synthesis. Treatment effects were measured using standardized mean differences, and odds ratios were used to measure retention. MDFT showed a significant effect for reducing drug abuse problem severity (*SMD* -0.35, 95% CI [-0.59, -0.11], p = .004; τ^2 = .04, p = .04) and frequency (*SMD* -0.24, 95% CI [-0.43, -0.06], p = .01; τ^2 = .01, p = .2 .) at 6 months, and in reducing drug use problem severity at 12 months (*SMD* -0.25, 95% CI [-0.39, -0.10], p = .0007; τ^2 = .00, p = .38) compared with CBT, TAU, MET/CBT5 and ACRA.
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	The review found MDFT to be more effective than other treatments on drug abuse problem severity and drug use frequency in the short-term but not long-term. It further showed MDFT had positive effects on treatment retention compared with control conditions. The findings should be interpreted with caution due to the small number of studies included.

Note. ACRA: Adolescent Community Reinforcement Approach; ASI: Addiction Severity Index; TLFB: Timeline Follow-Back; MET/CBT5: CBT-informed Individual Therapy.

Title of paper	**Effects of family therapy for substance abuse: A systematic review of recent research**
Full citation	Esteban, J., Suárez-Relinque, C., & Jiménez, T. I. (2023). Effects of family therapy for substance abuse: A systematic review of recent research. *Family Process, 62*(1), 49-73. https://doi.org/10.1111/famp.12841
Level of evidence	Level I
Design	Systematic review (18 studies, with 13 studies focused on adolescents)
Delivery format	Family, face-to-face
Participants	Participants were individuals (2,809 adolescents) with a SUD based on DSM-IV/V criteria or with problematic substance abuse behaviour.
Demographic characteristics	Mean age ranged from 15.4 to 18.6 years across studies, and the proportion of female participants ranged from 11% to 100%. Studies were conducted in the USA (8), Europe (4) and Chile (1).
Treating clinician type	Not specified
Intervention	Family therapy (MFT, BSFT, EBFT, FFT, CIFFTA)
Outcome(s) measured	Primary outcome was abstinence or reduction in substance abuse, as measured by urine samples, the TLFB, ADI, ASI, PEI, and/or DISC.
Procedure	A systematic review was conducted to assess the efficacy and effectiveness of family-based treatment approaches for substance use problems. The search method included studies published from 2010 through 2021 identified in electronic bibliographic databases, without limitations on geographic scope or language. All adolescent studies included, except for one, were RCTs.
Follow up	Yes; 18 months
Statistics summary	A systematic review and qualitative synthesis of studies was used to review the evidence. Most studies (7/13) compared MDFT with CBT, with most indicating the superiority of MDFT at follow-up with medium to large effect sizes. BSFT was examined in 3/13 studies, with two showing significantly greater positive change following treatment compared with control conditions. EBFT (single study) showed superior outcomes at follow-up compared with controls, however not at posttreatment. CIFFTA (single study) led to reduced problematic drug use both at posttreatment and follow-up when compares with controls.
Conflict of interest	Not specified
Risk of bias	Unclear
Summary of findings	Findings indicated that family-based treatment approaches are effective in reducing substance use and improving family functioning among adolescents with SUDs.

Note. ADI: Adolescent Diagnostic Interview; ASI: Addiction Severity Index; BSFT: Brief Strategic Family Therapy; CIFFTA: Culturally Informed Flexible Family Treatment for Adolescents; DISC: Diagnostic Interview Schedule for Children; EBFT: Ecologically Based Family Therapy; FFT: Functional Family Therapy; MFT: Multifamily Therapy; PEI: Personal Experience Inventory; TLFB: Timeline Follow-Back Method.

Motivational interviewing

Title of paper	Brief behavioral interventions for substance use in adolescents: A meta-analysis
Full citation	Steele, D. W., Becker, S. J., Danko, K. J., Balk, E. M., Adam, G. P., Saldanha, I. J., & Trikalinos, T. A. (2020). Brief behavioral interventions for substance use in adolescents: A meta-analysis. *Pediatrics, 146*(4). https://doi.org/10.1542/peds.2020-0351
Level of evidence	Level I
Design	Systematic review and meta-analysis (22 studies)
Delivery format	Individual, face-to-face
Participants	Total of 5,668 adolescents aged 12 to 20 years who met criteria for at least one substance use disorder or for problematic substance use (SU), excluding tobacco.
Demographic characteristics	Mean age ranged from 15.6 to 18.9 across studies, and the percentage of males ranged from 20% to 76%.
Treating clinician type	Trained mental health professionals (PhD psychologists, therapists), trained health professionals (hospital staff), other professionals (community clinicians, peer educators), students (bachelor's and master's level)
Intervention	Motivational interviewing (MI)
Outcome(s) measured	SU as measured by frequency of any use (cannabis and alcohol) and frequency of heavy use (alcohol). SU-related problems as measured by the scale with the highest mean severity.
Procedure	A systematic review and meta-analysis were conducted to evaluate the effectiveness of brief behavioural interventions for adolescents with problematic SU. The search method included RCTs identified in electronic databases searched from inception to October 2019, through reference lists of clinical practice guidelines, and via US FDA websites and ClinicalTrials.gov.
Follow up	No
Statistics summary	Both pairwise meta-analyses and network meta-analyses were conducted using random effects models. Effects were expressed as SNMDs for SU-related problem scales, and abstinence outcomes were compared as odds ratios (ORs). Compared with TAU, MI reduced heavy alcohol use days by 0.7 days per month (95% CrI [-1.6, 0.02], low SoE), alcohol use days by 1.1 days per month (95% CrI [-2.2, -0.3], moderate SoE), and overall substance-related problems by a SNMD of 0.5 (95% CrI [-1.0, 0], low SoE). MI did not significantly reduce cannabis use days compared with TAU.
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	Findings indicated that MI reduced heavy alcohol use, alcohol use days, and SU-related problems in adolescents with problematic SU, however it did not reduce cannabis use days. The authors noted a lack of consistently reported outcomes and limited available comparisons.

Note. CrI: Credible Interval; FDA: Food and Drug Administration; SNMD: Standardized Net Mean Differences; SoE: Strength of Evidence.

Psychotic disorders

SUMMARY OF EVIDENCE

The literature related to psychotic disorders in adolescents generally refers to early psychosis, first-episode psychosis, prodromal stage and/or clinical high risk of psychosis. These studies typically include participants up to the age of 30 years to reflect age of onset. As such, the age-related inclusion criteria for adolescents with relation to psychotic disorders has been expanded to cover this age range.

Level I evidence[101] has been identified in relation to cognitive behaviour therapy and family-based interventions. Specific outcomes investigated include positive and negative symptoms, functioning, and transition to psychosis.

Guidelines provided by NICE (2016) recommend both cognitive behaviour therapy and family interventions alongside pharmacotherapy (i.e. antipsychotic medication) for young people with early onset psychotic disorders. A recent NICE (2024) early value assessment has also supported the use of a number of digital interventions.

[101] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of psychotic disorders in children and adolescents.

Cognitive behaviour therapy

Title of paper	**Social and occupational recovery in early psychosis: A systematic review and meta-analysis of psychosocial interventions**
Full citation	Frawley, E., Cowman, M., Lepage, M., & Donohoe, G. (2023). Social and occupational recovery in early psychosis: A systematic review and meta-analysis of psychosocial interventions. *Psychological Medicine*, *53*(5), 1787-1798. https://doi.org/10.1017/S003329172100341X
Level of evidence	Level I
Design	Systematic review and meta-analysis (31 studies, with 8 studies focused on CBTp)
Delivery format	Not specified
Participants	Total sample of *n* = 2,811 participants across all studies. All participants were experiencing early-stage psychosis, defined as being in the high-risk stage and anytime within 5 years of a first diagnosis of psychotic disorder.
Demographic characteristics	The mean age of participants was 22.3 years (*SD* = 3.6). The mean percentage of male participants across studies was 63.3%. No details on ethnicity was provided.
Treating clinician type	Not specified
Intervention	CBT for psychosis (CBTp)
Outcome(s) measured	Level of social and occupational functioning as measured by the GAF, SAS, SIAS, SFS, SOFAS, and Time Use.
Procedure	A systematic review and meta-analysis was conducted to investigate the effectiveness of psychosocial interventions for improving functioning in early psychosis. Subgroup analyses were completed for different intervention types. The database search covered all publication dates until December 2020.
Follow up	No
Statistics summary	The standardised mean difference was estimated to determine the effect of CBT against comparators. The 8 studies that focused on CBTp included ultra high risk (UHR), prodromal, and early psychosis populations. When analysed together, the difference in validated measures of function was non-significant (*SMD* = 0.129, 95% CI [-0.21, -0.299]), *p* = .089, I^2 = 17.13). When the analysis excluded UHR and was conducted only on the 3 studies focused on prodromal or early psychosis, there was a difference in effect size in favour of CBTp at significance (*SMD* = 0.345, *p* < .005; confidence interval and heterogeneity values not provided).
Conflict of interest	None declared
Risk of bias	High
Summary of findings	This meta-analysis supports the use of psychosocial interventions for the improvement of functioning in early psychosis, and has found that the use of multi-component intervention models especially when delivered in community-based settings is associated with significant improvements in social and occupational functioning. In contrast, limited evidence was provided for symptom-focused CBT interventions and a significant effect size was only found when ultra high risk populations were excluded from the analysis. The authors note that CBT interventions were outperformed by cognitive remediation therapy.

Note. GAF: Global Assessment of Functioning Scale; SAS: Social Adjustment Scale; SIAS: Social Interaction Anxiety Scale; SFS: Social Functioning Scale; SOFAS: Social and Occupational Functioning Scale.

Title of paper	**Cognitive behavioral therapy for prodromal stage of psychosis - outcomes for transition, functioning, distress, and quality of life: A systematic review and meta-analysis**
Full citation	Zheng, Y., Xu, T., Zhu, Y., Li, C., Wang, J., Livingstone, S., & Zhang, T. (2022). Cognitive behavioral therapy for prodromal stage of psychosis - outcomes for transition, functioning, distress, and quality of life: A systematic review and meta-analysis. *Schizophrenia Bulletin*, *48*(1), 8-19. https://doi.org/10.1093/schbul/sbab044
Level of evidence	Level I
Design	Systematic review and meta-analysis (10 studies)
Delivery format	Not specified
Participants	Total sample of *n* = 1,128 participants across all studies. As per inclusion criteria, all participants were at Clinical High Risk of Psychosis (CHR-P) according to validated assessments.
Demographic characteristics	The mean age of participants was 22.33 years and 57.5% were male. Included studies were conducted in Great Britain, Canada, Australia, Italy, Germany, Netherlands, and China.
Treating clinician type	Not specified
Intervention	CBT for psychosis (CBTp)
Outcome(s) measured	The primary outcome was transition to psychosis. Secondary outcomes included psychotic symptoms as measured by the CAARMS, PANSS, BPRS, and SOPS; and functioning as measured by as measured by the GAF and SOFAS.
Procedure	A systematic review and meta-analysis was conducted to investigate the efficacy of CBTp on outcomes including transition rate, attenuated psychotic symptoms, and functioning in people with CHR-P when compared to needs-based interventions (NBI; including treatment as usual or nonspecific control treatment).The database search covered all publication dates until April 17, 2020.
Follow up	Yes (6 months; 12 months; 24 months)
Statistics summary	A relative risk (*RR*) measure was calculated for transition to psychosis as the primary outcome. A random-effects model was used for continuous outcomes. CBT significantly lowered rates of transition to psychosis compared to NBI within 6 months (after post-hoc sensitivity analyses; *RR* = 0.44, 95% CI [0.26, 0.73), *p* = .002), by 12 months (*RR* = 0.44, 95% CI [0.30, 0.64], *p* < .0001), by 24 months (*RR* = 0.46, 95% CI [0.30, 0.69], *p* = .0002), and over 24 months (*RR* = 0.58, 95% CI [0.35, 0.95], *p* = .03) after treatment. CBT was associated with significantly lower scores on attenuated psychotic symptom measures compared to NBI at 6-12 months (*SMD* = -0.17, 95% CI [-0.33, -0.02], *p* = 0.03) and 12-24 months (*SMD* = -0.24, 95% CI [-0.43, -0.06], *p* = 0.01) after treatment. No significant effects favouring CBT over NBI were found for functioning, depression, quality of life, or distress.
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	The findings of this meta-analysis supports the hypothesis that CBTp could significant reduce rates of transition to psychosis compared to NBI by 12 months, 24 months, and over 24 months. Findings also suggest a benefit in favour of CBT compared to NBI for the reduction of attenuated psychotic symptoms, however the authors note that the evidence in relation to this outcome is less robust. No significant effect was found in relation to levels of functioning, depression, quality of life, or distress.

Note. BRPS: Brief Psychiatry Rating Scale; CAARMS: Comprehensive Assessment of the At Risk Mental State; GAF: Global Assessment of Functioning Scale; PANSS: Positive and Negative Syndrome Scale; SOFAS: Social and Occupational Functioning Scale; SOPS: Scale of Prodromal Symptoms.

Family-based interventions

Title of paper	**Comparing interventions for early psychosis: A systematic review and component network meta-analysis**
Full citation	Williams, R., Ostinelli, E. G., Agorinya, J., Minichino, A., De Crescenzo, F., Maughan, D., Puntis, S., Cliffe, C., Kurtulmus, A., Lennox, B. R., & Cipriani, A. (2024). Comparing interventions for early psychosis: A systematic review and component network meta-analysis. *eClinicalMedicine*, *70*. https://doi.org/10.1016/j.eclinm.2024.102537
Level of evidence	Level I
Design	Systematic review and component network meta-analysis (37 articles, with family intervention in 24 out of 77 intervention arms)
Delivery format	Not specified
Participants	Total sample of *n* = 4,599 participants across all studies. As per inclusion criteria, all participants had 'first episode psychosis' or 'early psychosis' (i.e. within five years of symptom onset).
Demographic characteristics	The mean age of participants was 25.8 years (*SD* = 6.0) and 64% were male. Included studies were conducted in Europe, North America, Asia, Australia, and South America.
Treating clinician type	Not specified
Intervention	Family intervention as part of Early Intervention for Psychosis (EIP) services
Outcome(s) measured	The primary outcome was assessment of psychotic symptoms as measured by BNSS, BPRS, PANSS, and SAPS. Secondary outcomes included social functioning at 1-year follow up as measured by GAF, GFS, LSP, PSP, QLS, SLOF, and SOFAS.
Procedure	A systematic review and component network meta-analysis was conducted to examine the component-specific performance of EIP services in relation to positive and negative psychotic symptoms and social functioning. The specific components investigated were pharmacotherapy, case management, psychological intervention, family intervention, and social intervention. The database search covered database inception to February 2023.
Follow up	Yes (3 months; 1 year)
Statistics summary	A random-effects component meta-analysis was used. The component-specific incremental standardised mean difference of adding family interventions to an EIP treatment package was not significant for positive symptoms (at 3 month follow-up: *SMD* = -0.30, 95% CI [-0.78, 0.17], *p* = 0.21; at 1 year follow-up: *SMD* = -0.22, 95% CI [-1.53, 1.09], *p* = 0.28), negative symptoms (at 3 month follow-up: *SMD* = 0.57, 95% CI [-0.47, 1.62, *p* = 0.28; at 1 year follow-up: *SMD* = 0.52, 95% CI [-1.61, 2.65], *p* = 0.063), and social functioning (at 1 year follow-up: *SMD* = -0.02, 95% CI [-1.66, 1.62], *p* = 0.98). The incremental risk ratio of adding family interventions to an EIP treatment package was not signficant for dropout at end of treatment (*RR* = 0.82, 95% CI [0.57, 1.20), *p* = 0.32).
Conflict of interest	Yes (professional; financial)
Risk of bias	Low
Summary of findings	In this component network meta-analysis, family interventions were not associated with any clear benefits for psychotic symptoms, social functioning, and dropout rate. The authors note that this is consistent with previous research however note that the current study estimates average effects and that family interventions may still be beneficial at an individual level, particularly for patients who live with chronic illness or are in a stressful family environment.

Note. BNSS: Brief Negative Symptom Scale; BRPS: Brief Psychiatry Rating Scale; GAF: Global Assessment of Functioning Scale; GFS: Global Functioning Scale; LSP: Life Skills Profile Scale; PANSS: Positive and Negative Syndrome Scale; PSP: Personal and Social Performance Scale; QLS: Heinrichs-Carpenter Quality of Life Scale; SAPS: Scale for the Assessment of Positive Symptoms; SLOF: Specific Level of Functioning Scale; SOFAS: Social and Occupational Functioning Scale.

Dissociative disorders

SUMMARY OF EVIDENCE

Substantial revisions in the categorisation of dissociative disorders were made in the ICD-11 to align with evolving theoretical developments in the literature.[102] This review covered the complete list of dissociative disorders as outlined in the ICD-11 framework, including their subtypes. However, there is a lack of published research that investigated the efficacy of psychological interventions in the treatment of dissociative disorders, and no research studies that met our criteria were identified for child and adolescent populations.

[102] Herpertz-Dahlmann, B. (2021). The classification of dissociative disorders and bodily distress disorder: A comparison of ICD-10 and ICD-11. *Zeitschrift für Kinder- und Jugendpsychiatrie und Psychotherapie, 49*(6), 417–420. https://doi.org/10.1024/1422-4917/a000745

Anorexia nervosa

SUMMARY OF EVIDENCE

Psychological interventions for anorexia nervosa in children and adolescents are usually combined with nutritional and dietary education and may involve multidisciplinary services to monitor physical health. For the purposes of this review, the inclusion criteria was broadened to include studies with participants who had been diagnosed with atypical anorexia and/or other specified feeding or eating disorder (previously known as eating disorder not otherwise specified) who exhibit symptoms of anorexia nervosa but may not meet all diagnostic criteria. Studies whose participants were all female have been included to reflect research trends in the field of eating disorders.

Level I evidence[103] in support of family-based interventions were found in the treatment of young people with anorexia nervosa. Evidence in support of enhanced cognitive behaviour therapy was found for adolescents aged 12 to 18 years. Specifically, Level III evidence in support of the standardised format was found, and level IV evidence was found in support of the intensive format.

Guidelines provided by the American Psychiatric Association (2023) recommend family-based interventions as a first line treatment and this is in line with other guidelines such as NICE (2017; updated in 2020). They also highlight the use of eating disorder focused cognitive behaviour therapy if family-based interventions has been ineffective and provide conditional recommendations for the use of adolescent-focused psychotherapy.

[103] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of anorexia nervosa in children and adolescents.

Cognitive behaviour therapy

Title of paper	**Illness duration and treatment outcome of intensive cognitive-behavioral therapy in adolescents with anorexia nervosa**
Full citation	Calugi, S., Dalle Grave, A., Chimini, M., Lorusso, A., & Dalle Grave, R. (2024). Illness duration and treatment outcome of intensive cognitive-behavioral therapy in adolescents with anorexia nervosa. *The International Journal of Eating Disorders*, *57*(7), 1566–1575. https://doi.org/10.1002/eat.24196
Level of evidence	Level IV
Design	Case series
Format	Face to face, combination of group and individual
Participants	159 adolescents with a diagnosis of anorexia nervosa according to DSM-5 criteria and who did not respond to previous outpatient treatment
Demographic characteristics	The participant age range was 12 – 18 years, with mean age of 16.2 years (*SD* = 1.5), and only 2 participants being male. 122 adolescents had an illness duration of < 3 years, 37 adolescents had ≥ 3. The study was conducted in Italy.
Treating clinician type	Trained mental health professional (clinical psychologist and multidisciplinary team)
Intervention	Intensive cognitive behaviour therapy for eating disorders (intensive CBT-E)
Study groups	Not applicable
Outcome(s) measured	Relevant primary outcome include “good BMI outcome” and “full response” measured by author-defined cut-offs in eating disorder symptoms, measured by the EDE-Q.
Procedure	Eligibile participants first attended three or four preparatory sessions. Those who voluntarily participated are admitted to the hospital. For 20 weeks, participants received biweekly (reduced to weekly after 4 weeks) individual sessions and group session four times a week. Caregivers are involved to implement strategies. At post-treatment, participants are offered 20 post-inpatient sessions to prevent relapse.
Follow up	Yes, 20 weeks
Statistics summary	A two-level mixed-effects model, with time nested within individuals, assessed changes in BMI and eating disorder symptoms over time for those with shorter and longer anorexia nervosa durations. At post-treatment, 92.2% and 75.3% had a "good BMI outcome," while 68.2% and 59.6% achieved a "full response." Improvements continued to the 20-week follow-up, though at a slower rate.
Conflict of interest	None declared
Risk of bias	Serious
Summary of findings	The review supported the effectiveness of intensive CBT-E for treating adolescents with anorexia nervosa, regardless of illness duration. However, the researchers highlighted limitations, including the inability to control for confounding factors like age of onset, current age, and illness duration, as well as concerns about the external validity of the measures for a younger population.

Note. BMI: Body Mass Index; EDE-Q: Eating Disorder Examination Questionnaire.

Title of paper	**Enhanced cognitive-behavior therapy and family-based treatment for adolescents with an eating disorder: A non-randomized effectiveness trial**
Full citation	Le Grange, D., Eckhardt, S., Dalle Grave, R., Crosby, R. D., Peterson, C. B., Keery, H., Lesser, J., & Martell, C. (2022). Enhanced cognitive-behavior therapy and family-based treatment for adolescents with an eating disorder: A non-randomized effectiveness trial. *Psychological Medicine*, *52*(13), 2520–2530. https://doi.org/10.1017/S0033291720004407
Level of evidence	Level III
Design	Non-randomised effectiveness trial
Format	Individual and group, face to face
Participants	97 adolescents with a diagnosed eating disorder according to DSM-5 criteria (*n* = 76; 78% met criteria for anorexia nervosa or atypical anorexia nervosa)
Demographic characteristics	The age range of participants was 11 – 19 years. (*M* = 14.6, *SD* = 1.8), with 82.5% being female. %mBMI was 83.6 for the lower weight cohort (*n* = 37) was 83.6, and 103.7 for the higher weight cohort. 89% identified as Caucasian. The study was conducted in the USA.
Treating clinician type	Trained mental health professionals (clinical psychologists and social workers)
Intervention	Enhanced cognitive behaviour therapy (CBT-E)
Study groups	Family-based treatment (FBT) group: *higher weight cohort* and *lower weight cohort* CBT-E group: *higher weight cohort* and *lower weight cohort*
Outcome(s) measured	Primary outcomes were rate of weight gain measured by %mBMI, as well as eating disorder symptoms measured by the EDE or EDE-Q
Procedure	The FBT group received 20 sessions over approximately six months. For the CBT-E, lower-weight cohort (< 90% mBMI) partook in 40 sessions between 9 -12 months, while the higher-weight cohort (⩾ 90% mBMI) received 20 sessions over six months.
Follow up	Yes, at six and twelve months
Statistics summary	Mixed-effect linear model showed that at post-treatment, FBT had a significantly higher rate of weight gain compared to CBT-E in both the *lower weight cohort* (est. = 0.597, S.E. = 0.096, $p < 0.001$) and the *higher weight* cohort (est. = 0.495, S.E. = 0.83, $p < 0.001$). However, this advantage was no longer seen at follow-up. No significant difference was found between FBT and CBT-E in the improvement of eating disorder symptoms.
Conflict of interest	Yes; financial and professional associations
Risk of bias	Moderate
Summary of findings	This review found evidence supporting the effectiveness of both FBT and CBT in treating adolescent eating disorders, (which in this sample is primarily anorexia nervosa or atypical anorexia nervosa). During treatment, FBT was more efficient in promoting early weight gain. The authors noted that the lack of random allocation might have contributed to baseline differences, but they emphasised that this reflects real-world contexts where client choices are considered.

Note. %mBMI: percentage of median Body Mass Index; EDE: Eating Disorder Examination; EDE-Q: Eating Disorder Examination Questionnaire

Family-based interventions

Title of paper	Family therapy approaches for anorexia nervosa
Full citation	Fisher, C. A., Skocic, S., Rutherford, K. A., Hetrick, S. E., & Fisher, C. A. (2019). Family therapy approaches for anorexia nervosa. *Cochrane Database of Systematic Reviews*, *2019*(5), CD004780–CD004780. https://doi.org/10.1002/14651858.CD004780.pub4
Level of evidence	Level I
Design	Systematic review and network meta-analysis of 25 RCTs (with 16 studies focused on adolescents)
Format	Face to face, group (family unit)
Participants	The number of participants randomised was *n* = 1,389, all of whom were adolescents who had received a diagnosis of anorexia nervosa according to DSM or ICD criteria
Demographic characteristics	Participant mean and age range were not pooled across studies but provided in individual papers. Up to 12% in all but one study were male. Most trials were conducted in the UK, followed by the USA and Australia.
Treating clinician type	Not specified
Intervention	Structural family therapy, systemic family therapy, family-based therapy and approaches
Outcome(s) measured	Relevant primary outcome measures include remission based on DSM or ICD cut-off scores and all-cause mortality. Other relevant outcomes include change in BMI, and eating disorder psychopathology, measured by ABOS, EDE, and others
Procedure	A systematic review and network meta-analysis evaluated the efficacy of family-based psychological interventions in treating adults and adolescents with anorexia nervosa. Confidence in results was assessed using the the GRADE approach. The search was an updated from an earlier review conducted in 2016 and covered RCTs until May 2018.
Follow up	Yes, classified as short-term (less than 12 months) and long-term (12 months or longer)
Statistics summary	A random-effect meta analyses with subgroups were conducted. For adolescents at post-treatment (*k* = 4, *n* = 176), family therapy was significantly favoured over other psychological interventions for remission, I^2 = 62.6%, *RR* = 1.29, 95% CI [0.87, 1.92]. The same trends were found for long-term follow-up. With regards to change in BMI and eating disorder symptoms, family therapy was favoured over active control at post-treatment but not at follow-up.
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	The subgroup findings provided some evidence that family-based therapy may be more effective than active control in achieving remission for anorexia nervosa at post-treatment and long-term follow-up. However, when considering the broader research outcomes, as well as the low quality and limited number of included papers, the authors conclude that there is only minimal evidence supporting family-based therapy as more effective than treatment as usual, and insufficient evidence to confirm its superiority over other active treatments.

Note. ABOS: Anorectic Behaviour Observation Scale; BMI: Body Mass Index; EDE: Eating Disorder Examination-Questionnaire.

Bulimia nervosa

SUMMARY OF EVIDENCE

For the purposes of this review, inclusion criteria was broadened to include studies with participants who had been diagnosed with other specified feeding or eating disorder (previously known as eating disorder not otherwise specified) who exhibit symptoms of bulimia nervosa but may not meet all diagnostic criteria. Studies whose participants were all female have been included to reflect research trends in the field of eating disorders.

Level I evidence[104] was identified in support of family-based interventions (family-based treatment otherwise known as the Maudsley Model) for adolescents aged 12 years and older with bulimia nervosa. Level II evidence was found in support of individual cognitive behaviour therapy and psychodynamic therapy for adolescents aged 14 years and older.

Guidelines provided by NICE (2017; updated in 2020) recommend bulimia-nervosa-focused family-based interventions as first-line treatment and suggest providing support for family members who are not directly involved in the family-based interventions. The guidelines further recommend individual eating-disorder-focused cognitive behaviour therapy if family-based interventions is unacceptable, contraindicated, or ineffective. The American Psychiatric Association (2023) guidelines suggest eating disorder focused family-based treatment for adolescents who have an involved caregiver.

[104] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of bulimia nervosa in children and adolescents.

Cognitive behaviour therapy

Title of paper	**Cognitive-behavioral and psychodynamic therapy in female adolescents with bulimia nervosa: A randomized controlled trial**
Full citation	Stefini, A., Salzer, S., Reich, G., Horn, H., Winkelmann, K., Bents, H., Rutz, U., Frost, U., von Boetticher, A., Ruhl, U., Specht, N., & Kronmüller, K. T. (2017). Cognitive-behavioral and psychodynamic therapy in female adolescents with bulimia nervosa: A randomized controlled trial. *Journal of the American Academy of Child & Adolescent Psychiatry, 56*(4), 329-335. https://doi.org/10.1016/j.jaac.2017.01.019
Level of evidence	Level II
Design	RCT
Follow-up	12 months
Format	Individual
Participants	81 females aged 14 to 20 (mean age 18.7 years) with a DSM-IV diagnosis of full (78%) or partial (22%) bulimia nervosa.
Treating clinician(s)	Psychologists trained in the manualised treatments
Intervention(s)	CBT (n = 39)
Comparison group(s)	Psychodynamic therapy (n = 42)
Procedure	RCT designed to compare the efficacy of CBT with psychodynamic therapy for the long-term treatment of adolescents with bulimia nervosa. Both interventions comprised up to 60 sessions across a 12-month period, consistent with usual treatment practice for bulimia nervosa in Germany.
Summary of findings	On measures of bulimia nervosa remission rates from the beginning to end of treatment, both CBT and psychodynamic therapy interventions were effective and were accompanied by large effect sizes. There was no significant difference between the treatment groups at posttreatment (33% vs 31%) and the outcomes were stable at 12 months, follow-up. On secondary measures, CBT was more effective at alleviating symptoms of binge eating and purging (small effect sizes), and psychodynamic therapy was successful at alleviating eating concern (small effect size).

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 153. Copyright 2018 by the Australian Psychological Society.

Title of paper	**Randomized clinical trial of family-based treatment and cognitive-behavioral therapy for adolescent bulimia nervosa**
Full citation	Le Grange, D., Lock, J., Agras, W. S., Bryson, S. W., & Jo, B. (2015). Randomized clinical trial of family-based treatment and cognitive-behavioral therapy for adolescent bulimia nervosa. *Journal of the American Academy of Child & Adolescent Psychiatry, 54*(11), 886-894. https://doi.org/10.1016/j.jaac.2015.08.008
Level of evidence	Level II
Design	RCT
Follow-up	6 months, 12 months
Format	Individual
Participants	130 adolescents aged 12 to 18 (mean age 15.8 years) diagnosed with bulimia nervosa or partial bulimia nervosa (binge eating/purging once or more per week for 6 months) according to DSM-IV criteria. Ninety-four percent of participants were female.
Treating clinician(s)	Psychologist, social worker, or child psychiatrist
Intervention(s)	CBT adapted for adolescents (n = 58)
Comparison group(s)	Family intervention for adolescent bulimia nervosa (n = 52)
Procedure	RCT designed to evaluate the efficacy of CBT in relation to family intervention for adolescents with bulimia nervosa. All treatments consisted of 18 sessions delivered over a period of 6 months.
Summary of findings	The family-based intervention achieved significantly higher bingeing and purging abstinence rates than did CBT (39% vs 20%) among adolescents with full or partial bulimia nervosa. On the same abstinence measure, the family intervention continued to outperform CBT at 6 months' follow-up (44% vs 25%). However, at 12 months' follow-up, the difference between the two interventions was no longer significant (49% vs 32%). Overall, the family-based intervention for bulimia nervosa appears to be the preferred treatment for more rapid and sustained abstinence rates.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 153. Copyright 2018 by the Australian Psychological Society.

Family-based interventions

Title of paper	**Efficacy of family-based treatment for adolescents with eating disorders: A systematic review and meta-analysis**
Full citation	Couturier, J., Kimber, M., & Szatmari, P. (2013). Efficacy of family-based treatment for adolescents with eating disorders: A systematic review and meta-analysis. *International Journal of Eating Disorders, 46*(1), 3-11. https://doi.org/10.1002/eat.22042
Level of evidence	Level I
Design	Systematic review and meta-analysis (2 RCTs including bulimia nervosa)
Follow-up	6 months
Format	Family
Participants	165 young people aged 12 to 20 meeting DSM-IV-TR criteria for bulimia nervosa or eating disorder not otherwise specified. Further demographic information was not reported.
Treating clinician(s)	Various
Intervention(s)	Family intervention (n = 82)
Comparison group(s)	Various modalities of individual therapy (n = 83), including adolescent-focused individual therapy, individual CBT self-guided care, and supportive therapy
Procedure	Meta-analysis to determine the efficacy of family-based therapeutic approaches versus individual therapy for bulimia nervosa among adolescents. Two RCTs, both published in 2007, met the inclusion criteria.
Summary of findings	At posttreatment, there was no difference between individual and family interventions at achieving abstinence from bingeing or purging for adolescents with bulimia nervosa. However, compared with individual therapy, family intervention achieved higher rates of abstinence at 6 months follow-up (29% vs 16%). This meta-analysis did not contain information about within-group effectiveness for the two intervention types.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 152. Copyright 2018 by the Australian Psychological Society.

Title of paper	**Randomized clinical trial of family-based treatment and cognitive-behavioral therapy for adolescent bulimia nervosa**
Full citation	Le Grange, D., Lock, J., Agras, W. S., Bryson, S. W., & Jo, B. (2015). Randomized clinical trial of family-based treatment and cognitive-behavioral therapy for adolescent bulimia nervosa. *Journal of the American Academy of Child & Adolescent Psychiatry, 54*(11), 886-894. https://doi.org/10.1016/j.jaac.2015.08.008
Level of evidence	Level II
Design	RCT
Follow-up	6 months, 12 months
Format	Individual
Participants	130 adolescents aged 12 to 18 (mean age 15.8 years) diagnosed with bulimia nervosa or partial bulimia nervosa (binge eating/purging once or more per week for 6 months) according to DSM-IV criteria. Ninety-four percent of participants were female.
Treating clinician(s)	Psychologist, social worker, or child psychiatrist
Intervention(s)	CBT adapted for adolescents (n = 58)
Comparison group(s)	Family intervention for adolescent bulimia nervosa (n = 52)
Procedure	RCT designed to evaluate the efficacy of CBT in relation to family intervention for adolescents with bulimia nervosa. All treatments consisted of 18 sessions delivered over a period of 6 months.
Summary of findings	The family-based intervention achieved significantly higher bingeing and purging abstinence rates than did CBT (39% vs 20%) among adolescents with full or partial bulimia nervosa. On the same abstinence measure, the family intervention continued to outperform CBT at 6 months' follow-up (44% vs 25%). However, at 12 months' follow-up, the difference between the two interventions was no longer significant (49% vs 32%). Overall, the family-based intervention for bulimia nervosa appears to be the preferred treatment for more rapid and sustained abstinence rates.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 153. Copyright 2018 by the Australian Psychological Society.

Psychodynamic therapy

Title of paper	**Cognitive-behavioral and psychodynamic therapy in female adolescents with bulimia nervosa: A randomized controlled trial**
Full citation	Stefini, A., Salzer, S., Reich, G., Horn, H., Winkelmann, K., Bents, H., Rutz, U., Frost, U., von Boetticher, A., Ruhl, U., Specht, N., & Kronmüller, K. T. (2017). Cognitive-behavioral and psychodynamic therapy in female adolescents with bulimia nervosa: A randomized controlled trial. *Journal of the American Academy of Child & Adolescent Psychiatry, 56*(4), 329-335. https://doi.org/10.1016/j.jaac.2017.01.019
Level of evidence	Level II
Design	RCT
Follow-up	12 months
Format	Individual
Participants	81 females aged 14 to 20 (mean age 18.7 years) with a DSM-IV diagnosis of full (78%) or partial (22%) bulimia nervosa.
Treating clinician(s)	Psychologists trained in the manualised treatments
Intervention(s)	CBT (n = 39)
Comparison group(s)	Psychodynamic therapy (n = 42)
Procedure	RCT designed to compare the efficacy of CBT with psychodynamic therapy for the long-term treatment of adolescents with bulimia nervosa. Both interventions comprised up to 60 sessions across a 12-month period, consistent with usual treatment practice for bulimia nervosa in Germany.
Summary of findings	On measures of bulimia nervosa remission rates from the beginning to end of treatment, both CBT and psychodynamic therapy interventions were effective and were accompanied by large effect sizes. There was no significant difference between the treatment groups at posttreatment (33% vs 31%) and the outcomes were stable at 12 months, follow-up. On secondary measures, CBT was more effective at alleviating symptoms of binge eating and purging (small effect sizes), and psychodynamic therapy was successful at alleviating eating concern (small effect size).

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 153. Copyright 2018 by the Australian Psychological Society.

Binge eating disorder

SUMMARY OF EVIDENCE

Level II evidence[105] was identified in support of the use of cognitive behaviour therapy for female adolescents (12 to 18 years) with binge eating disorder. This evidence is limited to a single pilot RCT with a small sample size, so results should be interpreted with caution.

Guidelines provided by NICE (2017; updated in 2020) recommend in the first instance an age-appropriate binge-eating-disorder-focused cognitive behaviour guided self-help programme supplemented with brief supportive sessions (for example, 4 to 9 sessions lasting 20 minutes each over 16 weeks, running weekly at first). If guided self-help is unacceptable, contraindicated, or ineffective after four weeks, group eating-disorder-focused cognitive behaviour therapy is advised. The American Psychiatric Association guidelines (2023) endorse eating disorder-focused cognitive behaviour therapy or interpersonal psychotherapy in either individual or group formats.

[105] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of binge eating disorder in children and adolescents.

Cognitive behaviour therapy

Title of paper	**Cognitive behavioral treatment for recurrent binge eating in adolescent girls: A pilot trial**
Full citation	Debar, L. L., Wilson, G. T., Yarborough, B. J., Burns, B., Oyler, B., Hildebrandt, T., Clarke, G. N., Dickerson, J., & Striegel, R. H. (2013). Cognitive behavioral treatment for recurrent binge eating in adolescent girls: A pilot trial. *Cognitive and Behavioral Practice, 20*(2), 147–161. https://doi.org/10.1016/j.cbpra.2012.04.001
Level of evidence	Level II
Design	Pilot RCT
Follow-up	6 months
Format	Primarily individual, with minimal parental involvement
Participants	26 female adolescents aged 12 to 18 (mean age 15.1 years) who reported recurrent binge eating episodes (at least one per week) during a 3-month period. 52% of all participants met criteria for BED, and 32% met criteria for recurrent binge eating.
Treating clinician(s)	Counsellors and health professionals with postgraduate training
Intervention(s)	Developmentally adapted CBT (*n* = 13)
Comparison group(s)	Waitlist (*n* = 13)
Procedure	RCT to test the efficacy of a developmentally adapted version of CBT for treating female adolescents with recurrent binge eating behaviour. Participants attended eight core sessions and four optional supplementary sessions on topics of interpersonal relations, behaviour activation, and emotional regulation. Parents attended an initial orientation session and were provided with psychoeducation about eating behaviours.
Summary of findings	Compared with 50% in the waitlist group, all participants in the CBT group were abstinent from binge eating at 6 months' follow-up, and the effect size was large. Compared with waitlist controls, adolescent females in the CBT group had significantly fewer bingeing episodes at posttreatment, producing a medium to large effect size

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 154. Copyright 2018 by the Australian Psychological Society.

Insomnia disorders

SUMMARY OF EVIDENCE

The current review identified Level I evidence[106] in support of cognitive behaviour therapy for the treatment of insomnia disorders in children and adolescents. Level II evidence was identified in support of cognitive behaviour therapy in a family context for children aged 5-10 years and for mindfulness-based cognitive therapy for adolescents.

[106] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of insomnia disorders in children and adolescents.

Cognitive behaviour therapy

Title of paper	**Efficacy of cognitive behavioral therapy in children and adolescents with insomnia: A systematic review and meta-analysis**
Full citation	Ma, Z. R., Shi, L. J., & Deng, M. H. (2018). Efficacy of cognitive behavioral therapy in children and adolescents with insomnia: A systematic review and meta-analysis. *Brazilian Journal of Medical and Biological Research*, *51*(6), e7070. https://doi.org/10.1590/1414-431x20187070
Level of evidence	Level I
Design	Systematic review and meta-analysis (10 studies)
Format	Individual; group, face-to-face; videoconferencing
Participants	Total sample size of *n* = 464 participants who had been diagnosed with insomnia disorder as per the DSM, ICSD, or a clinical cut-off on the HSDQ.
Demographic characteristics	The total sample had a mean age of 12.7 years (range 5-19), and 64% were female. Studies were conducted in the Netherlands, Germany, and Australia.
Treating clinician type	Not specified
Intervention	CBT
Outcome(s) measured	Insomnia severity as measured by SOL, WASO, TST, and SE%.
Procedure	A systematic review and meta-analysis was conducted to investigate the effectiveness of CBT in the treatment of insomnia in children. A subgroup analysis was conducted on the RCTs alone. The database search covered inception to November 2017.
Follow up	No
Statistics summary	A random-effects model was used. Based on actigraphy results, a significant pooled effect size in favour of the intervention group was found for SOL (*MD* = -14.77, 95% CI [-27.60, -1.93], *p* = .02, I^2 = 70%) and SE% (*MD* = 4.33, 95% CI [0.98, 7.68], *p* = .01, I^2 = 68%), but not for WASO or TST. Sleep log results were consistent with actigraphy results, with a significant pooled effect size in favour of the intervention group found for SOL (MD = -12.28, 95% CI [-20.85, -3.72], *p* = .0005, I^2 = 45%) and SE% (*MD* = 5.54, 95% CI [0.98, 10.09], *p* = .0003, I^2 = 68%), but not for WASO or TST.
Conflict of interest	None declared
Risk of bias	High
Summary of findings	This meta-analysis provides some support for the use of CBT in the treatment of insomnia in children and adolescents, with results showing a significant effect of CBT on sleep onset latency and sleep efficiency. However, no effect was found for wake after sleep onset or total sleep time. Furthermore, the authors note that results were consistent between actigraphy and sleep logs.

Note. HSDQ: Holland Sleep Disorder Questionnaire; ICSD: International Classification of Sleep Disorders; SE%: Sleep Efficiency; SOL: Sleep Onset Latency; TST: Total Sleep Time: WASO: Wake After Sleep Onset.

Family-based interventions

Title of paper	**Short- and long-term effects of CBT-I in groups for school-age children suffering from chronic insomnia: The KiSS-program**
Full citation	Schlarb, A. A., Bihlmaier, I., Velten-Schurian, K., Poets, C. F., & Hautzinger, M. (2018). Short- and long-term effects of CBT-I in groups for school-age children suffering from chronic insomnia: The KiSS-program. *Behavioral Sleep Medicine*, *16*(4), 380-397. https://doi.org/10.1080/15402002.2016.1228642
Level of evidence	Level II
Design	Randomised controlled trial (RCT)
Format	Group, face to face
Participants	A sample size of *n* = 112 children and their parents was randomised, with *n* = 86 in the intervention group (*n* = 71 completing the program, *n* = 42 at follow-up) and *n* = 26 in the control group (*n* = 24 completing the study). All participants had chronic insomnia, as determined by a diagnostic interview with parent based on the ICSD-2, ICD-10 and DSM-5.
Demographic characteristics	The mean age of participants was 8.1 years (*SD* = 1.8, rang 5-11.5 years) and 52.7% were male. The study was conducted in Germany.
Treating clinician type	Not specified
Intervention	CBT-I-based family therapy
Study groups	Intervention group: KiSS program Control group: waitlist
Outcome(s) measured	Severity of insomnia symptoms as measured by sleep diaries and actigraphy results, and scores on the CSHQ-DE, ESS-C-DE, and SSR-DE.
Procedure	The KiSS program is a CBT-I group program designed for children aged 5-10 years and their parents. It follows a standardised manual which covers interventions including sleep restriction, stimulus control therapy, sleep hygiene, relaxation, and cognitive therapy. The groups consisted of at least four families each and were run over six weekly 100-min sessions. Three sessions were for the children, and three were for their parents. The control group received no intervention and completed data assessments at baseline and 6 weeks to coincide with post-treatment data in the intervention group.
Follow up	Yes; 3, 6, and 12 months
Statistics summary	A mixed-model design was used to compare post-treatment measures between groups, and a linear mixed model was used to assess long-term effects in the intervention group. A significant group assignment and time interaction favouring the intervention group was found for both the TSDS of the CSHQ-DE (F (1, 97.46) = 28.64, p < .001) and the SOD (F (1, 94.98) = 4.76, p = .032). A marginally significant group assignment and time interaction was found for the ESS-C-DE (F(1,109.28) = 3.11, p =.081). At post-treatment, 49.30% of the intervention group still met criteria for a sleep disorder, compared to 100% of the control group. Follow-up measures taken for the intervention group indicated maintenance of improvement across time.
Conflict of interest	None declared
Risk of bias	High
Summary of findings	These findings support the long-term efficacy of CBT-I groups for children aged 5-10 and their parents for the treatment of sleep disorders in childhood.

Note. CSHQ-DE: Children's Sleep Habit Questionnaire; ESS-C-DE: Epworth Sleepiness Scale for Children; ICSD: International Classification of Sleep Disorders; SOD: Sleep Onset Delay; SSR-DE: Sleep Self-Report; TSDS: Total Sleep Disturbance Score.

Mindfulness-based cognitive therapy

Title of paper	**The SENSE study: Post intervention effects of a randomized controlled trial of a cognitive-behavioral and mindfulness-based group sleep improvement intervention among at-risk adolescents**
Full citation	Blake, M., Waloszek, J. M., Schwartz, O., Raniti, M., Simmons, J. G., Blake, L., Murray, G., Dahl, R. E., Bootzin, R., Dudgeon, P., Trinder, J., & Allen, N. B. (2016). The SENSE study: Post intervention effects of a randomized controlled trial of a cognitive–behavioral and mindfulness-based group sleep improvement intervention among at-risk adolescents. *Journal of Consulting and Clinical Psychology, 84*(12), 1039–1051. https://doi.org/10.1037/ccp0000142
Level of evidence	Level II
Design	RCT
Follow-up	Nil
Format	Group
Participants	123 adolescents in school years 7 to 10 (mean age 14.4 years) with clinically significant symptoms of sleep problems. 58% of all participants were female.
Treating clinician(s)	Clinical psychologists or psychologists undergoing postgraduate training
Intervention(s)	Multicomponent CBT/mindfulness-based group sleep intervention (Sleep SENSE; *n* = 60)
Comparison group(s)	Study skills educational program (Study SENSE; *n* = 63)
Procedure	Sleep SENSE comprised seven weekly 90-minute sessions and incorporated a variety of modules including psychoeducation, sleep goals, stimulus control, sleep hygiene, and worry management. Six of the seven sessions included mindfulness practice/skill development.
Summary of findings	Compared with the educational program, at posttreatment, adolescents in the CBT/mindfulness intervention reported significant improvement with regard to subjective sleep quality (medium effect size), sleep onset latency (small effect size), and daytime sleepiness (small effect size). Additionally, CBT/mindfulness was significantly more effective at reducing objectively measured sleep onset latency (medium effect size) and anxiety (small effect size) than the educational program at posttreatment. There were no differences detected between the two conditions on measures of total sleep time, waking after sleep onset, or depressive symptoms.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 157. Copyright 2018 by the Australian Psychological Society.

Borderline personality disorder

SUMMARY OF EVIDENCE

Level II evidence[107] was identified in support of dialectical behaviour therapy for the treatment of borderline personality disorder in adolescents. Level III evidence in support of cognitive analytical therapy and Level IV evidence in support of psychodynamic psychotherapy was also identified. Level II evidence in relation to emotion regulation training for adolescents with elevated borderline personality symptoms was inconclusive.

There are currently no clinical guidelines for borderline personality disorder published since 2018, although the American Psychiatric Association currently has a draft undergoing revision.

[107] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of borderline personality disorder in children and adolescents.

Cognitive behaviour therapy

Title of paper	**Early intervention for adolescents with borderline personality disorder: Quasi-experimental comparison with treatment as usual**
Full citation	Chanen, A. M., Jackson, H. J., McCutcheon, L. K., Jovev, M., Dudgeon, P., Yuen, H. P., Germano, D., Nistico, H., McDougall, E., Weinstein, C., Clarkson, V., & McGorry, P. D. (2009). Early intervention for adolescents with borderline personality disorder: Quasi-experimental comparison with treatment as usual. *Australian and New Zealand Journal of Psychiatry, 43*(5), 397–408. https://doi.org/10.1080/00048670902817711
Level of evidence	Level III
Design	Quasi-experimental
Follow-up	24 months
Format	Individual, family, group
Participants	110 adolescents aged 15 to 18 (mean age 16.3 years) fulfilling at least partial DSM-IV criteria for BPD. Approximately 40% of participants met full criteria for BPD, and 75% of all participants were female.
Treating clinician(s)	Clinical psychologists who had completed CBT therapy training
Intervention(s)	Cognitive analytic therapy (CAT; *n* = 41)[108]
Comparison group(s)	TAU (*n* = 32), early intervention good clinical care (*n* = 37)
Procedure	Quasi-experimental study to evaluate the effectiveness of early CAT for BPD in relation to good clinical care and TAU. CAT and good clinical care consisted of up to 24 weekly sessions, while TAU had no limit on sessions. All intervention types included combinations of individual, family, and group components.
Summary of findings	Both the treatment and control groups demonstrated improvements on all primary outcome measures from baseline to 24-month follow-up. At posttreatment, the CAT intervention was more effective than early intervention clinical care at reducing externalising psychopathology among adolescents who met BPD criteria. CAT was also more successful than TAU at reducing both internalising and externalising pathologies. At 24 months from baseline, compared with TAU, CAT was associated with lower levels of externalising psychopathology and a faster rate of improvement, on both internalising and externalising measures.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 161. Copyright 2018 by the Australian Psychological Society.

[108] Cognitive analytic therapy is included in this section given the considerable overlap with CBT principles.

Dialectical behaviour therapy

Title of paper	**Implementing dialectical behaviour therapy in routine practice: An evaluation of a national CAMHS DBT service for adolescents**
Full citation	Camp, J., Hunt, K., & Smith, L. M. (2023). Implementing dialectical behaviour therapy in routine practice: An evaluation of a national CAMHS DBT service for adolescents. *Cognitive Behaviour Therapist*, *16*, e29. https://doi.org/10.1017/S1754470X23000211
Level of evidence	Level IV
Design	Case series
Format	Combination of individual and group, face to face, with adjunct telephone counselling
Participants	182 participants enrolled in DBT pre-treatment who have engaged in self-injury at least once in the past six months and met criteria for an additional four BPD domains as assessed by a clinician using the SCID-BPD
Demographic characteristics	The participants' age ranged from 12 – 19 years, with mean of 15.4 (*SD* = 1.3) years and 82% being female.
Treating clinician type	Not reported
Intervention	Dialectical behaviour therapy for adolescents (DBT-A)
Outcome(s) measured	Relevant outcomes were emerging BPD symptoms, measured by the MSI-BPD and BEST, emotional dysregulation measured by the DERS, and frequency of self-harm episodes
Procedure	Participants who met the eligibility criteria and accepted the treatment received six months of weekly individual therapy and weekly DBT skills groups, as well as between-session telephone counselling. They were also assigned a case manager and parent/carer worker for 12 months.
Follow up	None
Statistics summary	Pairwise comparisons indicated that self-harm counts were significantly lower in the fourth quartile than in pre-treatment, (Z = –7.46, p = <.01, r = –.64) with small to large effect sizes. Paired samples *t*-test indicated that MSI-BPD scores were significantly lower at post-treatment, $t(116) = 10.01$, $p < .001$, $d = 0.93$. On the other hand, DERS scores were significantly higher at post-treatment, $t(105) = 10.32$, $p < .001$, $d = 1.00$.
Conflict of interest	Yes; professional association (all authors have been employed by the service)
Risk of bias	Low
Summary of findings	This naturalistc study found that after engaging DBT-A in an inpatient setting, adolescents with elevated BPD symptoms experienced statistically significant reduction in emotional dysregulation and emerging BPD symptoms, with effect sizes ranging from small to large.

Note. BEST: Borderline Evaluation of Severity over Time; DERS: Difficulties in Emotion Regulation Scale; MSI-BPD: McLean Screening Instrument for Borderline Personality Disorder; SCID-BPD: Structured Clinical Interview for DSM-IV, BPD subscale.

Title of paper	**Efficacy of dialectical behavior therapy for adolescents at high risk for suicide: A randomized clinical trial**
Full citation	McCauley, E., Berk, M. S., Asarnow, J. R., Adrian, M., Cohen, J., Korslund, K., Avina, C., Hughes, J., Harned, M., Gallop, R., & Linehan, M. M. (2018). Efficacy of dialectical behavior therapy for adolescents at high risk for suicide: A randomized clinical trial. *JAMA Psychiatry*, *75*(8), 777–785. https://doi.org/10.1001/jamapsychiatry.2018.1109
Level of evidence	Level II
Design	Randomised clinical trial
Format	Combination of individual and group, face to face
Participants	173 participants who meet at least three borderline personality criteria under the DSM, at least one suicide attempt, elevated past month suicidal ideation, and recent self-harm
Demographic characteristics	The participants' age ranged from 12 – 18 years, with mean of 14.9 (*SD* = 1.5) years and 94.3% being female. 56% identified as White, 27% as Hispanic, with the rest being Native American, African American, and others
Treating clinician type	Trained mental health professionals (therapists)
Intervention	Dialectical behaviour therapy for adolescents (DBT-A)
Study groups	Intervention group: DBT-A Control group: Individual and group supportive therapy (IGST)
Outcome(s) measured	Primary outcomes were suicide attempts, non-suicidal self- injury, and self-harm measured by the SASII, as well as suicidal ideation measured by SIQ-JR
Procedure	Participants recruited from hospital emergency departments who met the eligibility criteria and agreed to participate were randomised to either DBT or IGST group. Participants in the DBT group completed an average of 23.4 weeks in treatment, while those in the IGST group completed an average of 18.7 weeks of weekly and individual group therapy
Follow up	Yes, 12 months
Statistics summary	Pairwise comparisons indiAt post-treatment, the rates of suicide attempts were notably lower in the DBT group with 90.3% experiencing no attempts, compared to 78.9% in the IGST group, (*OR* = 0.30, 95% CI [0.10, 0.91]). Significant advantage were also found for self-harm and non-suicidal self-injury. At six- and twelve-month follow-up, no statistically significant differences between groups were found (*OR* = 0.65, 95% CI [0.12, 3.36], *p* = .61).
Conflict of interest	Yes; professional and financial
Risk of bias	Low
Summary of findings	This study is supportive of the efficacy of DBT-A in reducing self-harm and suicidal attempts of adolescents who are at high-risk for suicide and have borderline personality traits. The authors note the predominantly female sample, which means that the results is less generalisable to adolescent males.

Note. SASII: Suicide Attempt Self-Injury Interview; SIQ-JR: Suicidal Ideation Questionnaire Junior.

Title of paper	**Emotion regulation training for adolescents with borderline personality disorder traits: A randomized controlled trial**
Full citation	Marieke Schuppert, H., Timmerman, M. E., Bloo, J., van Gemert, T. G., Wiersema, H. M., Minderaa, R. B., Emmelkamp, P. M. G., & Nauta, M. H. (2012). Emotion regulation training for adolescents with borderline personality disorder traits: A randomized controlled trial. *Journal of the American Academy of Child and Adolescent Psychiatry, 51*(12), 1314-1323.e2. https://doi.org/10.1016/j.jaac.2012.09.002
Level of evidence	Level II
Design	RCT
Follow-up	12 months (6 months post-treatment)
Format	Group
Participants	109 adolescents aged 14 to 19 (mean age 16.0 years), referred for emotional regulation or features of BPD. Approximately three-quarters of participants fulfilled five or more DSM-IV criteria (range 3 to 9 criteria) for BPD, and 96% of participants were female.
Treating clinician(s)	Clinicians with postgraduate training and at least 2 years' experience in therapy with adolescents with BPD features
Intervention(s)	Emotion-regulation training, which incorporates elements of DBT, CBT, and mindfulness therapy (*n* = 54)
Comparison group(s)	TAU (*n* = 55)
Procedure	RCT to evaluate the effectiveness of emotional regulation training as an intervention for adolescents with BPD symptoms. Treatment focused on improving control over intense emotions and improving a broad range of coping skills. The intervention was delivered through 17 x 105-minute weekly group sessions as well as two booster sessions in the subsequent 12 weeks.
Summary of findings	Although within-group improvements were reported for both emotion-regulation training and TAU groups, at posttreatment the emotion-regulation training intervention was no more effective than TAU at reducing severity of BPD symptoms, reducing general psychopathology, or improving quality of life. Compared with 12% of the TAU group, 19% of the intervention group was reported to be in remission at posttreatment. At 12 months' follow-up, the intervention group remission rate increased to 33%. However, the equivalent statistic for TAU was not reported due to design limitations.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 162. Copyright 2018 by the Australian Psychological Society.

Psychodynamic psychotherapy

Title of paper	Early intervention for borderline personality disorder: Psychodynamic therapy in adolescents
Full citation	Salzer, S., Cropp, C., & Streeck-Fischer, A. (2014). Early intervention for borderline personality disorder: Psychodynamic therapy in adolescents. *Zeitschrift für Psychosomatische Medizin und Psychotherapie, 60*(4), 368–382. https://doi.org/10.13109/zptm.2014.60.4.368
Level of evidence	Level IV
Design	Case series
Follow-up	None
Format	Individual, group
Participants	28 adolescents aged 14 to 19 (mean age 16.9 years) meeting DSM-IV criteria for BPD. More than three-quarters of the participants were female.
Treating clinician(s)	Clinicians trained in the psychoanalytic-interaction method
Intervention(s)	Psychoanalytic-interaction method of psychodynamic therapy (*n* = 28)
Comparison group(s)	None
Procedure	A case series to evaluate psychodynamic therapy among adolescents with BPD in an inpatient setting. The average treatment period was approximately 30 weeks and consisted of three 30-minute individual sessions and one 45-minute group session per week. Some additional treatment elements, such as occupational therapy and parent counselling, were provided.
Summary of findings	Psychodynamic therapy was found to be an effective intervention on a number of primary outcome measures. Almost 40% of participants were deemed to be in remission from BPD at posttreatment. On a measure of global functioning, there was a large within-group effect size from pre- to post-treatment, even controlling for the effect of adjunctive pharmacotherapy. Additional pre–post improvements were noted on measures of global psychological distress (medium effect size), psychosocial impairment (large effect size), interpersonal problems, and self-reported features of BPD (small to medium effect sizes).

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 163. Copyright 2018 by the Australian Psychological Society.

Attention deficit hyperactivity disorder

SUMMARY OF EVIDENCE

This review identified Level I evidence[109] in support of cognitive behaviour therapy, family-based interventions, psychoeducation, and self-guided digital interventions in the treatment of children and adolescents with attention deficit hyperactivity disorder (ADHD). Level II evidence was identified in support of play therapy in children and adolescents aged 6 to 15 years. Level IV evidence was identified in support of parent-child interaction therapy in children aged 2 to 7 years.

Guidelines provided by AADPA (2022) and NICE (2019) recommend offering ADHD-focused parent/family training for children under 5 years of age. For children and adolescents aged 5 to 17 years, the guidelines recommend parent/family training (individual or group format) and the use of cognitive behaviour interventions where appropriate. More intensive or individual training programs should be offered for parents of children with ADHD who have co-occurring oppositional defiant disorder or conduct disorder. For adolescents aged 13 to 17 years, the AADPA (2022) guidelines recommend that ADHD coaching be considered as part of a broader treatment plan. Pharmacotherapy was outside the scope of the current review; however, guidelines acknowledge that this may have a role in the management of ADHD and is often used in conjunction with psychosocial interventions.

[109] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of ADHD in children and adolescents.

Cognitive behaviour therapy

Title of paper	Treatment of attention-deficit/hyperactivity disorder in adolescents: A systematic review
Full citation	Chan, E., Fogler, J. M., & Hammerness, P. G. (2016). Treatment of attention-deficit/hyperactivity disorder in adolescents: A systematic review. *JAMA, 315*(18), 1997-2008. https://doi.org/10.1001/jama.2016.5453
Level of evidence	Level I
Design	Systematic review (10 RCTs)
Follow-up	Nil to 6 months (details not reported)
Format	Individual
Participants	916 adolescents aged 12 to 18 with ADHD. Various proportions of participants across studies were taking ADHD medication during treatment. No further demographic details were reported.
Treating clinician(s)	Not reported
Intervention(s)	Multi-component treatments incorporating behavioural (e.g., behaviour contingency management), cognitive behavioural, and skills training interventions (e.g., organisational skills) (n not reported)
Comparison group(s)	TAU, community care, waitlist (ns not reported)
Procedure	Systematic review to evaluate the effectiveness pharmacological and psychosocial interventions for adolescents with ADHD. The review of psychosocial treatment approaches incorporated 10 RCTs published between 2006 and 2017, two of which were CBT-only.
Summary of findings	Compared with control conditions, multi-component behavioural treatments were found to improve functional outcomes among adolescents with ADHD. These outcomes included academic and organisational skills (medium to large effect sizes) as well as parent ratings of their child's ADHD-related symptoms (small to medium effect sizes). The authors noted that findings for the two CBT-only studies were inconclusive, suggesting that CBT is most effective when combined with other behavioural and training components.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 166. Copyright 2018 by the Australian Psychological Society.

Title of paper	**The long-term outcomes of interventions for the management of attention-deficit hyperactivity disorder in children and adolescents: A systematic review of randomized controlled trials**
Full citation	Parker, J., Wales, G., Chalhoub, N., & Harpin, V. (2013). The long-term outcomes of interventions for the management of attention-deficit hyperactivity disorder in children and adolescents: A systematic review of randomized controlled trials. *Psychology Research and Behavior Management*, 87-99. https://doi.org/10.2147/PRBM.S49114
Level of evidence	Level I
Design	Systematic review (5 RCTs incorporating behaviour therapy)
Follow-up	12 to 96 months
Format	Various (details not reported)
Participants	1,057 children aged 6 to 11 years with a diagnosis of ADHD. Over half of all participants (54.7%) were from a single cohort spanning four RCTs.
Treating clinician(s)	Not reported
Intervention(s)	Combined behavioural management and pharmaceutical interventions (5 RCTs; n not reported)
Comparison group(s)	Control conditions (e.g., community care/behavioural treatment alone, medication alone, placebo; n not reported)
Procedure	Systematic review to evaluate the long-term outcomes of pharmaceutical, nonpharmaceutical, and combined interventions among children with ADHD. Studies published between 1982 and 2012 were included for analysis.
Summary of findings	A moderate to high level of evidence was found to support combined behavioural and pharmacological interventions for the treatment of ADHD among children. The findings were applicable to measures of core ADHD symptoms as well as academic performance, both at 14 months' follow-up. Furthermore, within-group analysis for the same period indicated that combined interventions (medium to large effect size) may be more effective than behaviour therapy or community care alone (small to medium effect size). Combined interventions did not differ from medication alone on core ADHD symptoms; however, combined treatment was superior on measures of social and academic skills.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 167. Copyright 2018 by the Australian Psychological Society.

Family-based interventions

Title of paper	**Psychosocial interventions for attention deficit/hyperactivity disorder: A systematic review and meta-analysis by the CADDRA guidelines work group**
Full citation	Tourjman, V., Louis-Nascan, G., Ahmed, G., DuBow, A., Côté, H., Daly, N., Daoud, G., Espinet, S., Flood, J., Gagnier-Marandola, E., Gignac, M., Graziosi, G., Mansuri, Z., & Sadek, J. (2022). Psychosocial interventions for attention deficit/hyperactivity disorder: A systematic review and meta-analysis by the CADDRA guidelines Work GROUP. *Brain Sciences, 12*(8), 1023. https://doi.org/10.3390/brainsci12081023
Level of evidence	Level I
Design	Systematic review and meta-analysis (24 studies, with 10 studies focused on caregiver/parent training)
Delivery format	Combination of individual, group, face to face and online
Participants	Preschoolers, children, adolescents and adults with a clinical diagnosis of ADHD. The caregiver/parent interventions included 962 participants.
Demographic characteristics	Mean ages ranging from 3.6 to 9.5 years across relevant studies. The percentage of males ranged from 58% to 100%.
Treating clinician type	Not specified
Intervention	Caregiver (parent) training (e.g. New Forest Parenting Program, Parent Focused Training)
Outcome(s) measured	Primary outcomes included core ADHD symptoms (inattention, hyperactivity/impulsivity) and serious adverse events. Outcomes were measured by validated ADHD symptom scales and including ratings by participants, parents (or caregivers), teachers, and clinicians.
Procedure	A systematic review and meta-analysis were conducted by the CADDRA Guidelines Work Group to provide recommendations for the treatment of ADHD symptoms across different populations. The search strategy included RCTs and meta-analyses identified in electronic databases from 2010 to February 2020. The GRADE approach was used to generate recommendations for a range of psychosocial interventions.
Follow up	Yes; 36 weeks
Statistics summary	Three-level and four-level meta-analyses were used to pool results and generate recommendations. Overall, caregiver interventions showed a significant moderate effect, with substantial heterogeneity (*ES* = 0.64, CI [0.29, 0.99], $p < .001$). Subgroup analyses showed that school aged children experienced the greatest treatment effects (*ES* = 0.91, CI [0.54, 1.28], $p < .001$), while the effect for preschoolers was negligible and non-significant (*ES* = 0.04, CI [-0.06, 0.14], $p = .396$). The preschooler analysis showed no heterogeneity, while the school aged children analysis revealed significant heterogeneity, largely due to within-study variation.
Conflict of interest	None declared
Risk of bias	Low
Summary of findings	The reviewed evidence supported a recommendation for caregiver interventions in reducing inattention and hyperactivity/impulsivity symptoms of ADHD in school age children (very low confidence recommendation). The review did not recommend caregiver interventions for preschool children (low confidence recommendation).

Note. CADDRA: Canadian ADHD Resource Alliance, ES: Effect Size.

Title of paper	**The efficacy of parent-child interaction therapy (PCIT) for youth with attention-deficit/hyperactivity disorder (ADHD): A meta-analysis**
Full citation	Phillips, S. T., Druskin, L. R., Mychailyszyn, M. P., Victory, E., Aman, E., & McNeil, C. B. (2024). The efficacy of parent–child interaction therapy (PCIT) for youth with attention-deficit/hyperactivity disorder (ADHD): A meta-analysis. *Child Psychiatry & Human Development,* 1-10. https://doi.org/10.1007/s10578-024-01678-2
Level of evidence	Level IV
Design	Meta-analysis (9 studies)
Delivery format	Family, face to face
Participants	Two hundred and eighty children with a diagnosis of ADHD.
Demographic characteristics	Participant ages ranged from 2 to 7 years across the nine studies. Studies were conducted in the USA (*k* =5), Japan, Hong Kong, Puerto Rico, and The Netherlands.
Treating clinician type	Not specified
Intervention	Parent-child interaction therapy (PCIT)
Outcome(s) measured	Outcomes included all externalising symptoms, ADHD symptoms only, child behaviours (e.g. fidgeting, verbal interference), parent symptomatology and parent behaviour. A range of measures were used, such as the Conners ADHD Index, CPRS, DPICS, CBCL, PSI, CTRF, ERC, and BASC.
Procedure	A meta-analysis was conducted to synthesize evidence on the use of PCIT for children with ADHD. The search strategy included published or unpublished studies identified in electronic databases and published through December 2021. Included studies did not need to have a control group.
Follow up	No
Statistics summary	Standardized mean gain (SMG) was used as a summary effect size, with Hedge's *g* calculated for individual study effect sizes. The aggregate effect size for ADHD symptoms, including five of nine studies, was significant (g = 0.89, 95% CI [0.53, 1.25], p < .001), with non-significant heterogeneity (Q = 15.65, p = .07) and a Fail-Safe N of 17. The aggregate effect size for observational measures of child behaviour, including four of nine studies, was significant (g = 0.44, 95% CI [0.23, 0.66], p < .001), with non-significant heterogeneity (Q = 5.85, p = .211) and a Fail-Safe N of 6.
Conflict of interest	None declared
Risk of bias	High
Summary of findings	Findings suggested that parent-child interaction therapy (PCIT) is an effective treatment for reducing core symptoms of childhood ADHD. PCIT was also found to alleviate parent symptoms, including parent stress and parenting behaviours.

Note. BASC: Behaviour Assessment System for Children; CBCL: Child Behaviour Checklist; CPRS: Conners Parenting Rating Scale; CTRF: Caregiver/Teacher Report Form; DPICS: Dyadic Parent–Child Interaction Coding System; ERC: Emotion Regulation Checklist; PSI: Parenting Stress Index.

Play therapy

Title of paper	**Comparison of the effect of filial and adlerian play therapy on attention and hyperactivity of children with attention deficit hyperactivity disorder: A randomized clinical trial**
Full citation	Mirzaie, H., Hassani Mehraban, A., Hosseini, S. A., Ghasemi Fard, F., & Jafari Oori, M. (2019). Comparison of the effect of filial and adlerian play therapy on attention and hyperactivity of children with attention deficit hyperactivity disorder: A randomized clinical trial. *Iranian Rehabilitation Journal, 17*(4), 341-350. https://doi.org/10.32598/irj.17.4.341
Level of evidence	Level II
Design	Randomised controlled trial (RCT)
Delivery format	Family, face to face
Participants	Fifty-one children (and their parents) aged 6-15 years diagnosed with ADHD by a psychiatrist. The parents had a minimum high school education and no psychiatric disorders.
Demographic characteristics	Mean age was 8.1 (*SD* = 2.0) for children, 37.6 (*SD* = 5.8) for mothers, and 42.2 (*SD* = 7.2) for fathers. Half of the children sample was male. The study was conducted in Tehran (Iran).
Treating clinician type	Occupational therapists
Intervention	Filial therapy (FT), Adlerian therapy (AT)
Study groups	Interventions: FT, AT Control group: No intervention
Outcome(s) measured	Different aspects of attention (e.g. selective attention, attentional control/switching) as measured by the TEA-Ch, and symptoms of emotional and behavioural disorders as measured by the CSI-4.
Procedure	Children (and their parents) were randomly allocated using blocked method to FT (*n* = 17), AT (*n* = 17) or the control group (*n* = 17). Parents in the FT intervention group received one session of training play therapy per week (45 minutes to 1 hour each) for 10 weeks and played with their children at home every day for at least 30 minutes. The AT intervention group received 3 sessions (45 minutes each) of play therapy for 10 weeks in the clinics. Data was collected at pre-test, post-test and 3-month follow-up.
Follow up	Yes; 3 months
Statistics summary	Statistical analyses were performed using Chi-squared, Man-Whitney U (U) and Kruskal-Wallis tests. Both intervention groups (FT and AT) led to significant reductions in symptoms of inattention and hyperactivity compared with controls ($p < .05$). Compared with AT, FT showed significantly greater reductions in symptoms of hyperactivity ($p < .05$).
Conflict of interest	No
Risk of bias	High
Summary of findings	Findings indicated that both play-based therapies (Filial therapy and Adlerian therapy) were effective in improving symptoms of hyperactivity and inattention in children aged 6-15 years with ADHD. Additionally, Filial therapy was found to be more effective than Adlerian therapy, suggesting that higher parental involvement may increase overall treatment effectiveness.

Note. CSI-4: Child Symptom Inventory – 4; TEA-Ch: Test of Everyday Attention for Children.

Psychoeducation

Title of paper	**Is psychoeducation for parents and teachers of children and adolescents with ADHD efficacious? A systematic literature review**
Full citation	Montoya, A., Colom, F., & Ferrin, M. (2011). Is psychoeducation for parents and teachers of children and adolescents with ADHD efficacious? A systematic literature review. *European Psychiatry, 26*(3), 166-175. https://doi.org/10.1016/j.eurpsy.2010.10.005
Level of evidence	Level I
Design	Systematic review (7 studies)
Follow-up	10 weeks to 24 months
Format	Various (e.g., group, individual, family)
Participants	2,034 children and adolescents (3 to 20 years) diagnosed with ADHD according to DSM-III or DSM-IV criteria. Further demographic details were not reported.
Treating clinician(s)	Psychiatrists, clinical assistants, psychologists, and/or social workers
Intervention(s)	Psychoeducation, defined as a "mainly informative intervention that integrates both psychotherapeutic and educational components". Many of the included studies combined psychoeducation with problem-solving strategies or training in communication/assertiveness.
Comparison group(s)	Four studies were RCTs with control conditions (details not provided), and three studies were pre-post intervention designs.
Procedure	Systematic review to evaluate evidence for psychoeducation programs in relation to clinical outcomes for children and adolescents with ADHD. Qualitative analysis was conducted on seven articles published between 1980 and 2010. Three of the included studies applied psychoeducation to the child's parents, a further three involved the child and his/her family, and one study targeted teachers.
Summary of findings	Psychoeducation demonstrated positive treatment effects for a number of ADHD-related outcome measures, including the child's behaviour, parent and child satisfaction, and the child's knowledge of ADHD. Improvements were also found regarding the children's attitude toward medication and their adherence to medical recommendations.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 168. Copyright 2018 by the Australian Psychological Society.

Self-guided digital interventions

Title of paper	**Meta-analysis of the efficacy of digital therapies in children with attention-deficit hyperactivity disorder**
Full citation	He, F., Qi, Y., Zhou, Y., Cao, A., Yue, X., Fang, S., & Zheng, Y. (2023). Meta-analysis of the efficacy of digital therapies in children with attention-deficit hyperactivity disorder. *Frontiers in Psychiatry, 14*, 1054831. https://doi.org/10.3389/fpsyt.2023.1054831
Level of evidence	Level I
Design	Meta-analysis (31 studies)
Delivery format	Digital interventions, with no therapist guidance
Participants	Total of 2,189 children and adolescents aged 4-17 years with a primary diagnosis of ADHD.
Demographic characteristics	Mean age ranged from 6.7 to 13.7 years across studies, and the overall sample consisted of 1,681 boys and 508 girls. Studies were conducted in a range of countries, such as the UK, Germany, South Korea, China, USA, France, and Australia.
Treating clinician type	Not specified
Intervention	Digital interventions, with no therapist guidance (e.g. video game-based technology)
Outcome(s) measured	Primary outcomes were the core symptoms of ADHD (inattention, hyperactivity/impulsivity) as measured by validated assessment tools (e.g. ADHD-RS). Secondary outcomes included attention control (measured by CPT), executive functions and working memory (measured by BRIEF)
Procedure	A meta-analysis was conducted to evaluate the evidence for the efficacy of digital therapeutics in children and adolescents with ADHD. The search strategy included clinical trials or prospective studies identified in electronic databases and published through July 2022.
Follow up	No
Statistics summary	Effect sizes (*ES*) were calculated using a continuous random effects model. Digital interventions improved symptoms of inattention (*ES* = -0.25 (95% CI [-0.40, -0.09], p = .002) with significant heterogeneity observed (I^2 = 73%, p = .005). They further improved hyperactivity symptoms (*ES* = -0.13 (95% CI [-0.28, 0.03], p = .02) with significant heterogeneity observed (I^2 = 78%, p = .004). Overall improvement in the total ADHD-RS score was also observed (*ES* = -0.24 (95% CI [-0.39, -0.09], p = .013) with significant heterogeneity observed (I^2 = 82%, p < .001).
Conflict of interest	Yes (one author, commercial)
Risk of bias	Unclear
Summary of findings	Findings suggested that digital therapy, mostly in the form of video game-based technology, demonstrates potential clinical efficacy in the treatment of paediatric ADHD. The authors noted the further research is needed to identify optimal conditions for digital therapy and any potential adverse effects (e.g. addiction).

Note. ADHD-RS: ADHD-Rating Scale; BRIEF: Behaviour Rating Inventory of Executive Function Questionnaire; CPT: Continuous Performance Task.

Title of paper	Efficacy of online intervention for ADHD: A meta-analysis and systematic review
Full citation	Shou, S., Xiu, S., Li, Y., Zhang, N., Yu, J., Ding, J., & Wang, J. (2022). Efficacy of online intervention for ADHD: A meta-analysis and systematic review. *Frontiers in Psychology, 13*, 854810. https://doi.org/10.3389/fpsyg.2022.854810
Level of evidence	Level I
Design	Systematic review and meta-analysis (6 studies, with 3 studies focused on children with ADHD)
Delivery format	Digital interventions, with and without therapist guidance
Participants	Total of 261 participants (*N* = 114 children) with a diagnosis of ADHD based on DSM criteria (2/3 studies) or clinically significant symptoms of ADHD (1/3 studies).
Demographic characteristics	Mean age was 4.0 and 4.4 years respectively in two of the studies, with the third study having an age range of 8-12 years
Treating clinician type	Not specified
Intervention	Digital intervention, with therapist guidance (including FFM, BPT, TPO)
Outcome(s) measured	Primary outcome measures were ADHD symptomatology as measured by the ADHD-RS, Conners (I/O) and Conners (H/I).
Procedure	This systematic review and meta-analysis aimed to evaluate the efficacy of online interventions in the treatment of ADHD. Electronic databases were searched with no time limit on 1 December 2021. Subgroup analyses were conducted for age (adults vs minors), intervention target ("patients" vs. "educators") for both attention and social function scores.
Follow up	No
Statistics summary	Random-effects analyses were used to analyse the data, with standard mean difference used to calculate effect sizes. Subgroup meta-analysis showed that digital interventions were more efficacious than waitlist controls in improving attention scores in children (*SMD* = - 0.81, 95% CI [-1.19, -0.42], $p < .001$). The between-study heterogeneity was found to be non-significant ($I^2 = 0\%$, $p = .73$). Subgroup analyses showed significant improvements in social function scores (*SMD* = - 0.84, 95% CI [-1.23, -0.46], $p < .001$) compared with waitlist controls, with non-significant heterogeneity observed ($I^2 = 0\%$, $p = .45$).
Conflict of interest	None declared
Risk of bias	High
Summary of findings	The results from this systematic review and meta-analysis indicate that online interventions may be effective in improving attention and social function outcomes in children diagnosed with ADHD.

Note. ADHD-RS: ADHD-Rating Scale; BPT: Behavioural Parent Training; Conners (I/O): Conners Inattention/Overactivity; Conners (H/I): Conners Hyperactivity/Inattention; FFM: Feed-Forward Modelling System; TPO: Triple P Online.

Disruptive behaviour or dissocial disorders

SUMMARY OF EVIDENCE

The ICD-11 category for disruptive behaviour or dissocial disorders encompasses both conduct disorder and oppositional defiance disorder.

Level I evidence[110] was identified in support of cognitive behaviour therapy and family-based interventions for the treatment of conduct disorder and oppositional defiance disorder in children. Level II evidence was found in support of parent training delivered remotely, and further Level IV evidence was identified which was specific to parent management training delivered via videoconferencing in rural and remote areas of Australia.

Level II evidence was identified in support of play therapy delivered in both individual and group formats. Level II evidence was found in support of psychodynamic therapy specific to adolescents aged 14 to 19 years.

Guidelines provided by NICE (2017) provide recommendations for the use of parent/carer training programs and child focused programs based on social and cognitive-behavioural problem solving. Recommendations into the use of multimodal interventions with focus on parents and families are also recommended.

Furthermore, a recent Practitioner Review[111] into the core competencies for evidence-based treatment of child conduct problems has highlighted the need for practitioners to meet core competency domains related to generic therapeutic competencies, parenting intervention competencies, and specific parenting skills/techniques.

[110] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of disruptive behaviour or dissocial disorders in children and adolescents.

[111] Barker, J. M., & Hawes, D. J. (2024). Practitioner Review: A core competencies perspective on the evidence-based treatment of child conduct problems. *Journal of Child Psychology and Psychiatry*, *65*(2), 124-136. https://doi.org/10.1111/jcpp.13882

Cognitive behaviour therapy

Title of paper	**Cognitive behavior therapy for externalizing disorders in children and adolescents in routine clinical care: A systematic review and meta-analysis**
Full citation	Riise, E. N., Wergeland, G. J. H., Njardvik, U., & Ost, L. G. (2021). Cognitive behavior therapy for externalizing disorders in children and adolescents in routine clinical care: A systematic review and meta-analysis. *Clinical Psychology Review*, *83*, 101954. https://dx.doi.org/10.1016/j.cpr.2020.101954
Level of evidence	Level I
Design	Systematic review and network meta-analysis (51 studies, with 28 studies focused on conduct disorder / oppositional defiance disorder)
Format	Individual and group; face-to-face
Participants	Total sample size of *n* = 5,295 participants, with *n* = 2774 in the studies focused on conduct disorder / oppositional defiance disorder. To be included, participants had to be diagnosed with conduct disorder or oppositional defiance disorder according to the DSM or ICD, or meet a clinical cut-off score on a validated parent or teacher rating scale.
Demographic characteristics	The sample specific to conduct disorder / oppositional defiance disorder had a mean age of 9.9 years, and 77.3% were male. Studies were conducted in North America, Europe, and Australia.
Treating clinician type	Trained mental health professionals (clinical psychologist, social worker); other (unspecified)
Intervention	Parent-based therapy (24 studies); Child-based therapy; MCT
Outcome(s) measured	Conduct disorder symptom severity as measured by remission rates and the CABAS, CBCL, ECBI, ICRS-ODD, ODD-RS, and QABC.
Procedure	A systematic review and network meta-analysis of RCTs was conducted to investigate the effectiveness of cognitive behaviour therapy programs (primarily parent-based behaviour interventions) in the treatment of conduct disorder / oppositional defiance disorder. The database search time frame covered inception to May 2020.
Follow up	Yes; 1 to 36 months
Statistics summary	A random effects model was used for the meta-analysis, however only within-group analyses were completed. The within-group effect size for treatment conditions relevant to conduct disorder / oppositional defiance disorder was significant in favour of the intervention at both post-treatment (k = 39, g = 0.98, 95% CI [0.85, 1.12], z = 14.31, p < .0001) and follow-up (k = 31, g = 1.06, 95% CI [1.89, 1.24], z = 11.87, p < .0001). At post treatment, remission rates were 48% for conduct disorder / oppositional defiance disorder.
Conflict of interest	None declared
Risk of bias	High
Summary of findings	This meta-analysis supports the use of parent-based and/or child-based behavioural interventions for conduct disorder and oppositional defiance disorder, however it must be noted these results are based on within-group outcomes only.

Note. CABAS: Child and Adolescent Functional Assessment Scale; CBCL: Child Behavior Checklist; ECBI: Eyberg Child Behavior Inventory; ICRS-ODD: Iowa Conners Rating Scale; MCT: Multi-dimensional treatment; ODD-RS: Oppositional Defiance Disorder Rating Scale; QABC: Questionnaire for Aggressive Behavior in Children.

Family-based interventions

Title of paper	**The efficacy of parent management training with or without involving the child in the treatment among children with clinical levels of disruptive behavior: A meta-analysis**
Full citation	Helander, M., Asperholm, M., Wetterborg, D., Öst, L.-G., Hellner, C., Herlitz, A., & Enebrink, P. (2024). The efficacy of parent management training with or without involving the child in the treatment among children with clinical levels of disruptive behavior: A meta-analysis. *Child Psychiatry and Human Development*, *55*(1), 164-181. https://doi.org/10.1007/s10578-022-01367-y
Level of evidence	Level I
Design	Systematic review and meta-analysis (25 studies)
Format	Parent training with or without child involvement; face-to-face
Participants	Total sample size of *n* = 2,023 participants. To be included, the children had to fulfil criteria for conduct disorder or oppositional defiance disorder, or have disruptive behaviour problems which meet a clinical cut-off score on a validated parent or teacher rating scale.
Demographic characteristics	The mean age of the total sample was 5.5 years (range 2 to 13 years) and 69% were male. Studies were conducted in Sweden, USA, Belgium, Portugal, Romania, New Zealand, UK, Norway, Hong Kong, Australia, Ireland, and Canada. No detailed information on ethnicity was provided.
Treating clinician type	Trained mental health professionals (unspecified)
Intervention	Parent Management Training (PMT); Parent-Child Interaction Therapy (PCIT)
Outcome(s) measured	Conduct disorder symptom severity as measured by remission rates and the CBCL, BASC-2, DBD - ODD subscale, ECBI, PDR, SDQ - CD subscale, PKBS, and PBQ.
Procedure	A systematic review and meta-analysis of RCTs was conducted to investigate the effectiveness of Parent Management Training and Parent-Child Interaction Therapy (with and without the addition of child CBT) in the treatment of disruptive behaviour. The database search time frame covered inception to April 2019.
Follow up	No
Statistics summary	A random-effects model was used for the meta-analysis and moderator analyses were used to compare specific interventions (PMT, PCIT with/without child CBT) to waitlist. Results showed a significant reduction in parent-rated disruptive behaviour compared to waitlist for both PMT (k = 16; g = 0.64, 95% CI [0.42, 0.86], I^2 = 66.2) and PCIT (k = 6; g = 1.22, 95% CI [0.75, 1.69]. I^2 = 0.96). Analyses comparing parent ratings in standard PMT versus PMT with child CBT found no significant differences between the two conditions.
Conflict of interest	Yes (research-based)
Risk of bias	Unclear
Summary of findings	Based on the findings of this meta-analysis, the authors conclude that both standard PMT and PCIT are more effective than waitlist in reducing disruptive behaviour in children. Their findings did not provide any evidence that combining PCIT with child CBT is more effective than PCIT alone.

Note. CBCL: Child Behavior Checklist; BASC-2: Behaviour Assessment System for Children 2; DBD: Disruptive Behaviour Rating Scale; ECBI: Eyberg Child Behavior Inventory; PDR: Parent Daily Report; SDQ: Strengths and Difficulties Questionnaire; PKBS: Preschool and Kindergarten Behavior Scales; PBQ: Behar Preschool Behavior Questionnaire.

Title of paper	**Distance-delivered parent training for childhood disruptive behavior (Strongest Families®): A randomized controlled trial and economic analysis**
Full citation	Olthuis, J. V., McGrath, P. J., Cunningham, C. E., Boyle, M. H., Lingley-Pottie, P., Reid, G. J., Bagnell, A., Lipman, E. L., Turner, K., Corkum, P., Stewart, S. H., Berrigan, P., & Sdao-Jarvie, K. (2018). Distance-delivered parent training for childhood disruptive behavior (Strongest Families™): A randomized controlled trial and economic analysis. *Journal of Abnormal Child Psychology*, *46*(8), 1613-1629. https://doi.org/10.1007/s10802-018-0413-y
Level of evidence	Level II
Design	Randomised controlled trial (RCT)
Format	Parent training; remote delivery via written material, videos and telephone
Participants	The sample was made up of n = 172 primary caregivers (94% biological parents) of children aged 6 to 12 years who met clinical cut-off scores on validated measures of disruptive behaviour. Of the *n* = 88 participants assigned to the intervention group, *n* = 47 received full intervention (12 sessions), *n* = 35 received partial intervention (1-11 sessions) and *n* = 6 received no intervention (0 sessions). There were *n* = 84 participants assigned to the control group.
Demographic characteristics	The mean age of of the children was 8.5 years and 29% were female. Of the primary caregiver involved, 95% were female and 67% were Caucasian. The study was conducted in Canada.
Treating clinician type	Other professional (coaches with training and supervision specific to the Strongest Families™ intervention)
Intervention	Parent training / behavioural intervention (Strongest Families™)
Study groups	Intervention group: Strongest Families™ Control group: TAU
Outcome(s) measured	Levels of disruptive behaviour as measured by the CBCL – Externalising Problems subscale. Additional measures were used to evaluate parenting practices and levels of parental distress.
Procedure	The Strongest Families™ intervention consisted of 12 skills-based sessions delivered via telephone coaching alongside a handbook, skills demonstration DVD, and other materials (e.g. behavioural charts). The assigned coach ran 12 weekly 30-40min sessions with the primary caregiver and had no contact with the child. The parent was required to show mastery of each skill before moving to the next session, and therefore in some cases there were more than 12 telephone coaching sessions to cover the 12 skills-based sessions covered by the program. Participants in the control group were encouraged to continue usual care (child, family, and parent-focused) as provided by the referring agency or service provider.
Follow up	Yes; up to 22 months
Statistics summary	Growth curve analyses were conducted with an intent-to-treat approach. Both conditions showed significant reductions in externalising behaviour over time. These improvements were significantly greater in the intervention group at 5 months (*d* = - 0.46, 95% CI [-0.79, -0.13]) and 10 months (*d* = - 0.05, 95% CI [-0.77, -0.08]), however by 16 and 22 months the difference was not significant.
Conflict of interest	Yes (Professional; Financial; Commercial)
Risk of bias	High
Summary of findings	These findings support the use of distance-delivered parent training as comparable in efficacy so standard care approaches (usual care defined here as child, parent or family focused care provided by regular services). Authors conclude that distance-delivered parent training may improve accessibility and affordability of care for children experiencing disruptive behaviours and their families.

Note. CBCL: Child Behavior Checklist.

Title of paper	**An effectiveness open trial of internet-delivered parent training for young children with conduct problems living in regional and rural Australia**
Full citation	Fleming, G. E., Kohlhoff, J., Morgan, S., Turnell, A., Maiuolo, M., & Kimonis, E. R. (2021). An effectiveness open trial of internet-delivered parent training for young children with conduct problems living in regional and rural Australia. *Behavior Therapy*, *52*(1), 110-123. https://dx.doi.org/10.1016/j.beth.2020.03.001
Level of evidence	Level IV
Design	Open trial
Format	Parent training; videoconferencing
Participants	The sample was made up of *n* = 27 mothers and their 1.5 to 4 year old child with clincially significant conduct problems as assessed by a clinical-cut off score on the ECBI.
Demographic characteristics	The mean age of the children was 3.02 years (*SD* = 0.73) and 56% were male. The participants lived in regional or rural Australia and were English speaking or English bilingual, and all but one mother were born in Australia.
Treating clinician type	Trained mental health professionals (clinically trained psychologists and a clinical nurse consultant that was a certified PCIT Level 2 trainer)
Intervention	Parent Management Training (PMT)
Study groups	Intervention group: Internet-delived Parent-Child Interaction Therapy (I-PCIT) No control
Outcome(s) measured	Severity of child conduct problems as measured by the ECBI.
Procedure	The I-PCIT was adapted for online delivery using encrypted videoconferencing technology. The therapy followed the standard PCIT protocol which was made up of two phases: Child-Directed Interaction (CDI) and Parent-Direction Interaction (PDI). Families transitioned from CDI to PDI once "mastery criteria" had been reached. The participating families completed an avergae of 9.5 treatment sessions (*SD* = 6.4; range 0-20). All but two families participants from their homes, with the remaining two from the community health center or the mother's workplace.
Follow up	No
Statistics summary	Unconditional linear mixed models and marginal models were used to examine the effects of assessment time point on outcome measures. Within-group effect sizes were significant in favour of the intervention on both the ECBI Intensity scores (*b* = -27.05, 95% CI [-35.71, -18.39], *p* < .001) and the ECBI Problem scores (*b* = -5.50, 95% CI [-7.70, -3.30], *p* < .001).
Conflict of interest	None declared
Risk of bias	Moderate
Summary of findings	These findings provide preliminary support for the use of I-PCIT, particularly in the context of improving accessibility of parent management training to families living in rural and remote areas.

Note. ECBI: Eyberg Child Behavior Inventory.

Play therapy

Title of paper	**Sandplay therapy in the treatment of children with oppositional defiant disorder and conduct disorder**
Full citation	Chalfon, M. S. T., & Ramos, D. G. (2022). Sandplay therapy in the treatment of children with oppositional defiant disorder and conduct disorder. *Estudos de Psicologia*, *39,* e200223. https://doi.org/10.1590/1982-0275202239e200223
Level of evidence	Level II
Design	Randomised controlled trial (RCT)
Format	Individual; face-to-face
Participants	The sample was made up of *n* = 41 (*n* = 21 randomised to each study group) children between 6 years and 11 years and 11 months who met clinical cut-off scores on validated measures related to conduct disorder symptom severity.
Demographic characteristics	The mean age of of the children was 8.2 years (*SD* = 1.6) and 68.3% were male. The study was conducted in Brazil.
Treating clinician type	Trained mental health professional (sandplay therapist)
Intervention	Sandplay therapy
Study groups	Intervention group: Sandplay therapy Control group: Waitlist (passive control)
Outcome(s) measured	Conduct disorder symptom severity as measured by the SDQ Conduct Problems Scale – Version for Parents and the CBCL/6-18.
Procedure	The sandplay therapy intervention consisted of 12 individual sessions conducted weekly. Each session was of 40 minute duration. The article describes sandplay therapy as a playful psychotherapeutic approach in which miniatures are used to compose a scene inside a rectangular box full of sand, illuminating unconscious dynamics. At the end of the 12 weeks, participants in the control group that still met inclusion criteria underwent the intervention, providing further data for statistical analyses.
Follow up	Yes; 3 months
Statistics summary	The mean scores were compared using the t-test and Mann-Whitney test. At post-treatment, there was a significant difference in CBCL scores in favour of the intervention group on both the Oppositional Defiant Problems subscale (r = 0.75, p < .001) and Conduct Problems subscale (r = 0.36, p = .042).
Conflict of interest	None declared
Risk of bias	High
Summary of findings	These findings support the efficacy of sandplay therapy in reducing the symptoms of conduct disorder and oppositional defiant disorder, however the authors note further research is required to ascertain the generalisabilty of these results.

Note. CBCL: Child Behavior Checklist; SDQ: Strengths and Difficulties Questionnaire.

Title of paper	**A comparative study on the effectiveness of individual and group play therapy on symptoms of oppositional defiant disorder among children**
Full citation	Morshed, N., Babamiri, M., Zemestani, M., & Alipour, N. (2019). A comparative study on the effectiveness of individual and group play therapy on symptoms of oppositional defiant disorder among children. *Korean Journal of Family Medicine*, *40*(6), 368-372. https://doi.org/10.4082/kjfm.18.0045
Level of evidence	Level II
Design	Randomised controlled trial (RCT)
Format	Individual and group; face-to-face
Participants	The sample was made up of n = 45 children (*n* = 15 in each study group, with no dropouts reported) aged between 6 to 10 years who met diagnostic criteria (via symptom measures and clinical interview) for oppositional defiance disorder.
Demographic characteristics	The mean age of of the children was 7.6 years in the individual play therapy group, and 7.4 years in the group play therapy and control groups. The percentage of males in each group was 53% in individual play therapy, 47% in group play therapy, and 80% in the control group.The study was conducted in Iran.
Treating clinician type	Trained mental health professional (therapist)
Intervention	Play therapy
Study groups	Intervention groups: 1. Individual play therapy 2. Group play therapy Control group: Waitlist
Outcome(s) measured	Oppositional defiance disorder symptom severity as measured by the CBCL parent and teacher report forms.
Procedure	The play therapy intervention was the same across both intervention groups, with the individual versus group (15 children) formats the only differentiating feature. The play therapy interventions involved a range of activities including but not limited to playing with toys and role playing with animals, puppet shows and emotion images, anger management play actiities, game bubble to exercise deep breathing, and other tasks focused on emotion regulation, relaxation, problem-solving and positive self-talk.
Follow up	Yes; 2 months
Statistics summary	Analyses of covariance (ANCOVA) and Bonferroni tests were conducted to test hypotheses. At posttest, there was a significant mean difference favouring the intervention groups when control was compared to both individual play therapy (parent scores: mean difference = 4,37, $p \leq 0.001$; teacher scores: mean difference = 3.83, $p \leq 0.001$) and group play therapy (parent scores: mean difference = 5.44, $p \leq 0.001$; teacher scores: mean difference = 4.57, $p \leq 0.001$). These effects were maintained at follow-up for both intervention groups.
Conflict of interest	None declared
Risk of bias	High
Summary of findings	These findings support the efficacy of play therapy delivered in both individual and group formats for the treatment of oppositional defiant disorder in children aged 6 to 10 years. Moreover, the authors report no significant difference in the effectiveness of individual versus group delivered formats, acknowledging a potential cost-effectiveness benefit to providing care in a group context.

Note. CBCL: Child Behavior Checklist

Psychodynamic therapy

Title of paper	**Psychodynamic therapy for adolescents suffering from co-morbid disorders of conduct and emotions in an in-patient setting: A randomized controlled trial**
Full citation	Salzer, S., Cropp, C., Jaeger, U., Masuhr, O., & Streeck-Fischer, A. (2014). Psychodynamic therapy for adolescents suffering from co-morbid disorders of conduct and emotions in an in-patient setting: A randomized controlled trial. *Psychological Medicine, 44*(10), 2213-2222. https://doi.org/10.1017/S003329171300278X
Level of evidence	Level II
Design	RCT
Follow-up	6 months
Format	Individual, group, family
Participants	66 adolescents aged 14 to 19 (mean age 16.5 years) meeting ICD-10 criteria for mixed disorders of conduct and emotion. Approximately two-thirds of the participants were female.
Treating clinician(s)	Clinicians trained in psychodynamic treatment and with a mean 9 years of professional experience
Intervention(s)	Manualised psychodynamic therapy (*n* = 32)
Comparison group(s)	Waitlist control group (*n* = 34)
Procedure	RCT with the aim of evaluating manualised psychodynamic therapy for the treatment of adolescents with comorbid disorders of conduct and emotion within an in-patient setting. Treatment consisted of three 30-minute sessions of individual therapy and one 45-minute group therapy session per week. Additional elements included parent counselling, occupational therapy, and weekly ward rounds. Treatment was completed after a mean duration of 34 weeks.
Summary of findings	The rate of remission from mixed disorder of conduct and emotion was significantly higher among the psychodynamic therapy treatment group (71.9%) compared with controls (8.8%) at posttreatment. There was a significant reduction in overall behavioural difficulties for the treatment group in comparison with controls (small effect). However, there was no significant treatment effect for overall psychological distress. These results held at 6 months' follow-up, as did the rate of remission.

Note. Adapted from *Evidence-Based Psychological Interventions in the Treatment of Mental Disorders: A Literature Review* (4th edition) by The Australian Psychological Society, 2018, p. 171. Copyright 2018 by the Australian Psychological Society.

Enuresis

SUMMARY OF EVIDENCE

This review incorporates behavioural interventions specific to enuresis under cognitive behaviour therapy. Level I evidence[112] was identified in support of alarm therapy for the treatment of enuresis in children and adolescents. Level I evidence in relation to urotherapy was deemed inconclusive.

Guidelines provided by NICE (2010; reviewed in 2018) classify alarm therapy as a first-line treatment for enuresis in children and adolescents under 19 years of age.

[112] Statements made on the efficacy and/or level of support identified for an intervention are based on the article identified as having 1) highest level of evidence based on NHMRC levels of evidence hierarchy, 2) the lowest risk of bias as assessed using the appropriate Cochrane Risk of Bias tool, and 3) the most recent publication date, in that order. Accordingly, the articles presented below may not be reflective of the whole body of current evidence on the efficacy of any given intervention in the treatment of enuresis in children and adolescents.

Cognitive behaviour therapy

Title of paper	**The efficacy of standard urotherapy in the treatment of nocturnal enuresis in children: A systematic review**
Full citation	Jorgensen, C. S., Kamperis, K., Walle, J. V., Rittig, S., Raes, A., & Dossche, L. (2023). The efficacy of standard urotherapy in the treatment of nocturnal enuresis in children: A systematic review. *Journal of Pediatric Urology, 19*(2), 163-172. https://dx.doi.org/10.1016/j.jpurol.2022.12.011
Level of evidence	Level I
Design	Systematic review (39 studies, including 22 RCTs)
Format	Individual; face-to-face
Participants	The number of participants in included studies ranged from 18 to 666 children (total sample size was not provided). A diagnosis of primary nocturnal enuresis was required for inclusion.
Demographic characteristics	The age range of participants was 3-15 years (no mean age was provided for the total sample). All studies included both genders (total percentages not provided).
Treating clinician type	Not specified
Intervention	Urotherapy
Outcome(s) measured	Enuresis severity as operationalised by number of wet nights.
Procedure	A systematic review investigating the use of standard urotherapy in the treatment of children with primary nocturnal enuresis was completed. The database search time frame was not clearly specified.
Follow up	No
Statistics summary	Across the 22 RCTs, complete responders varied from 0–92%, and the reduction in the number of wet nights ranged from 12–98%. Many of the RCTs included were assessed as poor quality. Three studies that were assessed as being of high quality reported few children achieving complete response (5%, 25% and 33%).
Conflict of interest	None declared
Risk of bias	Unclear
Summary of findings	This systematic review notes that conclusions regarding the efficacy of urotherapy cannot be made given the poor quality of studies and high levels of heterogeneity. High quality studies demonstrated limited efficacy, and this review has therefore concluded that there is insufficient evidence for offering standard urotherapy as a first-line treatment for children with primary nocturnal enuresis.

Title of paper	**Systematic review and meta-analysis of alarm versus desmopressin therapy for pediatric monosymptomatic enuresis**
Full citation	Peng, C. C. H., Yang, S. S. D., Austin, P. F., & Chang, S. J. (2018). Systematic review and meta-analysis of alarm versus desmopressin therapy for pediatric monosymptomatic enuresis. *Scientific Reports, 8*(1), 16755. https://doi.org/10.1038/s41598-018-34935-1
Level of evidence	Level I
Design	Systematic review and network meta-analysis (15 articles)
Format	Individual; face-to-face
Participants	Total sample size of *n* = 1,502 participants diagnosed with monosymptomatic nocturnal enuresis.
Demographic characteristics	The age range of participants was 5-16 years (no mean age was provided for the total sample). Included studies were conducted in Sweden, France, Canada, Hong Kong, China, Turkey, Germany, Korea, the UK, Saudi Arabia, Italy, Iran, and Brazil.
Treating clinician type	Not specified
Intervention	Alarm therapy
Outcome(s) measured	Enuresis severity as operationalised by number of wet nights.
Procedure	A systematic review and network meta-analysis of RCTs comparing the efficacy of alarm therapy and desmopression therapy was conducted to compare the effectiveness of the two interventions. The database search time frame covered inception to April 2017.
Follow up	Yes; 2-12 months
Statistics summary	Pooled analyses of dichotomous outcomes with a random model was used. Both intention-to-treat (ITT) and per-protocol analyses (PP) were used due to the high dropout rate in the alarm therapy group. Alarm therapy had a significantly higher partial response rate (i.e. >50% reduction in wet nights) compared to desmopression in the PP analysis (*OR* = 1.53, 95% CI [1.05, 2.23], *p* = .03, I^2 = 33%) but not in the ITT analysis (*OR* = 0.97, 95% CI [0.73, 1.30], *p* = .85, I^2 = 28%). Results from 4 studies that reported a sustained response rate for more than 3 months post-intervention showed a significantly better sustained response rate in alarm therapy compared to desmopression (*OR* = 2.89, 95% CI [1.38, 6.0], I^2 = 28%).
Conflict of interest	None declared
Risk of bias	Unclear
Summary of findings	The findings of this meta-analysis indicate comparable efficacy between desmopression and alarm therapy in achieving >50% reduction in baseline wet nights in ITT analyses. A significantly higher drop out rate was observed in alarm therapy when compared to desmopression. However, in the children who do complete the therapy, PP analyses indicate a superior treatment response and lower relapse rate in alarm therapy compared to desmopression.