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Mentalisation-based therapy for eating disorder treatment: protocol for a systematic review

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ABSTRACT

Introduction Eating disorders (EDs) are complex psychological and physiological disorders that often co-occur in the presence of other mental health difficulties. Mentalisation-based therapy (MBT) offers a promising therapeutic approach for treating comorbid difficulties by fostering individuals' capacity to understand their own and others' mental states. More specifically, MBT is a novel approach for treating EDs that recognises the intricate interplay between psychological factors and disordered eating behaviours, targeting the underlying cognitive and emotional processes implicated in ED pathology. The possible value of MBT in treating EDs has been proposed, but the existing research on the topic has not yet been synthesised. This review aims to examine the effectiveness of MBT across diverse ED presentations through analysis of the peer-reviewed literature.

Methods and analysis This systematic review protocol adheres to the Preferred Reporting Items for Systematic reviews and Meta-Analyses for Protocols checklist. The review will include peer-reviewed studies on MBT for EDs without geographical restrictions. A systematic search for the published literature will be conducted using the following databases: Medline, Embase, PsycInfo and Cochrane Central Register of Controlled Trials. For articles to be included, documents must describe and evaluate MBT for EDs and be a quantitative study. There will be no restrictions on publication date. The two authors will independently screen titles, abstracts and full-text articles. A meta-analysis will be conducted for data synthesis if at least three studies with comparable designs, populations and outcomes are identified. If studies are too heterogeneous, a narrative synthesis will summarise the results. The findings may contribute to a more nuanced understanding of MBT's role in ED treatment, with potential implications for clinical practice, policy development and future research endeavours.

Ethics and dissemination Ethical approval is not required as all data are available from public sources. The results of this systematic review will be disseminated through peer-reviewed publications and conference presentations.

PROSPERO registration number CRD42024421136.

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ The study will adhere to Preferred Reporting Items for Systematic reviews and Meta-Analyses guidelines for systematic reviews, ensuring methodological rigour.
⇒ Two independent researchers will conduct screening to ensure reliability.
⇒ A limitation is that economic aspects of mentalisation-based therapy in eating disorder treatment will not be considered.
⇒ A further limitation includes the absence of unpublished literature, which could result in publication bias.

INTRODUCTION

Eating disorders (EDs) present a multifaceted and clinically challenging mental health phenomenon characterised by disturbances in eating behaviours, body image dissatisfaction and profound psychological distress.[1] The severity and chronicity inherent in these disorders pose significant health risks, including medical complications and heightened mortality rates.[2] EDs also impact psychosocial functioning, eroding interpersonal relationships and derailing school/career trajectories.[3] Notably, recent years have witnessed a concerning trend towards more intricate presentations of EDs, frequently accompanied by comorbid conditions such as personality disorders and trauma-related symptoms.[4] This evolving clinical landscape emphasises the imperative for efficacious and effective treatment approaches capable of addressing the multifarious and intersecting needs of individuals with EDs.

Mentalisation-based therapy (MBT) has emerged as a compelling therapeutic modality, garnering increasing attention for the treatment of EDs. MBT draws from a theoretical framework of attachment theory and psychoanalytic principles to enhance individuals' capacity to comprehend mental states.[5] MBT revolves around the pivotal concept of mentalisation—the ability to understand both one's own and others' mental states, encompassing thoughts, emotions, beliefs and intentions.[6] This conceptual framework posits disruptions in mentalisation as contributing

to various psychopathologies by hindering individuals' adeptness in emotion regulation and interpersonal navigation.[7] MBT strives to foster empathy and self-awareness by employing techniques, including mentalising exercises and reflective dialogue.[8]

The MBT theoretical model aligns with existing aetiological models of EDs.[9] A predisposing factor for the development and maintenance of EDs is attachment insecurity.[10] A meta-analysis[11] of 35 studies found that samples with EDs had higher rates of insecure attachment than community controls, with a large effect size. Mentalisation, which develops in the context of attachment relationships,[6] is also implicated in the development of EDs. A meta-analysis by Simosen *et al*[12] found that individuals with EDs had significantly lower mentalisation abilities in comparison to individuals without EDs. Impairments in mentalising function in individuals with EDs contribute significantly to challenges in recognising and regulating emotions, as well as maintaining healthy interpersonal relationships.[13] MBT for EDs offers a tailored therapeutic approach by targeting the psychological underpinnings fuelling disordered eating behaviours, strengthening the therapeutic alliance and preventing dropout.[14] By addressing challenges in interpersonal relationships, self-perceptions and emotion regulation, MBT endeavours to disrupt the cyclical patterns perpetuating eating pathology, focusing on identity, attachment and self-esteem issues inherent in such disorders.[9]

Previous research in diverse mental health contexts, such as borderline personality disorder (BPD) and depression, has highlighted the effectiveness of MBT.[5] Noteworthy outcomes include enhancing interpersonal functioning, alleviating symptom severity and augmenting overall psychological well-being.[15] A systematic review by Malda-Castillo *et al*[16] notes that the evidence for MBT shows promising improvements, especially for BPD, but additional evidence is needed to treat other diagnoses. However, the effectiveness of MBT's application in EDs is evolving. Although preliminary studies, including the NOURISHED trial,[17] have hinted at the potential benefits of MBT interventions in this population, further empirical investigation is warranted to determine its precise effectiveness, mechanisms of action and long-term implications for individuals with EDs.[18] Furthermore, existing studies have predominantly focused on specific subtypes or have exhibited methodological limitations, thereby impeding the generalisability of findings.[19]

Therefore, this systematic review aspires to critically evaluate MBT's effectiveness in treating EDs, considering severity and comorbidity. Synthesis of the existing literature and evaluation of treatment outcomes across diverse ED presentations will provide insight into MBT's role in ED treatment. Furthermore, by identifying gaps and limitations in the current evidence base, this review aims to inform future research directions and guide the development of tailored interventions for individuals with EDs and comorbid conditions. Ultimately, by elucidating the effectiveness of MBT in treating EDs, this review aspires to contribute to optimising clinical practice and improving outcomes for individuals with these disorders.

Primary research question

What is the effectiveness of MBT in the treatment of EDs?

Secondary research questions

What are the clinical outcomes of MBT interventions across different types of ED, including symptom reduction, improvements in psychological well-being and enhancements in quality of life? (Treatment outcomes)

What is the effectiveness of MBT compared with other established treatments for EDs, examining factors such as treatment adherence, relapse rates and overall treatment outcomes? (Comparative effectiveness)

What patient or treatment characteristics moderate or mediate the effectiveness of MBT, including age, gender, comorbidities and treatment duration? (Mediators and moderators)

What are the long-term effects of MBT interventions on ED symptoms and psychological well-being, including sustained improvements and potential relapse? (Long-term outcomes)

This protocol for a systematic review outlines the aims to examine MBT's effectiveness, mechanisms and long-term effects in treating EDs, hoping to offer insights that may contribute to future research and clinical practice in this area.

METHODS AND ANALYSIS

A systematic review will be conducted to synthesise the extant literature concerning the application of MBT in the treatment of EDs. This investigation will adhere to the methodological guidelines outlined in the Preferred Reporting Items for Systematic reviews and Meta-Analyses for Protocols[20] (PRISMA-P) and the methodology delineated in the Joanna Briggs Institute Reviewer's Manual.[21]

The study protocol, registered under the identification number CRD42024421136, was officially accepted by PROSPERO (www.crd.york.ac.uk/PROSPERO) in September 2024. This protocol aligns with the PRISMA-P checklist.[20] Any amendments or modifications to the protocol will be meticulously documented and dated within the PROSPERO registration platform.

Eligibility criteria

Population

The study population will be inclusive of people of all ages, genders, races and cultural backgrounds, diagnosed with EDs according to the criteria outlined in the International Classification of Diseases-11 (ICD-11)[22] or Diagnostic and Statistical Manual of Mental Disorders-5 (DSM-5),[23] including the corresponding diagnoses from previous editions. Additionally, participants with coexisting mental health conditions, such

as BPD, or neurodevelopmental diagnoses, such as autism, will be included. Exclusion criteria encompass individuals who do not meet the official diagnostic criteria for EDs as outlined in the ICD-11 or DSM-5 (and previous editions), as well as those individuals diagnosed solely with BPD without a concurrent ED diagnosis.

Intervention

MBT is a psychotherapeutic approach emphasising understanding mental states.[5] Inclusion criteria encompass studies employing MBT in individual or group settings, solely using MBT protocols tailored for ED treatment. Exclusion criteria include studies focusing on broad mental health concerns and interventions lacking integration of MBT principles in treating EDs.

Comparator

Studies with and without a control group (inactive control or active comparator group) will be included. Comparator groups include cohorts undergoing treatment as usual (TAU), alternative active interventions for EDs, waiting list cohorts, no treatment or placebo. Variants of TAU may involve cognitive behavioural therapy for EDs, family-based treatment or psychopharmacotherapy. Only studies with baseline or endpoint data will be considered.

Outcomes

The primary outcomes will encompass the various measures specific to ED pathologies, such as the Eating Disorder Examination Questionnaire (EDE-Q),[24] Eating Disorder Symptoms Scale,[25] Change in Eating Disorder Symptoms Scale,[26] Multidimensional Body-Self Relations Questionnaire-Appearance Scales[27] and body image dimensional assessment.[28] These instruments are pivotal in gauging the severity and nature of ED symptoms.

The secondary outcomes will review outcomes such as quality of life, anxiety symptoms, depression symptoms, BPD symptoms and global psychiatric symptoms, ensuring an extensive evaluation of treatment effectiveness.

The effectiveness of MBT will be evaluated based on the amelioration of symptoms associated with each ED, using the tools to assess changes in psychopathology. It is essential to recognise that the outcome measures may diverge across studies, with different validated scales employed in each.

Context

The geographical location and healthcare setting will not be restricted, encompassing community treatment teams, day hospitals and inpatient facilities. Studies involving both digital and face-to-face interventions will be considered without limitation.

Types of evidence source

Types of evidence will include published, peer-reviewed randomised controlled trials (RCTs), cluster RCTs, longitudinal quantitative studies with multiple participants (including RCTs, quasiexperimental studies, cohort studies and case series) and non-RCTs. Studies conducted in English will be considered for inclusion. Exclusion criteria include studies in non-English languages, systematic reviews, meta-analyses, qualitative studies, incomplete trials, case-control studies and case reports. Additionally, non-peer-reviewed publications, such as editorials, commentaries, books and book chapters, are excluded. Grey literature—conference abstracts and dissertations will also be excluded.

Search strategy

The literature search will be run on four electronic databases: Medline (Ovid), Embase (Ovid), PsycInfo (EBSCO) and the Cochrane Central Register of Controlled Trials. There is no time limit on the search, ensuring inclusivity. Additionally, rigorous citation searching, both backwards and forwards, will complement the database search, supplemented by consultations with field experts. Employing Boolean operators and proximity search techniques, the research question—segmented into two concepts: EDs and MBT with all variations—will be explored to yield results.

Find a full search strategy in the online supplemental information file.

Study selection

After the literature search, data will be imported into a reference manager, Rayyan, and duplicates will be removed. The two authors (KGS and AA) will review titles and abstracts as per the eligibility criteria in table 1. Both authors will also retrieve and review full texts for potentially eligible studies. Any discrepancies will be resolved through discussion. Reference lists of included articles will be manually searched for additional relevant studies. Reasons for exclusion will be documented throughout.

Data extraction

The authors, KGS and AA, will independently use a data extraction form, presented in box 1, to extract critical information relevant to the study aims. If any extracted data conflict, both reviewers will consult the literature together, and consensus will be obtained. A data extraction form, adapted from the Cochrane Data Collection Form for Intervention Reviews, will be employed to extract relevant data, encompassing citation details, study objectives, design, participant characteristics, intervention and comparator details, outcome measures, analyses performed and key findings, among other essential elements. This form may undergo updates during the final review process to ensure accurate capture of all pertinent data. The two authors, KGS and AA, will compare and discuss the extracted data to resolve any discrepancies and ensure consistency before finalising the data for analysis.

Table 1 Eligibility criteria

	Inclusion criteria	Exclusion criteria
Patient population	Patients of any age with a diagnosed ED as per ICD-11 or DSM-5 criteria (including older editions) and those with comorbid conditions, such as personality disorder.	Patients who do not meet the diagnostic criteria for EDs as outlined in the ICD-11 or DSM-5 (and previous editions), as well as those individuals diagnosed solely with BPD without a concurrent ED diagnosis.
Intervention	MBT in individual or group settings, solely using MBT protocols tailored for ED treatment.	MBT interventions not specific for EDs and interventions lacking integration of MBT principles in treating EDs.
Comparator	Treatment as usual, alternative active interventions for EDs, waiting list cohort, placebo or no control group.	Studies lacking baseline or endpoint data in the absence of a control group.
Outcomes	Measures specific to ED pathology, for example, The Eating Disorder Examination Questionnaire, Eating Disorder Symptoms Scale, Change in Eating Disorder Symptoms Scale, Multidimensional Body-Self Relations Questionnaire-Appearance Scales, and body image dimensional assessment.	Does not report any ED outcomes specific to ED pathology or those specified in inclusion criteria.
Types of evidence	Published, peer-reviewed randomised controlled trials (RCTs), cluster RCTs and longitudinal quantitative studies with multiple participants (including RCTs, quasiexperimental studies, cohort studies and case series). English language papers.	Systematic reviews and meta-analyses, incomplete trials, case-control studies, case reports, qualitative papers, non-peer-reviewed publications, editorials, commentaries, books and book chapters are excluded. Non-English papers.

DSM, The Diagnostic and Statistical Manual of Mental Disorders; ED, eating disorder; ICD, International Classification of Diseases.

Risk of bias

The two authors (KGS and AA) will conduct a risk of bias assessment to evaluate the risk of bias across various studies. The Cochrane Risk of Bias (RoB 2) tool[29] will be used for randomised studies and the Risk Of Bias In Non-randomised Studies-of Interventions tool will be used for non-randomised studies.

Summary assessments categorising the risk of bias as low, medium or high will be performed by established guidelines. Bias evaluation will be integrated into the data extraction process, following the independent coding protocol and the resolution of discrepancies as previously outlined. These assessments will inform the interpretation of outcome data.

The strength of the body of evidence will be evaluated using the Grading of Recommendations, Assessment, Development and Evaluations approach.[30] This approach considers factors such as study design, risk of bias, inconsistency, indirectness, imprecision and publication bias to ascertain the confidence level in the cumulative evidence.

Box 1 Draft data extraction table

Data item
- ⇒ Author(s)
- ⇒ Publication year
- ⇒ Location and country
- ⇒ Study objectives
- ⇒ Study design
- ⇒ Sample size
- ⇒ Participant characteristics
- ⇒ Mentalisation-based therapy intervention details
- ⇒ Comparator details
- ⇒ Outcome measures
- ⇒ Analyses performed
- ⇒ Key findings
- ⇒ Conclusion

Data analysis and synthesis

The selection procedure will be visually presented in a PRISMA flow diagram,[31] offering a clear overview of the study selection process. A table summarising the extracted data will accompany a narrative description aligning with the research aims. This narrative will highlight common and distinctive characteristics of the treatment modalities. The main findings will be examined across various domains, including physical, psychological, social and functional outcomes, ensuring a detailed overview of clinical outcomes. Eating disorder symptom measures, such as EDE-Q[32] and Eating Disorder Examination,[33] will be employed to assess treatment effectiveness. Outcome measures may vary, necessitating the utilisation of different validated scales.

A meta-analysis will be conducted if an adequate number of studies report data on MBT intervention among similar populations (k >3). A random-effects model will be used, pooling results from studies with similar interventions, comparators and outcome measures. The statistical analysis will include 95% CIs and two-sided p values. Sensitivity analyses and meta-regression will be performed only if between-study heterogeneity is high (I^2 ≥75%). The intervention's impact will be reported in effect sizes, such as the standardised mean difference, Hedge's g or risk ratio.

Subgroup analyses might be conducted where feasible to assess sample characteristics (eg, type of ED, sex and

age of participants, setting of the study and country of study) or study design and treatment conditions (eg, study design, MBT-based intervention, group/1:1 treatment, online or face-to-face treatment and length of treatment).

DISCUSSION

This systematic review and meta-analysis endeavours to assess the effectiveness of MBT in addressing EDs. The anticipated outcomes of this investigation are poised to offer novel perspectives on the effectiveness of interventions explored to date. Moreover, through examination of the existing literature, potential gaps in evidence may be delineated, thereby contributing to the formulation of future research agendas and policy directives.

This study protocol represents the first systematic review focusing on MBT as a therapeutic intervention for EDs. Through a synthesis of the peer-reviewed literature, this review aims to shed light on MBT's effectiveness in addressing the multifaceted presentations of EDs. Employing rigorous selection criteria and robust search methodologies, the review will encompass diverse studies from varied geographical and clinical contexts, ensuring a thorough understanding of MBT's applicability. Methodological rigour, including risk of bias assessment, will underpin the reliability and validity of the findings. By examining MBT's effectiveness and identifying gaps in the existing literature, this review aims to inform clinical practice, encourage further research and potentially contribute to increased treatment options for individuals with EDs.

Contributors KGS: conceptualisation, methodology, writing—original draft and project administration; AA: methodology, writing—reviewing and editing. Both authors substantially contributed to this work, approved the final manuscript and agree to be accountable for all aspects of the work. KGS is the guarantor.

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Competing interests None declared.

Patient and public involvement Patients and/or the public were not involved in the design, conduct, reporting or dissemination plans of this research.

Patient consent for publication Not applicable.

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REFERENCES

1 Smink FR, Van Hoeken D, Hoek HW. Epidemiology, course, and outcome of eating disorders. *Curr Opin Psychiatry* 2012;25:189–95.
2 Arcelus J, Mitchell AJ, Wales J, *et al*. Mortality rates in patients with anorexia nervosa and other eating disorders. A meta-analysis of 36 studies. *Arch Gen Psychiatry* 2011;68:724–31.
3 Treasure J, Duarte TA, Schmidt U. Eating disorders. *The Lancet* 2020;395:899–911.
4 Wildes JE, Marcus MD, Crosby RD, *et al*. The clinical utility of personality subtypes in patients with anorexia nervosa. *J Consult Clin Psychol* 2011;79:665–74.
5 Bateman A, Fonagy P. 8-year follow-up of patients treated for borderline personality disorder: mentalization-based treatment versus treatment as usual. *Am J Psychiatry* 2008;165:631–8.
6 Fonagy P, Gergely G, Jurist EL, *et al*. *Affect regulation, mentalization, and the development of the self*. New York: Other Press, 2002.
7 Fonagy P, Target M. Mentalization and the changing treatment of borderline patients. *Am J Psychother* 2006;60:171–86.
8 Bateman AW, Fonagy P. *Psychotherapy for borderline personality disorder: mentalization-based treatment*. Oxford University Press, 2004.
9 Bateman A, Fonagy P, Campbell C, *et al*. *Eating Disorders*. Cambridge University Press, 2023.
10 Treasure J, Schmidt U. The cognitive-interpersonal maintenance model of anorexia nervosa revisited: a summary of the evidence for cognitive, socio-emotional and interpersonal predisposing and perpetuating factors. *J Eat Disord* 2013;1:13.
11 Jewell T, Apostolidou E, Sadikovic K, *et al*. Attachment in individuals with eating disorders compared to community controls: A systematic review and meta-analysis. *Int J Eat Disord* 2023;56:888–908.
12 Simonsen CB, Jakobsen AG, Grøntved S, *et al*. The mentalization profile in patients with eating disorders: a systematic review and meta-analysis. *Nord J Psychiatry* 2020;74:311–22.
13 Danner UN, Sternheim L, Evers C, *et al*. The importance of distinguishing between the different eating disorders (sub)types when assessing emotion regulation strategies. *Psychiatry Res* 2012;200:588–95.
14 Robinson P, Skårderud F. Eating disorders. In: Bateman E, Fonagy E, eds. *Handbook of Mentalizing in Mental Health Practice*. American Psychiatric Publishing, 2019: 369–86.
15 Stevenson C, Leichsenring F, Luntamo M. Mentalization-based treatment for depression: A systematic review and meta-analysis of effectiveness. *Psychol Med* 2017;47:1877–88.
16 Malda-Castillo J, Browne C, Perez-Algorta G. Mentalization-based treatment and its evidence-base status: A systematic literature review. *Psychol Psychother* 2019;92:465–98.
17 Robinson P, Hellier J, Barrett B, *et al*. The NOURISHED randomised controlled trial comparing mentalisation-based treatment for eating disorders (MBT-ED) with specialist supportive clinical management (SSCM-ED) for patients with eating disorders and symptoms of borderline personality disorder. *Trials* 2016;17:549.
18 Sharp C, Pane H, Ha C, *et al*. Theory of Mind and Emotion Regulation Difficulties in Adolescents With Borderline Traits. JAACAP 2011;50:563–73.
19 Midgley N, Ansaldo F, Target M. The meaningful assessment of therapy outcomes: Incorporating a qualitative study into a randomized controlled trial evaluating the treatment of adolescent depression. *Psychotherapy (Chic)* 2017;54:85–97.
20 Moher D, Shamseer L, Clarke M, *et al*. Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 statement. *Syst Rev* 2015;4:1.
21 Aromataris E, Munn Z. JBI Manual for Evidence Synthesis. *JBI* 2020.
22 World Health Organization. *International statistical classification of diseases and related health problems*. 11th edn. 2019.
23 American Psychiatric Association. *Diagnostic and statistical manual of mental disorders*. 5th edn. 2022.
24 Fairburn CG, Beglin SJ. Assessment of eating disorders: interview or self-report questionnaire? *Int J Eat Disord* 1994;16:363–70.
25 Stice E, Telch CF, Rizvi SL. Development and validation of the Eating Disorder Diagnostic Scale: a brief self-report measure of anorexia, bulimia, and binge-eating disorder. *Psychol Assess* 2000;12:123–31.
26 Bardone-Cone AM, Harney MB, Maldonado CR, *et al*. Defining recovery from an eating disorder: Conceptualization, validation, and examination of psychosocial functioning and psychiatric comorbidity. *Behav Res Ther* 2010;48:194–202.

27 Cash TF. *The Multidimensional body-self relations questionnaire users' manual.* Psychology Press, 2000.
28 Evans C, Dolan B, Kline M. Psychometric review of the Body Image Dimensional Assessment (BIDA). *J Pers Assess* 1994;63:502–15.
29 Sterne JAC, Savović J, Page MJ, *et al*. RoB 2: a revised tool for assessing risk of bias in randomised trials. *BMJ* 2019;366:l4898.
30 Schünemann HJ, Wiercioch W, Brożek J, *et al*. GRADE Evidence to Decision (EtD) frameworks for adoption, adaptation, and de novo development of trustworthy recommendations: GRADE-ADOLOPMENT. *J Clin Epidemiol* 2013;66:726–35.
31 Page MJ, McKenzie JE, Bossuyt PM, *et al*. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ* 2021;372:n71.
32 Fairburn CG, Beglin SJ. Eating disorder examination questionnaire (6.0). In: *Cognitive behaviour therapy and eating disorders*. New York: Guilford Press, 2008: 309–13.
33 Fairburn CG, Cooper Z, O'Connor M. Eating disorder examination (16.0d). In: Fairburn CG, ed. *Cognitive behaviour therapy and eating disorders*. Guilford Press, 2014: 265–308.