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**10-session Cognitive Behavioural Therapy (CBT-T) for Eating Disorders: A
Systematic Review and Narrative Synthesis**

&

**“It’s a lot deeper than the way it looks”: An Interpretative
Phenomenological Analysis of Body Image for Men with Eating Disorders**

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Doctorate in Clinical Psychology

The University of Edinburgh

April 2023

DClinPsychol Declaration of Own Work

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10-session Cognitive Behavioural Therapy (CBT-T) for Eating Disorders: A Systematic Review and Narrative Synthesis

“It’s a lot deeper than the way it looks”: An Interpretative Phenomenological Analysis of Body Image for Men with Eating Disorders

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Lay Summary

Eating disorders describe how people may struggle with their eating and body image. Eating disorders pose risks to a person's mental and physical health, and understanding and treating eating disorders require improvement. Although eating disorders are experienced mostly by women, men also experience eating disorders, yet research has tended to not focus on them. Therefore, it is important to study eating disorders in order to better understand how people experience them and improve treatments. The current thesis has two articles – one which investigated a relatively new psychological therapy for eating disorders, and another which explored how men with eating disorders experience body image.

The first article is a systematic review of a brief cognitive behavioural psychological therapy for people who have eating disorders, but who are not underweight, which is delivered over ten sessions. Eating disorder psychological treatments are rather lengthy in comparison to treatments for other mental health difficulties and a new treatment has been designed which can treat people with almost half the number sessions than current treatments. This review involved searching several research databases to identify the most relevant studies. Eight studies were selected to be included in the review and it was found that this new psychological therapy helped people who received it with their eating disorder symptoms, disordered eating behaviours, psychological and social difficulties, as well as anxiety and depression symptoms. However, the studies included were found to have poor quality in how they were designed. Future research is needed to investigate this therapy further before eating disorder services offer it to their patients, but it is a promising therapy that could help patients with fewer sessions than therapies that are currently being offered.

The second article is a study which explored how men with eating disorders experienced body image. Existing research highlights that our understanding of how men experience eating disorders is limited and more research is needed. Men and women have been shown to have some differences in how they experience eating disorders, but research has found with body image they may differ more greatly. Research suggests that men may wish to have a more muscular body, rather than thin body in comparison to women. However, most of this research has been done with men without eating disorders. More research has been identified to be needed to understand body image among men with diagnosed eating disorders. This study involved recruiting men from four National Health Service specialist eating disorder services which provide eating disorder treatment to adults. Ten men with eating disorders participated in an interview with a researcher either face-to-face or remotely (by video or phone call). The study used an approach to analyse the data called Interpretative Phenomenological Analysis which helps develop detailed understandings of people's individual and shared experiences. The researcher examined each interview in depth, and interpreted how participants understood their experiences of body image and how this related to their eating disorders. It was found that participants experienced body image in different ways. One way was that they experienced body image personally, such as being critical towards their bodies and having particular goals for how they wanted their bodies to look. Body image was also experienced in relation to other people and relationships, such as having concerns others may not like or love them because of their bodies. Their sense of body image was also impacted by wider factors, such as by the media and attitudes society holds. Participants also described ways of controlling their bodies with their eating and exercise, which had a negative impact for them psychologically, socially and physically. The study findings are specific to the ten people who participated, but the findings can still help future research and clinical practice by considering their perspectives.

Thesis Portfolio Abstract

Background: Eating disorders are mental health conditions which are complex and pose significant risks to those experiencing them. Understanding eating disorders and investigating new treatments is considered greatly important for the research literature in order to inform clinical practice.

Aims: The thesis is divided into two parts. The first is a systematic review and narrative synthesis of the existing literature on a relatively new and brief ten-session cognitive behavioural therapy for eating disorders for people who are not underweight, CBT-T. The second is a qualitative study on how men with eating disorders experience body image.

Method: The systematic review synthesised results of eight published articles on CBT-T from five databases. The qualitative study used semi-structured interviews and Interpretative Phenomenological Analysis to understand the experiences of body image of ten men with eating disorders.

Results: The systematic review demonstrated that CBT-T had an effect on a range of outcomes, including eating disorder psychopathology, disordered eating behaviours, psychosocial impairment, depression and anxiety. However, issues with study quality were found. Findings from the qualitative study highlighted how body image was experienced by men with eating disorders intrapersonally, interpersonally and systemically.

Conclusion: The systematic review highlighted that CBT-T is a promising treatment for those with non-underweight eating disorders, yet more research of higher methodological quality is needed before services should offer CBT-T as a treatment. The qualitative study indicates that body image is a complex and multi-faceted experience for men with eating disorders. The findings provide several research and clinical implications to improve research and practice relevant for men with eating disorders.

Keywords: eating disorders, body image, men, treatment, CBT-T

Systematic Review

10-session Cognitive Behavioural Therapy (CBT-T) for Eating Disorders: A Systematic Review and Narrative Synthesis

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Abstract

Objective: To review the literature examining the effectiveness and efficacy of a cognitive behavioural therapy (CBT) for eating disorders delivered in ten sessions for those who are not underweight (CBT-T).

Method: A systematic search of the literature (MEDLINE, EMBASE, PsycINFO, Scopus and ProQuest Applied Social Sciences Index and Abstracts) was conducted to identify relevant publications to date at the time of March 2022. Intervention studies of any study design that investigated CBT-T offering outcome data at least pre- to post-intervention for eating disorder and related outcomes were included. Results were reported for outcomes including treatment attrition, abstinence, remission, eating disorder psychopathology, disordered eating behaviours, psychosocial impairment, depression and anxiety. Results were synthesised using a narrative synthesis framework. The Effective Public Health Practice Project (EPHPP) quality assessment tool (Thomas et al., 2004) was used to assess the quality of included studies.

Results: Outcomes for 555 people who received CBT-T across eight studies (one randomised control trial and seven non-randomised studies) were synthesised. Support was found for the effectiveness and efficacy of CBT-T for a range of non-underweight eating disorders, with respect to eating disorder psychopathology, disordered eating behaviours, psychosocial impairment, abstinence and remission. CBT-T also led to improvements for depression and anxiety symptoms.

Discussion: CBT-T is a promising treatment which improves eating disorder and co-morbid outcomes for people with non-underweight eating disorders within ten sessions, with comparable results to standard-length CBT for eating disorders (CBT-ED). Although results for CBT-T are promising, there were concerns with the quality of the studies. Future research is required to strengthen the evidence base with larger, higher-quality studies which compare CBT-T directly to recommended psychological treatments, such as standard-length CBT-ED.

Keywords: eating disorders, non-underweight eating disorders, cognitive behavioural therapy, ten-session cognitive behavioural therapy, treatment outcomes

Introduction

Eating disorders are characterised by a morbid preoccupation with weight and body shape, and disturbances in eating behaviours (Nicholls & Viner, 2005; Schmidt et al., 2016). The lifetime prevalence of eating disorders is estimated around 8.4% for women and 2.2% for men (Galmiche et al., 2019). People with eating disorders, particularly those with anorexia nervosa, have significantly increased mortality rates (Chesney et al., 2014; Crow et al., 2009).

Cognitive behavioural therapy (CBT) for eating disorders (CBT-ED) has been found to be effective for the full spectrum of eating disorders (Brownley et al., 2016; National Institute of Clinical Excellence [NICE], 2017) and is the most extensively investigated treatment for eating disorders (Linardon et al., 2017). CBT-ED is a generic term that includes different evidence-based forms of CBT for eating disorders (Fairburn, 2008; Waller et al., 2007). These different forms of CBT-ED share common aims to address the cognitions and emotions that underpin eating disorder psychopathology through nutritional and behavioural changes (Mulken & Waller, 2021).

Randomised control trials (RCTs) have demonstrated that CBT-ED is effective for a range of eating disorders, including bulimia nervosa (BN), binge eating disorder (BED), other specified feeding and eating disorder (OSFED), and anorexia nervosa (AN), with large improvements in eating disorder symptoms (Bryne et al., 2017; Fairburn et al., 1991, 2009, 2015; Ghaderi, 2006). Although RCTs are considered the ‘gold standard’ of evidence-based research (Meldrum, 2000), they have been criticised for not reflecting routine clinical practice due to being tightly controlled (Fensterheim & Raw, 1996); for example, participants are characterised as typically presenting with less severe mental health difficulties and fewer co-morbidities than those who routinely seek treatment (Kazdin, 2008). Considering this, several studies have found CBT-ED to be effective in routine clinical practice (Knott et al., 2015; Signorini et al., 2015; Turner et al., 2015). Systematic reviews of randomised and non-randomised studies have found CBT-ED to be an effective treatment for patients with an eating disorder (Atwood & Friedman, 2020; Dahlenburg et al., 2019; de Jong et al., 2019), with CBT-ED being either equally efficacious or superior to other psychological treatments (Linardon et al., 2017; Slade et al., 2018).

This evidence is reflected in clinical practice guidelines, with CBT-ED listed as one of the recommended treatments for children, young people and adults with AN, BN, BED and OSFED (NHS Education for Scotland [NES], 2014, 2015; NICE, 2017; Scottish Intercollegiate Guidelines Network [SIGN], 2022). For adults with non-underweight eating disorders, including BN, BED and atypical cases, clinical guidelines state that CBT based guided self-help (GSH) should be the first-line treatment (NICE, 2017; NES, 2014), as is the case for children and young people with BED (NICE, 2017). If GSH is unacceptable, contraindicated, or ineffective, CBT-ED is recommended instead. However, more recent guidelines do not recommend the use of GSH for non-underweight eating disorders (SIGN, 2022).

Guidelines typically recommend 16 to 20 sessions of CBT-ED (NES, 2014; NICE, 2017) for those with non-underweight eating disorders, such as BN and BED, and 40 sessions for those who are underweight, namely those with AN (Fairburn, 2008; NICE, 2017; SIGN, 2022). However, NICE (2017) acknowledge that attending a high number of sessions is a substantial commitment for those with an eating disorder. There is also increasing pressure from services for shorter, cost-effective psychological therapies for eating disorders that are also evidence-based (Pellizzer et al., 2019a). The cost of treatment is a concern for services (Watson et al., 2017; Weissman & Rosselli, 2017) and the chronicity of the disorder along with mental health and medical co-morbidities results in high and expensive use of health services (Green & Griffiths, 2014; Tseng et al., 2021). Furthermore, the COVID-19 pandemic has heavily impacted those with eating disorders and increased demand on services. There are reports of increases of worsening eating disorder symptomology and people requiring treatment worldwide (Fernández-Aranda et al., 2020; Haripersad et al., 2021; Phillipou et al., 2021), including increases in inpatient admissions and re-admissions (Hansen et al., 2021; Mathews et al., 2021), and outpatient referrals (Hansen et al., 2021; Solmi et al., 2021). This impact has been noted for children and young people in particular; for example, National Health Service (NHS) child and adolescent mental health services in England have seen referrals increase by almost two thirds since pre-pandemic rates (NHS England, 2022).

In the UK, NICE (2017) have recommended for research to evaluate briefer psychological treatments for eating disorders and highlight that people may be able to achieve remission with a smaller number of sessions or over a shorter period of time. Evidence has established that early symptom changes, such as changes in binge eating, purging and dietary restraint, are a consistent and strong predictor of outcome for all eating disorders (Linardon, de la Piedad Garcia et al., 2017; Vall & Wade, 2015). Evidence also suggests that most change is found in the first four to six weeks of eating disorder treatment (Linardon et al., 2016; Vall & Wade 2015). The number of sessions of CBT-ED has not been found to correlate with improved outcomes (Rose & Waller, 2017). Current guidelines reflect a stepped-care approach for non-underweight eating disorders from GSH to CBT-ED and evidence has found this approach to be cost-effective for eating disorder treatment (Crow et al., 2013). Wade and colleagues (2021) argued that there is a 'gap' in service provision for a therapy which is more intensive than GSH, but shorter and less expensive to deliver than CBT-ED, given the recommended duration of CBT-ED where body mass index (BMI) is above 17.5 is 20 sessions with an experienced therapist over a five-month period (Fairburn, 2008). This number of sessions is around twice the length of CBT recommended for other disorders, such as for anxiety and depression (NES, 2014), which can be delivered by less specialised therapists (Layard & Clark, 2014). Evidence has demonstrated that brief versions of CBT are as effective for anxiety disorders as longer versions (Öst & Ollendick, 2017). Reducing the length of CBT-ED could potentially reduce waiting lists and allow faster access to treatment for those accessing services (Tatham et al., 2020).

Recently a briefer CBT-ED for non-underweight patients which is delivered over ten sessions, CBT-T, has been developed and introduced by Waller and colleagues (2019). CBT-T is a transdiagnostic, manualised outpatient therapy for those with an eating disorder and a BMI above 17.5, which can be delivered by novice therapists under supervision (such as assistant and trainee clinical psychologists), as well as qualified therapists. The CBT-T protocol (Waller et al., 2019) adopts key elements of CBT-ED (Fairburn, 2008; Waller et al., 2007) including in-session weighing, psychoeducation, nutritional change, exposure, behavioural experiments, cognitive restructuring, body image work and relapse prevention. Initially, four sessions are offered with treatment extended to ten sessions dependent on active engagement and progress with therapeutic tasks (Waller et al., 2019), as the protocol recognises that early change in outpatient psychological therapies is one of the best predictors of positive outcomes for eating disorders (Vall & Wade, 2015). Preliminary evidence has found that CBT-T reduces cognitive and behavioural eating disorders symptoms, along with anxiety and depression symptoms (Pellizzer et al., 2019a, 2019b; Waller et al., 2018), with comparable effects to 20 session versions of CBT-ED (such as CBT-E, Tatham et al., 2020) when delivered by assistant and trainee psychologists under supervision. A qualitative study on patient experiences of CBT-T found recipients reflected positively on their experience, feeling that CBT-T was specific to their needs, that the therapist was fair but firm, and that treatment had a positive effect on their overall quality of life and eating behaviours (Hoskins et al., 2019). However, some negative aspects of CBT-T were found with participants reporting issues with timings of sessions and wanting more than ten sessions.

The present review aimed to summarise and critically evaluate the available literature examining the efficacy and effectiveness of CBT-T for non-underweight eating disorders. Since the current review was prospectively registered, a systematic review and meta-analysis of CBT-T for eating disorders has been published (Keegan et al., 2022), though no narrative synthesis was conducted. The meta-analysis found medium to large effect sizes for eating disorder psychopathology, psychosocial impairment, depression, anxiety, and weekly frequencies of vomiting and objective binge eating. At follow-up, the authors found that eating disorder psychopathology continued to be below the norm of a non-clinical sample of women (Mond et al., 2006). Although these findings are informative for the effect of CBT-T on a range of outcomes, significant heterogeneity was found in five meta-analyses conducted. Heterogeneity is central to understanding meta-analytic results and high heterogeneity limits meta-analytic results (Imrey, 2020). Therefore, as noted by Keegan and colleagues, the results should be interpreted with a degree of caution given this violates one of the assumptions of meta-analysis (Higgins & Thompson, 2002).

Given the above systematic review and meta-analysis had some limitations and a narrative synthesis was not provided, this review aimed to further contribute to understanding the efficacy and effectiveness of CBT-T with a narrative synthesis of results from the available data. Narrative synthesis is an approach for synthesising

findings from numerous studies relying mainly on text to summarise findings (Popay et al., 2006). It is frequently used when a meta-analysis is not feasible and allows the researchers to explore differences in study findings while taking into account the quality of evidence (Lisy & Porritt, 2016). Therefore, this detailed and varied approach to synthesising data would provide useful insight given the novelty of CBT-T as an intervention and such approach is yet to be conducted for the CBT-T literature.

The specific aims of the present systematic review were to build on the meta-analysis previously published by Keegan and colleagues (2022) by evaluating the effect of CBT-T at various time points, on specific eating disorder psychopathologies, against comparator treatments results, and remission and abstinence rates. This review also provides the first independent systematic review of CBT-T, as two of the co-authors of the previous systematic review are co-developers of CBT-T. The review and narrative synthesis aimed to:

1. Determine the effect of CBT-T on eating disorder symptomology and related impairment at pre-treatment, mid-treatment, post-treatment and follow-up
2. Determine the effect of CBT-T on co-morbid difficulties at pre-treatment, mid-treatment, post-treatment and follow-up
3. Synthesise attrition, remission and abstinence rates of CBT-T and comparator treatments, where applicable

Method

This systematic review was conducted in accordance with the PRISMA 2020 guidelines (Page et al., 2020). The protocol was prospectively published on Prospero (CRD42021286870) – see Appendix 1 for the protocol.

Eligibility Criteria

The following criteria were defined for papers to be included in the review: 1) participants must have a diagnosed or diagnosable eating disorder and/or be receiving treatment for an eating disorder, including AN, BN, BED or OSFED during the time of the study; 2) participants must have undergone CBT-T (Waller et al., 2019) during the course of the study; 3) published articles in an English-language peer-reviewed journal; 4) reported outcomes of interest regarding eating disorder symptoms (such as, formal outcome measures and frequency of disordered eating), with at least pre- and post-treatment outcomes; 5) intervention studies, with any study design (including randomised, non-randomised, cohort studies, case-controls, cross-sectional and case series designs); 6) studies offering quantitative outcome data; 7) studies with CBT-T with either a comparator or no comparator; 8) studies conducted in all settings; 9) participants can be of any age. The following criteria were defined for papers to be excluded in the review: 1) participants with feeding disorders or an eating disorder which does not have weight/shape concerns, such as avoidant restrictive food intake disorder (ARFID); 2) studies with a CBT intervention for eating disorders which is not formal, manualised CBT-T; 3) the study is in the form of a case study, letter, poster, commentary book or book chapter; 4) the full text was unavailable, as an abstract was unlikely to provide sufficient detail; 5) studies offering qualitative data relating to CBT-T.

Search Strategy

The search strategy was designed to identify all papers reporting on the efficacy or effectiveness of CBT-T for people with eating disorders. The strategy was developed to be specific in order for relevant papers to be found, but broad enough to identify other potentially relevant papers. Search terms were developed to identify interventions relevant to CBT-T and CBT for eating disorders, with asterisks to account for American spellings. Search terms also focused on populations to include all types of eating disorders and disordered eating. Databases were chosen which cover relevant literature, including clinical practice, health, psychology and social sciences as potentially relevant papers could be published in various types of journals. Literature searches were conducted using MEDLINE, EMBASE, PsycINFO, Scopus and ProQuest Applied Social Sciences Index & Abstracts (Education Collection, Social Science Database and Sociology Collection) databases using combinations of the following search terms: “10-session* cognitive behavi* therap*” or “ten-session* cognitive behavi* therap*” or

“brief cognitive behavi* therap*” or “CBT-T” or “cognitive behavi* therap* for eating disorder*” AND “eating disorder*” or “anorexia nervosa” or “bulimia nervosa” or “binge eating” or “disordered eating”. No filters or limits were used. The search was completed in March 2022.

Selection of Studies

After conducting the initial searches, duplicates were removed, and the remaining titles and abstracts were then screened. Full texts of the papers were screened for eligibility before achieving an agreement for the included papers in this review. The lead reviewer (AP) and co-reviewer (MZ) screened papers independently at all stages. COVIDENCE software was used in this process. Initially 259 papers were found through the systematic literature search. After duplicates were removed, 156 papers were screened for suitability for inclusion in this review according to the eligibility criteria (see Figure 1 for PRISMA flowchart). The title and abstract of each of these were screened by the lead reviewer (AP) and co-reviewer (MZ), with 92.95% agreement and conflicts were resolved by discussion. Inter-rater reliability for abstract and title screening was found to be $k = 0.617$, $p < .001$ indicating ‘moderate’ reliability (McHugh, 2012). This led to 142 papers being excluded. 14 papers were then screened in full by the lead reviewer and co-reviewer, with 92.86% agreement and one conflict was resolved by discussion. Inter-rater reliability for full text screening was found to be $k = 0.851$, $p = .001$ indicating ‘strong’ reliability (McHugh, 2012). Five papers were excluded as the interventions used did not meet the inclusion criteria and one paper was excluded as its design did not meet the inclusion criteria. One paper (Pellizzer et al., 2019c) was a secondary analysis using a subset of two samples combined from previous studies (Pellizzer et al., 2019a, 2019b). Whilst the sample was not completely independent from samples in other included papers, reviewers decided to include this paper as it reported novel results from only participants with disordered eating behaviours the week preceding baseline assessment. This led to eight papers being included in the review.

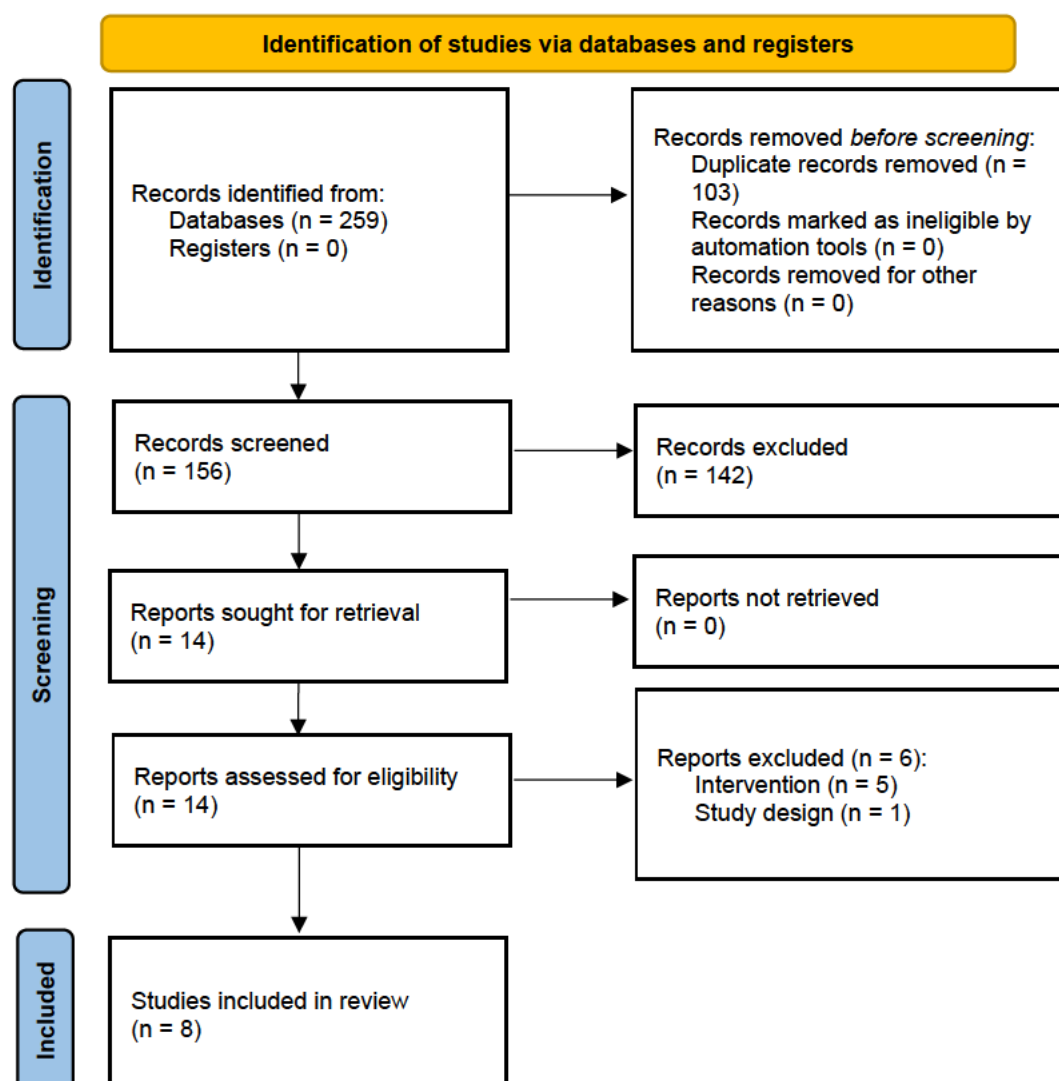


Figure 1. PRISMA 2020 flowchart

Data Extraction

Relevant data were extracted from the included studies and grouped into summary tables to enable comparisons of study characteristics, participant characteristics and study results. The decision for which variables to extract was made by the lead reviewer (AP) in collaboration with the co-author (EN). Study characteristics extracted included: study design, setting, country, funding, inclusion criteria, exclusion criteria, sample size, attrition rates, intervention received, follow-up periods and statistical analyses (see Table 1). For participant characteristics, the gender, age range, ethnicity and type of eating disorder were extracted (see Table 2). The study results extracted were type of outcome and how it was measured, and the outcomes relating to: eating disorder psychopathology, disordered eating behaviours, psychosocial impairment related to eating disorder features, depression and anxiety symptoms, attrition, remission and abstinence rates (see Table 3). In circumstances where studies met inclusion criteria but not all information was included in the paper, authors were contacted to gather this relevant information. Where applicable, any missing data were explicitly reported. Data were extracted to the tables by the lead reviewer (AP) and reviewed with the co-author (EN) for accuracy and relevance of included information. This information was used for the synthesis of the included studies.

Data Analysis and Synthesis

At the outset, concerns about diversity and heterogeneity of study characteristics, namely sample sizes, study designs and use of controls groups, prohibited the use of meta-analysis (Ioannidis et al., 2008; McKenzie & Brennan, 2019). As such, a narrative synthesis was conducted to provide a detailed synthesis of the results by outcome and followed guidelines by Campbell et al. (2019).

Quality Assessment

The methodological quality of all included studies was assessed using the Effective Public Health Practice Project (EPHPP) quality assessment tool (Thomas et al., 2004). The EPHPP quality assessment tool evaluates eight components for both randomised and non-randomised quantitative studies: Selection Bias, Study Design, Confounders, Blinding, Data Collection Methods, Withdrawals or Dropouts, Intervention Integrity and Analyses. A rating of 'strong', 'moderate' or 'weak' based on the scoring method recommended by the assessment tool was assigned to each category and a global rating was calculated based on the frequency of weak ratings across these components, except for Intervention Integrity and Analyses. The methodological quality was determined by the lead reviewer (AP) and a sub-selection of the papers (50%) were randomly selected, using an online random number generator, and independently rated by a co-reviewer (MZ). Decisions were compared and discussed by both reviewers to achieve a consensus on any discrepancies. Inter-rater reliability between reviewers was measured using Cohen's kappa (κ) statistic. Inter-rater reliability for quality ratings was found to be $k = 0.68$, $p < .001$ indicating 'moderate' reliability (McHugh, 2012). There was 75% agreement for the overall quality scores which is considered 'acceptable' (Stemler, 2004).

Effect Size Reporting

The effect of CBT-T was determined by interpreting effect sizes using Cohen's (1988) benchmarks. One study did not provide effect sizes for all outcomes in the paper (Wade et al., 2021) and the lead author was contacted to request outcome data, which was provided. Another study (Pellizzer et al., 2019c) reported continuous outcomes in the paper, but did not calculate effect sizes. For both studies, effect sizes were calculated from means and standard deviations using GPower 3.1 (Faul et al., 2007).

Results

Description of Studies

Of the eight studies included in this review, one study described an RCT, one study described a non-randomised comparison, and six studies were case series (see Table 1). Sample sizes for the studies ranged from 26 to 193 (total $N = 555$) and a full range of eating disorder diagnoses were represented (see Table 2). All but one study (Rose et al., 2021) included a follow-up period; the longest follow-up was six months (Tatham et al., 2020). All studies were conducted in outpatient settings and all but one study (Rose et al., 2021) reported intent-to-treat (ITT) analyses, which have been included in the synthesis (rather than completer analysis). All studies except one

(Tatham et al., 2020) reported the gender of samples in which the majority were female (>90%). Two studies which utilised comparator groups compared CBT-T to a standard-length CBT-ED (CBT-E; Tatham et al., 2020) and GSH (Wade et al., 2021), which are the current recommended treatments for non-underweight eating disorders, including BED and BN (NES, 2014; NICE, 2017).

Results and effect sizes from the studies are displayed by outcome category in Table 3. Remission and abstinence results are grouped into several categories, including studies that used a comprehensive definition of remission and single criterion definitions. Outcomes for statistical tests and effect sizes from the original papers are reported where available.

Table 1. Characteristics of included studies

Author, Year	Study Design; Setting; Country; Funding	Participants Inclusion Criteria; Exclusion Criteria	Sample Size; Attrition	Intervention	Follow-up	Analyses
Moore et al. (2021)	Open label pre–post trial/case series Outpatient NHS setting UK No specific grant for funding	Inclusion: Meet DSM-5 criteria for BED Exclusion: low weight BMI (<17.5), purging or laxative use during therapy or over the month preceding therapy, self- harm or active suicidality	N = 53 Attrition: n = 12 participants (22.64%)	CBT-T	10 weeks (post- treatment at final session) Three-month follow-up	Intent-to-treat (ITT) analyses with paired t-tests. 53 included in analysis, multiple imputations used to correct for missing data.
Pellizzer et al. (2019a)	Case series design Outpatient university setting Australia Funding not reported	Inclusion criteria not reported Exclusion: any severe physical and/or mental health condition, already receiving psychological therapy for an eating disorder, difficulty understanding/speaking English	N = 52 Attrition: n = 20 participants (38.46%)	CBT-T	10 weeks (post- treatment at final session) One-month follow-up Three-month follow-up	Multilevel modelling used to assess outcomes using completer and ITT analyses – 32 for completer analysis and 52 for ITT analysis. Within- group effect sizes were calculated (Cohen's <i>d</i>).
Pellizzer et al. (2019b)	Case series design Outpatient setting	Inclusion: >17.5 BMI	N = 26	CBT-T	10 weeks (post- treatment at final session)	Completer and ITT analyses were conducted, with of multi-level modelling to enable inclusion of

	Australia	Exclusion: participants with a severe physical or mental health condition which would interfere with treatment, if they were currently receiving psychological therapy for an eating disorder or if they had difficulty speaking/understanding English	Attrition: n = 13 participants (50%)		One month follow-up Three-month follow-up	missing data. Effect sizes were computed for within-group comparisons using Cohen's <i>d</i> .
	No funding received					
Pellizzer et al. (2019c)	Case series design	Inclusion: participants who started treatment and reported disordered eating behaviours the week preceding baseline assessment	N = 62	CBT-T	10 weeks (post-treatment at final session)	62 included in analysis (one removed due to missing data). Linear regression was used for predictor variables. ITT approach used for the outcome variables and time points.
	Outpatient setting		Attrition: n = 23 participants (36.51%)		Three-month follow-up	
	Australia					
	Funding not reported	No exclusion reported				
Rose et al. (2021)	Case series design	Inclusion: diagnosis of BN or atypical AN, no previous eating disorder treatment, compliance with physical health monitoring, medically stable, no co-morbid severe mental health problem, no problematic alcohol or substance use, no recent moderate/severe self-harm and above a BMI of 18.5	N = 40	CBT-T	10 weeks (post-treatment at final session)	Pre to post treatment change was examined using mixed models to analyse treatment scores (pre and post) and possible interactions between duration of eating disorder.
	Outpatient NHS clinic		Attrition: n = 14 participants (35%)			
	UK					
	Funding not reported					

Exclusion not reported						
Tatham et al. (2020)	Cohort comparison	Inclusion: adults above the age of 18 and BMI above 18.5	N = 193	CBT-T vs CBT-E	10 weeks (post-treatment at final session)	Outcomes were compared using both completer analyses and ITT analyses. Completer analyses used repeated measures ANOVAs with partial eta ² effect sizes and post hoc Least Significant Difference (LSD) tests.
	NHS outpatient setting		CBT-E (n = 138)			
	UK	Allocation of treatment group was based on mental health and medical risk: those with higher risk and lower weight were allocated to CBT-E	CBT-T (n = 55)		Six-month follow-up	
	Funding not reported		CBT-E attrition: n = 86 participants (62.32%) CBT-T attrition: n = 24 participants (47.3%)			ITT analyses used multiple imputation to replace missing data, and paired t-tests were used for within groups score comparisons at different time points (effect sizes determined using Cohen's <i>d</i>).
Wade et al. (2021)	RCT	Inclusion: BMI above 17.5, above the age of 15 years old, diagnosis of an eating disorder, consent for service to liaise with GP and ability to commit to therapy	N = 98	CBT-T vs CBTm	10 weeks (post-treatment at final session)	Linear mixed-model (LMM) analyses were used to assess effectiveness of each intervention on continuous outcomes using ITT analysis. Within-group effect sizes were calculated at end of treatment and follow-ups. Least-squares post-hoc comparisons were used due to power constraints.
	University outpatient eating disorder service		CBT-T: n = 46 allocated			
	Australia		CBTm: n = 52		One-month follow-up	
	The study was supported by the Clinical College of Australian Psychological Society	Exclusion: current rapid weight loss, reported plans for suicide, evidence of substance dependence or active psychosis, receiving psychological therapy for an eating disorder, difficulty	CBT-T attrition: n = 20 (43.48%) CBTm attrition: n = 23 (44.23%)		Three-month follow-up	

		speaking/understanding English				
Waller et al. (2018)	Case series design	Inclusion: >18 years, BMI above 18 and diagnosed with an eating disorder	N = 93	CBT-T	10 weeks (post-treatment at final session)	ITT methods were used and multiple imputations were used to substitute for missing data.
	NHS outpatient setting		Attrition: n = 29 (31.18%)			
	UK	Exclusion: physical risk, active suicidality, or an inability to undertake therapy due to learning disability or limited English language skills			Three-month follow-up	Repeated measures ANOVAs with post hoc Least Significant Difference (LSD) tests to determine pairwise differences were used for all outcomes, although for depression and anxiety outcomes were not collected at follow-up.
	No external funding was received					

Table 2. Participant characteristics of included studies

Author, Year	Gender	Age	Ethnicity	Diagnosis
		Range; Mean; Median		Number of Participants
Moore et al. (2021)	77% female; 21% male; 2% transgender	Not reported	Not reported	BED
Pellizzer et al. (2019a)	90.4% female	Range: 15–68 years Mean: 26.42 (SD = 9.62)	82.7% White	BN OSFED AN BED
Pellizzer et al. (2019b)	96.2% female	Range: 16-51 years Mean: 28.73 years (SD) = 9.57	100% White	Not reported
Pellizzer et al. (2019c)	91.9% female	Range: 15-68 years Mean: 27.37 years (SD = 9.77)	87.1% White	BN OSFED
Rose et al. (2021)	90% female	Range: 18-51 years Median: 26 years	90% British; 5% White European; 5% Mixed White and Asian	BN OSFED
Tatham et al. (2020)	Not reported	CBT-E mean: CBT-E: 31.5 years (SD = 12.4) CBT-T mean: 29.4 years old (SD = 10.2)	Not reported	Atypical AN: n = 45 BN: n = 86 Atypical BN: n = 38 BED: n = 24

Wade et al. (2021)	CBT-T: 91% female	Range not reported	Not reported	AN: n = 5
	CBTm: 94% female	CBT-T mean: 26.91 years (SD = 10.88)		BN: n = 68
		CBTm mean: 25.77 years (SD = 7.45)		BED: n = 5 OSFED: n = 20
Waller et al. (2018)	98% female; 2% male	Range: 18-57 years	Not reported	BN: n = 51
		Mean: 27.4 years (SD = 8.66)		BED: n = 25
				OSFED: n = 17

Note: All information available is presented in the table. Anorexia nervosa (AN), bulimia nervosa (BN), binge eating disorder (BED) and other specific feeding or eating disorder (OSFED). Studies which reported the number of participants with each diagnosis are included. Standard deviation is abbreviated to SD.

Table 3. Results of included studies

Author, Year	Outcomes	Eating Disorder Psychopathology	Disordered Eating Behaviours	Clinical Impairment	Depression and Anxiety	Abstinence and Remission
Moore et al. (2021)	Eating disorder psychopathology - EDE-Q Depression - PHQ-9 Anxiety - GAD-7 Weekly frequency of objective binge eating – taken from food diaries	Pre- to mid-treatment changes in global eating disorder psychopathology: EDE-Q global score, $d = 0.93$. Pre- to post-treatments changes in global eating disorder psychopathology: EDE-Q global score, $d = 1.23$. Pre- to mid-treatment changes in specific eating disorder psychopathologies: Restraint ($d = 0.72$), Eating Concern ($d = 0.65$), Weight Concern ($d = 0.68$) and Shape Concern ($d = 0.45$). Pre- to post-treatment changes in specific eating disorder psychopathologies: Restraint ($d = 0.83$), Eating Concern ($d = 1.29$), Shape Concern ($d = 0.92$), and Weight Concern ($d = 1.14$). No effect sizes were given for follow-up.	Pre- to mid-treatment changes in binge eating frequency: $d = 1.16$. Pre- to post-treatment changes in binge eating frequency: $d = 1.28$. Changes were reported to be sustained at follow-up, but no effect sizes are reported.	Not applicable (N/A)	Pre- to mid-treatment reductions: depression (PH-9, $d = 0.50$) and anxiety (GAD-7, $d = 0.44$). Pre- to post-treatment reductions: depression (PHQ-9, $d = 0.82$) and anxiety (GAD-7, $d = 0.55$). Post-treatment to follow-up: effect size for depression decreased at follow-up from post-treatment ($d = 0.37$). Effect sizes were not reported for GAD-7 scores.	Authors defined remission in three ways. A cut-off of the global EDE-Q score below 2.77 at final session and ‘clinically significant change’ in EDE-Q global with a reduction > 1.70 . A Reliable Change Index (EDE-Q Global reduction ≥ 1.38) was also calculated. 46 participants (87.2%) were below the 2.77 cut-off score at the end of treatment. 50 participants (94.3%) met this at follow-up. The CSC index (Jacobson & Truax, 1991), found 25 participants (47.6%) met the criterion for remission by the end of treatment. 33 participants (61.5%) met the criterion for remission at follow-up. Reliable Change Index demonstrated that 33 participants (62.4%) met remission at the end of

						treatment, and 35 participants (66%) met this at follow-up.
Pellizzer et al. (2019a)	Eating disorder psychopathology – EDE-Q, global score only reported	Pre- to mid-treatment changes in global eating disorder psychopathology: EDE-Q global score, $d = 1.19$.	Reductions between pre- and mid-treatment for binge eating, ($d = 1.06$) and purging ($d = 0.57$).	Significant reductions for clinical impairment were found at: mid-treatment ($d = 0.98$), post-treatment ($d = 1.62$), one-month follow-up ($d = 1.67$) and three-month follow-up ($d = 1.62$).	Negative affect demonstrated significant reductions from pre- to post-treatment ($d = 0.59$). Reductions were found at one-month follow-up ($d = 0.74$) and three-month follow-up ($d = 0.72$).	Abstinence was defined as being free of all disordered eating behaviours, purging and objective bingeing, over the past month. Abstinence rates were 38.5% at end of treatment, 44.2% at one-month follow-up and 48.1 % at three-month follow-up. Remission was defined as having an EDE-Q global score no greater than one standard deviation above the community mean (< 2.77) using Australian norms (Mond et al., 2006). Remission rates at end of treatment were 32.5%, 34.6% at one-month follow-up and 42.3% at three-month follow-up.
	Clinical impairment - CIA	Pre- to post-treatment changes in global eating disorder psychopathology: EDE-Q global score, $d = 1.96$.	Post-treatment reductions were found for binge eating ($d = 1.02$) and purging ($d = 0.55$).			
	Negative affect – DASS-21					
	Weekly frequency of disordered eating – taken from food diaries	Changes were sustained at one-month follow-up ($d = 1.99$) and three-month follow-up ($d = 1.92$).	Changes were found at one-month ($d = 0.97$) and three-month ($d = 0.94$) follow-ups for binge eating. For purging, changes were found at one-month follow-up ($d = 0.49$) and three-month follow-up ($d = 0.52$).			
Pellizzer et al. (2019b)	Eating disorder psychopathology – EDE-Q	Significant reductions in eating disorder psychopathology (EDE-Q global score) found from pre- to mid-treatment, $d = 1.27$, and post-treatment, $d = 1.63$. Reductions were sustained at the one-month follow-up	Binge eating behaviours had significant reductions at mid-treatment ($d = 0.91$) and post-treatment ($d = 0.89$). Effect sizes were sustained, but decreased	CIA scores had significant reductions at mid-treatment ($d = 1.28$) and post-treatment ($d = 2.08$), which were	For negative affect, at mid-treatment there were significant reductions ($d = 0.44$) which improved further at post-treatment ($d = 1.04$).	Authors defined abstinence as no disordered eating behaviours over the past 28 days. Abstinence rates were 44% at post-treatment, 36% at one-
	Clinical impairment – CIA					

	Negative affect – DASS-21	($d = 2.22$) and three-month follow-up ($d = 2.34$).	slightly, at one-month follow-up ($d = 0.87$) and three-month follow-up ($d = 0.83$).	sustained at the one-month follow-up ($d = 1.92$) and three-month follow-up ($d = 2.04$).	Effect sizes were sustained at the one-month follow-up ($d = 1.06$) and three-month follow-up ($d = 0.97$).	month follow-up and 36% at three-month follow-up.
	Weekly frequency of disordered eating behaviours – taken from food diaries	For the EDE-Q subscales, at mid-treatment, significant reductions were found for: Restraint ($d = 1.27$), Eating Concern ($d = 1.48$), Shape Concern ($d = 0.75$) and Weight Concern ($d = 0.54$). Statistically significant changes were observed for all subscales at post-treatment (Restraint, $d = 1.63$; Eating Concern, $d = 2.44$; Shape Concern, $d = 1.58$; Weight Concern, $d = 1.55$), one month follow-up (Restraint, $d = 1.61$; Eating Concern, $d = 2.39$; Shape Concern, $d = 1.50$; Weight Concern, $d = 1.43$) and three month follow-up (Restraint, $d = 1.40$; Eating Concern, $d = 2.71$; Shape Concern, $d = 1.77$; Weight Concern, $d = 1.40$)	Purging behaviours had reductions at mid-treatment ($d = 0.57$) and post-treatment ($d = 0.58$). The effect size remained at a similar size at one-month follow-up ($d = 0.57$) and three-month follow-up ($d = 0.54$).			Remission was defined as having an EDE-Q global score no greater than one standard deviation above the community mean (< 2.77) using Australian norms (Mond et al., 2006). Remission rates at post-treatment were 28%, 20% at one-month follow-up and 24% at three-month follow-up.
Pellizzer et al. (2019c)	Eating disorder psychopathology – EDE-Q, global score only reported	For the global EDE-Q score, a significant reduction was found from baseline to post-treatment ($d = 2.38$).	N/A	A significant reduction was found for clinical impairment score from baseline score to post-treatment ($d = 2.54$).	N/A	N/A
	Clinical impairment – CIA	From post-treatment to follow-up there was a decrease in effect size ($d = 0.14$).		There was a decrease from post-treatment to follow-up in		

				effect size ($d = 0.19$).		
Rose et al. (2021)	Eating disorder psychopathology – EDE-Q, global effect size only reported Clinical impairment – CIA Frequency of binge eating, vomiting and laxative use over previous seven and 28 days – taken from EDE-Q and ED-15	Significant changes for the EDE-Q global score were observed from pre-treatment to post-treatment ($r = .86$).	Abstinence rates of completers from binge eating/purging over the final 28-days was 30.1%, and 7-days was 73.1%.	Statistically significant reductions in the CIA score were found from pre-treatment to post-treatment ($r = .78$).	N/A	Abstinence was defined as binge eating and purging abstinence over seven- and 28-day periods (see disordered eating column). Remission was defined in two ways. Post-treatment global EDE-Q score < standard deviation above the community mean in adult females, <2.77 (Fairburn et al., 2006). 76.9% met this criterion. Remission was also defined as the above criterion plus 28-day binge eating and purging abstinence; 23.1% reported remission.
Tatham et al. (2020)	Eating disorder psychopathology – EDE-Q, global score only reported Clinical impairment - CIA	For CBT-E, EDE-Q global score reduced from pre-treatment to mid-treatment ($d = 0.39$). Pre- to post-treatment showed a significant reduction ($d = 1.44$). Reductions were found at post-treatment to follow-up ($d = 0.06$). For CBT-T, the EDE-Q global score reduced from pre-treatment to mid-treatment ($d = 0.44$). Pre- to post-	N/A	For CBT-E, the CIA score showed reductions from pre-treatment to post-treatment ($d = 1.36$) and from post-treatment to follow-up ($d = 0.54$).	N/A	Remission was defined by authors as a decrease in EDE-Q global scores from above to below a cut-off (2.77, Turner et al., 2015). At the end of treatment, 61.2% of participants who received CBT-E had an EDE-Q global score that fell below the cut-off. 58.6% of participants who

		treatment showed a significant reduction ($d = 1.26$). Reductions were also observed at post-treatment to follow-up ($d = 0.03$).		For CBT-T, the CIA score showed reductions from pre-treatment to post-treatment ($d = 0.92$) and from post-treatment to follow-up ($d = 0.41$).		received CBT-T had a score which fall below this cut-off. At follow up, rates were 58.6% for CBT-E participants and 59.3% for CBT-T participants.
Wade et al. (2021)	Eating disorder psychopathology – EDE-Q, global score only reported Disordered eating behaviours – ED-15, a behavioural count of objective binge episodes, self-induced vomiting episodes, laxative abuse, and/or driven exercise Clinical impairment – CIA Negative affect - DASS-21	For CBT-T, statistically significant reductions were found for EDE-Q global score from pre-treatment to: mid-treatment ($d = 1.05$), post-treatment ($d = 1.75$), one-month follow-up ($d = 2.25$) and three-month follow-up ($d = 1.80$). For the GSH comparator, CBTm, significant reductions in the EDE-Q global score were found from pre-treatment to: mid-treatment ($d = 0.95$), post-treatment ($d = 1.88$), one-month follow-up ($d = 2.42$) and three-month follow-up ($d = 2.17$).	For CBT-T, there were reductions in binge eating behaviours from pre-treatment to: mid-treatment ($d = 0.60$), post-treatment ($d = 0.78$), one-month follow-up ($d = 0.77$) and three-month follow-up ($d = 0.69$). For CBTm, binge eating behaviours showed reductions from pre-treatment to: mid-treatment ($d = 0.68$), post-treatment ($d = 0.91$), one-month follow-up ($d = 0.95$) and three-month follow-up ($d = 0.93$). For CBT-T, reductions were found for vomiting	For CBT-T, the CIA score had significant reductions from pre-treatment to: mid-treatment ($d = 0.83$), post-treatment ($d = 1.73$), one-month follow-up ($d = 2.24$) and three-month follow-up ($d = 1.84$). For CBTm, significant reductions in CIA score were found from pre-treatment to: mid-treatment ($d = 0.81$), post-treatment ($d = 2.00$), one-month	For CBT-T, DASS-21 score reduced significantly from pre-treatment to: mid-treatment ($d = 0.32$), post-treatment ($d = 0.81$), one-month follow-up ($d = 1.11$) and three-month follow-up ($d = 1.05$). For CBTm, reductions were observed from pre-treatment to: mid-treatment ($d = 0.5$), post-treatment ($d = 1.08$), one-month follow-up ($d = 1.19$) and three-month follow-up ($d = 1.19$).	Remission was defined at the last follow-up with a BMI above 18.5, no disordered eating behaviours and normative levels of psychopathology in the last month. The second and third criteria were evaluated over the previous 28 days using the EDE-Q, with the third criterion evaluated using a cut-off of one standard deviation from community Australian norms for EDE-Q global score (<2.77, Mond et al., 2006). Remission was achieved in 22 of 43 completers (51%), 7 out of 21 (38%) in the CBT-T group and 14 out

from pre-treatment to: mid-treatment ($d = 0.34$), post-treatment ($d = 0.43$), one-month follow-up ($d = 0.40$) and three-month follow-up ($d = 0.43$). For CBTm, significant reductions were found for vomiting at pre-treatment to: mid-treatment ($d = 0.47$), post-treatment ($d = 0.60$), one-month follow-up ($d = 0.63$) and three-month follow-up ($d = 0.61$). For CBT-T, reductions in laxative use were found from pre-treatment to: mid-treatment ($d = 0.03$), post-treatment ($d = 0.29$), one-month follow-up ($d = 0.29$) and three-month follow-up ($d = 0.29$). For CBTm, laxative use showed reductions from pre-treatment to: mid-treatment ($d = 0.25$), post-treatment ($d =$	follow-up ($d = 2.66$) and three-month follow-up ($d=2.06$).	of 22 (64%) in the CBTm group.
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			0.37), one-month follow-up ($d = 0.38$) and three-month follow-up ($d = 0.37$).			
			For CBT-T, driven exercise showed reductions from pre-treatment to: mid-treatment ($d = 0.13$), post-treatment ($d = 0.19$), one-month follow-up ($d = 0.14$) and three-month follow-up ($d = 0.14$).			
			For CBTm, driven exercise reduced from pre-treatment to: mid-treatment ($d = 0.16$), post-treatment ($d = 0.18$), one-month follow-up ($d = 0.15$) and three-month follow-up ($d = 0.19$).			
Waller et al. (2018)	Eating disorder psychopathology - EDE-Q	Substantial reductions were found for the EDE-Q global and subscales from pre- to post-treatment.	Substantial reductions in the frequency of all three disordered eating behaviours pre- to post-treatment were found.	N/A	Anxiety and depression levels fell substantially pre- to post-treatment.	Abstinence was defined as being free of disordered eating behaviours over the past two months or past week. Remission was defined as abstinence (as above) and having an EDE-Q global score no more than one standard
	Depression - PHQ-9	For the global score, repeated measures ANOVA was significant; $F(3,90) = 60.5, p = .001, \eta_p^2 = .668$.	For objective binges, repeated measures ANOVA was significant;		For PHQ-9 scores, repeated measures ANOVA was significant; $F(3,90) =$	
	Anxiety - GAD-7					

For the Restraint subscale, repeated measures ANOVA was significant; $F(3,90) = 51.1, p = .001, \eta_p^2 = .630$.	$F(3,90) = 27.2, p = .001, \eta_p^2 = .476$.	46.3, $p = .001, \eta_p^2 = .502$.	deviation above the norm for British non-clinical females (<2.77).
For Eating Control, repeated measures ANOVA was significant; $F(3,90) = 56.0, p = .001, \eta_p^2 = .651$.	For vomiting, repeated measures ANOVA was significant; $F(3,90) = 21.0, p = .001, \eta_p^2 = .402$.	For GAD-7 scores, repeated measures ANOVA was significant; $F(3,90) = 10.2, p = .001, \eta_p^2 = .181$.	At the end of treatment, of completers there was an abstinence rate of 67.2% who were free of disordered eating behaviours over the previous week. ITT abstinence rate was 59.1%.
For Shape Control, repeated measures ANOVA was significant; $F(3,90) = 58.7, p = .001, \eta_p^2 = .662$.	For laxative use, repeated measures ANOVA was significant; $F(3,90) = 13.4, p = .001, \eta_p^2 = .308$.		Remission rate for completers was 50% and 40.2% for the ITT sample. At follow-up, completer analysis showed an abstinence rate of 42.8% and a remission rate of 37.1%. ITT analysis demonstrated an abstinence rate of 41.9% and a remission rate of 36.6%.
For Weight Control, repeated measures ANOVA was significant; $F(3,90) = 41.2, p = .001, \eta_p^2 = .578$.			

Note. For studies which offered both intent-to-treat and completer analysis data, intent-to-treat data has been extracted for the purpose of the review: Moore et al. (2021), Pellizzer et al. (2019a, 2019b), Wade et al. (2021) and Waller et al. (2018). Effect sizes were calculated for the following studies from means and standard deviations using GPower (Faul et al., 2007): Pellizzer et al. (2019c) and Wade et al. (2021). Only outcome and analyses of interest relevant to the review are included in the table. Full names for measures are: Eating Disorder Examination Questionnaire (EDE-Q; Fairburn & Beglin, 2008), Clinical Impairment Assessment Questionnaire (CIA; Bohn & Fairburn, 2008), Depression, Anxiety and Stress Scale – 21 (DASS-21; Lovibond & Lovibond, 1995), Generalised Anxiety Disorder Questionnaire (GAD-7; Spitzer et al., 2006), Patient Health Questionnaire (PHQ-9; Kroenke et al., 2001) and Eating Disorder-15 (ED-15; Tatham et al., 2015).

Quality Assessment

Quality appraisals are presented in Table 4. Regarding the global methodological quality of the studies, seven studies were rated as ‘weak’ and one was rated as ‘moderate’. Most included studies (except two which were scored as ‘weak’) were rated as ‘moderate’ regarding Selection Bias, indicating that the samples were somewhat likely to be representative of the target population and the level of participation from participants selected to participate was relatively high. Most included studies were rated as ‘weak’ for Study Design (except two in which one was rated as ‘strong’ and the other rated as ‘moderate’), given most studies were case series designs and there was no method of randomisation. All studies included were rated as ‘weak’ for Confounders as the control of confounders was not described. All studies were rated as ‘moderate’ for Blinding; most studies, except the RCT (Wade et al., 2021), did not describe blinding procedures and the tool guidance suggests a rating of ‘moderate’ in such cases. For all studies included, the Data Collection Methods were rated as ‘strong’ given the use of reliable and valid outcome measures. All studies (except one) were rated as ‘weak’ for Withdrawals and Dropouts as the dropout rate at follow-up was high (less than 60% completing the study) or the withdrawals and drop-outs were not adequately described. For Intervention Integrity, studies varied in the percentage of participants who received the allocated intervention of interest; one study was between 80-100% (Waller et al., 2018), five studies were between 60-79% (Moore et al., 2021; Pellizzer et al., 2019a, 2019c; Rose et al., 2021; Wade et al., 2021) and two studies were less than 60% (Pellizzer et al., 2019b; Tatham et al., 2020). Only two studies had the consistency of delivery of the intervention monitored (Rose et al., 2021; Wade et al., 2021). It was unclear in all studies if participants received a co-intervention, such as psychotropic medication or dietetic input, and most studies excluded participants already receiving psychological therapy, except four studies (Moore et al., 2021; Rose et al., 2021; Tatham et al., 2020; Waller et al., 2018). All studies, except one (Rose et al., 2021), were rated well for Appropriate Statistical Analyses and completer and ITT analyses were reported.

Table 4. Methodological quality of included studies

Author, Year	Selection Bias	Study Design	Confounders	Blinding	Data Collection Methods	Withdrawal & Dropouts	Overall Rating
Moore et al. (2021)	Moderate	Weak	Weak	Moderate	Strong	Moderate	Weak
Pellizzer et al. (2019a)	Weak	Weak	Weak	Moderate	Strong	Moderate	Weak
Pellizzer et al. (2019b)	Moderate	Weak	Weak	Moderate	Strong	Weak	Weak
Pellizzer et al. (2019c)	Weak	Weak	Weak	Moderate	Strong	Moderate	Weak
Rose et al. (2021)	Moderate	Weak	Weak	Moderate	Strong	Moderate	Weak
Tatham et al. (2020)	Moderate	Moderate	Weak	Moderate	Strong	Weak	Weak
Wade et al. (2021)	Moderate	Strong	Weak	Moderate	Strong	Moderate	Moderate
Waller et al. (2018)	Moderate	Weak	Weak	Moderate	Strong	Moderate	Weak

Attrition

Treatment attrition ranged from 23% to 50% of the total samples. Of the two studies which had comparison treatment groups, CBT-T attrition rates were lower than the comparison groups of CBT-E (Tatham et al., 2020) and GSH (Wade et al., 2021). Only one of the comparator studies explored between-group predictors of attrition; Tatham and colleagues (2020) explored if initial characteristics of age, BMI, EDE-Q global score or CIA score predicted treatment completion in either form of CBT using binomial logistic regressions. For CBT-E there was an overall effect, $X^2 (N = 138) = 10.4, p = .035$, where the only significant predictor was BMI ($B = 0.081, p =$

.06). This indicated that participants with a higher BMI were more likely to achieve treatment completion. For CBT-T, there was no significant overall effect, and none of the individual predictors were significant.

For the studies without comparators, only three studies explored predictors of attrition (Pellizzer et al., 2019a, 2019b; Waller et al., 2018). Pellizzer and colleagues (2019a) found that purging was the only significant predictor of attrition for patients who decided collaboratively with the therapist to leave treatment, odds ratio = 1.15 (95% CI [1.00, 1.32]). Pellizzer and colleagues (2019b) found no significant predictors of attrition. Waller and colleagues (2018) found no associations between drop-out and diagnosis during treatment, X^2 ($N = 93$) = 2.84, NS, or follow-up, X^2 ($N = 93$) = 2.00, NS. Waller and colleagues also used binominal logistic regression to predict drop-out during treatment, based on outcomes taken at the first session: age; global EDE-Q score; frequency of objective binge-eating, vomiting and laxative use; BMI; GAD-7 score; PHQ-9 score; Working Alliance Inventory – Short Revised score and Personality Belief Questionnaire – Short Form score. Analyses showed an overall significant effect, X^2 ($N = 93$) = 39.8, $p < .008$; a negative association was found with GAD-7 anxiety score ($B = -.313$, $p < .04$) which suggested that drop-out was less likely among patients who had higher anxiety levels.

Abstinence

Four studies reported abstinence rates with varying definitions of abstinence. Three studies (Pellizzer et al., 2019a, 2019b; Rose et al., 2021) defined abstinence as no disordered eating behaviours over the past month. Pellizzer and colleagues (2019a) reported abstinence of these behaviours for 38.5% at post-treatment, 44.2% at one-month follow-up and 48.1% at three-month follow-up following CBT-T. Pellizzer and colleagues (2019b) reported abstinence rates of 44% at post-treatment, 36% at one-month follow-up and 36% at three-month follow-up. Rose and colleagues (2021) reported abstinence of these behaviours of 30.1% of those who completed CBT-T. Two studies also defined abstinence as cessation of disordered eating behaviours over the past seven days (Rose et al., 2021; Waller et al., 2018). Authors reported cessation of the behaviours over the past week for 73.1% (Rose et al., 2021), and 67.2% for the completer sample and 59.1% for the ITT sample (Waller et al., 2018). Waller and colleagues (2018) also defined abstinence as cessation of these behaviours over two months and found the ITT sample demonstrated an abstinence rate of 41.9%, whereas the completer sample had a rate of 42.8%. The two studies with comparison groups (Tatham et al., 2020; Wade et al., 2021) did not report abstinence rates.

Remission

All studies reported remission rates using a comprehensive and stringent definition of global EDE-Q score one standard deviation above the community mean in adult females, below a cut-off score of 2.77 (Fairburn & Beglin, 1994; Mond et al., 2006), except two studies (Pellizzer et al., 2019c; Wade et al., 2021). Among the seven studies using this criterion, remission rates ranged from 28% to 87.2% of the total samples at the end of treatment. Remission rates reported at one-month follow-up were only provided by two of the studies which were 34.6% (Pellizzer et al., 2019a) and 20% (Pellizzer et al., 2019b). Remission rates varied at three-month follow-up with the lowest remission rate being 24% (Pellizzer et al., 2019b), followed by 37.1% (Waller et al., 2018, completer sample [36.6% for ITT sample]), 42.3% (Pellizzer et al., 2019a) and 94.3% (Moore et al., 2021). The longest follow-up was six months (Tatham et al., 2020) which found CBT-T had a remission rate of 59.3% and the CBT-E comparator had a rate of 58.6%. Tatham and colleagues (2020) found at end of treatment CBT-T had a remission rate of 58.6% and CBT-E had a rate of 61.2%.

Other definitions of remission were used by some of the studies. Wade and colleagues (2021) defined remission at the last follow-up with a BMI above 18.5, an absence of disordered eating behaviours and normative levels of eating disorder psychopathology in the past month (using the same criteria as the other studies, global EDE-Q score below 2.77). The authors found CBT-T remission rates were 38%, which was lower than the GSH comparator which had a rate of 64%. Rose and colleagues (2021) calculated remission rates using the stringent definition of global EDE-Q score below 2.77 plus abstinence from disordered eating behaviours over the past month; 23.1% of those who received CBT-T reported remission. Moore and colleagues (2021) defined remission in two other ways. Clinically significant change was defined as a reduction in EDE-Q global score above 1.70, and 47.6% met this criterion at the end of therapy and 61.5% at three-month follow-up. A reliable change index

was also calculated, defined as EDE-Q global score reduction above 1.38, and 62.4% met this at the end of treatment and 66.0% met this at three-month follow-up.

In sum, remission rates for CBT-T varied by definition and follow-up time point. CBT-T was shown to have comparable remission rates to standard length CBT for eating disorders (CBT-E) but had lower remission rates than GSH.

Eating Disorder Psychopathology

All studies measured changes in eating disorder psychopathology using the Eating Disorder Examination Questionnaire (EDE-Q; Fairburn & Beglin, 2008). All studies found that CBT-T resulted in significant reductions in global eating disorder psychopathology corresponding with large effects at mid-treatment, except for one study which had a small effect size at mid-treatment (Tatham et al., 2021). CBT-T resulted in significant reductions with large effect sizes at end of treatment across all studies, including the sample of participants with disordered eating behaviours the week preceding baseline assessment (Pellizzer et al., 2019c). All studies demonstrated maintenance of effects at one-month, three-month and six-month follow-up. Of the studies that had comparator groups (Wade et al., 2021; Tatham et al., 2020), reductions in global eating psychopathology at all time points were comparable between treatment groups. For the trial which compared CBT-T to GSH (Wade et al., 2021), significant reductions were found in global eating disorder psychopathology corresponding to large effect sizes at mid-treatment, post-treatment, one-month follow-up and three-month follow-up for both treatments. The authors found no significant between-group effects at any time point, or interactions between group and time (this was also the case for all other outcomes). Tatham and colleagues (2021) compared CBT-T to CBT-E and found similar reductions in global eating disorder psychopathology with small effect sizes for both treatments at mid-treatment, but large effect sizes at end of treatment for both treatments. Tatham and colleagues explored if the duration of the two treatments was associated with the level of change in eating disorder psychopathology; for both treatments the number of sessions had no overall effect at end of treatment or six-month follow-up.

Three studies (Moore et al., 2021; Pellizzer et al., 2019b; Waller et al., 2018) reported changes in specific features of eating disorder psychopathology from CBT-T using additional subscales of the EDE-Q which assesses: Restraint, Eating Concern, Shape Concern and Weight Concern (see Table 3 for results). Two studies which reported outcomes at mid-treatment (Moore et al., 2021; Pellizzer et al., 2019b) found significant reductions in eating disorder psychopathologies with medium and large effects within the first four weeks at mid-treatment for all subscales. All three studies reported significant reductions in all eating disorder psychopathology subscales with large effects at end of treatment. One study (Pellizzer et al., 2019b) found that these changes in all eating disorder psychopathologies were sustained at three-month follow-up with large effects.

Thus, the studies suggest that CBT-T reduces eating disorder psychopathology with large effects. CBT-T was shown to be comparable to CBT-E and GSH.

Disordered Eating Behaviours

All except for two studies (Pellizzer et al., 2019c; Tatham et al., 2020) reported disordered eating behaviours as an outcome. These studies found large effects of CBT-T for reducing the frequency of objective binge eating episodes over the previous 28 days at end of treatment and follow ups, except Rose and colleagues (2021). Rose and colleagues did not report effect sizes but found that for those who received CBT-T, 30.1% abstained from both binge eating and purging (combined) over 28 days, and 73.1% over the past seven days. From pre-treatment to mid-treatment, effect sizes of CBT-T were large (Moore et al., 2020; Pellizzer et al., 2019a, 2019b) and medium (Wade et al., 2021).

Four studies (Pellizzer, et al., 2019a, 2019b; Wade et al., 2021; Waller et al. 2018) found CBT-T to have an effect for purging behaviours (including vomiting, laxative use and driven exercise) with small to medium effect sizes in most studies at end of treatment and follow-ups. One study found large effect sizes for CBT-T reducing vomiting and laxative use at the end of treatment (Waller et al., 2018). From pre-treatment to mid-

treatment, medium effect sizes were observed for purging behaviours (Pellizzer et al., 2019a, 2019b), but small effects for vomiting and for laxative use and driven exercise, with an effect, d , <0.2 (Wade et al., 2021).

With regards to comparator efficacy, only one study had a treatment comparator to CBT-T for disordered eating behaviours (Wade et al., 2021). Both CBT-T and GSH showed large effect sizes for binge eating behaviours at end of treatment, one-month follow-up and three-month follow-up. The study explored three purging behaviours: vomiting, laxative use and driven exercise. For vomiting, GSH was found to have medium effect sizes at end of treatment and both follow-ups, whereas CBT-T had small effect sizes for the same time points. For laxative use, effect sizes were small for both treatments at end of treatment and both follow ups. Effect sizes were comparable for CBT-T and GSH for driven exercise in which effects were small at end of treatment and both follow ups. At mid-treatment, both treatments had medium effect sizes for binge eating behaviours. There was more variation in effect of the treatments for purging behaviours at mid-treatment; CBT-T had a small effect for vomiting, but GSH had a medium effect. For laxative use, CBT-T effect size, d , was <0.2 , whereas GSH had a small effect size at mid-treatment.

In sum, CBT-T appears to result in large decreases in binge eating behaviour and small to moderate decreases in purging behaviours. CBT-T was mostly comparable to GSH, though GSH was superior for some purging behaviours.

Clinical Impairment Related to Eating Disorder Features

Six studies (Pellizzer et al., 2019a, 2019b, 2019c; Rose et al., 2021; Tatham et al., 2020; Wade et al., 2021) examined the effects of CBT-T on psychosocial impairment due to eating disorder features measured by the Clinical Impairment Assessment questionnaire (CIA; Bohn & Fairburn, 2008). All six studies found reductions in clinical impairment score with large effect sizes at end of treatment, including the sample of participants with disordered eating behaviours the week preceding baseline (Pellizzer et al., 2019c). Three studies (Pellizzer et al., 2019a, 2019b; Wade et al., 2021) found large effect sizes at mid-treatment, one-month follow-up and three-month follow-up. Two studies (Pellizzer et al., 2019c; Tatham et al., 2020) identified that changes were sustained from end of treatment to follow-up and found small effect sizes.

Regarding comparator efficacy, Tatham and colleagues (2020) found both CBT-T and CBT-E had large effect sizes on CIA scores at end of treatment, although the effect size for CBT-E was slightly larger. From end of treatment to follow-up, CBT-E showed larger effects in comparison to CBT-T, as CBT-E had a medium effect size whereas CBT-T had a small effect size. No between-group differences were explored for CIA scores by the researchers. Wade and colleagues (2021) found CBT-T and GSH treatment groups had large effect sizes for CIA scores at mid-treatment, end of treatment and one-month and three-month follow-ups, and effect sizes were comparable.

Overall, study results suggest that CBT-T results in significant improvements in psychosocial impairments with large effects. Evidence suggests that CBT-T was comparable to GSH and CBT-E, although CBT-E was more superior at follow-up.

Depression and Anxiety

Five studies (Moore et al., 2021; Pellizzer et al., 2019a, 2019b; Wade et al., 2021; Waller et al., 2018) examined the effects of CBT-T on co-morbid anxiety and depression symptoms. Two studies (Moore et al., 2021; Waller et al., 2018) used the Patient Health Questionnaire (PHQ-9; Kroenke et al., 2001) to measure depression symptoms and the Generalised Anxiety Disorder Questionnaire (GAD-7; Spitzer et al., 2006) to measure anxiety symptoms. The other three studies (Pellizzer et al., 2019a, 2019b; Wade et al., 2021) used the Depression, Anxiety and Stress Scale-21 (DASS-21; Lovibond & Lovibond, 1995). All found CBT-T to improve anxiety and depression symptoms with medium to large effect sizes at end of treatment. At mid-treatment, two studies (Moore et al., 2021; Pellizzer et al., 2019b) found CBT-T to show medium effect sizes for depression and anxiety and one found a large effect size (Wade et al., 2021). Three studies (Pellizzer et al., 2019a, 2019b; Wade et al., 2021) found large effects for depression and anxiety symptoms at one-month and three-month follow-ups.

Regarding comparator efficacy, only one study had a treatment comparator to CBT-T for depression and anxiety symptoms, GSH (Wade et al., 2021). Both CBT-T and GSH showed large effect sizes for depression and anxiety scores at end of treatment, one-month follow-up and three-month follow-up. At mid-treatment, CBT-T had a small effect size on depression and anxiety scores, whereas GSH had a medium effect size. From mid-treatment to end of treatment, CBT-T had a small effect size on depression and anxiety scores, whereas GSH had a medium effect size.

Taken together, the studies suggest that CBT-T results in significant changes in co-morbid depression and anxiety symptoms with medium to large effect sizes. However, CBT-T was not shown to be superior to GSH, which had comparable results at the end of treatment and follow-up, but GSH showed superior results over the course of treatment (beginning to mid-treatment and mid-treatment to post-treatment).

Discussion

The purpose of this review was to summarise and evaluate the existing research on the efficacy and effectiveness of CBT-T within a narrative synthesis framework. Based on the findings of the eight papers reviewed, CBT-T was associated with improvements in eating disorder and related outcomes.

Summary of Findings

CBT-T resulted in significant reductions in eating disorder psychopathology with large effects from before treatment to the end of treatment in all included studies. This is consistent with the previous meta-analysis (Keegan et al., 2022). Further to pre-post effects of CBT-T, the current review also found at specific time points that CBT-T showed maintenance of effects up to six-month follow-up. These changes in eating disorder psychopathology are comparable with the effect sizes of standard-length CBT-ED at end of treatment and follow-ups (Attwood & Friedman, 2020), yet, crucially, were achieved in fewer sessions. When CBT-T was directly compared with CBT-E, there were comparable effect sizes at all time points (Tatham et al., 2020). Mid-treatment comparisons between CBT-T and CBT-ED cannot be made directly, given the session number for mid-treatment differs due to treatment lengths. Nevertheless, it is still useful to consider the amount of change for different outcomes at the middle point of each treatment. The current review found at mid-treatment there were significant reductions in eating disorder psychopathology corresponding with large effects, except for one study (small effect size; Tatham et al., 2020). These findings are comparable to standard CBT-ED, in which significant changes in eating disorder psychopathology have been found at mid-treatment (Raykos et al., 2014; Turner et al., 2015). GSH and CBT-T had comparable significant reductions in psychopathology with large effects at all time points measured (Wade et al., 2021). This evidence is consistent with studies demonstrating that GSH leads to significant improvements for eating disorder psychopathology (Jensen et al., 2020; Traviss et al., 2011; Traviss-Turner et al., 2017).

Three studies provided results for the effects of CBT-T on dietary restraint, eating concern, shape concern and weight concern specifically (Moore et al., 2021; Pellizzer et al., 2019b; Waller et al., 2018). Significant large reductions in all psychopathologies were found at the end of treatment in all studies and at three-month follow-up in one study (Pellizzer et al., 2019b). At mid-treatment, medium to large effects were found for the specific psychopathologies (Moore et al., 2021; Pellizzer et al., 2019b). The CBT-T findings on specific psychopathologies at mid-treatment, post-treatment and follow-up are comparable with standard length CBT-ED (Calugi et al., 2021, 2022; Turner et al., 2016).

Of the six studies that measured disordered eating behaviours (Moore et al., 2021; Pellizzer et al., 2019a, 2019b; Rose et al., 2021; Wade et al., 2021; Waller et al., 2018), CBT-T led to significant improvements with large effects for reducing the frequency of objective binge eating episodes at all time points, except for one study at mid-treatment (medium effect size; Wade et al., 2021). For purging behaviours, four studies (Pellizzer et al., 2019a, 2019b; Wade et al., 2021; Waller et al. 2018) found that CBT-T led to improvements with small to medium effects at the end of treatment and follow-ups, but one study found large effects for CBT-T reducing vomiting and laxative use at the end of treatment (Waller et al., 2018). These findings complement Keegan and colleagues' (2022) meta-analysis in which a large effect size was found for objective binge eating and a medium effect size

for vomiting behaviours pre- to post- CBT-T, though other forms of purging behaviours were not meta-analysed as were presently synthesised. These findings are mostly comparable to standard CBT-ED in which research has also showed large effect sizes for reducing the number of patients engaging in objective binge eating, but small to moderate effect sizes for purging behaviours (Byrne et al., 2011; Fairburn et al., 2009; Fairburn et al., 2015; Garte et al., 2015; Knott et al., 2015). Furthermore, across purging behaviours at mid-treatment, CBT-T led to reductions with small to medium effects (Pellizzer et al., 2019a, 2019b; Wade et al., 2021) which has also been found at mid-treatment for standard CBT-ED (Turner, et al., 2016). Further to CBT-ED, comparing CBT-T to GSH in the Wade and colleagues (2021) study, both GSH and CBT-T showed large effects sizes for binge eating behaviours at all time points. However, for purging behaviours there was more variation between treatments. GSH was superior to CBT-T for vomiting at all time periods, yet both had comparable effects at all time points for laxative use and driven exercise. This is consistent with evidence from an RCT that GSH can lead to significant improvements in disordered eating behaviours, including laxative use and exercise (Traviss et al., 2011). The impact of CBT-T on eating disorder psychopathology and disordered eating behaviours, with the exception of some purging behaviours, appears consistent with the literature that early behavioural change can be achieved in the first four to six sessions of treatment. This has been found for standard-length CBT-ED (Fairburn et al., 2004; Raykos et al., 2013; Turner et al., 2015), and is the best predictor for the best prognosis from therapy for an eating disorder (Le Grange et al., 2014; Vall & Wade, 2015).

In addition to eating disorder outcomes, the present review also considered the effect of CBT-T on psychosocial impairment, and depression and anxiety. Results indicated significant improvement with large effects on psychosocial impairment related to an eating disorder at the end of treatment in six studies which measured this (Pellizzer et al., 2019a, 2019b, 2019c; Rose et al., 2021; Tatham et al., 2020; Wade et al., 2021). This is consistent with Keegan and colleagues' findings (2022). Additionally, this review found reductions with large effects at mid-treatment and up to three-month follow-up (Pellizzer et al., 2019a, 2019b; Wade et al., 2021). These reductions in psychosocial impairment are comparable to standard CBT-ED at post-treatment and follow-up (Dalle Grave et al., 2019, 2020, 2022). CBT-T had larger improvements at mid-treatment, in comparison to CBT-ED for an AN sample (Bryne et al., 2017). Yet, one study (Tatham et al., 2020) found at post-treatment to follow-up CBT-E had larger effects for psychosocial impairment compared to CBT-T, but similar sized effects for psychosocial impairment at pre-treatment to post-treatment. Comparing CBT-T with GSH, Wade and colleagues (2021) found comparable reductions with large effect sizes for psychosocial impairment at all time points. GSH has been demonstrated to lead to improvements in psychosocial impairment at the end of treatment, with improvements sustained at follow-up for those with binge-purge eating disorders (Fitzsimmons-Craft et al., 2020).

Five studies reporting depression and anxiety symptoms found reductions with medium to large effect sizes at the end of treatment following CBT-T (Moore et al., 2021; Pellizzer et al., 2019a, 2019b; Wade et al., 2021; Waller et al., 2018). This is consistent with Keegan and colleagues (2022) findings that depression and anxiety symptoms had a significant reduction with a large effect size from pre- to post-CBT-T. Furthermore, at specific time points, there were reductions in symptoms with medium effect sizes (Moore et al., 2021; Pellizzer et al., 2019b) and a large effect size (Wade et al., 2021) at mid-treatment, and large effects up to three-month follow-up (Pellizzer et al., 2019a, 2019b; Wade et al., 2021). Effects for these symptoms at all time points seem comparable to standard-length CBT-ED (Byrne et al., 2011; Bryne et al., 2017; Fairburn et al., 2009; Knott et al., 2015; Waller et al., 2014), even with fewer sessions, and are consistent with findings that CBT-ED interventions are also effective for co-morbid difficulties (Linardon et al., 2017; Turner et al., 2016). In the comparison between CBT-T and GSH (Wade et al., 2021), the treatments had comparable large effect sizes for depression and anxiety symptoms at the end of treatment and follow-up periods, but GSH had a larger effect size than CBT-T at mid-treatment. Studies have found eating disorder focused GSH interventions to produce significant reductions for depression and anxiety for those with non-underweight eating disorders, including BN (Sanchez-Ortiz et al., 2011) and BED (Striegel-Moore et al., 2010).

Regarding attrition, the results indicated that CBT-T was no more acceptable than standard CBT-ED, CBT-E (Tatham et al., 2020), or GSH (Wade et al., 2021) when compared with these directly. Attrition rates across the studies suggested that CBT-T has comparable rates to standard, longer forms CBT-ED from a review of

controlled and uncontrolled trials of CBT-E (Atwood & Friedman, 2020). CBT-T attrition rates were comparable to routine clinical practice studies of CBT-ED (Frostad et al., 2018; Jenkins et al., 2019; Signorini et al., 2018), which have higher attrition rates than studies conducted in research settings (Mulken & Waller, 2021). It is important to highlight that as part of the CBT-T approach, at session four patients may be collaboratively discharged, depending on engagement and progress with therapeutic tasks. The attrition rates of the studies reviewed included both participants who were discharged at session four and participants who dropped out over the course of treatment. Considering this approach is not part of standard CBT-ED treatments, the attrition rate of CBT-T was comparable to standard CBT-ED.

All studies included provided remission rates for CBT-T, although definitions varied. Remission rates at the end of treatment were comparable to standard forms of CBT-ED (Bryne et al., 2011; Turner et al., 2015). Indeed, one study comparing remission rates between treatments (Tatham et al., 2020) found that CBT-E and CBT-T had comparable rates at the end of treatment and six-month follow-up. GSH had higher remission rates than CBT-T (Wade et al., 2021), and similar remission rates as for those with BN who received GSH (Mitchell et al., 2011). The four studies which provided abstinence rates (Pellizzer et al., 2019a, 2019b; Rose et al., 2021; Waller et al., 2018) used different definitions, but reported similar rates to an effectiveness trial of standard-length CBT-ED (Turner et al., 2015).

Strengths and Limitations of the Research

Findings should be interpreted with caution considering the limitations of the included studies. Study quality was mostly weak, with the only RCT included receiving a moderate global rating. Most of the quality concerns related to study design, given most of the included studies were case series designs which had a non-randomised and uncontrolled design. Non-randomised intervention studies can overestimate the effect for interventions studied, meaning obtaining definitive results about the likely effects of an intervention can be challenging (Deeks et al., 2003). Non-randomised studies are more likely to introduce potential biases compared with randomised trials; thus, results evaluating effects of interventions should be interpreted with caution (Reeves et al., 2009). Whilst CBT-T did yield similar outcomes to standard-length CBT-ED and GSH, the efficacy of CBT-T in comparison to other treatments remains a question that should be investigated. Further investigation utilising RCTs with larger samples would introduce less bias (Reeves et al., 2019) and thereby increase the validity and value of findings. Treatment adherence to the CBT-T protocol and thus the integrity of the delivery of the intervention was only monitored in three studies (Rose et al., 2021; Wade et al., 2021; Waller et al., 2018). This of particular importance given the majority delivering CBT-T were novice therapists. All studies, with the exception of one (Rose et al., 2021), were conducted by the authors of CBT-T. A concern highlighted when judging if a treatment is more than probably effective is whether a treatment has been demonstrated to be effective when researched by a team independent of the original developers (Godfrin & van Heeringen, 2010). Therefore, this is a priority for future research. The length of follow-up was relatively short in most studies, with the longest being six months. Establishing the maintenance of the effects of CBT-T requires a longer follow-up period, such as 12 months or above as examined in other CBT-ED studies (Calugi, et al., 2017; Fairburn et al., 2015; Le Grange et al., 2022), which would allow researchers to draw conclusions about comparability of CBT-T and CBT-ED in the long-term. Finally, all studies were conducted in the UK and Australia, with predominantly white and female samples, which impacts the generalisability of interpretations and implications of the findings to men and non-Western countries. This is reflective of a wider issue of a lack of research into eating disorder treatment of ethnic minority groups (Rodgers et al., 2018) and men (Weltzin et al., 2005).

Despite these limitations, there are notable strengths of the included studies. Although there are methodological quality issues with case series designs, clinical practice studies have been highlighted to be important to demonstrate the usefulness and applicability of evidence-based therapies for eating disorders (Signorini et al., 2018), given criticisms of controlled treatment effectiveness studies of CBT-ED, such as tight inclusion criteria and interventions being delivered under strict conditions (Turner et al., 2015). This review suggests that, drawing on mostly routine clinical practice effectiveness studies, manualised CBT-T can be effectively implemented in outpatient and community settings, with participants representative of those who seek treatment from healthcare services with various eating disorders, albeit not patients who are underweight. All

studies, with one exception (Rose et al., 2021) used ITT analysis meaning that it is likely that reported effect sizes have not been overestimated and conclusions regarding effectiveness are less biased (McCoy, 2017). Further strengths are that, in addition to statistically significant change in outcomes reported, multiple studies reported on clinically significant change, such as remission and abstinence rates, and all studies made use of similar validated and reliable outcome measures. Furthermore, more than half of the included studies (Moore et al., 2021; Pellizzer et al., 2019a, 2019c; Rose et al., 2021; Wade et al., 2021) stated the power calculations needed in order to assess the probability of finding genuine intervention effects and demonstrated that the study was sufficiently powered based on the estimated effect size.

Strengths and Limitations of the Review

Limitations within this review should be noted. Included studies were limited to peer-reviewed journal articles, and this review and narrative synthesis may have been enriched by including unpublished data. Although there were quality issues with the included studies, it was agreed to include relevant studies because if the low-quality studies were removed this would not have allowed for an evaluation of the current evidence-base of CBT-T, given the limited evidence thus far due to the novelty of the treatment. Data extraction was not fully cross-checked by another reviewer; due to the scope and time limitations of the review this was not possible, though discussion with the co-author was utilised to clarify any issues during the data extraction process.

A strength of the present review was that two reviewers independently conducted screening of all papers at each stage of screening, with good reliability between both reviewers. A quality assessment was conducted and half of the included papers were independently co-assessed by another reviewer with good reliability established. Furthermore, study authors were contacted where relevant data were not reported and effect sizes were calculated by the lead reviewer when not provided in the original papers, to ensure all possible results were included in the synthesis.

Implications for Research and Clinical Practice

This review highlights several key areas for future research. Some of these recommendations align with the previous meta-analysis (Keegan et al., 2022) which noted issues with the samples included with diagnoses, age, and diversity. As stated previously, the majority of the included studies were routine clinical practice studies which meant that they lacked randomisation and a control group, and drew on small, potentially unrepresentative samples from one service. Future RCTs are needed to assess the efficacy and effectiveness of CBT-T compared to current recommended treatments for non-underweight eating disorder presentations, such as standard CBT-ED and GSH (NES, 2014; NICE, 2017), with multiple sites, larger samples and longer follow-up periods. Future research should be conducted by researchers independent from CBT-T developers. Although transdiagnostic samples were included, the majority of participants had BED and BN, rather than those with atypical AN who are not underweight. Studies have demonstrated that there are no significant differences in eating pathology or severity of impairment between those with AN and atypical AN (Coniglio et al., 2017; Eddy et al., 2008; Thomas et al., 2009). Although those with atypical AN may not be underweight and thus appropriate for CBT-T, evidence indicates they share similar psychopathology with typical AN patients, which may potentially impact responsiveness to a briefer treatment. Therefore, future research should examine CBT-T effects with non-underweight, atypical AN presentations. Although some adolescents were included in the samples of the studies, future research should investigate if briefer forms of CBT-ED could be offered to adolescents with non-underweight eating disorders, given CBT-ED is second-line treatment for young people with most eating disorders (NES, 2014; NICE, 2017). Future research on CBT-T should also recruit samples which are more diverse, with a particular focus on minority ethnic groups and those who do not identify as female, to consider if any treatment adaptations are required.

Regarding clinical implications, this review found preliminary support for the potential benefit of CBT-T for patients with non-underweight eating disorders, with comparable results to longer forms of CBT-ED, but delivered in around half the time of standard CBT-ED. Findings from this review support research that most therapies have most benefit around the tenth session for eating disorders (Rose & Waller, 2017), as well as other mental health difficulties (Bell et al., 2017; Delgadillo et al., 2014). Further, CBT-T was delivered mostly by

novice therapists under supervision in the included studies, except for two studies (Moore et al., 2021; Rose et al., 2021), with CBT-T effects comparable to CBT-ED which is delivered by qualified therapists. This supports the role of less specialised therapists under supervision delivering eating disorder treatments, as is the case with other mental health difficulties where novice therapists can achieve treatment effects comparable to experienced therapists (Ost et al., 2012; Zandberg & Wilson, 2013). Offering CBT-T may help services offer a briefer CBT-ED which would be more cost-effective, help with waiting list times for treatments and help treatment access for those with an eating disorder (see Keegan et al., 2022). Clinical implementation should be considered once future research addresses the methodological issues of the current evidence base of CBT-T. It is unclear from the current evidence whether CBT-T could bridge the ‘gap’ in service provision for a treatment which is more intensive than GSH, given the one study included (Wade et al., 2021) which compared GSH to CBT-T had comparable results for both treatments. Evidence for the effectiveness of GSH interventions is reflected in current clinical guidelines for some non-underweight eating disorders, such as BN and BED (NES, 2014; NICE, 2017), while Wilson and Zandberg (2012) argue that GSH can be as effective as more specialist therapies for eating disorders. CBT-T is of higher intensity and requires more resources to deliver than GSH, including purchasing a treatment manual, more sessions, training and supervision. Therefore, further research is needed to evaluate CBT-T against GSH, before services introduce CBT-T within the stepped-care approach to psychological treatment which is ‘above’ GSH and ‘below’ standard-length CBT-ED.

Conclusion

The results of treatment outcomes within the current review, alongside findings from the previous meta-analysis (Keegan et al., 2022), indicate that CBT-T leads to improvements to eating disorder and co-morbid outcomes for people with non-underweight eating disorders within ten sessions. Additionally, current review findings indicate that positive improvements were found within four sessions, and gains were sustained at follow-up for a range of outcomes. Effects are mostly comparable to standard CBT-ED, but delivered across fewer sessions, addressing the research recommendation by NICE (2017) for evaluating briefer psychological treatments for eating disorders. Future research is required to strengthen the evidence base of initial positive findings, with higher quality studies addressing the current methodological concerns highlighted in this review. Limitations with the available data due to the lack of high-quality evidence means a recommendation to support the implementation of CBT-T in eating disorder services cannot be made at present, though preliminary findings appear promising.

Other Information

The review protocol was registered on Prospero (reference number CRD42021286870) and can be accessed via the Prospero website. Data sharing is not applicable to this review as no new data were created or analysed.

Statements and Declarations

No funding was received for this paper. There are no competing interests of review authors.

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Original Research Article

“It’s a lot deeper than the way it looks”: An Interpretative Phenomenological Analysis of Body Image for Men with Eating Disorders

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Highlights

- The study investigated how men with diagnosed eating disorders experienced body image
- Body image was experienced intrapersonally, interpersonally and systemically
- The findings offer new insights to how men with eating disorders experience body image, with considerations for research and clinical practice

Abstract

Objective: Men represent a proportion of those with eating disorders yet are neglected in the existing literature. One area with limited research is how men with eating disorders experience pathological body image concerns. This study investigated how men with eating disorders experience body image, and how they make sense of their experiences.

Method: Ten male participants with diagnosed eating disorders were recruited from four National Health Service specialist adult eating disorder services. Semi-structured interviews were conducted to explore how participants experience body image. Interview transcript data was analysed with Interpretative Phenomenological Analysis (Smith et al., 2009) to understand their lived experience of body image individually and how this was shared across participants.

Results: Analysis identified four superordinate themes: ‘Focus on Self’, ‘Focus on Others’, ‘Systemic Influences and Pressures’ and ‘Attaining Body Goals and Controlling Body Image’.

Discussion: Findings indicated that body image for men with eating disorders is complex and multi-faceted, and is experienced intrapersonally, interpersonally and systemically. This study adds to the limited accounts of body image among men with eating disorders, with recommendations made for future research, as well as for clinicians to incorporate the nuances of men’s experiences of body image into clinical practice.

Keywords: Eating disorders, body image, men, interpretative phenomenological analysis, qualitative research

Introduction

Eating disorders are a group of mental health conditions characterised by a desire to lose weight, an extreme fear of weight gain and over-valuation of body image (Morris & Anderson, 2021). People with eating disorders have a higher risk of mortality and a reduced quality of life (van Hoeken & Hoek, 2020). Eating disorders have a burdening impact for those affected (Levine, 2012) and their carers (Raenker et al., 2013), and economic costs are high for health services and society (Kessler et al., 2009; Samnaliev et al., 2015; Streatfeild et al., 2021). Eating disorders often have a long-term and chronic presentation (Steinhausen, 2002; Ward et al., 2019) and high comorbidities with other mental health difficulties (Ulfvebrand et al., 2015), such as mood disorders (Thiebaut et al., 2019), anxiety disorders (Sander et al., 2021) and post-traumatic stress disorder (Brewerton et al., 2020; Rijkers et al., 2019). Despite their severity, many individuals with eating disorders do not seek support from services (Bohrer et al., 2017; Hart et al., 2011). Of those who do seek treatment, a small proportion receive evidence-based eating disorder treatment (Mond et al., 2007; Von Ranson et al., 2013; Waller, 2016) and recovery rates are considered optimistic but slow (Hay, 2020), with lower rates for those with anorexia nervosa in comparison to bulimia nervosa (Eddy et al., 2017). Funding for eating disorder research is limited in comparison to other mental health difficulties (Woelbert et al., 2021). The marginalisation of this research has been seen as consequential to the associated stigma with eating disorders among mental health professionals and researchers (Solmi et al., 2021). Therefore, further research is required to understand the nature and treatments of eating disorders to address the marginalisation existing in the mental health literature.

Men with eating disorders make up an estimated 10-25% of affected individuals (Hudson et al., 2007; Sweeting et al., 2015; Weltzin et al., 2005), with lifetime prevalence rates estimated to be around 2.2% for men compared to 8.4% for women (Galmiche et al., 2019). Despite this proportion, eating disorders are commonly viewed as a female issue, as cultural stereotypes portray them in such a way (Sweeting et al., 2015; Till, 2011; Wooldridge & Lytle, 2012). Men may not prioritise their eating difficulties and may delay seeking help because of the perceived stigma associated with having an eating disorder (Räsänen & Hunt, 2014), which is a significant barrier to receiving treatment (Griffiths et al., 2015). Even when men seek treatment, they are more likely to receive a misdiagnosis, such as depression, and less likely to receive an eating disorder diagnosis than women, despite presenting with similar symptoms (Currin et al., 2007). Eating disorders in men are therefore considered to be frequently under-diagnosed, under-treated, and misunderstood (Strother et al., 2012). Less than 1% of empirical studies pertaining to eating disorders have investigated male presentations (Murray et al., 2016), leading to an incomplete understanding of eating disorders among men (Mitchison & Mond, 2015; Murray et al., 2017), and the recommendation for future research to focus on men's experiences (Scottish Intercollegiate Guidelines Network, 2022).

Research has identified several subtle differences in eating disorder presentations between men and women, though evidence is sparse. Existing literature indicates a greater prevalence of physical activity and compulsive exercise among men as compensatory behaviours (Lewinsohn et al., 2002; Murray et al., 2014; Strober et al., 2006), which can have an emotion regulation function (Murray et al., 2014). Excessive use of laxatives is less common in men than women (Button et al., 2008), and men typically report less emotional distress than women following a binge eating episode (DiGiacchino et al., 1999; Lewinsohn et al., 2002). Although men are usually less concerned about weight than women, they demonstrate equal concerns about body shape (Strober et al., 2006). Men are also more likely than women to experience comorbidities with other mental health difficulties (Carlat et al., 1997, Striegel-Moore et al., 1999), although more recent evidence suggests this gender difference is small (Ulfvebrand et al., 2015). Men have a later onset of eating disorders than women (Gueguen et al., 2012; Hoek, 2006; Hudson et al., 2007). Clinicians working with men have identified male-specific eating disorder features, such as a focus on fitness, and a need to adapt treatment for men, with some reporting not feeling confident to make these adaptations (Kinnaired et al., 2018). These findings highlight the need for additional research to examine clinical presentations of eating disorders among men in detail.

Previous research suggests that there is a notable gender difference with body and shape concerns among individuals with eating disorders, with men having less of a desire for thinness than women (Darcy et al., 2012; Joiner et al., 2000; Stanford & Lemberg, 2012). Men with anorexia nervosa have body shape concerns related to

muscularity (Murray et al., 2012), and men are more likely to have a preference to lose fat and develop muscle than women with eating disorders (Núñez-Navarro et al., 2012). However, research is limited and few studies have investigated men's body image concerns in clinical samples. Although previous research provides some clinical evidence that men with eating disorders are less concerned with thinness and more concerned with muscularity, there is little detailed understanding of how men experience pathological body concerns.

Several studies with non-clinical samples have established that in the general population men prefer a more muscular body whereas women prefer a thinner body (Grossbard et al., 2009; Jones & Crawford, 2005; Murray & Touyz, 2012; Ridgeway & Tylka, 2005; Tiggemann et al., 2008). However, body ideals shift according to sociocultural context, with current Western ideals spotlighting a toned and slim body (Aniulis et al., 2021), and a 'slim-thick' body for women (McComb & Mills, 2022; Overstreet et al., 2010; Webb et al., 2013). For men, Western ideals emphasise a muscular body (Edwards et al., 2014; Thornborrow et al., 2020). Evidence suggests that men experience an emphasis of muscular and lean ideals on social media (Holland & Tiggemann, 2016), with such content potentially detrimental to men's body image (Gültzow et al., 2020; Tiggemann & Anderberg, 2020). High levels of body dissatisfaction are associated with an increased risk of developing eating disorders in men and women (Dakanalis et al., 2015; Olivardia et al., 2004; O'Gorman et al., 2020); in particular, body image concerns related to muscularity have been found to predict increased disordered eating in men (Calzo et al., 2016; Compte et al., 2015; Hoffmann & Warschburger, 2017). Disordered eating behaviours with a focus on muscularity include severe dietary restriction of non-protein foods, excessive protein consumption, continued eating despite feeling full and use of appearance-enhancing substances (Mosley, 2009; Murray et al., 2012). Murray and colleagues (2016) argue that these behaviours are distinct from traditional eating disorder behaviours since they aim to build greater musculature or muscle leanness. Furthermore, they note that men with these concerns experience challenges with diagnosis and treatment, given that diagnostic classifications focus on thinness-oriented concerns and behaviours. This may marginalise men with muscularity-oriented eating disorder behaviours, maintain views that eating disorders among men are rare and contribute to preventing men accessing eating disorder treatment.

Although previous research provides useful findings for body image concerns and disordered eating in men, this mostly relates to non-clinical samples. There is limited research focusing on how specific aspects of body image impact men with diagnosed eating disorders when body and shape concerns become pathological; that is, when there are disturbances in the experience of body shape and weight, as reflected in diagnostic criteria for anorexia nervosa and bulimia nervosa (American Psychological Association, 2013), and body shape and control of it, as well as weight, are central to a person's self-evaluation as part of eating disorder psychopathology (Fairburn et al., 2003). This differs from body dissatisfaction, which is relatively common in the general population, impacting around 10-30% of men and 20-40% of women (Frederick et al., 2012). Body image is considered poorly understood and more complex for men with eating disorders (Darcy & Lin, 2012), and emerging evidence suggests that men and women with eating disorders experience body image differently. Therefore, understanding how pathological concerns with body image are experienced by men with eating disorders is an important focus for research to ensure that clinical practices recognise and respond appropriately to men's experiences.

Qualitative research exploring men's experiences of body image in the context of eating disorders could provide valuable insights into clinical presentations (Murray et al., 2017), given currently limited understandings. While a number of published qualitative studies have examined different aspects of men's experiences of eating disorders (for a review of qualitative studies on men with eating disorders, see Coopey & Johnson, 2022), such as seeking and receiving treatment (Dearden & Mulgrew, 2013; De Beer & Wren, 2012; Räisänen & Hunt, 2014; Robinson et al., 2013; Thapliyal et al., 2020), recovery (Pettersen et al., 2016), differences in symptoms between males and females (Arnow et al., 2017) and masculinity as part of the eating disorder experience (Drummond, 2002), none of these studies specifically examined body image among men. Findings have highlighted men experiencing tension between being thin versus muscular (Arnow et al., 2017), a preoccupation with body size and disgust towards their personal appearance impacting masculine identity (Drummond, 2002), and pursuing fitness links to a physical identity of being slim and muscular (De Beer & Wren, 2012). Nevertheless, the depth

of understanding of men's experiences with body image is limited, indicating that further qualitative research is needed to explore the meanings and perceptions of body image among men with eating disorders.

To the best of the researchers' knowledge, no qualitative studies have exclusively focused on exploring how men with eating disorders experience body image and concerns related to their bodies. A qualitative approach is appropriate as it allows for in-depth and thorough understandings of complex and under-researched phenomena (Korstjens & Moser, 2017), as is the case for body image among men with diagnosed eating disorders. Qualitative research is concerned with rich descriptions and capturing the individual person's perspective (Denzin & Lincoln, 2000), allowing for detailed data to be gathered to gain a greater understanding of the underlying processes and meanings of body image among men with eating disorders.

The aim of this study was to investigate the experiences of body image among men with eating disorders, with a focus on obtaining detailed insights into their perceptions and meanings of their experience of body image. The research questions were:

1. How do men with eating disorders experience body image?
2. How do men with eating disorders make sense of their experiences?

Method

Design

A qualitative approach was chosen to address the aims of the study. Interpretative Phenomenological Analysis (IPA, Smith & Osborn, 2008) was used to guide the study design, data collection and analysis. IPA was deemed appropriate for the research question, given it aims to understand participants' lived experience and how they make sense of their experiences (Smith et al., 2009). IPA is grounded on the principles of phenomenology, idiography and hermeneutics. In line with these principles, this study aimed to understand the experience (phenomenology) of men with an eating disorder (idiography) and how they make sense of body image as part of their experience (hermeneutics). While IPA focuses on idiography, it seeks to understand detailed accounts of patterned meaning across participants with shared experiences (Smith et al., 2009). Being 'double hermeneutic' is key within IPA, where it is assumed that the conclusions made reflect the researcher's interpretation of each participant's retelling and understanding of their experience (Smith et al., 2009). Semi-structured interviews were employed to allow for detailed, personal and contextualised accounts of participants' lived experience (Smith et al., 2009).

Participants

Participants were men with a diagnosed eating disorder under the care of a National Health Service (NHS) specialist adult outpatient eating disorder service. The inclusion criteria specified participants be: English speakers, above the age of 18 years, cis-men who identify their gender as male, diagnosed with an eating disorder (anorexia nervosa, bulimia nervosa, binge eating disorder or other specified feeding and eating disorder), awaiting or engaging in treatment and able to provide informed consent. The exclusion criteria were patients: diagnosed with avoidant restrictive food intake disorder, identified by clinicians as physically and/or psychologically unstable or discharged from services. Inclusion and exclusion criteria were developed through considering both interpretative concerns (the degree of similarity or variation that can be contained in the analysis of the phenomenon) and pragmatic concerns (such as the ease or difficulty of contacting potential participants, relative to the rarity of the phenomenon). The services from which participants were recruited had small numbers of men on their caseloads, which is reflective of the small number of men accessing eating disorder services (with men representing 25% of cases in UK community samples; Sweeting et al., 2015) and perhaps systemic issues of restrictions to accessing specialist NHS treatment for those with eating disorders, such as only low weight individuals being able to access specialist treatment (Brown et al., 2018). Homogeneity is central to answering the research question and to the chosen analytic approach in order for divergence and convergence to be properly examined (Smith et al., 2009). As such, the study recruited a homogenous sample of men (cis-men with a male gender identity) with eating disorders sharing similar psychopathology (Fairburn et al., 2003). This accounts for

interpretative concerns, whilst also allowing men with different diagnoses to be sampled for pragmatic reasons. This allowed for enough variation to be contained within the analysis of the phenomenon and ensured a sufficient sample could be obtained by recruiting men with various eating disorder diagnoses.

As is common in qualitative research and in line with IPA, purposive sampling was used to recruit a defined group with relevance and significance to the research question (Etikan et al., 2016; Smith et al., 2009). The type of purposive sampling would be considered ‘criterion’, as the lead researcher identified and selected cases from specialist eating disorder services that met a predetermined criterion of importance (Palinkas et al., 2015), with clinician support.

Procedure

Recruitment took place in four specialist NHS services in Scotland which provide outpatient treatment to adults with eating disorders. The lead researcher presented the study to clinicians at team meetings for three services and a consultant clinical psychologist discussed the study with their team in the fourth service. Clinicians were asked to consider patients on their caseloads who met the inclusion criteria and to approach them to discuss the study with the information sheet (see Appendix 2). Potential participants could either consent for their clinician to pass their contact details to the researcher (see Appendix 3) or they could contact the researcher directly from details provided on the information sheet. The researcher discussed the study with potential participants by telephone or email and gave them the opportunity to ask further questions, before they decided whether they wished to participate. For those who were interested in participating, informed consent was obtained (see Appendix 4) and interviews were arranged in which medium the participant preferred (face-to-face, telephone or video call).

Of the ten participants who consented to participating, all attended a semi-structured interview conducted by the lead researcher – two face-to-face at NHS clinics, three by telephone call and five by video call. Participants were asked about their experiences of body image and how this related to their experience of having an eating disorder. A semi-structured interview schedule (see Appendix 5) was developed considering IPA guidelines (Smith et al., 2009), themes in existing literature, the research question and consultation with three ‘experts by experience’. Experts by experience were men with lived experience of eating disorders who responded to a social media advert placed by the University of Edinburgh’s Eating Disorders and Behaviours Research Group’s Twitter account. The interview questions were developed to be expansive and open. Participants were promoted to discuss their experiences at length, and they were prompted when necessary to move from the generic to the specific and the descriptive to the affective. Each interview started with an unrecorded informal discussion to help build rapport, ease any anxiety, establish a plan for the interview and confirm participants’ consent to record. At the end of the interview, participants were reminded of the study aims, had the opportunity to ask the researcher any questions and were thanked for their participation. Participants also completed a demographic questionnaire (see Appendix 6). The length of interviews ranged from 51 minutes to 93 minutes.

After the interview, the researcher completed a reflexive diary entry (see Appendix 7). Interviews were digitally recorded on an encrypted dictation device and/or via secure Microsoft Teams (dependent on health board permissions). Recordings were uploaded to a secure NHS server. All interviews were transcribed verbatim and anonymised by the lead researcher. Transcribing as soon after the interview as possible enabled the researcher to reflect on the interviewing style and adapt as needed. Pseudonyms are used throughout for participants’ anonymity. Interviews took place between May and December 2022.

Ethics

Ethical approval was granted by the West of Scotland Research Ethics Committee (reference: 21/WS/0125) via the Integrated Research Application System (reference: 301916). The study was logged with the School of Health in Social Science Ethics Committee and The University of Edinburgh acted as the Sponsor for the study - see Appendix 8-11 for approval documents. Ethical considerations took into account the possibility of participants experiencing distress during the interview. The information sheet informed participants about the topics being covered, their right to withdraw was highlighted and the option to pause the interview at any point was emphasised. Throughout the interview, the researcher asked participants how they found the process. Participants

consented to the researcher breaching confidentiality if there were concerns regarding mental health, as well as physical health, to discuss with their clinician. However, for all participants, there were no concerns.

Data Analysis

Qualitative Approach

Although IPA seemed most appropriate at the outset, different qualitative approaches were considered for analysis, including grounded theory, discourse analysis and thematic analysis. Grounded theory may be useful to develop a theoretical understanding of body image among men with eating disorders which can be generalised, given it aims to develop a theory grounded in data collected and an explanation to address the accounts of participants (Pidgeon & Henwood, 1997; Smith et al., 2009). However, this was not an aim of the current study and it may dilute the focus on lived experience as required by the research question. Discourse analysis aims to understand the use of language and how it functions in specific contexts (Smith et al., 2009). While gaining insights into dominant discourses and how language is used around this topic may be interesting, it does not fit with the study's aims. Discourse analysis would not allow for a sufficiently detailed and experiential account to be gathered and it would move the focus from the individual and their meaning-making. Thematic analysis is used to study patterned meaning across participants by developing themes across a data set (Braun & Clarke, 2012). While this would address shared experiences, the idiographic aim of the research question to gather accounts of personal experience would not be met as well as in IPA, given IPA focuses on both individual and shared experience. Given the above concerns with alternative qualitative approaches, IPA remained as the most appropriate approach to meet the aims of the study.

Data Analysis Process

Data was analysed following the inductive and iterative 'cycle' described by Smith and colleagues (2009) involving a six-stepped procedure: reading and re-reading transcripts, initial noting, developing emergent themes, searching for connections across emergent themes, moving to the next case and looking for patterns across cases – see Appendix 12 for a sample of analysis. Due to the relatively large sample, Smith and colleagues (2009) suggest measuring recurrence across cases is important to help determine the key themes at a group level. The status of 'recurrent' was defined by a subordinate theme being present in half of the interviews. Though there is no rule for this, counting recurrence can enhance the validity of findings from a large sample (Smith et al., 2009). Given that the researcher facilitates the sense-making of the phenomenon in IPA (Smith et al., 2009), reflexivity is of utmost importance; that is, the process in which researchers evaluate and develop explicit awareness of themselves during the research process (Shaw, 2010). Relevant to the present study, the lead researcher considered their prior experiences of working with those with eating disorders as an assistant and trainee clinical psychologist, and how these experiences may have influenced existing ideas of what it means to have an eating disorder. The researcher has an interest in how men experience eating disorders, reflected in the decision to investigate male eating disorder experiences. The researcher has their own experience of being male and what this means to them, as well as their own relationship with eating and body image. The researcher's potential assumptions, experiences and biases may have influenced the design, analysis and reporting of the present study. For example, prior understandings of the phenomenon could both facilitate and neglect aspects of the research process, such as decisions to expand or not on experiences shared in the interview, or how certain experiences were understood during analysis. The researcher took a reflexive stance throughout the research process in which a reflexive diary was maintained, as recommended by Newton and colleagues (2012), particularly attending to evolving perceptions, methodological decision points and personal introspections (Lincoln & Guba, 1982). Indeed, IPA recommends the researcher use themselves and their thoughts, feelings and experiences as a 'touchstone' (Smith et al., 2009). The lead researcher used supervision with co-authors to ensure the analytic process was adhered to and a credible account was produced by sharing and discussing examples of initial notes, themes generated and related transcript quotations.

Ensuring Quality

In line with good practice in qualitative research (Yardley, 2000, 2008), the quality of qualitative research can be demonstrated, enhanced and evaluated with the following principles: sensitivity to context, commitment and rigour, coherence and transparency, and impact and importance.

Sensitivity to Context

It is recommended that the context of theory and previous research be made clear (see Introduction), as well as the social context of the relationship between participant and researcher (Yardley, 2015). The study design accounted for this by utilising a questionnaire to gather demographic and background information to place the participants in context. During analysis, the researcher reflected on the relationship with each participant and on the interactional nature of the interview; for example, reflecting on how rapport was developed and power differentials played out. This was also considered as part of initial noting and within the reflexive diary. The researcher was aware of the interactional nature of the interview process, in which empathy was shown, participants were put at ease and any power issues were managed. Awareness of the interview process is important, given IPA can only be as good as the data it derives from (Smith et al., 2009). Supervision with co-authors was utilised throughout interviews and analysis to reflect on these issues. IPA allowed for sensitivity to context as the approach is centred on close engagement with the idiographic. Smith and colleagues (2009) argue a good IPA study demonstrates sensitivity to data with evidence to the raw data, including several verbatim extracts from participants to support arguments being made and allow the reader to check interpretations. This principle was followed in the presentation of findings.

Commitment and Rigour

Commitment and rigour refers to sufficiently detailing the analysis to ensure that the validity of results can be evidenced (Yardley, 2000). It was designed for the study to interview eight to ten participants to collect enough data to ensure a sufficient analysis was achieved, as recommended for professional doctoral IPA studies (Smith et al., 2009; Turpin et al., 1997), and ten participants were interviewed. The lead researcher conducted the data analysis, but analysis was discussed, challenged and revised with co-authors throughout the analytic process. Co-authors also provided insights around the coherence, credibility and structure of the analysis. In line with good practice, a credibility check was conducted in which a ‘mini-audit’ (Smith et al., 2009) was completed by a co-author (EN) where the analysis of the first participant’s transcript was checked for the validity of annotations and approach employed. As a result, the credibility of analysis was validated, potential additional themes were identified and feedback was given on the development of emergent themes. This informed subsequent analyses and was discussed in supervision. A further audit was conducted by a researcher independent of the research team (MZ) on the analysis of another participant’s data, randomly selected by an online number generator. This enabled assessment of credibility of findings from someone outside the research team and eating disorders field. The credibility of analysis was again supported and some superordinate themes were re-phrased. The analysis aimed to be thoroughly and systematically conducted, with sufficient engagement with the particular and the idiographic, in line with IPA (Smith et al., 2009). Rigour was addressed by the sample being reasonably homogenous, and interview quality was ensured through reviewing each interview when transcribing and adapting interviewing style as required. For analysis, given the large sample size, themes were judiciously selected to allow for appropriate illustrations for each theme, and each theme was supported with quotes from several participants and accounts were drawn on even-handedly. All participants consented to be sent a summary of findings, along with an opportunity to offer feedback to enhance validity. This respondent validation compares the researcher’s account with the participants to establish credibility (Lincoln & Guba, 1985) and assess quality (Mays & Pope, 2000).

Coherence and Transparency

Coherence and transparency are the extent that the interpretation is clearly derived from the data and all relevant research processes are disclosed (Meyrick, 2006). Transparency during the data analysis was achieved by having a ‘transparent pathway’ (Meyrick, 2006) which demonstrates rigour by having an audit trail to evidence the process of developing transcript data to the final write-up, also recommended by IPA authors (Smith et al., 2009) – see Appendix 13 for an overview of the audit trail. As discussed, IPA methodology prioritises reflexivity. The lead researcher took a reflexive stance at all stages of the study to ensure transparency, for example, noting if the researcher’s experiences influenced the design, collection, analysis or interpretation of findings.

Impact and Importance

Impact and importance refer to the contribution of current findings to theoretical knowledge and practice (Yardley, 2008). This was considered when relating the interpretation of findings to existing literature and theory and clinical

practice. The study aimed to contribute to the literature by providing an in-depth understanding of body image among men with eating disorders.

Results

Contextualising the Sample

Demographic information was collected to help place the participants in context. See Table 1 for demographic information.

Table 1. Participant self-reported demographic information

Participant	Age	Ethnicity	Gender	Sexual Orientation	Marital Status	Education	Employment Status	Eating Disorder Diagnosis
1. 'Charlie'	30-39	White	Male	Bisexual	Married	Undergraduate	Employed	BN
2. 'Russell'	40-49	White	Male	Heterosexual	Single	College	Employed	Unsure
3. 'Morgan'	21-29	White	Male	Gay	Single	Postgraduate	Employed	BED
4. 'Tom'	21-29	White	Male	Heterosexual	Unmarried	College	Long-term sick	OSFED
5. 'Murray'	18-20	White	Male	Gay	Single	College	Full-time student	AN
6. 'Mason'	18-20	White	Male	Heterosexual	Single	High school	Unemployed	OSFED
7. 'Jacob'	18-20	Mixed race	Male	Heterosexual	Single	College	Employed	Atypical AN
8. 'Harry'	18-20	White	Male	Bisexual	Single	College	Full-time student	BN
9. 'Neil'	50-59	White	Male	Heterosexual	Divorced	College	Employed	BN
10. 'Ed'	50-59	White	Male	Heterosexual	Married	Undergraduate	Employed	BED

Note: Anorexia nervosa (AN), bulimia nervosa (BN), binge eating disorder (BED) and other specific feeding or eating disorder (OSFED).

Qualitative Interview Themes

Analysis produced four superordinate themes: 1) Focus on Self, 2) Focus on Others, 3) Systemic Influences and Pressures and 4) Attaining Body Goals and Controlling Body Image. Each theme was divided further into subordinate themes as displayed in Table 2, together with the frequency of occurrence for each theme by participants.

Table 2. Summary of superordinate and subordinate themes with participant contributions to subordinate themes

Superordinate Themes	Subordinate Themes	Participant Contributions
Focus on Self	A critical perception of one's body	1, 2, 3, 4, 5, 6, 7, 8, 9 and 10
	Focusing on a body goal	1, 2, 3, 5, 6, 8 and 9
	The body tied to one's self-worth	2, 3, 5, 6, 7, 8 and 9
	An 'intense' preoccupation with one's body	1, 2, 4, 5, 7 and 8
Focus on Others	Body image based on others' perception; how others see one's body	1, 4, 5, 7, 9 and 10
	The body impacting interpersonal acceptance and inclusion	1, 2, 3, 5, 7, 8 and 9
	Internalisation of others' negative comments; creating a sense of fault with one's body	1, 2, 4, 7, 8 and 9
	Selectively attending to and comparing the bodies of others	1, 2, 3, 6, 7 and 9
Systemic Influences and Pressures	Representations of bodies in the media	1, 2, 3, 4, 6, 7, 8 and 9
	Socio-cultural expectations of bodies	1, 3, 4, 5 and 8
Attaining Body Goals and Controlling Body Image	Controlling the body through eating	1, 2, 3, 4, 5, 6, 7, 8, 9 and 10
	'Compulsive', obsessive and 'excessive' exercise to control the body	2, 4, 5, 6, 7, 8 and 9
	Negative impact of efforts to control one's body	2, 3, 6, 8, 9 and 10

The following narrative is organised according to Smith's (2011) guidelines that for larger samples, over eight participants, extracts from at least three participants should be used per theme. Themes are presented with detail, alongside extracts which aim to capture the substance of the theme, considering convergence and divergence between participants.

Superordinate Theme One: Focus on Self

The first superordinate theme captures how the participants experienced body image with a specific focus on themselves and their inner world, and different meanings attached to their bodies. This included participants' own perceptions of their bodies, as well as the mental and emotional experience of what their bodies meant to them.

Subordinate Theme One – A Critical Perception of One's Body

All participants described a negative and critical perception of their bodies. It was felt "*everyone is their own worst critic*" (Charlie), with a critical internal dialogue towards the self and the body, such as participants reflecting "*I'm quite critical of myself*" (Mason) and "*there's a bit of self-loathing in there*" (Neil). This is captured intensely by Tom:

"You're your own worst critic. Anytime that I look in a mirror, I look at something and it could be anything and be like, 'ohh you've got this wrong. You've got that wrong'. Um, I hate looking in the mirror, it makes me feel like I resent my body. But at the same time... I'm trying to change how I look, but I'm going the wrong way about it" – Tom

Tom's account suggests he is highly critical towards his body, with his repetition of "wrong", following scrutinising and focusing on perceived defects with his body. His use of "*I resent my body*" indicates the strong negative emotional reaction to his body. Tom alludes to attempting to address his perception and emotions around his body with his eating disorder, but he acknowledges this is problematic, with use of "*I'm going the wrong way about it*". A negative perception of and emotional response to the body is similarly experienced by Russell, who focused on fatness:

"I think just... I don't like fat (laughs)... I don't like a huge amount of excess weight and I find that really kind of repulsive (laughs). I know that sounds terrible... I used to look at myself in the mirror and if anything was kind of hanging, I'd think 'this is disgusting'" – Russell

Russell's internal dialogue when he perceives fat on his body is fatphobic towards himself, which he acknowledges as problematic. Nevertheless, his emotions are strongly negative, with his use of powerful descriptors, such as "*repulsive*" and "*disgusting*". His laughter when describing this represents some discordance between his language and manner, suggesting humour possibly being a coping mechanism to minimise or detach from distressing emotions and thoughts.

Others experienced difficulties with their perception of their bodies, some perceiving it negatively and some experiencing a distorted perception of the body. Participants recognised that their perceptions were not always reliable or accurate:

"Uh, so like, I mean, whenever I look in the mirror, it's like different (laughs). So yeah, it's... I don't know. Uh, yeah, it's... Yeah, I, I don't... I don't like it. Uh, but like it changes. But I'm never, I'm never like... I don't know, happy with it... Umm, it's... just sometimes I look in the mirror and I'll see myself as thin. And then sometimes I still see myself as like fat, so it just kind of alternates... You don't trust what you see and so you listen to that critical voice" – Murray

Murray's confusion with his perception of his body is illustrated by his repetition of "*I don't know*", suggesting an uncertainty of his own perception; from perceiving his body as "*fat*" at times, but also as "*thin*". Even though his perception changes, the emotional relationship with his body remains negative, and because of the mistrust, he relies on further critical self-talk towards his body. A distorted body perception is also shared by Jacob:

"I know with myself, erm, the biggest, biggest part that I've, I've always had was that, um, I... I see myself in the mirror and I always get told that it's not what, it's not really what I see. It's not really what's the true form of yourself. I... I look at myself (sighs)... I always see myself as bigger than everybody else" – Jacob

Jacob's account touches on how he views his body as larger than other people, and how others in his life contrast his perception, indicating his body perception is inaccurate. Despite others assuring him that his body is not how he perceives it, this perception does not change. Jacob shared negative perceptions of being fat and a dislike for his body to be 'big' throughout the interview. He acknowledges that he is critical towards his body due to his awareness that his perception is not accurate and his sigh as he spoke about this indicates how frustrating this is for him. The pervasive nature of critically perceiving one's body and the impact of this, such as hurtful self-talk and unreliable perception of their body, is evident throughout the sample.

Subordinate Theme Two – Focusing on a Body Goal

The majority of participants shared desires and goals for their bodies. Many experienced distress if their body was incongruent with their goals. Three participants reflected on this, two similarly wanting "*to be as thin as possible*" (Charlie) and to "*be as thin as possible... like, the most bones showing*" (Murray). Harry explained what a goal for thinness meant to him:

"I always had this weird sort of image in my head of... you know, you're somehow sort of... slim, but not to the point where it was like you were a toothpick, you know?... I would always sort of find... a part of myself, whether it be sort of like 'ohh yeah no my lower back is too, is too thick'" – Harry

Harry's account indicates a want to be slim, though not too thin, with his use of the "toothpick" metaphor. He illudes to an unhelpful cycle where he would look for perceived defects with his body and if his body did not meet his thinness goal, this would be distressing and his fixation on his body would increase.

Rather than striving for thinness, four participants shared a goal for their bodies to be "muscular" (Morgan), with a focus "all about fitness and strength" (Russell) and "on the vascularity" (Neil). Mason's experience encapsulated his intense drive to achieve muscularity:

"Erm, so that's what I'd always work towards... is being really lean and strong, but that's really difficult to achieve so that's why it comes with the high standards... I thought 'right, I'm really going to go for this fitness thing'. I was going to do as much as I can for it. Er, so that made it a lot worse I think. That was my new goal... perfect health, perfect fitness, you know" – Mason

Mason acknowledges that his perfectionistic goal for leanness and muscularity requires high standards and is hard to achieve. Reaching his 'perfect' body goal required him acting towards this goal "as much" as he could. Mason recognises in hindsight this was problematic for his eating disorder, with his use of "that made it a lot worse". In Murray's case, his goals for his body were distinct between himself and the eating disorder:

"So there is the anorexic ideal and then there's the kind of, I guess the more authentic ideal... so just like the anorexic, so there's a certain weight that like I want to like get down to and I've had that number in my head for years and years and years. Um, it's just kind of that, but like that's just kind of the anorexia... it's difficult because like you... yeah, there's a huge conflict because with the... kind of healthy ideal or possibly like the Murray ideal, um, is you have... that has a lot of fear attached to it. Like that's why like I like can't talk about it because I'm just like so like scared of it... And I think the thing about anorexia and body image is it's a lot deeper than the way that it just looks" – Murray

Murray conceptualises a difference between himself and anorexia, and how there are two body goals for himself and anorexia. He feels that moving away from anorexia's body goal towards his own goal, to have a healthy body, is associated with fear. He describes experiencing a sense of "conflict" with body goals between the self and anorexia. His use of "authentic" ideal illustrates how the goal for thinness, anorexia's goal, is perhaps inauthentic to what he would like for his body as he recovers from anorexia. His complicated and difficult experience with body image and anorexia due to conflicting goals is encapsulated with his use of "a lot deeper" and suggests he found talking about his own goal for his body difficult during the interview.

Subordinate Theme Three – The Body Tied to One's Self-esteem

The third subordinate theme encapsulates the majority of participants' experiences with their body image being key to their self-esteem. This was highlighted as a varying emotional experience, positively and negatively impacting the self, evidenced in part by Harry:

"...if you think of like a pie chart of how people would sort of think about... their own self, like, body image would take up some sort of part of that. And overtime, that sort of body image section of the pie chart sort of slowly and slowly got more eaten up by sort of actual... erm, sort of control... And then that will mean 'OK, so how do I make myself feel good about my body or how do I make myself feel less terrible about my body? If I have some sort of control over it, well I'll binge and purge' ... the pie chart just started to grow and grow and grow because the more control I felt I had over my weight... was the more... good I was able to feel about myself" – Harry

Evident in Harry's description is that his body image is increasingly significant in how he determines his self-worth. Harry uses a pie chart analogy to represent ways of determining his self-esteem and how his body, then control and his weight, has become the dominant way of judging his self-worth. Harry reflects on how controlling his body made him feel good about himself and "less terrible" about this body. His use of "myself" rather than solely referencing his body illustrates how controlling his body influenced his overall sense of self-worth, not just body image. This pie chart analogy is common in cognitive behavioural therapy for eating disorders and may be how Harry's eating disorder and self-esteem were conceptualised during treatment, impacting how he

made sense of his experience. Similarly, Murray reflected that “*body image is kind of what I’m like worth or who like who I am*”, but elaborated on the positive impact controlling his body had on his sense of self-worth:

“It’s, it’s... you find achievement in it. You find success in it. You finally feel like you’re good enough and if there’s progress... quite often like there is. Like with losing weight, like it’s... I can lose weight quite quickly. So I got like really hooked on to that... um... and so that kind of... so there’s a lot of like achievement and just trying to be like... And then there’s also the kind of thing of being like the best anorexic” – Murray

Like Harry, Murray’s experience echoes positive ways controlling the body, as well as weight, can influence self-esteem. Losing weight seems to boost his self-esteem, particularly when having an overall negative view of himself, as suggested with “*feel like you’re good enough*” when he was able to control his weight and body. Engaging with disordered eating behaviours to influence his self-esteem is described in an almost addictive way, with use of “*really hooked*”, in relation to the sense of accomplishment he feels. Beyond the body to his self-esteem, Murray’s comment on a drive to be “*the best anorexic*” is suggestive of how important an anorexic identity feels to him, and how motivated he remains to embody it. Mason also experienced his body in this way, as “*the main driver of my self-esteem and how I would feel about myself*”, but he acknowledged the problematic nature of judging himself based on his body:

“It was... it was difficult because naturally not being able to look perfect would always mean that my self-esteem would never be great. I’d always be working towards improving it. It really, it really drains your confidence when you don’t like how you look. It makes you less sociable, just not yourself as much” – Mason

In Mason’s account the impossibility of his body meeting his standards of perfection resulted in his self-esteem being poor. His continued attempts to improve his body to feel good about himself negatively impacted his social life and meant he did not feel like himself. He reflected on these attempts as having been unsuccessful and in hindsight realising judging himself according to “*perfect*” body image is problematic. Mason found moving away from his body as the main way to evaluate his self-esteem to be helpful:

“I’d say I’ve found other ways to measure my self-esteem, er, like certain skills – like I’m really into music, I like playing instruments, guitar... Er, you know, my academic capabilities, I think of myself as quite intelligent, so I try to let that make me feel a bit better about myself” – Mason

Moving away from a focus on his body to other aspects of his life to evaluate his self-esteem, such as music and academic work, seems to have encouraged an emotional shift to Mason feeling more positive about himself. Again, this illustrates how body image being tied to his self-esteem felt problematic to him.

Subordinate Theme Four – An ‘Intense’ Preoccupation with One’s Body

Six participants spoke about their body image being a preoccupying and all-consuming experience. Jacob spoke of the cognitive preoccupation with his body image:

“It’s pretty much 24/7. I’m constantly thinking about it, er, it’s quite tiring to tell the truth... I feel really frustrated ‘cause I don’t want to think about it, but I am gonna think about it... Yeah, it’s kind of something that no matter how I try it’s always there. It’s... it’s always there in some form whether thinking about my body image myself or thinking about... foods” – Jacob

Jacob’s account illustrates the constant, automatic and intrusive nature of thoughts about his body. His use of “*I don’t want to think about it, but I am gonna think about*” implies he feels helpless and that thinking about his body feels almost inevitable. Unsurprisingly, he finds this emotionally tiring. Charlie’s account echoed Jacob’s sentiments around preoccupation in a slightly different way:

“...it’s very distracting and... and the usual anxieties come with that... those thoughts distract you from what you should be enjoying or achieving... I’ve already knocked my own confidence... And I’ve kind of managed to shatter my own confidence and put myself back in a shell” – Charlie

Evident for Charlie is that thoughts about his body distract him from activities he values. Attending to his body seems to strongly impact his confidence, as suggested by his use of “*shatter*” and “*put myself back in a shell*”, implying he turns inwards within himself. Harry’s experience echoes the obsessional nature of thoughts towards one’s body:

“I would sort of tend to more sort of hyper-fixate on those things... Like it would just make me... constantly just sort of like nervous. It would make me hate my own sort of body shape, hate my own self”
– Harry

For Harry, thinking about and attending to parts of his body he disliked became an obsessive fixation and impacted him emotionally. The description of how the critical thoughts made him “*hate my own self*” suggests that not only did this impact his body image, but his overall self-esteem, which also relates to the previous subordinate theme.

Superordinate Theme Two: Focus on Others

The second superordinate theme both contrasts with and complements the intrapersonal experience encapsulated by the first superordinate theme, in which participants described interpersonally focusing on the body in relation to others.

Subordinate Theme One - Body Image Based on Others’ Perception; How Others See the Body

More than half of participants experienced distress around their body image, not only in relation to how they view their own bodies, but how they assumed others would perceive their bodies. Body image was viewed as “*how I see myself and how other people see me*” (Tom) and “*how I think other people see me, not only just how I see myself*” (Murray). Neil’s experience of body image and the perception of others captured how others’ perspectives are taken into account:

“It means how I perceive myself and how others perceive myself based on my experiences... Everything I do is about... the end result is how, how I look... how I think I look and how I think I’m perceived by everybody else... But it’s just my perception of how my body looks... how others are going to perceive me” – Neil

Neil’s account emphasises how he perceives his body relates closely to how he believes others may think his body looks, giving this more credence than his own perception. His use of “*everything*” highlights how the behaviours he does to influence his body, “*the end result*”, is driven by how other people will view his body.

For several participants, thinking about how others perceived their bodies involved predicting that their perception would involve negatively evaluating their bodies and them as people based on their bodies, such as being “*big and clumsy*” (Tom) and believing others “*hate me, um, because of my weight and the way I look*” (Jacob). Charlie spoke of the intensity of this:

“... get that feeling that people are looking at you, judging you on how you look and think if I’m fat... I will be constantly thinking that people are doing that to me... they’re looking at me and thinking, you know, ‘he’s letting himself go’” – Charlie

Charlie’s emphasis here is on judgement and negative evaluation of his body by others, but also about him as a person with his use of “*judging you on how you look*”; a sense that others’ perception of the body extends beyond the body itself, but to the person as a whole. Ed experienced this in a similar way but elaborated on the emotional experience of this:

“I probably feel self-conscious about what other people think, you know, whether ‘that fat bugger sitting over there’ type of thing... vulnerable in the way that, that how are other people perceiving me? How are other people thinking about me? What are other people seeing? Because I don’t like what I see” – Ed

Ed’s account captures negative comments about his body that he believes others may be thinking, in an evaluative way similar to Charlie, but he links these predictions to his own negative perception of his body. Predicting such body evaluations impacts the self emotionally in a negative way, as illustrated with his use of

“self-conscious” and “vulnerable” which emphasises how hard this can be for him. Basing body image on the imagined perception of others is pervasive and distressing for several participants and appeared to encourage even greater critical evaluation of the self.

Subordinate Theme Two – The Body Impacting Interpersonal Acceptance and Inclusion

A focus on other people is a feature of the second subtheme with interpersonal relationships. Most participants spoke about their body image impacting interpersonal relationships in different ways. The theme is captured succinctly by Neil stating that being “*loved, liked or approved by other people is significantly impacted by what I would think, like ‘am I fat or not?’*”. Charlie described how he experiences his body and romantic relationships to be linked when discussing a previous romantic relationship:

“So I was thinking ‘I can’t eat, I can’t eat and not do anything about it, she’s gonna leave me’. She was quite popular and she had quite a lot of friends... she had male friends... who I considered to be attractive and, um, she had a lot more friends than I did. So you’re almost thinking her friends are saying I’m not good enough for her... I think that’s when I... I recall, um, properly falling into the trap of an eating disorder” – Charlie

Charlie’s account highlights how he felt his body played a part in his relationship with his girlfriend at the time; feeling his body was inadequate and this would be a reason for potential romantic abandonment. His relational concerns linked with his body further when he described feeling the need to change his body through restricting his eating and the eating disorder intensity increasing. His comparison to the appearance of other men further added to his feelings of inadequacy, which also seemed to play a part with his eating disorder experience. Morgan also spoke of the romantic interpersonal aspect to how he felt about his body:

“I’m a gay man who, you know, I use different networks and apps to kind of meet other gay guys and stuff and there are guys who... like larger... men. And you know it’s times when I’m interacting with them, where I feel more kind of... But even in, in that way there is that negative aspect of it. It feels almost fetishistic rather than like... a natural attraction if that makes sense” – Morgan

Morgan experiences a need to rely on specific networks which would value his body, suggesting a discomfort of romantic interactions in more general settings. Interestingly, he acknowledges how these romantic interactions around his body are problematic in which he feels his body is sexually objectified, with his use of “*fetishistic*”; perhaps not taking into account other attributes he is able to offer in a romantic relationship, with his use of “*rather than like... a natural attraction*”. He elaborated on how these romantic interactions in such specific spaces impact his sense of self and body image:

“...if someone has said to me, you know, ‘I love the shape of your chest’ or ‘I love this about you’ and I’m like, you know, ‘yeah, I feel like good and I don’t know curvy or something today’. But... um... I think I’m very kind of focused on... the idea of the body as like a sexual object or a, you know, an object of attraction. So for me, feeling good about my body or not so good... obviously I want to be healthy and stuff, but good and not good as based upon how attractive I feel I am to others” – Morgan

Evident is that Morgan’s body image is influenced positively by being valued by other men viewing him in an objectified way. Yet, this interpersonal validation of his body is also conflicting for him, acknowledging the positive side to feeling attractive to others, but also problematic side with relying on this as the only criterion to feel good about his body, as well his body being objectified by others.

Social acceptance and inclusion with the body was also experienced among four participants and is captured strongly by Jacob:

“I was getting compliments from people. I was getting compliments from the... ‘oh look how much weight you’ve lost, you’re looking great’. Um, it was... it kind of fuelled me a bit more, ‘you can keep going, you can keep going’... A lot of people seemed to kind of take more of an interest in me and in my life, and how I feel. And it kind of made me feel, feel a way that I’d never felt before... Um, it made me feel happy. It made me feel wanted, included. Especially for being bullied for... the majority of my life I kind of felt... I kind of felt like you’ve finally been accepted” – Jacob

How others interacted with Jacob in a positive way, giving attention and compliments about his body as a result of weight loss, is a stark contrast to the experiences of being bullied from a young age and being socially deprived, which seemed to be a driving factor to motivating the eating disorder. Jacob experienced the change in his body and positive comments by others as rewarding as this meant he was socially accepted and he valued this. These excerpts provide insight into the complexity of how interpersonal acceptance and inclusion impact eating disorders; part of disordered eating and cognitions may be motivated by striving for acceptance, and when the acceptance is obtained, this may reinforce these unhealthy beliefs.

Subordinate Theme Three – Internalisation of Others’ Negative Comments; Creating a Sense of Fault with One’s Body

More than half of participants described negative early experiences of people commenting on their body and weight. These experiences were felt to have impacted their body image negatively, and were felt to have “*stemmed from that, it’s followed me through*” (Tom) and “*made me feel alienated because... I, I was bigger*” (Harry). Neil’s experience of weight and body bullying had a profound impact on him:

“Basically, basically my first memory was being in the village primary school and kind of kicked to the ground, er, with a circle of kids around me shouting ‘you fat bastard, you fat shit’, all this kind of stuff... So that’s (laughs) kind of shaped everything really since then... I think because of the trauma as a child, you know, and the experience that everyone was focusing on my weight” – Neil

Neil’s description of being emotionally and physically bullied based on his body illustrates a key experience, of many he described enduring, in which others attended to his weight and body negatively. His use of “*trauma*” captures the distress he still feels from others being critical of his body. His use of “*shaped everything*” highlights how these experiences were salient to him feeling negatively about his body and developing the eating disorder. His laugh when describing this suggests almost some desensitisation to his experience, finding humour in it rather than distress. Charlie had similar experiences to Neil and spoke about how his experiences shaped his internal thoughts about his body image:

“...there was a friend who meant no harm who said ‘you’re getting a bit podgy there’ and that sticks in my mind as being the trigger... ‘oh you’re just a bit chubby there’. I was 11 years old... you don’t think about how words can affect you in that way... Umm... so I thought ‘I am, he’s right’. And so then when you are getting changed in the changing room... you were thinking ‘well, there’s others thinking that’” - Charlie

Charlie’s account speaks of how he internalised these experiences from the social or external to the internal, in which he believed there was something defective with his body and assumed others would be thinking that too. He noted how his young self was impacted by this rhetoric, although he felt his friend’s intention was not to be negative, differing to what Neil experienced. His use of this experience being a “*trigger*” highlights how key this was to him feeling negatively towards his body, which would later become one of his concerns related to his eating disorder. Jacob spoke of his internalisation of negative comments by others and the emotional impact this had on him:

“It was brought up quite a lot by people... people would call me ‘fat’ or call me things like that. Ever since people started kind of bringing that stuff up to me it, it kind of made me feel different to everybody else. I would feel ashamed and stuff like that... Yeah, I should feel ashamed... and as if it’s... I’m not right for it, erm, definitely... it definitely... ‘cause quite a lot of people pointed it out” - Jacob

Evident in Jacob’s experience is that he internalised these experiences cognitively in a self-evaluative way to feel abnormal about the self because of his body, with his use of “*different to everybody else*” and “*not right for it*”. Beyond influencing his cognitive internal world about the self and his body, these experiences led to shame-based emotions about his body. Overall, there appeared to be concordance between participants who raised experiences of being bullied due to their weight and shape; these experiences were significant, distressing and for many were instrumental in the development of their eating disorder.

Subordinate Theme Four – Selectively Attending to and Comparing the Bodies of Others

More than half of participants shared experiences of comparing their own bodies to the bodies of others. These comparisons tended to be selective and biased towards bodies that were idealised by participants. Russell described how he experienced body comparisons:

“Yeah, I do compare myself to other people, but I don’t know if that’s crazy... I realise it’s not the most healthy thing, aye. I do actively try and stop myself doing it... I just kinda... I guess the thing is I do always question ‘why’, you know... does it matter? Um... or why does it matter to me? ... Yeah, do I really feel the need to compete with people that are in their early twenties and things. Possibly part of me thinks ‘yeah, you can do it’, but the other part is like ‘why bother? Enjoy yourself’” – Russell

Here, Russell considers how comparing his body to others may not be the best for him and whether this is a rational thing to do. His description of effortfully attempting to not compare suggests how prominent these comparisons were for him. Interestingly, Russell questions why he compares his body to the bodies of young people, acknowledging a motivational or competitive function to it, but also this as distressing within his self-talk, with his use of “*enjoy yourself*”. A motivational function to body comparisons was also experienced by Mason:

“I would watch a lot of fitness videos and the guys in them would be, you know, probably on steroids, so... so lean and so big, you know. I’d just be watching that a lot of the time and it makes you feel worse because you think ‘surely I can look like them if you just keep working’” – Mason

Mason acknowledges that bodies in fitness media may not be naturally achieved, but he would spend significant amounts of time comparing his body to such media representations. His example of a thought when watching this content suggests these comparisons were to give a motivational ‘push’ to continue his actions towards meeting his body goals, which had a negative emotional impact. Jacob also compared his body to people in the media, as well as people in person:

“I start comparing myself to the people I see on social media or walking in the streets or people I know myself... I could never watch a show like Love Island. I’ve got my reasons why I wouldn’t in the first place (both laugh), but the other reason is definitely just because I’d start comparing myself and kind of sulk in the kind of ‘why don’t I look like this?’... It would be even that I’ve saw somebody walking down the street and think ‘oh why can’t I look like them?’ type thing...” – Jacob

This excerpt demonstrates the impact that body comparisons to others had on Jacob in being critical towards his body. Jacob avoids certain television shows because he finds this triggering for comparisons and self-criticism due to the body types represented on the show, indicating the emotional impact comparison-making had on him which he manages with avoidance.

Superordinate Theme Three: Systemic Influences and Pressures

While the superordinate themes thus far focused on the intrapersonal and interpersonal aspects of body image, participants also described wider systemic influences on how they perceived their bodies. This superordinate theme encapsulates experiences of other systems that operate around the participants and how these impact the self.

Subordinate Theme One – Representations of Bodies in the Media

The majority of participants experienced the media and representations of bodies in a negative way in relation to their body image. They particularly emphasised the distorted sense of reality of bodies the media portrays, reflected as “*the social media lie, you know, it’s just a photograph*” (Charlie). In Mason’s experience, social media had a significant impact on his body image and eating disorder:

“But yeah I think most of the media that had an impact on me was social media. All the apps... because on an app like Instagram people will post their best photos in the best lighting with the most, the most editing. So it’s... I think it’s quite a distorted app in general. It’s not really a good depiction of life” – Mason

Mason's account illustrates that social media impacted him because of the inaccurate portrayal of how bodies look. Like Charlie, Mason acknowledges the ways the portrayals of bodies have been created, such as with editing or use of lighting, and how this creates such representations of people's 'best' appearance. Mason further described how these depictions of bodies on social media impacted him:

"It feels like that's what you need to be almost, erm, because you're just viewing it so much. And you don't even notice it at the time but it does over the long-term have an impact... I think what I view as healthy is and a good body I think was really distorted by that, by that app specifically. Maybe Instagram and YouTube as well. I think deleting Tik Tok had a big impact on my self-esteem" - Mason

Here, Mason reflects on how seeing this content created a standard for what his body 'should' be in the long-term, evidenced with his use of "what you need to be". His deleting of Tik Tok illustrates how negatively Tik Tok content must have impacted his body image and self-esteem before. Morgan also spoke about the impact of the media, but queer media specifically:

"I feel like, you know, from an early age, you're kind of... when you start to, you know, interact with queer media and obviously porn and stuff like that. Everyone has... there's a higher bar for what the average person looks like and you're made to feel even more kind of abnormal there" - Morgan

For Morgan, in a similar way to Mason, the media impacted his idea of the 'standard' of what bodies should look like. The portrayals of bodies in queer media influenced specifically his sense of what queer men look like, particularly high body standards for queer men. Viewing these bodies from a young age impacted Morgan's self-esteem negatively, with his use of feeling "abnormal", as he was not meeting the standard set as a precedent for queer men by the media he consumed. It appears that an understanding of distorted representations of bodies in the media and a negative impact on self-esteem were common experiences highlighted among participants.

Subordinate Theme Two – Socio-cultural Expectations of Bodies

Half of participants spoke about wider societal and cultural systems which impacted their eating disorder, body image and overall sense of self. Murray highlighted the impact at a systems-level of societal and cultural beliefs of bodies and eating:

"...it's an actual experience which involves a relationship between you and like society or another community, like you're not gonna want to... um, leave that. And you know, and also like... it is also you... I mean, in our society like dieting and diet culture like it's such a huge like part of like our... people are always like dieting and stuff. And it's, you know, and there's all these different like... um... so, we live in a... a bit of a... like a like a Pro Ana society, a little bit almost. Everything's kind of... like weight loss is like praised and weight gain is like shamed. And there's a lot of emphasis on how you look" - Murray

Murray highlights the relationship between the self and society as a system, and the impact that society has on the self in valuing thinness, dieting and appearance. Murray's body and eating attitudes are impacted by pervasive societal messages about the importance of appearance; his intra-psychic experience of attitudes to his body and eating link to his social context. His use of "Pro Ana" illustrates how strongly he feels what society values is akin to niche content which is positive towards and encourages eating disorder behaviour. His use of "not gonna want to... um, leave that" is interesting, suggesting a conformity to societal beliefs, and that not subscribing to these beliefs would be hard. This perhaps illuminates why recovery may feel difficult for Murray, as he feels he would be moving from the majority to a minority. Charlie's experience of societal views of bodies offers some similarity, but some divergence to Murray:

"You know, men are kind of criticised and they use jokey terms like 'dad bod' and... 'moobs'... and that actually is... it's the same as those horrible magazine articles that put circles around women's love-handles and that kind of thing... And, erm, and the way men are talked about for having a dad bod... you all want to avoid that at all costs... So there's that kind of stuff... do I look feminine? Or, you know, I'm not a macho man... I don't look like a man... I'm not a man" - Charlie

Charlie highlights a similarity of body shaming and fatphobic narratives in society for men's bodies to how women experience this too. The prospect of his body being spoken about in such way seems to evoke distress

and a want to avoid this, as suggested with “*avoid that at all costs*”. He also touches on the impact of societal standards of bodies to how he experiences masculinity; feeling his body does not fit the mould of a masculine body and how this impacts his sense of masculinity by equating not *looking* manly to not *being* manly.

Away from general societal views of bodies, three participants spoke of how views of bodies within queer community impact them. Murray spoke of how particular bodies are valued within the gay community:

“...like in the gay community like, men like it, there’s... there’s kind of like you either have to be like, really muscly or like really like, like thin or like, I mean, like twinkish (laughs)... but then like in the gay community is different because, like really like skinny guys are like desired” – Murray

In this excerpt, Murray highlights his experience as a gay man of body preferences within the gay community and identities or sub-groups being attached to particular bodies. He describes two extremes of what is desirable for gay men to be either thin or muscular. Murray emphasising “*really like skinny guys*” being desirable to some gay men, may indicate a shift from the external, the queer community, to the internal, Murray, valuing a thin body. This may help contextualise why Murray idealises having a thin body as part of his eating disorder experience. Harry’s experience of being a queer man, identifying as bisexual, and operating as an individual within the queer community with an eating disorder was also experienced as difficult:

“I feel like... (pause) in the queer community there’s a much bigger emphasis, especially within men who love men... that, you know, body image does kind of come first... These feelings of ‘well, even that I have an eating disorder I need to conform to these sort of rigid stereotypes of how queer men should look. I should participate in that sort of circuit anyway’... Even though it makes me incredibly uncomfortable to do so... Because otherwise you’re just not... you’re not queer enough. Otherwise you’re not really going to be accepted” – Harry

Harry’s reflection here is that for queer men body image is prioritised and views of bodies within the queer community holds different meanings to him, including his queer identity but also his relationships with others. He describes an inner conflict for him to conform to body ideals for queer men, in order to be accepted, “*queer enough*” and romantically engage with others within the community, even though this painful for him and at odds with his recovery. Many participants reflected common experiences of being influenced by fatphobic or body-shaming societal rhetoric, with particular emphasis on certain body types being desirable in the queer community. It is interesting to note a general sense of resenting this pressure from wider systems, though for some a conflicting sense of still needing to comply to be accepted.

Superordinate Theme Four: Attaining Body Goals and Controlling Body Image

The fourth superordinate theme reflects the participants’ experiences of focusing on achieving their body goals. Efforts and meanings of different behaviours to achieve body goals varied across participants, but most experienced a negative impact on the self.

Subordinate Theme One – Controlling the Body Through Eating

All participants spoke about attempting to control their bodies, as well as managing their negative body image, with disordered eating behaviours. Five participants spoke about restricting their eating in order to influence their bodies, as discussed in detail by Murray:

“...if I’m not taking action like that’s when I start to feel like really fat and stuff... Um... so like exercising a lot... It’s like restricting food. And I’m always like, I’m trying to recover... but like often, like, taking action is something that, like it happened, it just kind of happens subconsciously at this point. Like, you don’t even like... like realise you’re doing it, but at first it was like a conscious thing” – Murray

Restricting eating, as well as exercise, appears to be valued by Murray as a way to manage feelings of fatness. His use of “*taking action*” suggests a productive and goal-focused sentiment to restricting, to help manage distressing experiences around his body. His restricting seems to be conscious, but is also partly experienced as automatic, unconscious and seemingly out of Murray’s control. His restricted eating to manage feelings of fatness is at odds with his treatment, implied by his use of “*trying to recover*”, but the sense of it happening without him

realising means he is perhaps unlikely to recover in the way treatment intends if he continues to restrict. A valued aspect of eating behaviours to influence the body is shared by three participants who purged after eating, captured strongly by Charlie:

“...you know being bulimic, if I stopped that cycle it would be mentally frightening ‘cause I’d be losing control... it kind of felt like almost a lightbulb moment when actually I’d thought about it... that makes sense – you eat something and then it doesn’t really go to your stomach and get fat”- Charlie

In this excerpt, Charlie speaks of positive and valued beliefs to purging, by self-inducing vomiting, in which he could eat without negatively impacting his body by becoming ‘fatter’. His use of a “lightbulb moment” illustrates the realisation of first beginning purging and implies this was positive for him. Interestingly, he also experienced a sense of fear around stopping purging as there would be a perceived loss of control, that being a loss of being able to control his body.

While Murray and Charlie described disordered eating in line with a goal to avoid gaining weight, two participants described eating certain foods with a goal of gaining muscle. Control was central to Russell’s experience of eating, although this experience of control was mixed for him:

“And... er... yeah like agonising over macro content and things like... using the app and scanning barcodes. The meals that I did make, I was having like all the time... I like cooking so there’s a decent amount of different meals I’d have, but it got to the point where, like, I didn’t really need to work out the calorie contents because I already knew pretty much off hand, you know... And waking up during the night and eating like an obscene amount of food, probably because I was eating so little during the day and then waking up the next day and thinking ‘oh my god I’ve just undone all the work that I did” – Russell

For Russell, controlling his body by focusing on foods that would help build muscle and checking the contents of foods, exemplifies the goal-focused nature of his eating to influence his body. Reliance on the same foods and developing an extensive knowledge of food and nutrition indicates an obsessionality towards eating and a need for control. His eating pattern was described as unsustainable due to binge eating during the night, which lead to feelings of being out of control and a sense of distress for impacting progress to his body. In addition to Russell, four other participants had experiences of binge eating which negatively impacted their body image, reflected on by Ed:

“...you eat something and then you, you picture the negative impact that’s going to have... The negative impact of doing that is either I’ll stay as fat as I am now or I’ll just get fatter. One of those two things will happen” – Ed

When speaking about binge eating, Ed describes the mental images he experiences relating to how bingeing will impact his body image. He sees the impact of binge eating negatively in which there are two outcomes to his body he is certain of (his use of they “will happen”) in which his body size will stay the same or increase. The way Ed describes the impact of bingeing to his body conveys a sense of helplessness which he cannot control. It appears that participants’ sense of controlling their body via their intake, through restriction, purging or tracking nutritional content, can be experienced as reassuring and motivating, but also distressing.

Subordinate Theme Two - ‘Compulsive’, Obsessive and ‘Excessive’ Exercise to Control the Body

Although eating was one way body image was managed and controlled by participants, seven participants spoke of influencing their bodies through “a lot of exercise” (Neil). Russell reflected on exercising to influence his body:

“I’d be thinking ‘oh I haven’t eaten anything yet, if I start exercising now I should have like low glycogen levels and so I should be mainly burning fat... I don’t want to go out, I really can’t be bothered’. Yeah, I’d be sitting either wanting to go back to sleep or just wanting to do nothing, but with this kind of nagging thought that I was just being lazy or I was missing an opportunity. And yeah like sometimes I’d just get up and force myself out the door before I could have time to think about it (pause) and just start walking” - Russell

Evident for Russell is how exercise is driven to influence his body, specifically to burn fat, and how he would experience intrusive thoughts to exercise. These thoughts induced guilt which compelled him to exercise, prioritising exercising over basic needs, such as sleeping or relaxing. He highlights two conflicting demands, the need to rest and the need to exercise in a driven way, which he manages by not giving himself time to think, with his use of “*force myself*”. Similarly, Tom described a compulsive nature to exercise:

“Um, I’ll wake up and the first thing I’ll do is I’ll take the dog for a 3 and a half or four mile walk... My head says I’ve got to get that walk in. If I don’t do that, my day feels... a waste kinda. It just doesn’t feel right... And then usually about five or six I’ll take the dog out for another walk, about the same length. And if I don’t do that, it feels the same as the first one, it just doesn’t feel right” – Tom

Tom’s use of language highlights the intrusive and obligatory nature of his exercise routine, with use of “*I’ve got to*”, and the emotional impact of feeling unsettled or uncomfortable, in which “*it just doesn’t feel right*”. Driven exercise becoming routine and an obligation echoes Russell’s reflections of forcing himself to walk before he thinks about it and changes his mind. Tom’s use of “*my head*” describes a separation or externalisation of the self and the eating disorder, in which the cognitive experience of intrusive thoughts to exercise seems to be driven by the eating disorder. Relating back to a sense of achievement with exercise, Mason reflected on the emotional experience of meeting his strength and appearance goals:

“I would go to the gym, you know, every day and just keep going until you get what you want and then still want to do more. Like I was saying, not being satisfied with, um, where you are at any point. Not being able to appreciate achievements I think as well. When I’d reach a certain strength level or a certain... or when I did finally get the abs I wanted it was still not very... it was quite underwhelming, you know” - Mason

For Mason, he describes the process of exercising until a particular body goal was met, but then not experiencing satisfaction with this and needing further goals; a constant moving of the goalpost for his exercise and body goals. He reflects on the emotional outcome of achieving goals not as he expected, in which there was a sense of not feeling accomplishment, which felt disappointing to him. Though participants describe exercising excessively to attain body image related goals, they may not be satisfied or reduce their distress once they achieve them.

Subordinate Theme Three – Negative Impact of Efforts to Control One’s Body

The previous subordinate themes capture different ways participants tried to control and influence their bodies. Yet, over half of participants described the negative psychological, physical and social impact of attempting to influence their body image. Mason reflected on how being focused on his body and eating disorder impacted his social life and relationships with others:

“When I kept going it started to affect my life more because I was going out less and doing less... purely focusing on that, so it was affecting my life quite badly... from a social point of view anyway... I wouldn’t eat with my family, I’d do meal prepping for the whole day, I’d be working out three times a day. Just really going for it. I would end up doing less and less, so it does take away a lot from your life... It felt lonely, but at the time I felt like I was doing the right thing, um, it’s only really with hindsight that I could see that it wasn’t healthy” - Mason

For Mason, the gradual increase in focusing on attaining his body goals had a negative impact socially and lead to him feeling isolated. There is a sense of mourning and missed opportunity to his social life from this. In the moment he described not being able to see this, but looking back he is able to see how this was problematic, both socially and psychologically. As part of Harry’s experience there was a similarity with grief for how the eating disorder impacted his social life:

“It just sort of fuelled this sense of alienation that I felt to encourage me to sort of... become more anti-social, withdraw from doing social activities... sort of put off things with friends. It really impacted... I feel as if it really impacted my social development when it comes to things such as... such as relationships... practically lost... some degree of autonomy over myself... Just from the sheer, just sort

of... amount of effort that I would put in into... controlling my, not necessarily my weight, but my shape”
– Harry

In Harry’s account, focusing on controlling his body as part of his eating disorder came at the expense of social activities and meant he withdrew from others, captured by his use of “*anti-social*”. Experiencing this in late adolescence, Harry emphasised the loss of opportunities to develop socially and the overall negative impact on his social development with relationships. Harry goes on to reflect on the wider psychological impact on the self, in which there is a shift from him controlling his shape and weight, to him being controlled by the eating disorder, as suggested with his use of language in which he highlights a loss of autonomy. Not only did controlling the body impact participants psychologically and socially, but also physically, which is reflected on by Neil:

“You were eating and exercising, and just thinking about it all the time. You know, you weren’t eating as much as you should do, so you’re hungry all the time... And it’s like you’re thinking ‘oh I’m going to get hungry’ and putting off that thought. And then your body starts to get cold, you know” - Neil

In Neil’s case, the impact of restricting his eating and exercising resulted in both physical and mental hunger, managed by cognitive avoidance. His use of an example of experiencing coldness illustrates the physical impact to his body as a consequence of controlling his body with eating and exercising. His acknowledgement of negative physical implications of disordered eating indicates a sense of unsustainability and declining health, as his basic need of warmth is not being met. The participants’ narratives suggest that not only physical, but psychological and social needs are often neglected when going to great lengths to control their body image.

Discussion

This study aimed to understand the experiences of body image among men with diagnosed eating disorders and is the only available qualitative research offering in-depth insight into this phenomenon. Experiences of body image were personal to each participant, yet several themes were prominent across participants: 1) Focus on Self, 2) Focus on Others, 3) Systemic Influences and Pressures, and 4) Attaining Body Goals and Controlling Body Image.

Main Findings

The first superordinate theme referred to how men with eating disorders experienced body image in a self-focused and intrapersonal way. Participants described a sense of dissatisfaction and critical perception towards the body. Body dissatisfaction is a risk factor for and a common clinical feature of eating disorders among men and women (Bell & Rushforth, 2008; Dakanalis et al., 2015; Glashouwer et al., 2019; Masheb & Grilo, 2003; O’Gorman et al., 2020; Stice & Shaw, 2002). Further, participants experienced negativity and shame towards their bodies; body shame has been found to be strongly related to eating disorder pathology in a recent meta-analysis (Nechita et al., 2021). The current findings are consistent with existing literature, providing detailed insight into what body dissatisfaction means to men with eating disorders, including internal fatphobia and critical self-talk. Ways of addressing dissatisfaction and negativity towards their bodies varied among participants, with some focusing on goals for muscularity. This is consistent with existing evidence that men with eating disorders can be more concerned with muscularity than thinness (Darcy et al., 2012; Murray et al., 2012; Núñez-Navarro et al., 2012; Stanford & Lemberg, 2012). However, a proportion of participants had goals for thinness, suggesting that the apparent gendered body concern difference was not as pronounced by the sample as in existing literature. For some participants, their bodies and ability to control them was a way to evaluate their self-worth. This is consistent with cognitive behavioural conceptualisations of eating disorders in which people’s self-evaluation is based largely on body shape, weight and control of these (Fairburn et al., 2003). Although there is no existing evidence among male eating disorder samples specifically, the current findings support that men determine their self-worth in such way, as studies have found for women (Fairburn et al., 1993b; Trottier et al., 2013). Participants also experienced preoccupation with their bodies and had intrusive thoughts about body image and other aspects of their eating disorder, both of which are consistent with findings among women (Askew et al., 2020; Belloch et al., 2016; Roncero et al., 2013).

The second superordinate theme emphasised the role of others and interpersonal relationships in how participants experienced body image, which was not anticipated from the male eating disorder and body image literature. Although body image is defined as one's feelings, beliefs and perceptions of their body (Cash, 2004), participants' perceptions of their bodies also related to how they believed others perceived their bodies. This is somewhat consistent with objectification theory (Fredrickson & Roberts, 1997), which posits that women are culturally influenced to internalise the perspective of an observer as the primary view of their physical self. This appeared to be experienced by the current male participants; their sense of body image involved imagining others viewing them physically by focusing on their bodies. Although objectification theory has largely been tested with women, some evidence suggests that men experience self-objectification related to a desire for muscularity (Daniel & Bridges, 2010; Oehlhof et al., 2009). Another key finding was that many participants experienced concerns that others may evaluate their bodies negatively, and that others' views of them as a person are based on their appearance. These findings are consistent with cognitive behavioural conceptualisations that cognitions about bodies and eating can relate to self-perception and how others will perceive them, and also link with social, personal and aspirational outcomes (Waller et al., 2007).

Over half of participants experienced early negative interpersonal interactions around their bodies which remained salient into adulthood. The interpersonal environment in which a person is raised is important to the development of body image (Duffy et al., 2021) and childhood bullying has been associated with eating disorders (Copeland et al., 2015; Lie et al., 2019; Menzel et al., 2010), with specific weight- and shape-bullying being positively associated with purging and muscularity-oriented behaviour (Day et al., 2021). Among young girls, there are associations with increases in body dissatisfaction and eating disorder pathology with relational pressures to be thin (Marcos et al., 2013; Presnell et al., 2004). There is less research for men, but evidence suggests that among young men appearance criticism from peers and peer pressure to increase muscularity are strong predictors of body dissatisfaction (Barker & Galambos, 2003; Jones et al., 2004; Xu et al., 2010). Theoretically, the present findings support the tripartite influence model of body image and eating disturbance (Thompson et al., 1999) which argues that relationships with others, including peers and parents, as well as the media, influence body dissatisfaction via internalisation of body ideals. Supporting evidence for this model exists among young women and men (Keery et al., 2004; Papp et al., 2013; Rodgers et al., 2012; Shroff & Thompson, 2006; Smolak et al., 2005), and this study provides further support from a clinical sample of adult men. Furthermore, the participants' experiences support cognitive behavioural (Beck 1967, 1976), and schema-focused (Young, 1999; Young et al., 2003) theories positing that early experiences shape beliefs about the self and others, specifically for eating disorder populations (Jones et al., 2007). The findings endorse existing research and theory that men with diagnosed eating disorders have been similarly impacted by negative interpersonal experiences around their appearance and they internalise these experiences, resulting in negative beliefs and feelings toward their bodies.

Most participants felt that their bodies impact social and intimate interpersonal relationships, for example fearing rejection from others due to their bodies. Difficulties with interpersonal relationships is both a predisposing and maintaining factor for eating disorders (Cardi et al., 2018; Treasure et al., 2020). Among community samples appearance-based rejection sensitivity predicts disordered eating (Park, 2007), and appearance-based sensitivities to rejection and low social rank are associated with drive for thinness among those with eating disorders (De Paoli et al., 2017). People with eating disorders are likely to report negative beliefs or early maladaptive schemas regarding the self and relationships with others (Boone et al., 2013; Maher et al., 2022). For body image, a recent systematic review found that body dissatisfaction correlated with several early maladaptive schemas (Maher et al., 2022), such as Social Isolation (feeling disconnected from others, isolated from the world and not feeling a sense of social belonging to any group, Young et al., 2003) - for an overview of early maladaptive schemas and domains, see Young and colleagues (2003). No existing studies have examined how men with eating disorders experience early maladaptive schemas, yet the current findings align with previous research and schema therapy conceptualisations of beliefs about the self and other. For example, participants felt they may be romantically abandoned and felt deprived socially due to their bodies, with one participant seeking approval from niche groups to feel positive about his body. Thus, providing details of the continued impact in adulthood of negative internalised interpersonal experiences among men with eating disorders in shaping beliefs about others and their bodies. The present findings on body image and interpersonal relationships also appear consistent with research on interpersonal sensitivities, which refers to an individual's hypersensitivity to perceived self-deficiencies in

relation to others (Davidson et al., 1989). Interpersonal sensitivity is associated with a drive for muscularity among adolescent men (Zarei, 2020), and a fear of being negatively evaluated by others is associated with a desire for thinness and predicted bulimic behaviours (Gilbert & Meyer, 2005). An interpersonal psychotherapy model of eating disorders (Rieger et al., 2010) proposes that those who fear negative evaluation from others may develop an over-concern with their body shape and weight and have difficulties with affect. Consequently, disordered eating behaviours are used to manage negative self-evaluation and affect. Consistent with these conceptualisations, participants experienced difficulties with their bodies in relation to fears of criticism, rejection fears and negative evaluation by others.

The role of others in participants' experiences of body image also emerged through making comparisons. Those with eating disorders may focus selectively on others' bodies who they consider more 'perfect' than theirs (Waller et al., 2007). Individuals who frequently compare their body to others they deem more attractive are at higher risk of body and eating disturbances (Dittmar & Howard, 2004; Myers & Crowther, 2009; Tiggemann et al., 2009). Among non-clinical samples of men, research suggests that more frequent body comparison is associated with increased attentional engagement with muscular bodies, relative to non-muscular bodies (Dondzilo et al., 2021). Moreover, social media use has been shown to be positively associated with body comparisons, which was sequentially positively associated with body dissatisfaction (Modica, 2020). In line with this, more than half of participants described making such comparisons, both in-person and with media representations of bodies, which negatively impacted their body image. A subtlety experienced by some participants was a motivational component to body comparisons. Consistent with this, viewing more media 'fitspiration' content has been associated with muscular body ideal internalisation and higher body comparisons, which is in turn associated with body dissatisfaction, more body-driven exercise motivation and less health-based exercise motivation in men (Fatt et al., 2019).

The third superordinate theme referred to how wider systemic factors impacted the participants' experiences of body image. Their experiences appeared to align with systems theories (von Bertalanffy, 1967, 1972). Systems theory uses people's contexts or environments to explain mental health difficulties (Brown, 2010), referencing how power operates in social structures, institutions and media (Boyle, 2022). Social context is also emphasised as important in understanding mental distress beyond intrapsychic attributes (Boyle, 2011). Consideration was extended beyond intrapsychic experiences of the body to self or others, to how participants experienced their bodies in contexts around them, one of which was the media. The media has been demonstrated to contribute to the development of eating disorders (Spettigue & Henderson, 2004). Social media posts tend to be curated to maximise attractiveness or appeal (Tiggemann & Anderberg, 2020), sometimes by digital enhancement (Chua & Chang, 2016). Perhaps understandably, some participants experienced the media distorting their view of 'normal' bodies and found that internalising body ideals in the media contributed to negative perceptions of their own bodies. This negative impact on body image is consistent with findings that exposure to ideal male bodies can significantly impact body dissatisfaction among men (Arbour & Ginis, 2006; Barlett et al., 2008; Blond, 2008; Tiggemann & Anderberg, 2020). Appearance-focused social media is associated with eating disorder symptoms for young and adult women (Donovan et al., 2020; Fitzsimmons-Craft et al., 2020) and men (Holland & Tiggemann, 2016; Griffiths et al., 2018). In addition to systems theory, the current findings provide further support for the tripartite influence model (Thompson et al., 1999). The above literature is consistent with the current study's finding that the media provides a social context contributing to body dissatisfaction among men with eating disorders.

Wider societal perspectives of bodies also impacted body image. Some participants reflected on the influence of body and weight shaming, as well as dieting being valued. In Western cultures, fatness is ridiculed and thinness is valued (Brewis et al., 2011; Pearl, 2018). Weight stigma refers to societal shaming through negative attitudes and beliefs towards a person based on their weight (Puhl & Heuer, 2009). Weight stigma is prevalent and consequences of it include social exclusion and isolation for those who are overweight (Arias Ramos et al., 2018; Carr & Friedman, 2006; Lewis et al., 2011). This was echoed by some participants who experienced social exclusion due to their weight and who continued to experience fears of negative evaluation based on their weight and body. Placing participants' distress around their bodies and weight in the context of societal narratives and behaviours to those of higher weight is important to contextualise negative influences on body image. Three participants discussed how being part of the queer community negatively influenced their body image, as

particular body types are valued, namely thin or muscular bodies, and systemic appearance-based stigma is both perpetuated by and inflicted upon queer men (Bonell et al., 2023). Participants spoke of experiences fitting in or being excluded based on their bodies, which is reflected in previous qualitative research on queer men and body image (Austen et al., 2022; Jones, 2015; Morgan & Arcelus, 2009; Tran et al., 2020), and how this impacted their eating disorders. To the researchers' knowledge, these findings offer new insights into how body image is experienced by queer men with eating disorders, which is yet to be investigated.

The fourth superordinate theme captured how participants focused on and worked towards body goals through disordered eating and exercise behaviours, and the negative impact of these. Consistent with existing research on muscularity-oriented disordered eating among men, two participants controlled their eating to influence muscularity (Calzo et al., 2016; Compte et al., 2015; Cunningham et al., 2021; Hoffmann & Warschburger, 2017; Murray et al., 2016). However, half of participants engaged in restrictive eating behaviours which was not anticipated by the male body image literature. Previous research highlights that men acknowledge exercise as a method of weight control rather than restrictive eating or modifying diet (Drummond, 1999; Yates, 1991). Moreover, men may view thinking about food and restriction of food as 'feminine behaviour' (Gast et al., 2012), though men aiming for muscularity may engage in 'cyclical restriction' (Lavender et al., 2017). Among clinical samples, there is minimal research exploring restrictive disordered eating behaviours in men; one study found young men with eating disorders report restriction as a common symptom (Norris et al., 2013). The present findings demonstrate that men with diagnosed eating disorders have nuances and subtleties with disordered eating; a shared underlying aim to control their bodies with eating can manifest through different disordered eating behaviours. Half of participants experienced a negative impact on their body image following binge eating, such as a sense of helplessness with controlling their body. This is consistent with previous qualitative findings where men who binge eat reported dissatisfaction with their bodies (Carey et al., 2017). Three participants used purging behaviours to control their bodies. Existing research suggests that men are less likely to engage in vomiting (Hay et al., 2005; Strother et al., 2012), yet the present findings suggest that some men with eating disorders do purge by self-induced vomiting to manage their body image concerns. Many participants excessively and obsessively exercised to influence their bodies, corresponding with existing literature that men tend to engage in exercise to influence weight and shape (Drummond, 1999; Hay et al., 2005; Strother et al., 2012; Yates, 1991), and to manage body image concerns (Weltzin et al., 2005, 2012). A compulsive nature to exercise was also experienced by participants and compulsive exercise is considered a core feature of eating disorders (Martenstyn et al., 2022). Men may engage in compulsive exercise driven by a desire for a muscular and lean body (Danielsen et al., 2018), which was the case for some participants. Yet, other participants engaged in compulsive exercise to manage obsessional thoughts around exercise. Obsessional thoughts around exercise are reflected in previous qualitative research (Hallward et al., 2022).

Over half of participants experienced a negative impact from attempting to influence and control their bodies; this was impairing psychologically, socially and physically. Eating disorders have significant and specific consequences on physical health (Doll et al., 2005; Rome & Strandjord, 2016), and psychological and social functioning (Bohn et al., 2008; Harrison et al., 2011; Tchanturia et al., 2013). Furthermore, two participants felt that the development of their eating disorder and focus on their bodies in adolescence impacted their social development, and they had a sense of grief over lost social opportunities. These experiences correspond with research that eating disorders impact and delay transitions in typical social development (Patel et al., 2016).

Strengths and Limitations

This is the first qualitative study exploring how men with eating disorders experience body image and addresses existing gaps in the literature in this area (Darcy & Lin, 2012; Murray et al., 2017; Scottish Intercollegiate Guidelines Network, 2022). IPA's idiographic focus meant that the findings gave unique insights into how participants with diagnosed eating disorders experienced body image. Several novel themes emerged which were not anticipated by existing literature on men, eating disorders and body image. By recruiting through NHS services, only participants with clinician validated diagnoses were sampled, as self-report diagnosis is a noted limitation for clinical research (Dudas et al., 2017). Furthermore, the sample was comprised of various eating disorder diagnoses. This is a strength given research into body image difficulties among those with binge eating disorder is sparse (Lewer et al., 2017), with studies tending to focus on anorexia nervosa and bulimia nervosa.

Semi-structured interviews are considered the ‘gold-standard’ of qualitative data collection (Haines-Saah & Oliffe, 2012). Semi-structured interviews enable questions to be guided by the researcher based on the research question, but also be led by participants’ concerns. This enables the research question to be answered whilst also gathering rich data not anticipated by the interview schedule. Regarding ensuring quality (Yardley, 2000, 2008), a co-author and independent researcher provided feedback on the quality of analysis of two interviews. All research members were involved in data analysis, as reflected in the audit trail to demonstrate transparency (see Appendix 13). Respondent validation of overall themes was planned to ensure credibility and quality, and one participant offered feedback that the themes felt reflective of his experience. The lead researcher maintained a reflexive stance at all stages, including planning, design, data collection and analysis; reflexive diary extracts provide transparency about the impact of the subjectivity of the researcher (see Appendix 7). Whilst conducting the analysis, the lead researcher was aware of how some of the accounts of the participants were related to personal and professional experiences, which may have impacted sense-making and interpretations. Personally, the lead researcher had experienced negative interpersonal interactions about weight and appearance when younger, with some of the experiences described by participants being close to the researcher’s own experiences. As a gay man, the researcher identified with experiences of body preferences and stigma within the queer community shared by some participants. Professionally, the researcher acknowledged how clinical experiences, such as the influence of certain psychological therapies and interest in systemic thinking, may have also impacted sense-making. Although reflexively noted, it is important to acknowledge the influence of personal and professional experiences to the data analysis.

Despite the above strengths, there are limitations to the study. Most interviews were conducted by telephone or video call. Although considered useful options and comparable to face-to-face interviews (Gray et al., 2020; Nehls et al., 2015), there are positives and negatives to establishing rapport with remote interviews (Creswell, 2013; Weller, 2017). The lead researcher acknowledged that for face-to-face interviews attending to non-verbal cues was easier, which helped guide the interview, yet rapport was built comparably with phone, video and face-to-face interviews. In addition, as participants were receiving treatment within NHS eating disorder services, gathering information on treatment type, length and exposure may have offered further context for analysis. For example, some participants used concepts and terminology aligned with cognitive behavioural therapy for eating disorders. The lead researcher was familiar with this from professional experience in eating disorder services which was reflexively noted during analysis, as it potentially impacted how their experiences were interpreted. Though some participants disclosed aspects of treatment, the type and duration of treatment received may have impacted how they made sense of their experiences. Inclusion of various eating disorder diagnoses which share the same psychopathology was not considered to impact homogeneity considerably, in order to meet IPA’s needs interpretatively and pragmatically. Yet, homogeneity within the sample may have been enhanced by focusing on particular diagnoses. Differences or similarities in body image among men with specific diagnostic samples could be addressed in future research. Lastly, generalisability of findings is limited due to the small sample size and subjectivity. Generalisability tends not to be an aim of qualitative studies (Noble & Smith, 2015) nor was this an intention of the current study; rather, this study aimed to provide rich insight into the experience of body image among men with eating disorders. Future research may account for generalisability by exploring the themes found in the present study utilising a quantitative approach.

Implications for Research and Practice

The current study has further implications for future research. Though the sample comprised of four queer men, future qualitative research could explore how queer men with eating disorders experience body image. As only cis-men with male gender identities were included, further qualitative research could explore how body image is experienced by people with eating disorders across the gender spectrum, including transgender and non-binary people. Both recommendations are relevant given lesbian, gay, bisexual and transgender (LGBT) people experience greater incidences of eating disorders and disordered eating behaviours compared to heterosexual and cis-gender people (Parker & Harriger, 2020). To expand on the novel interpersonal findings related to body image, future research could explore this further. For example, examining if body image concerns are correlated with or predicted by interpersonal difficulties, fear of negative evaluation by others or maladaptive schemas among men with eating disorders.

Regarding clinical implications, the findings support previous recommendations that muscle-orientated body image concerns should be assessed and considered within treatment for men with eating disorders (Murray et al., 2016). However, the sample did not appear to demonstrate such a gendered difference with thinness and muscularity as described in existing literature (Darcy et al., 2012; Joiner et al., 2000; Murray et al., 2012; Núñez-Navarro et al., 2012; Stanford & Lemberg, 2012). Therefore, clinicians should consider men with eating disorders presenting with thinness concerns. Consideration should be given to systemic influences regarding who can and do access NHS treatment which may have impacted the sample, such as weight being a measure for illness severity and need for treatment by services (Brown et al., 2018; Scottish Intercollegiate Guidelines Network, 2022), and focuses on thinness-orientated concerns (Murray et al., 2016). Given those with a low weight will be more likely to access treatment and the current sample was recruited from NHS services, this might lead to more representation of thinness concerns and fewer muscularity concerns in the sample. Clinicians should assess interpersonal concerns with body image and, if present, consider formulating and addressing these as part of recommended treatments for eating disorders (National Institute for Health and Care Excellence, 2017; Scottish Intercollegiate Guidelines Network, 2022), such as cognitive behavioural therapy for eating disorders (Fairburn, 2008; Waller et al., 2007) and the Maudsley model of anorexia nervosa treatment for adults (Schmidt & Treasure, 2006; Schmidt et al., 2014). While both therapies can address interpersonal and relational difficulties to an extent, men presenting with considerable interpersonal and relational concerns with body image may benefit from other psychological therapies with more of a focus on interpersonal relationships as an adjunct or alternative approach, as recommended by clinical guidelines (NHS Education for Scotland, 2014; Scottish Intercollegiate Guidelines Network, 2022). For example, interpersonal psychotherapy (Jacobs et al., 2004; Rieger et al., 2010), cognitive analytic therapy (Newell, 2012) and schema therapy (Simpson & Smith, 2019) for eating disorders. Participants also reported critical relationships with their bodies and shame-based emotions. For men with high levels of shame and self-criticism, compassion-focused therapy for eating disorders (Goss & Allan, 2014) may be a useful adjunct or alternative (Steindl et al., 2017). Although certain psychological therapies do not recommend developing a psychological formulation for the development of eating disorders (Fairburn, 2008; Waller et al., 2019), early experiences of appearance-related bullying appeared to be key for participants' experiences of distress with their bodies. Formulating the impact of early experiences on cognitions regarding self and others (Kuyken et al., 2008) may be important to consider in treatment with male patients. Lastly, considering social context within treatment has been highlighted to be important for understanding mental distress (Boyle, 2011). Clinicians should consider if contextual factors, such as media and societal narratives, may impact the experience of body image for men with eating disorders.

Conclusion

In conclusion, findings highlighted how body image was experienced intrapersonally, interpersonally and systemically. Men identified a critical and preoccupying experience with their bodies, in which their body shape goals varied and their bodies were central to how they determined their self-esteem. Participants attempted to manage body image concerns by controlling their bodies with disordered eating and exercise, which had negative psychosocial and physical consequences. Their perception of their bodies involved considering how others may perceive and evaluate them, which was influenced by early experiences of appearance-based bullying. Wider systemic influences were also highlighted, with media representations and societal narratives negatively impacting their sense of body image. Future research could examine interpersonal concerns and body image among men with eating disorders. Further exploring how body image is experienced by people with eating disorders across the sexuality and gender spectrum may increase understandings of diverse populations. Clinicians working with men with eating disorders should consider the complexities of body image as part of assessment, formulation and treatment. This includes comprehensively assessing body image without assuming men solely present with muscularity body concerns. Assessing, formulating and treating early negative interpersonal experiences and body image concerns should be considered; if appropriate, offering interpersonally focused psychological therapies for eating disorders. This study offers insight into this under-investigated area, providing individual and shared meanings and context to how body image is understood for men with diagnosed eating disorders.

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Appendices

Appendix 1. Systematic Review Protocol.

10-session cognitive-behavioural therapy (CBT-T) for eating disorders: a systematic review

Andreas Paphiti, Emily Newman

Citation

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Review question

The aim is to review the effectiveness of a relatively new, 10-session cognitive behavioural therapy (CBT) for non-underweight eating disorders (CBT-T) from the available evidence in the literature.

The review question is what is the effectiveness of CBT-T for those with eating disorders?

Searches

All years will be searched on the following databases to identify studies: MEDLINE, EMBASE, PsycINFO and Proquest. The review will follow PRISMA guidelines (BMJ, 2009). Only studies published in English will be extracted.

The search strategy will apply the database-specific methods of using the following search terms: ("10-session* cognitive behavi* therap*" or "ten-session* cognitive behavi* therap*" or "brief cognitive behavi* therap*" or "CBT-T" or "cognitive behavi* therap* for eating disorder*" AND "eating disorder*" or "anorexia nervosa" or "bulimia nervosa" or "binge eating" or "disordered eating").

Types of study to be included

The types of study to be include will be study designs for intervention studies.

Condition or domain being studied

The conditions being studied are eating disorders, specifically anorexia nervosa (AN), bulimia nervosa (BN), binge eating disorder (BED) and other non specified eating disorder (OSFED).

Participants/population

Inclusion criteria:

- 1) Participants must have a formal diagnosis, diagnosable or receiving treatment of an ED, including either AN, BN, BED or OSFED during the time of the study.
- 2) Participants must have undergone CBT-T during the course of the study.
- 3) Published articles in an English-language peer-reviewed journal.

- 4) Studies in which outcomes include a measure of eating disorder symptoms (such as formal outcome measures, frequency of disordered eating and/or weight restoration), with at least pre- and post-treatment outcomes.
- 5) Studies which are intervention studies, with any study design (including RCTS, non-randomised trials, cohort studies, case-controls, cross-sectional and case series designs).
- 6) Studies offering quantitative data regarding outcomes of CBT-T intervention studies.
- 7) Studies with CBT-T with either a comparator or no comparator.
- 8) Studies conducted in all settings.
- 9) Participants can be of any age.

Exclusion criteria:

- 1) Participants with feeding disorders or an eating disorder which does not have weight/shape concerns, such as Avoidant Restrictive Food Intake Disorder.
- 2) Studies with a CBT intervention for eating disorders which is not formal, manualised CBT-T.
- 3) Studies not in English.
- 4) The study is in the form of a case study, letter, poster, commentary book or book chapter to minimise bias.
- 5) The full text was unavailable, as an abstract was unlikely to provide sufficient detail.
- 6) Studies which have used CBT-T, but the aims of the studies are not to evaluate the effectiveness of the intervention.
- 7) Studies offering qualitative data of CBT-T
- 8) Studies which are unpublished.

Intervention(s), exposure(s)

- 1) The studies must involve quantitative measures of the relationship between CBT-T and eating disorder symptom outcomes.
- 2) The studies must include a measure of eating disorder symptoms and related outcomes pre- and post-treatment (such as, outcome measures, weight restoration or loss, bingeing and purging frequency).

Comparator(s)/control

Patients who do not undergo CBT-T (another treatment intervention or no-treatment control groups).

Context

Studies in clinical or research settings.

Main outcome(s)

The main important outcome will be to determine the effect of CBT-T on symptom outcomes for adults with eating disorders.

Measures of effect

The outcomes will be eating disorder symptoms measured by formal outcome measures and frequency of disordered eating (such as frequency of purging, laxative use and binge eating).

Additional outcome(s)

Other outcomes that will be explored are anxiety and depression symptoms, impairment related to an eating disorder, abstinence, remission and 'good outcome'.

Data extraction (selection and coding)

Titles and/or abstracts of studies retrieved using the search strategy and those from additional sources will be screened independently by one review author to identify studies which potentially meet the inclusion criteria outlined above. The full texts of these potentially eligible studies will then be retrieved and independently assessed for eligibility by two review team members. Any disagreements between them over the eligibility of particular studies will be resolved through discussion with a third reviewer. Missing data will be requested from study authors.

Criteria for data extraction will include:

1. Author(s), publication year, period of data collection, and country where research took place;
2. Type of study (e.g. exploratory, evaluation);
3. Aims, objectives, and/or research questions;
4. Type of participants included (e.g. participant characteristics and type of eating disorder);
5. Funding;
6. Recruitment context/methods of sampling;
7. Intervention(s) and follow-up;
8. Inclusion and exclusion criteria;
9. Date(s)/time period of data collection;
10. Data collection methods and process;

11. Data analysis procedure;
12. Results;
13. Key discussion points presented by authors;
14. Study limitations.

Risk of bias (quality) assessment

A quality assessment will be conducted with the Thomas Quality Assessment Tool as it can be used for randomised and non-randomised studies. The tool rates methodological quality for each of the questions in the eight sections of the tool:

Selection bias

Study design

Confounders

Blinding

Data collection methods

Withdrawals and dropouts

Intervention integrity

Analysis

Once all questions have been answered, users rate the overall methodological quality of the research article. The main reviewer will appraise all studies and a second examiner will co-review a random selection of 50% of papers. Any discrepancies will be discussed between the two examiners and if agreement is not reached, discussion with an independent reviewer.

The quality of studies included will be discussed within the discussion section of the narrative synthesis in which the outcomes of the studies and quality of studies will be considered as part of the discussion and interpretation of the results.

Strategy for data synthesis

A narrative synthesis will be conducted to evaluate the efficacy of CBT-T for non-underweight eating disorders, due to heterogeneity across a number of areas which mean a meta-analysis can not be conducted.

The points of interest for the synthesis of results will be: attrition, patient characteristics, eating disorder psychopathology, disordered eating behaviours, depression and anxiety, clinical impairment related to the eating disorder, abstinence and remission.

Text and tables will be used to provide a descriptive summary and explanation of study characteristics and findings.

Analysis of subgroups or subsets

None planned.

Contact details for further information

Andreas Paphiti

Organisational affiliation of the review

University of Edinburgh and NHS Tayside

Review team members and their organisational affiliations

Mr Andreas Paphiti. University of Edinburgh
Dr Emily Newman. University of Edinburgh

Type and method of review

Narrative synthesis, Systematic review

Anticipated or actual start date

25 February 2022

Anticipated completion date

24 April 2023

Funding sources/sponsors

There are no funders - the systematic review is being completed as part of the researcher's Doctorate in Clinical Psychology at The University of Edinburgh.

Conflicts of interest

Language

English

Country

Scotland

Stage of review

Review Completed not published

Subject index terms status

Subject indexing assigned by CRD

Subject index terms

Cognitive Behavioral Therapy; Feeding and Eating Disorders; Humans

Date of registration in PROSPERO

25 October 2021

Date of first submission

22 October 2021

Appendix 2. Participant Information Sheet.



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PARTICIPANT INFORMATION SHEET

Understanding the Experiences of Body Image in Men with Eating Disorders

You are being invited to take part in research on understanding how men with eating disorders experience body image. Andreas Paphiti (Trainee Clinical Psychologist) at the University of Edinburgh is leading this research and is being supervised by Dr Emily Newman (Senior Lecturer) and Dr Paula Collin (Consultant Clinical Psychologist). Before you decide whether to take part it is important you understand why the research is being conducted and what it will involve. Please take time to read the following information carefully.

WHAT IS THE PURPOSE OF THE STUDY?

The purpose of the study is to understand how men with eating disorders experience body image.

WHY HAVE I BEEN INVITED TO TAKE PART?

You are invited to participate in this study because you are a male patient aged 18 or over, accessing support for an eating disorder from a specialist service.

DO I HAVE TO TAKE PART?

No. Your participation is voluntary. If you do decide to take part, you are still free to withdraw at any time and without giving a reason. Deciding not to take part or withdrawing from the study will, not affect your access to mental health care or other healthcare you may receive.

Please note that once you have participated in the interview, your data will be anonymised and it will not be possible to withdraw your data after this point.

WHAT WILL HAPPEN IF I DECIDE TO TAKE PART?

If you do decide to take part, please keep this Information Sheet. You will be asked to complete an Informed Consent Form to show that you understand your rights in relation to the research, and that you are happy to participate. You will be asked to select all statements to indicate your consent to participate. Informed consent will be gathered by the researcher from you if you decide to take part, and the time allowed between being given this information sheet to taking consent is 24 hours to a week. If you decide to participate by doing the interview by phone or video, consent can be taken online (by emailing a copy of the completed form to the researcher), or you the researcher can post a consent form to you with a stamped envelope for you to return. If you wish to do it face-to-face, this will be taken by the researcher in-person before the demographic questionnaire and interview are completed.

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The researcher will then contact you by phone or email to arrange an interview. Before the interview, you will be asked to complete a demographic questionnaire, which will take around five minutes to complete. The interview will include questions about your experiences with having an eating disorder, and how you experience body image.

The interview will take place in a safe environment at a time that is convenient to you. Ideally, we would like to video and/or audio record your responses (and will require your consent for this), so the location should be in a fairly quiet area. The interview should take around an hour to complete.

After the interview, you will be contacted to contribute to the analysis of your data by commenting on the findings.

With your consent, your clinician who informed you about the study and your GP will be informed that you are participating in the study. We will only let them know you are taking part, we will not share any of the information you provide with them.

WHAT ARE THE POSSIBLE BENEFITS OF TAKING PART?

There are no direct benefits, but by sharing your experiences with us, you will be helping the researcher and the University to better understand the experiences of men with eating disorders and how they experience body image. Hearing from men with eating disorders is important as they are a part of the eating disorder population, but little research has taken into account their perspectives. Hearing from men with eating disorders helps to inform research, and evidence-based practice and guidelines concerning male patients with eating disorders.

ARE THERE ANY RISKS OR DISADVANTAGES ASSOCIATED WITH TAKING PART?

There is a risk that questions relating to how you experience an eating disorder may cause distress. If you do become upset or distressed during the interview you can choose to not answer certain questions or you can ask to pause or stop the interview at any time. There is also contact information of support services at the end of this sheet.

RISKS OF PARTICIPATION (COVID-19)

For participants who wish to be interviewed face-to-face, rather than by phone or video call, we have taken specific steps to minimise the risk of exposure to the Coronavirus during the study by adhering to the Scottish Government [guidance](#)

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(<https://www.gov.scot/coronavirus-covid-19/>) Further, you will only interact with researchers who are well, and have had no known contact with COVID-19 positive individuals for the past 14 days. However, even with these control measures, there remains some additional risk of exposure from participating in this study.

If you would like to change to a remote medium to conduct the interview (by phone or video call), please let the researcher know and this can be arranged.

WHAT IF I AM UNWELL?

If you feel unwell or have been in contact with a COVID-19 positive individual in the past 14 days, then please contact the researcher (Andreas Paphiti, 01382 346556), and we will postpone or cancel the research interaction.

WILL MY TAKING PART BE KEPT CONFIDENTIAL?

All the information we collect during the course of the research will be kept confidential and there are strict laws which safeguard your privacy at every stage. However, if there are safety concerns that arise during the study regarding your mental and/or physical health, in these cases confidentiality may need to be breached in order for the researcher to act on these concerns – for example, discussing these concerns with your clinician. If this is to happen, this will be communicated and discussed with you.

HOW WILL WE USE INFORMATION ABOUT YOU?

We will ask for information from you for this research project. This information will include some demographic information (such as your age and diagnosis) and your perspectives on body image. People may use this information to do the research or to check to make sure the research is being done properly. Your data will be associated with a randomly generated participant number. We will keep all information about you safe and secure. The final report will be written in a way that means no single participant can be identified. Once we have finished the study, we will keep some of the data so we can check the results. We will keep all information about you safe and secure.

Consent to being audio and/or video recorded is required to participate in the study and all recordings will be destroyed once they have been transcribed by the main researcher. Your data will only be viewed by the research team.

All electronic data will be stored on a password-protected computer file and all paper records will be stored in a locked filing cabinet. Your consent information will be kept separately from your responses in order to minimise risk.

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In the unlikely event of a participant losing capacity to consent, the research team would retain personal data collected, but would not collect any further information.

WHAT ARE YOUR CHOICES ABOUT HOW YOUR INFORMATION IS USED?

You can stop participating in the study at any time, without giving a reason, but we will keep information about you that you have already given. We need to manage the data in specific ways for the research to be reliable. This means that the researchers will not be able to let you see or change the data we hold about you.

WHERE CAN YOU FIND OUT MORE ABOUT HOW YOUR INFORMATION IS USED?

You can find out more about how we use your information at:

- at www.hra.nhs.uk/information-about-patients
- or by asking one of the research team via email (details below)
- by emailing the UoE Data Protection officer at DPO@ed.ac.uk
- at <https://www.ed.ac.uk/records-management/privacy-notice-research>

WHAT WILL HAPPEN WITH THE RESULTS OF THIS STUDY?

The results of this study may be summarised in published articles, reports and presentations. You will not be identifiable from any published results. Quotes or key findings will always be made anonymous in any formal outputs. With your consent, your anonymised information will be kept for a minimum of 5 years and may be used in future research. A summary of the findings from the study will be made available to participants who indicate they would like to receive this. This summary will be sent to participants by post or email.

WHO IS ORGANISING AND FUNDING THE RESEARCH?

This research is being organised as part of the researcher's Doctorate in Clinical Psychology and The University of Edinburgh is the sponsor for this research.

WHO HAS REVIEWED THE STUDY?

The study proposal has been reviewed by School of Health in Social Science Ethics Committee and NHS Ethics Committee.

Who can I contact?

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If you are interested in participating in the study, please contact the researcher, Andreas Paphiti, via email on or phone on 01382 346556. You can also give consent for your clinician to pass your contact details and the researcher will be in touch to discuss the study if you are interested.

If you have any further questions about the study, please contact Andreas Paphiti via email: or Dr Emily Newman at

If you would like to discuss this study with someone independent of the study team please contact: Helen Sharpe, Research Lead for Clinical and Health Psychology at the University of Edinburgh on:

If you wish to make a complaint about the study, please contact the Head of School at the University of Edinburgh, Dr Matthias Schwannauer: headofschool.health@ed.ac.uk.

SUPPORT

If you experience distress or upset during or after the interview, you are able to seek support from your clinician at the eating disorder service and/or Beat's (the eating disorder charity) helpline on 0808 801 0677. You can also contact the following helplines:

- NHS 24 - 111
- Breathing Space - 0800 838587 (Monday to Thursday 6pm to 2am, weekends 6pm to 6am)
- Samaritans - 116 123

Appendix 3. Consent to Contact Form.



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Body Image in Men with Eating Disorders
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Body Image in Men with Eating Disorders – A Qualitative Study

Consent to Contact Form

Thank you for discussing the study with your patient. If your patient is interested in participating, please can the following details be taken below and form given to the researcher.

Patient Name:

Patient Contact Number:

Patient Email Address:

Patient's preferred method of communication – please delete as appropriate:

Phone – Yes/No

Email – Yes/No

Please confirm that the patient is happy to be contacted by the researcher - – please delete as appropriate:

Yes

No

Unsure

Thank you for completing.

Please give the completed form to the researcher or email at

Appendix 4. Consent Form.



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PARTICIPANT CONSENT FORM

Study Title: Understanding the Experiences of Body Image in Men with Eating Disorders

Researcher name: Andreas Paphiti

Researcher contact details:
01382 346556

Participant ID: _____

Please **read and initial ALL of the following statements** if you agree to participate in this research study.

1. I confirm that I have read and understood the Participant Information Sheet (Version 2 dated 07/11/2021) for the above study. ☐
2. I have been given the opportunity to consider the information provided, ask questions and have had these questions answered to my satisfaction. ☐
3. I understand that my participation is voluntary and that I can ask to withdraw at any time without giving a reason and without my medical care or legal rights being affected. ☐
4. I understand that my anonymised data will be stored for a minimum of 5 years and may be used in future ethically approved research. ☐
5. If participating face-to-face, I am aware that participating in this study at the current time may carry risks in relation to potential exposure to coronavirus, and I understand the steps that have been taken in relation to minimise the risks of exposure and transmission. ☐

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6. I agree to my interview being audio and/or video recorded.

☐

7. I understand that anonymous quotations from the interview may be used in the thesis and published reports.

☐

8. I understand that in instances in which the researcher has safety concerns regarding my mental and/or physical health, confidentiality may need to be breached to act on these concerns by discussing such concerns with your clinician.

☐

9. I understand that relevant sections of data collected during the study may be looked at by individuals from the Sponsor (the University of Edinburgh) or from the NHS Board where it is relevant to my taking part in this research.

☐

10. I agree to take part in the above study.

☐

The below statements are optional consent and you can still take part in the study without agreeing to these – **please read and initial if you consent to these:**

1. I agree to be further contacted to contribute to the analysis process with a summary of the findings.

☐

2. I agree for the researcher to contact my GP to inform them of my participation in the study.

☐

Name of person giving consent

Date

Signature

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Name of person taking consent

Date

Signature

1x original – into Site File; 1x copy – to Participant

Appendix 5. Interview Schedule.

Body Image in Men with Eating Disorders: A Qualitative Study

Interview Schedule

Introduction

Thank you for agreeing to take part in this research. We are interested in understanding your experiences with body image and having an eating disorder.

We expect the interview to last up to one hour, but we can stop to take a break at any point, and you can finish the interview at any time without giving an explanation.

[If participant has consented to be recorded, switch on the recorder]

May I double-check that you are happy for this interview to be recorded?

[Continue recording, if participant has confirmed their consent.]

What is your understanding of the term body image? *Possible prompts:* What does body image mean to you? What does it mean to you as a man?

How do you feel about your body? *Possible prompts:* Could you tell me more about that? Does it relate to how you feel about yourself as a man? Is how you look important to you? In what ways is it important to you? How important is it in influencing how you feel about yourself? How do you cope?

Can you tell me about how you ideally would like your body to look? *Possible prompts:* How would you like it to look? What would you change? Is there a particular area? Would it change how you feel?

How do you feel and think your body compares to other men of your age? *Possible prompts:* Does this perspective ever change?

Has there been a recent time in which you have felt negatively about your body and shape? *Possible prompts:* What happened? How did you feel? How do you cope if you feel negative about your body?

Are there or have there been times in which you have felt positive about your body? *Possible prompts:* When did you feel positive about it? Are there parts that have made you feel happy?

Can you tell me what happened when your first started to pay attention to your body and appearance? *Possible prompts:* When did this happen? Did something change? Did

anything significant happen around this time? Did you see yourself differently before in comparison to now?

How do your body or shape concerns relate to your eating? *Possible prompts:* Has your eating changed? How do you feel about these changes? Does anything make it better? Does anything make it worse?

Are there other things that you have done to try to influence your body, shape or weight? *Possible prompts:* Has your eating changed? Have you limited what you've eaten? Have you used any substances to facilitate changes in your body? Have there been changes in how you exercise?

Can you tell me about the pressures or triggers you experience that make you feel concerned about your body? *Possible prompts:* Are there particular triggers? Do you find particular situations more difficult than others? Are there certain pressures that come from being a man?

Closing Question

Is there anything else you would like to discuss that has not already been covered?

Thank you very much for taking part in this interview.

Appendix 6. Demographic Questionnaire.



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Body Image in Men with Eating Disorders: A Qualitative Study

Demographic Questionnaire

Participant number:

Which category below includes your age?

- 18-20
- 21-29
- 30-39
- 40-49
- 50-59
- 60 or older

Which category below best represents your ethnicity?

- White
- Black
- Asian
- From multiple races
- Other ethnicity (please specify)

How do you identify your gender?

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- Female
- Male
- Non-binary
- Transgender
- Gender fluid
- Other (please specify)

How do you identify your sexual orientation?

- Heterosexual
- Gay
- Lesbian
- Bi-sexual
- Queer
- A-sexual
- Pansexual
- Other (please specify)

Which category below represents your marital status?

- Single
- Married
- Widowed
- Divorced
- Separated

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- Never married

What is the highest level of school you have completed or the highest degree you have received?

- Less than high school degree
- Secondary/high school degree or equivalent, e.g., Standards, Highers, GCSEs or A-Levels
- College course
- Undergraduate degree
- Postgraduate degree

Which of the following categories best describes your employment status?

- Employed, working 1-39 hours per week
- Employed, working 40 or more hours per week
- Not employed, looking for work
- Not employed and not looking for work
- Full-time student
- Part-time student
- Retired
- Disabled, not able to work
- Other (please specify)

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Which of the following types of eating disorder have you been diagnosed with?

- Anorexia nervosa
- Bulimia nervosa
- Atypical anorexia nervosa
- Atypical bulimia nervosa
- Binge eating disorder
- Other specified feeding or eating disorder (OSFED)
- Other (please state)
- Unsure

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Appendix 7. Reflexive Diary Extract.

I felt he needed reassurance a few times during the interview. He was really open with me about the interpersonal and relational side to his body and eating, about being fetishised and his body being validated. This part of meaning-making seemed quite clear to him. He commented that he felt comfortable and didn't feel judged by me, which I was glad to hear. It was interesting for me, as a gay man too, to hear about his experiences in the queer community around body image – something that was relevant to my own experiences when I've been on dating apps and in queer spaces about the valued 'ideal' of body shape, e.g. thin or muscular.

Reflecting on the interview, there were areas that could have been expanded more on. We didn't explore masculinity in relation to body and BED as much as we could have, likewise for sexuality. Was there a reason for this? Perhaps I felt it would have been too much to explore and we were already mostly through the interview time.

I felt questions around when he first began to attend to his weight and body in his teenage years weren't fully answered and perhaps avoided? Perhaps there was something difficult about this and he didn't feel comfortable to be open about it? There was more opportunity to have asked more questions, but I didn't want to push.

As with the other interviews, I feel balancing summarising without making meaning or links was a line to balance, and something to keep reflecting on as I progress with interviews.

Appendix 8. Confirmation of Study Logged with School of Health in Social Science.



HISS Research Ethics

To: HISS Research Ethics +1 other



Mon 24/01/2022 12:55

Dear Andreas,

Thank you for your email and for providing us with all the relevant documents. We have now checked that your project adheres to any University governance concerns and your application has been logged. As your project has been reviewed and received a favourable opinion by IRAS it does not require further review by the Clinical Psychology Ethics Committee database.

If you need to make any changes to the protocol these would go through the REC, but I would appreciate if you could also copy University ethics into any correspondence.

Wishing you all the best with your project.

Best wishes,

Ingrid

Ingrid Obsuth, PhD

Lecturer in Clinical Psychology

Ethics & Integrity Lead

Appendix 9. Research Ethics Service Ethical Approval Letter.

WoSRES
West of Scotland Research Ethics Service



Mr Andreas Paphiti
Trainee Clinical Psychologist
15 Dudhope Terrace
Dundee
DD3 6HH

West of Scotland REC3
West of Scotland Research Ethics Service
Ground Floor Ward 11
Dykebar Hospital
Grahamston Road
Paisley PA2 7DE

Date 13 December 2021
Direct line 0141 314 0212
E-mail WoSREC3@ggc.scot.nhs.uk

Please note: This is the favourable opinion of the REC only and does not allow you to start your study at NHS sites in England until you receive HRA Approval

Dear Mr Paphiti

Study title: Body Image in Men with Eating Disorders: A Qualitative Study
REC reference: 21/WS/0125
Protocol number: CAHSS2107/08
IRAS project ID: 301916

Thank you for your letter of 30th November 2021, responding to the Research Ethics Committee's (REC) request for further information on the above research and submitting revised documentation.

The further information was considered in correspondence by a Sub-Committee of the REC. A list of the Sub-Committee members is attached.

Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised, subject to the conditions specified below.

Good practice principles and responsibilities

The [UK Policy Framework for Health and Social Care Research](#) sets out principles of good practice in the management and conduct of health and social care research. It also outlines the responsibilities of individuals and organisations, including those related to the four elements of [research transparency](#):

1. [registering research studies](#)
2. [reporting results](#)
3. [informing participants](#)
4. [sharing study data and tissue](#)

Conditions of the favourable opinion

The REC favourable opinion is subject to the following conditions being met prior to the start of the study.

Confirmation of Capacity and Capability (in England, Northern Ireland and Wales) or NHS management permission (in Scotland) should be sought from all NHS organisations involved in the study in accordance with NHS research governance arrangements. Each NHS organisation must confirm through the signing of agreements and/or other documents that it has given permission for the research to proceed (except where explicitly specified otherwise).

Guidance on applying for HRA and HCRW Approval (England and Wales)/ NHS permission for research is available in the Integrated Research Application System.

For non-NHS sites, site management permission should be obtained in accordance with the procedures of the relevant host organisation.

Sponsors are not required to notify the Committee of management permissions from host organisations

Registration of Clinical Trials

All research should be registered in a publicly accessible database and we expect all researchers, research sponsors and others to meet this fundamental best practice standard.

It is a condition of the REC favourable opinion that **all clinical trials are registered** on a publicly accessible database within six weeks of recruiting the first research participant. For this purpose, 'clinical trials' are defined as the first four project categories in IRAS project filter question 2. Failure to register a clinical trial is a breach of these approval conditions, unless a deferral has been agreed by or on behalf of the Research Ethics Committee (see here for more information on requesting a deferral: <https://www.hra.nhs.uk/planning-and-improving-research/research-planning/research-registration-research-project-identifiers/>)

If you have not already included registration details in your IRAS application form, you should notify the REC of the registration details as soon as possible.

Further guidance on registration is available at: <https://www.hra.nhs.uk/planning-and-improving-research/research-planning/transparency-responsibilities/>

Publication of Your Research Summary

We will publish your research summary for the above study on the research summaries section of our website, together with your contact details, no earlier than three months from the date of this favourable opinion letter.

Should you wish to provide a substitute contact point, make a request to defer, or require further information, please visit: <https://www.hra.nhs.uk/planning-and-improving-research/application-summaries/research-summaries/>

N.B. If your study is related to COVID-19 we will aim to publish your research summary within 3 days rather than three months.

During this public health emergency, it is vital that everyone can promptly identify all relevant research related to COVID-19 that is taking place globally. If you haven't already done so, please register your study on a public registry as soon as possible and provide the REC with the registration detail, which will be posted alongside other information relating to your project. We are also asking sponsors not to request deferral of publication of research summary for any projects relating to COVID-19. In addition, to facilitate finding and extracting studies related to COVID-19 from public databases, please enter the WHO official acronym for the coronavirus disease (COVID-19) in the full title of your study. Approved COVID-19 studies can be found at: <https://www.hra.nhs.uk/covid-19-research/approved-covid-19-research/>

It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

After ethical review: Reporting requirements

The attached document "After ethical review – guidance for researchers" gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Adding new sites and investigators
- Notification of serious breaches of the protocol
- Progress and safety reports
- Notifying the end of the study, including early termination of the study
- Final report
- Reporting results

The latest guidance on these topics can be found at <https://www.hra.nhs.uk/approvals-amendments/managing-your-approval/>.

Ethical review of research sites

NHS/HSC sites

The favourable opinion applies to all NHS/HSC sites taking part in the study, subject to confirmation of Capacity and Capability (in England, Northern Ireland and Wales) or management permission (in Scotland) being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

Non-NHS/HSC sites

I am pleased to confirm that the favourable opinion applies to any non-NHS/HSC sites listed in the application, subject to site management permission being obtained prior to the start of the study at the site.

Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

<i>Document</i>	<i>Version</i>	<i>Date</i>
Evidence of Sponsor insurance or indemnity (non NHS Sponsors only) [Evidence of UoE Insurance]		30 June 2021
GP/consultant information sheets or letters [GP Letter]	Version 1	03 September 2021
Interview schedules or topic guides for participants [Interview Schedule]	Version 1	10 September 2021
IRAS Application Form [IRAS_Form_17092021]		17 September 2021
IRAS Application Form [IRAS_Form_29112021]		29 November 2021
Non-validated questionnaire [Demographic Questionnaire]	Version 1	20 August 2021
Other [Consent to Contact Form V1 20 Aug 21]	Version 1	20 August 2021
Other [Covering Letter to Client]		
Other [CT Confirmation]		04 August 2021
Other [Liability Insurance Certificate]		
Other [Introduction to Good Clinical Practice Certificate]		25 January 2021
Other [Clinical Supervisor CV]		24 August 2021
Other [PI Confirmation]		05 August 2021
Other [Miriam Zoeller CV]		20 August 2021
Other [Data Protection Training Certificate]		16 October 2020
Other [Responses to REC Points]		30 November 2021
Participant consent form [Consent Form]	Version 2	07 November 2021
Participant information sheet (PIS) [Participant Information sheet]	2	07 November 2021
Research protocol or project proposal [Study Protocol]	Version 2	07 November 2021
Summary CV for Chief Investigator (CI) [CV for Chief Investigator]		01 August 2021
Summary CV for supervisor (student research) [CV for Supervisor]		

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

User Feedback

The Health Research Authority is continually striving to provide a high quality service to all applicants and sponsors. You are invited to give your view of the service you have received and the application procedure. If you wish to make your views known please use the feedback form available on the HRA website: <http://www.hra.nhs.uk/about-the-hra/governance/quality-assurance/>

HRA Learning

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IRAS project ID: 301916 Please quote this number on all correspondence

With the Committee's best wishes for the success of this project.

Yours sincerely

On Behalf of
Dr Anne Louise Cunningham
Chair

Email: wosrec3@ggc.scot.nhs.uk

Enclosures: List of names and professions of members who were present at the meeting and those who submitted written comments

"After ethical review – guidance for researchers"

Copy to: Charlotte Smith, University of Edinburgh

West of Scotland REC 3

Attendance at Sub-Committee of the REC meeting on 07 December 2021

Committee Members:

<i>Name</i>	<i>Profession</i>	<i>Present</i>	<i>Notes</i>
Mr John Cassels	Principal Policy Officer (Vice-Chair)	Yes	Chair of Meeting
Miss Kayleigh Margaret O'Rourke	N/A	Yes	

Also in attendance:

<i>Name</i>	<i>Position (or reason for attending)</i>
Ashley McLaren	REC Manager

Appendix 10. Confirmation of Favourable Opinion for Online Recruitment as Part of Contingency Plan.

WoSRES
West of Scotland Research Ethics Service

Mr Andreas Paphiti
Trainee Clinical Psychologist
NHS Tayside
15 Dudhope Terrace
Dundee
15 Dudhope Terrace
Dundee
DD3 6HH



West of Scotland REC 3
West of Scotland Research Ethics Service
Ground Floor Ward 11
Dykebar Hospital
Grahamston Road
Paisley PA2 7DE

Date 25 April 2022
Direct line 0141 314 0212
E-mail WoSREC3@ggc.scot.nhs.uk

Dear Mr Paphiti

Study title: Body Image in Men with Eating Disorders: A Qualitative Study
REC reference: 21/WS/0125
Protocol number: CAHSS2107/08
Amendment number: Charlotte Smith, The University of Edinburgh, (REC Ref AM02)
Amendment date: 04 April 2022
IRAS project ID: 301916

The above amendment was reviewed at the meeting of the Sub-Committee held on 14 April 2022 in correspondence.

Ethical opinion

The members of the Committee taking part in the review gave a favourable ethical opinion of the amendment on the basis described in the notice of amendment form and supporting documentation.

Approved documents

The documents reviewed and approved at the meeting were:

Document	Version	Date
Completed Amendment Tool [Amendment Tool Locked]	1	04 April 2022
Copies of materials calling attention of potential participants to the research [Online Advert]	1	04 April 2022
Other [Response to REC queries]		22 April 2022
Research protocol or project proposal [Protocol]	3	04 April 2022

Membership of the Committee

The members of the Committee who took part in the review are listed on the attached sheet.

Working with NHS Care Organisations

Sponsors should ensure that they notify the R&D office for the relevant NHS care organisation of this amendment in line with the terms detailed in the categorisation email issued by the lead nation for the study.

Amendments related to COVID-19

We will update your research summary for the above study on the research summaries section of our website. During this public health emergency, it is vital that everyone can promptly identify all relevant research related to COVID-19 that is taking place globally. If you have not already done so, please register your study on a public registry as soon as possible and provide the HRA with the registration detail, which will be posted alongside other information relating to your project.

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

HRA Learning

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IRAS Project ID - 301916:	Please quote this number on all correspondence
----------------------------------	---

Yours sincerely

On behalf of
Dr Ben Parkinson
Chair

E-mail: wosrec3@ggc.scot.nhs.uk

Enclosures: List of names and professions of members who took part in the review

*Copy to: Charlotte Smith, Sponsor contact
Dr Emily Newman, Academic Supervisor*

West of Scotland REC 3

**Attendance at Sub-Committee of the REC meeting on 14 April 2022 (Decision issued
25th April 2022)**

Committee Members:

<i>Name</i>	<i>Profession</i>	<i>Present</i>	<i>Notes</i>
Dr Kenneth Harden	Retired GP	Yes	
Dr Ben Parkinson	Senior Lecturer (Chair)	Yes	Chair of meeting

Also in attendance:

<i>Name</i>	<i>Position (or reason for attending)</i>
Ashley Nisbet	REC Manager

Appendix 11. Email Confirmation of Amendment for NHS Greater Glasgow and Clyde Service.

From: GRAM Nrspcc <gram.nrspcc@nhs.scot>

Sent: 01 July 2022 13:06

To: CAHSS Research ethics <Cahss.res.ethics@ed.ac.uk>; Generic Reviews, R&D
<R&D.GenericReviews@ggc.scot.nhs.uk>

Cc: GRAM Randdpermissions <gram.randdpermissions@nhs.scot>; R&D Office
<R&DOffice@nhslothian.scot.nhs.uk>; Liz Coote ; Lynn Balmer ;
TAY tasc <tay.tasc@nhs.scot>; Elisabetha Ursuta ; Anne Black1
; Lindsay Carnegie ; Katherine Coll

Subject: IRAS: 301916, notification of amendment

Dear All

I am pleased to confirm that your amendment documentation is complete and implementation information is below.

Please note that this email does not constitute R&D approval.

Additional guidance can be [found here](#)

IRAS Project ID:	301916
Short Study Title:	Body Image in Men with Eating Disorders: A Qualitative Study
Amendment No./Sponsor Ref:	NSA2
Amendment Date:	27.06.22
Amendment category and implementation information for NHS organisations in Scotland:	New site – Please start to set up your new sites as per the guidance in IRAS . Sites may not open until NHS permission is in place. It is noted that the Protocol has been updated to reflect the new site added.

In line with our current process, R&D colleagues at Scottish sites are included in this email and have access to all amendment documentation. There is no requirement to send directly to them.

It remains Sponsor responsibility to ensure the final approved amendment documentation is available for the research teams.

Kind regards
Pam

Senior Administrator
NRS Permissions Coordinating Centre
Research & Development Office
Foresterhill House Annexe
Foresterhill
ABERDEEN
Email:

Appendix 12. Sample of Transcript Analysis.

Positive emotions associated with body acceptance	P: Well I think acceptance now might be a possibility is quite exciting and quite reliving. You know, I'm never going to make the cover of Men's Health, you know. Even though that's where I would want to be. I know that's photoshopped and they dehydrate themselves. And they have special lighting to exaggerate the six-pack and all that. I know all that. But it still does... I think because the trauma as a child, you know, and the experience that everyone was focusing on my weight. I look back and I wasn't even a fat kid.	Commented [AP74]: Positive emotional side to body acceptance; a relief Commented [AP75]: Ideal to meet representation of body in media; recognition/conflict that he will not attain this Commented [AP76]: Awareness these representations of bodies are not accurate
Body ideal to meet media representation of bodies; recognition of dissonance with inability to achieve with desire for ideal	I: Uh huh. P: You know I look back at pictures at me when I was 17/18 and in my early 20s, and I'm just a normal guy. But I never felt that normal. So to have the... the feeling that... this is how I am now and maybe that I can love myself is, yeah, quite exciting.	Commented [AP77]: Was he going to say how this impacts him? But then doesn't finish sentence Commented [AP78]: Acknowledgment of weight trauma as a child and how this influenced ED?
View of critical experiences of body as a child as traumatic; its influence to ED	I: Yeah. Is there a time recently, Neil, when you have felt positive about your body?	Commented [AP79]: Contrast with perception of body when younger to now; different perception of body present vs past
Body neutrality rather positivity	P: I wouldn't go as far as positive. I: Ok.	Commented [AP80]: Not positive towards body?
Body negativity experienced, despite move to acceptance	P: The only time I feel good is when I'm in the gym and I kind of... I don't know if it's just the t-shirt that I wear because, because it's not tight, it's not loose, it's just like a normal gym top. Erm, I look in the mirror and think 'oh, I look alright'. And I'm quite happy, you know, and I go and do my workout and I finish, and I come out of the shower with a towel on wrapped around and I walk past the big mirror and think 'fucking hell, I don't like that'. Then I'll get changed and I kinda... I was out the other week with my girlfriend and I put a shirt on and she said 'oh you look nice' and took a picture. I saw the picture and I thought 'oh I hate that' (laughs). There's a big shift even with a day depending on what I'm wearing.	Commented [AP81]: Not body positive, but neutral
Body image dependent on clothes worn	I: Yeah. P: You know, and she said if you were black, that's more accepting, that's more forgiving. I: Uh huh.	Commented [AP82]: Some experiences of body negativity still Commented [AP83]: Shifts with body image dependent on clothing and how his body looks?
Acknowledgement of always being unhappy with body	P: Um... so... so yeah, I think I'm getting to the point where I'm never going to be happy with what I see naked but again I'm 52, not going to happen (laughs), you know.	Commented [AP84]: Acceptance that never will be happy with body – referenced age, feel this is not possible given age?

Appendix 13. Audit Trail for Analysis.

Analytical Step	Reading and Re-reading	Initial Notation	Development of Emergent Themes	Identify Superordinate Themes	Cross-case Analysis
Analytical Process	Reading on transcripts twice to be familiar with the interview, with notes on ideas, possible connections and reflexive notes made on a separate document.	This stage involved examining semantic content and language use on an exploratory level.	An analytic shift to working primarily with the initial notes rather than the transcript itself to develop provisional, emergent themes.	This stage involved developing and mapping how themes linked together, such as through abstraction.	The final stage involved recognising themes which were particular to individual cases also represented higher order qualities and concepts shared by the other cases; developing themes which represent connections for the whole group of cases.
		Linguistic, descriptive and exploratory comments were noted, along with reflexive notes.	Initial notes were produced to themes which represented a concise statement of what was important in the various comments attached to a piece of transcript, namely the psychological essence of the participants' experiences.	Emergent themes were drawn together to produce a structure which allowed for all the most important and interesting aspects of the participants' accounts.	Due to the larger number of cases, measuring recurrence across cases was used for subordinate themes. A subordinate theme was defined to be recurrent in at least half of all interviews.
		For the first transcript, a co-researcher (EN) conducted a mini-audit of initial notes. Initial notes were discussed and others noted by EN.	For the first transcript, a co-researcher (EN) conducted a mini-audit and identified potential emergent themes, discussed in supervision.	Mini-audits by MZ and EN offered feedback on validity of themes and phrasing of subordinate themes.	Cross-case analysis was reviewed in supervision with EN and PC. Some changes to phrasing and subordinate themes
		Mini-audit conducted by independent researcher (MZ) – randomly selected participant transcript nine. Additional notes were offered and AP's notes commented on.	Mini-audit conducted by independent researcher (MZ) in which other potential emergent themes were discussed and AP's themes checked for credibility.		were subsequently made. Participants were sent the overall themes and offered to comment on if they wished. Feedback from one participant themes were reflective of his experience.
Analysis Performed By	AP	AP EN MZ	AP EN MZ	AP EN MZ	AP EN PC Participants
Analytical Tools	Digital transcripts	Digital transcripts	Digital and physical transcripts with initial notes	Emergent themes and transcripts	Reviewed themes across all participants, with noted transcripts Respondent validation

Appendix 14. Study Protocol.



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Body Image in Men with Eating Disorders
Version 4, 27/06/2022
IRAS Project ID: 301916

Protocol

Body Image in Men with Eating Disorders: A Qualitative Study

	The University of Edinburgh College of Arts, Humanities and Social Sciences 55 George Square Edinburgh EH8 9JU
Protocol authors	Mr Andreas Paphiti Dr Emily Newman Dr Paula Collin
Chief Investigator	Mr Andreas Paphiti
Sponsor number	CAHSS2107/08
REC number	21/WS/0125
Version Number and Date	Version 4, 27/06/2022

CR007-T02 v3.0



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Body Image in Men with Eating Disorders
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LIST OF ABBREVIATIONS

ACCORD	Academic and Clinical Central Office for Research & Development - Joint office for The University of Edinburgh and Lothian Health Board
CI	Chief Investigator
CRF	Case Report Form
GCP	Good Clinical Practice
ICH	International Conference on Harmonisation
PI	Principal Investigator
QA	Quality Assurance
REC	Research Ethics Committee
SOP	Standard Operating Procedure
ED	Eating disorder(s)
IPA	Interpretative phenomenological analysis



1 INTRODUCTION

1.1 BACKGROUND

Eating disorders (EDs), including anorexia nervosa (AN) and bulimia nervosa (BN), are serious and complex mental health disorders which impact physical and psychological health. The lifetime prevalence of AN is 0.8% and 2.6% for BN (Stice, Marti & Rhode, 2013), with a peak age of onset between 13–18 years (Swanson et al., 2011).

Men are estimated to make up between 10% to 25% of people with an eating disorder (Weltzin et al., 2005; Hudson, Hiripi, Pope, & Kessler, 2007; Sweeting et al., 2015). Although men represent a proportion of eating disorder (ED) cases, EDs have been socially constructed as a female issue (Till, 2011; Wooldridge & Lyttle, 2012), with cultural stereotypes of EDs as 'female' (Sweeting et al., 2015). Indeed, men may overlook ED concerns and delay help-seeking (Räsänen & Hunt, 2014), and perceived stigma among men is associated with delayed help-seeking which may be a significant barrier to treatment for EDs (Griffiths et al., 2015). When seeking treatment, men with EDs are more likely to be misdiagnosed and are less likely to receive an ED diagnosis than women, despite reporting broadly similar presentations as women (Curran, Schmidt, & Waller, 2007).

1.2 RATIONALE FOR STUDY

Previous research has established that EDs in men are under-diagnosed, undertreated and misunderstood, with a need for research to explore these issues (Strother, Lemberg, Stanford, & Turbeville, 2012). Within the ED research literature, less than 1% of all empirical research relating to EDs has focused on male presentations (Murray, Griffiths & Mond, 2016) and current understandings of EDs have been developed largely from research conducted with females (Mitchison & Mond, 2015). Murray et al. (2017) argue that the exclusion of males from ED research has led to gaps in understanding of clinical presentations for men. Evidence suggests subtle differences among ED presentations between men and women (Robinson, Mountford & Sperlinger, 2012; Murray et al., 2017). Some differences have been found for compensatory behaviours in which physical activity and compulsive exercise are more prominent among men, in comparison to women (Lewinsohn et al., 2002; Strother et al., 2006; Murray et al., 2014) and have more of an emotion regulation function (Murray et al., 2014). The excessive use of laxatives is less frequent in men compared to women (Button, Alridge & Palmer, 2008). Following a binge eating episode, men report less emotional distress than women (DiGiacchino et al., 1999; Lewinsohn et al., 2002). Men tend to be less concerned about weight than their female counterparts, but show equal concerns with shape (Strober et al., 2006).

There is some evidence of a more pronounced gender difference in which body and shape concerns for men with EDs are more likely to be focused on a muscular and lean body shape, rather than thinness compared to women (Joiner, Katz & Heatherton, 2000; Darcy et al., 2012). There is also evidence that men with muscle dysmorphia and anorexia share similar body shape concerns around muscularity (Murray et al., 2012). However, research that has investigated body image among men in clinical samples is limited. In non-clinical samples, a number of studies have demonstrated preferences among men for a more muscular body ideal, rather than a thinner body ideal that women prefer (Stanford & McCabe, 2002; Ridgeway & Tylka, 2005; Jones & Crawford, 2005; Tiggemann, Martins & Churchett, 2008; Grossbard, Lee, Neighbors & Larimer, 2008). However, more recently there is evidence that women also prefer a 'curvy-thin' body ideal (Overstreet, Quinn & Agocha, 2010; Webb, Warren-Findlow, Chou & Adams, 2013). Body dissatisfaction among men has been acknowledged to have increased in recent years (O'Gorman, Sheffield, Clarke & Griffiths,



2020) and high levels of body dissatisfaction have been shown to be a risk factor for developing an ED in men, as well as women (Olivardia, Pope, Borowiecki & Cohane, 2004; Dakanalis et al., 2015; O'Gorman, Sheffield, Clarke & Griffiths, 2020). In men, higher levels of body image concerns around muscularity predicted stronger engagement in disordered eating in a longitudinal study (Hoffmann & Warschburger, 2017). Such disordered eating behaviours can include high levels of protein consumption, severe dietary restriction of non-protein foods, continued eating despite feeling full and use of appearance-enhancing substances (Mosley, 2009; Murray et al., 2012). Murray, Griffiths and Mond (2016) argue that disordered eating related to such body image concerns is distinct from traditional eating disordered behaviours because they are mostly focused on the development of greater musculature, the development of greater muscle leanness or both.

This gender difference of 'thinness versus muscularity' has been demonstrated in non-clinical samples, yet little research has focussed on how specific aspects of body image influence men with EDs, when body concerns are pathological; when body and shape concerns, and the control of them, become over-evaluated as part of the ED psychopathology. Fairburn, Cooper and Shafran (2003) posit the core psychopathology of EDs involves the over-evaluation of weight and shape, and control of them. It has been argued there is a need to understand the experiences of EDs for men (Darcy et al., 2012) and an area that is apparent, based on the limited existing literature, is body image. Understanding men's experiences of body image through qualitative research can provide important information to improve understandings of clinical presentations.

To date, as far as the researcher is aware, no qualitative studies have exclusively focused on inductively exploring how men with EDs experience body image and concerns regarding their bodies. The majority of published qualitative studies of men's experiences have focused on seeking and receiving treatment (De Beer & Wren, 2012; Robinson, Mountford & Sperlinger, 2013; Dearden & Mulgrew, 2013; Thapliyal, Conti, Bandara & Hay, 2020). Other studies have explored men with EDs experiences of recovery (Pettersen, Wallin & Björk, 2016), differences in symptoms between male and female young people (Arnow et al., 2017), delayed help-seeking and symptom recognition (Räsänen & Hunt, 2014), impact of the ED on everyday life (Lyons, McAndrew & Warne, 2019), masculinity as part of the ED experience (Drummond, 2002) and navigating discussing EDs at work (Siegel & Sawyer, 2020). Although these studies did not specifically explore body image among men, there are some relevant findings which are discussed below.

Arnow et al. (2007) investigated differences in ED symptoms in an adolescent male and female sample - they found only males talked about the tension between being thin versus muscular. Body image was found to be equally important to both genders and males tended to describe symptoms arising from external factors, such as sport and wanting to become healthy. However, the study explored experiences of both genders in relation to experiences of ED symptoms, and although it provided interesting findings about body image, the findings have limited detail about body image given the broad research question and the findings are limited to an adolescent sample. Drummond (2002) explored perspectives of eight men with a focus on the ED experience using semi-structured interviews. Data was analysed using a phenomenological approach and themes found were 'eating disorders as a form of competition', 'fat phobia' and 'fitting the image: a flawed sense of masculinity'. Findings relevant to the experience of body image were that the participants were preoccupied with body size and experienced disgust towards their personal appearance, which heavily impacted on individual masculine identity. However, an issue with this study is that only six of the participants were diagnosed with an ED - this influences the homogeneity of the sample and likely the validity of interpretations as a representation of men with EDs experiences. The research question and interview schedule were not specific to body image, but more to the overall ED experience, and thus did not gain detailed experiential accounts of body image from the sample. De Breer and Wren (2012) explored treatment experiences of nine men with anorexia nervosa using interpretative phenomenological analysis and a salient theme related



to how body image was experienced was 'experiencing eating disorders as a pursuit of a physical identity characterised by fitness'. Among the men, pursuing fitness appeared linked to a physical identity to be slim and muscular. The study highlights the importance of exploring how men make sense of body image as part of their ED experience.

These qualitative studies have explored experiences of men with EDs in relation to a variety of phenomena and noted findings of body image as part of how men experience these phenomena; alluding to findings that can be expanded on to explore body image specifically and in more depth. The contribution from these studies utilising a qualitative approach is that detailed findings were provided about the experiences of men, which would not have been gained to the same extent using a quantitative approach. Given the research area of men and EDs appears under-researched, these qualitative findings provide rich data that helps to build the literature.

At present, there exists a lack of detailed understanding of men with EDs experience of body image. Given the use of qualitative methods to explore several topics with EDs and men, it seems to be an appropriate method to understand the experiences of body image for men with diagnosed EDs that is currently lacking in the ED literature. Indeed, as this phenomenon is complex, under-researched and not well understood, the use of a qualitative method is considered appropriate for such reasons to allow for detailed data to account for these issues (Korstjens & Moser, 2017). To the researcher's knowledge this will be the first study to explore how body image is experienced by men with a diagnosed ED using a qualitative approach and the study aims to add to the qualitative ED literature.

2 OBJECTIVES

2.1 OBJECTIVES

2.1.1 Primary Objective

The aim of the study is to explore how men with EDs experience body image. In particular, to provide a detailed account of the meaning and perception of body image as part of the ED experience among men.

3 STUDY DESIGN

Design

An exploratory, qualitative design will be used to understand the personal lived experience of body image for men with an eating disorder. The study will focus on the meaning-making for how body image is 'lived' by men as part of the eating disorder experience. Data will be collected using semi-structured interviews to gain detailed, contextualised and personal accounts of the participants' lived experience.

Ethics

Ethical approval will be sought from NHS Research Ethics Committee due to the use of NHS patients for participants. The study will be logged with the School of Health in Social Science at the University of Edinburgh.

Sample

Participants will be men with a diagnosis of an eating disorder. They will be sampled using a purposive sampling method in which the researcher recruits a defined group for whom the research question has relevance and personal significance, rather than through probability



methods, because they can offer the project insight into an experience relevant to the research question. Potential participants will be recruited from the specialist adult eating disorder service in NHS Tayside which covers Dundee, Perth and Angus who meet the inclusion criteria. If recruiting the required number of participants is not viable in NHS Tayside, then patients will be from specialist ED services in areas provided by NHS Grampian, NHS Lothian and NHS Greater Glasgow and Clyde. Purposive sampling is consistent with the theoretical underpinnings of the chosen qualitative approach (see below), and it allows for interpretive and pragmatic concerns for the project to be met, by utilising small, purposively-selected and carefully-situated samples. As part of a recruitment contingency plan, if sufficient participant numbers are not able to be recruited by NHS services, participants will be recruited by online – for example, by social media and Beat's, eating disorder charity research recruitment page.

Procedure

For NHS patients, clinicians working in the service will be informed of the project and the researcher will present the aims of the project at a team meeting. Clinicians will be asked to consider potential participants who meet the inclusion criteria by reviewing their caseloads and approach patients who meet the criteria.

The clinician will then approach potential participants to introduce the research to them and provide them with a participant information sheet. With verbal consent from the participant, the clinician can discuss with the researcher queries with the potential participants' suitability if needed - the researcher will not discuss casefiles with clinicians. For those recruited online, they will make contact with the researcher from study details provided in the online advert.

Those who are interested in participating, including NHS and online potential participants, are able to opt-in by contacting the researcher with contact details provided on the information sheet. For NHS patients who do not wish to initiate contact with the researcher, patients who are interested in participating in the project inform their clinician that they give permission for their details (such as name and contact information) to be given to the researcher. The researcher will contact potential participants via telephone to provide details regarding the topics to be covered, the length of the interview and the medium the interview will be conducted (face-to-face, video or telephone interview). For those recruited online, interviews will be conducted either by telephone or video call. Potential participants will have the opportunity to ask further questions during the telephone call. After this phone call, participants will be asked to let the researcher know if they wish to participate by getting in contact with the researcher by email or telephone. Participants will have a minimum of 24 hours and up to a week to decide whether or not they would like to take part, and will contact the researcher within that time period if they would or would not like to take part. If a week passes and a potential participant has not contacted the researcher, the researcher will make contact to find out their decision - it will be ensured that no pressure is put on potential participants to agree to participate.

If interest in participating is expressed, informed consent will be gained and then a time for the interview will be agreed. Informed consent to participate will be attained before participants complete the demographic questionnaire and the interview is conducted – this will depend on the method in which the interview will be conducted. If participants wish to be interviewed by video or telephone, consent will be obtained by either posting the consent form to participants and participants can return it signed with a stamped envelope (which the researcher will send with the consent form) or they can scan it and email the consent form to the researcher. Alternatively, for participants doing remote interviews, an electronic version can be sent to them via email and participants can email the consent form completed back to the researcher. For face-to-face interviews, participants can give written consent by being given a physical copy by the researcher and give the consent form back to the researcher, before they complete the demographic questionnaire and interview. Face-to-face interviews will be conducted at NHS clinics. Regarding the demographic questionnaire, for those being interviewed face-to-face, they will be given the demographic questionnaire to complete before the interview begins. For those who are being interviewed remotely, the questionnaire will be sent ahead of the interview online (by email) or sent in the post, with a stamped envelope for



participants to return to the researcher.

Semi-structured interviews will be conducted and an interview schedule will be developed with questions based on the research question and existing literature to explore the lived experience of body image by male patients with an eating disorder. It may be needed for the participant to be interviewed more than once, should the first interview take time for rapport to be developed and their experiences elicited, should participants consent to being interviewed again. Semi-structured, one-to-one interviews will be used as they allow for detailed and first-person accounts that are key to IPA's theoretical grounding and gather rich data needed for analysis. Reid, Flowers and Larkin (2005) argue semi-structured interviews are the preferred means for collecting data.

An interview schedule will be developed to guide the semi-structured interview and questions will be designed to be open. Smith et al. (2009) argue the use of a schedule allows to plan for difficulties that may be encountered and for the interview to facilitate a discussion of relevant topics, which allows the research question to be subsequently answered by analysis. The interview questions will provide structure for the interview but not be fixed; rather the interview will be led by the participants as relevant to the research question. Initial questions will be modified in the light of participants' responses, and the researcher will be able to enquire after any other interesting areas which arise. Smith et al. (2009) suggest for adult participants that around six to ten questions that are open and expansive, along with prompts and probes for participants, should be prepared. The types of questions recommended for interviews which will be used are descriptive, narrative, structural, contrast, evaluative, circular and comparative questions. Questions will use language that is accessible for the participants, whilst ensuring they are relevant to the research question. The interview schedule will be piloted with the first participant to assess the acceptability of the interview questions, as well as the overall interview experience, and adjusted after if required.

Interviews will be audio and/or video recorded for the interview transcription and data analysis, and anonymised ahead of analysis. Data will be stored securely in line with the procedures and guidelines of The University of Edinburgh and NHS Tayside.

Analysis

Interview transcript data will be analysed using interpretative phenomenological analysis (IPA). IPA was chosen as the project aims to gather rich, contextualised and detailed data to explore the meaning made by men with eating disorders to their lived experience of body image. IPA allows for both individual and shared experiences of the participants to be explored and considered. IPA emphasises studying people idiographically and aims at generating rich and detailed descriptions of how individuals experience the phenomenon under investigation (Smith et al., 2009). IPA's focus on exploring in-depth participants' lived experiences and how participants make sense of those experiences assists with defining the research question appropriate for an IPA study; questions looking at lived experience, perspectives and meaning-making among a particular sample. To explore this process, IPA is grounded on the principles of phenomenology, idiography and hermeneutics. The research question is consistent with these theoretical principles as it aims to understand the experience (phenomenology) of men with an eating disorder (idiography) and how they make sense of it as part of their experience (hermeneutics). Other qualitative approaches were considered including grounded theory, thematic analysis and discourse analysis. Grounded theory aims to develop a theory that is grounded in the data collected from participants with the aim to generate a focused understanding of the research question and an explanation to address the participants' accounts that can be generalised to the wider population (Pidgeon and Henwood, 1997; Smith et al., 2009). This is not the aim of this research and it does not give enough prominence to lived experience as needed. In contrast, IPA focuses on the participants' lived experience and how themes developed may link to the literature that exists, which is more appropriate to the proposed study. Discourse analysis aims to understand how language is used and functions in specific contexts (Smith et al., 2009). Although gaining insight to how language is used and the dominant discourses that may be present within the eating disorder experience is interesting, this approach does not fit with the research aims and will not allow for a detailed experiential account of body image for men with an eating disorder to be gathered. Further, it would shift the focus of the research away from the



individual and their meaning-making; therefore, IPA appears more appropriate. Thematic analysis is a qualitative method for studying mainly patterned meaning across participants by identifying themes across the data set (Braun & Clarke, 2012); this would answer the research question to an extent as it would allow a focus on shared experiences. However, the idiographic aims of the research question, to capture first-person accounts of personal experience, would not be met to the same extent that IPA allows given it focuses on both individual and shared experience. On such grounds, grounded theory, discourse analysis or thematic analysis were decided to not be appropriate, and IPA was chosen to be used.

Interview transcripts will be transcribed verbatim and the analysis will follow the six stepped procedure described by Smith, Flowers and Larkin (2009).

Ensuring Quality

For qualitative research, the validity criteria used for quantitative research has been considered not appropriate and requires different approaches to demonstrating the value and validity of research (Yardley, 2008). The proposed study has considered guidelines developed by Yardley (2000; 2008) to ensure quality is achieved:

- sensitivity to context,
- commitment and rigour,
- coherence and transparency and
- impact and importance.

Sensitivity to Context

Yardley (2015) suggests that qualitative research should make the context of theory and previous understandings of research topics clear, along with the socio-cultural context of the study and the social context of the relationship between researcher and participant.

This will be considered in the following ways:

- The existing literature will be reviewed to gain an understanding of the relevant research and theory on body image and eating disorders in general, and specifically body image for men in both in non-clinical and clinical samples. The researcher will explore how the themes from data link to this literature in the discussion of the study.
- The researcher and participants will be placed in context. This will involve considering the participants' context in which they experience the phenomenon by gathering demographic and relevant background information. Demographic information will be gathered, such as age, gender and diagnosis, using a questionnaire that participants will complete prior to the interview, which will help ensure sensitivity to context. When presenting the findings, it will be considered how these factors may shape the participants' reports of their lived experience. During the analysis process, the researcher will reflect on the social context of their relationship with the participants. The researcher will do this by reflecting on how they may have been perceived by the participants, and by considering rapport and power differentials with them. Such issues will be considered during the planning process for the interview and when interview questions are designed, such as how questions can help build rapport. At both the planning and analysis stages, these issues will be brought to supervision.

Commitment and Rigour

Commitment and rigour are the extent to sufficient level of detailed analysis is achieved to ensure the validity of the results can be demonstrated (Yardley, 2000).

A desired sample size that aims to allow for a sufficient analysis of the data using IPA for the phenomenon has been determined. For data analysis, the researcher will have the coding supervised by both field and academic supervisors to ensure the themes generated are not limited to a single perspective. A table with verbatim extracts from participants will be constructed to clearly demonstrate the density of each theme. Participants will also be sent a summary of the findings to see if the themes identified are representative of their experiences.



Coherence and Transparency

This refers to the extent the interpretation is clearly derived from the data and the disclosure of all relevant research processes (Meyrick, 2006).

For the data collection and analysis, transparency will be addressed by providing an in-depth account of all aspects of the research process, including sampling, interviews and analysis. Meyrick (2006) suggests the use of a 'transparent pathway' to demonstrate rigour and this will be achieved by using an audit trail to link the data to the final write-up. The interview schedule, interview data, verbatim transcripts, coding and analytic notes will be retained to provide examination of how the analysis was achieved.

As IPA has a strong reflexive nature as part of its methodology, the researcher can take a reflexive stance, throughout the process of the research both professionally and personally. Reflexive engagement will be achieved by the researcher acknowledging their own assumptions, experiences and biases regarding the phenomenon and how they may influence the analysis of the data. In particular, the researcher will consider how prior experiences of working in an eating disorder service previously as an assistant psychologist, special interest in eating disorders among men and own experience as a man may influence the analysis. A selection of coding will be verified by the academic and field supervisors to check the researcher's coding. This will be done in supervision by engaging in reflective practice and the use of a reflective diary, as recommended by Newton et al. (2012).

Impact and Importance

This refers to the extent that the current research findings contribute to theoretical knowledge and practice. There is a clear need to understand the experiences of men with EDs both from a research and clinical practice perspective. From a research perspective, the findings from the study will help to inform and build the literature for clinical samples by addressing the gap in current research, which lacks an understanding how men with EDs experience body image. It is aimed that the findings will have implications for future qualitative and quantitative research, with the detailed data illuminating areas which need further research.

Clinically, an aim of this research is to help support clinical practice to assist clinicians working at and with ED services to work well to improve the service experiences of men who access services. In Scotland, there has been a recent national review of ED services with recommendations published in March 2021 which recognised the need to assess and improve support for people living with an ED. Given the research aims to provide detailed data about the experiences of men with EDs, a potential benefit may be that professionals working in specialist services have perspectives to consider when working with men on their caseloads; helping to ensure they are able to respond to those who access services and potentially improve patient experiences. In turn, this may help improve assessment and consider any treatment adaptations for men accessing ED services, by having an understanding of their concerns regarding body image from the data collected.



4 STUDY POPULATION

4.1 NUMBER OF PARTICIPANTS

A sample size of between four and ten interviews is recommended by Smith et al. (2009) for a professional doctorate; this is to allow for a successful analysis that requires time and reflection – whereas a larger dataset may inhibit such aspects. Turpin et al. (1997) suggests for UK clinical psychology doctoral programmes six to eight participants is appropriate; this size sample allows the researcher to explore differences and similarities between participants, without gathering an overwhelming amount of qualitative data. Therefore, a sample size of eight to ten participants will be recruited. It is important to note that the number of participants needed will depend upon the breadth of experiences that the participants will convey in relation to the research question; therefore, no fixed number of participants is identified given there will be variation depending on the data gathered from the sample.

4.2 INCLUSION CRITERIA

- English speakers.
- Patients above the age of 18-years-old.
- Patients who are cis-males and identify their gender as male.
- Patients with a diagnosis of anorexia nervosa (AN), bulimia nervosa (BN), binge eating disorder (BED) and other specified feeding and eating disorder (OSFED).
- Patients who are awaiting treatment or engaging in treatment.
- Patients who are able to provide informed consent.

4.3 EXCLUSION CRITERIA

- Non-English speakers.
- Patients who are not cis-males with a male gender identity.
- Patients with a diagnosis of avoidant restrictive food intake disorder (ARFID).
- For those recruited by NHS services, patients identified by their clinician as physically and/or psychologically unstable.
- Patients discharged from services.



5 PARTICIPANT SELECTION AND ENROLMENT

5.1 IDENTIFYING PARTICIPANTS

Clinicians working in the eating disorder service will be informed of the project and the researcher will present the aims of the project at a team meeting. Clinicians will be asked to consider potential participants who meet the inclusion criteria by reviewing their caseloads and approach patients who meet the criteria. For those recruited online, they will make contact with the researcher from study details provided in the online advert.

Those who are interested in participating, including NHS and online potential participants, are able to opt-in by contacting the researcher with contact details provided on the information sheet. For NHS patients who do not wish to initiate contact with the researcher, patients who are interested in participating in the project inform their clinician that they give permission for their details (such as name and contact information) to be given to the researcher. The researcher will contact potential participants via telephone to provide details regarding the topics to be covered, the length of the interview and the medium the interview will be conducted (face-to-face, video or telephone interview). For those recruited online, interviews will be conducted either by telephone or video call. Potential participants will have the opportunity to ask further questions during the telephone call. After this phone call, participants will be asked to let the researcher know if they wish to participate by getting in contact with the researcher by email or telephone. If interest in participating is expressed, informed consent will be gained and then a time for the interview will be agreed.

5.2 CONSENTING PARTICIPANTS

Informed consent will be gathered by the researcher from participants and the time allowed between being given the information sheet to taking consent is 24 hours to a week. Participants will have a minimum of 24 hours and up to a week to decide whether or not they would like to take part, and will contact the researcher within that time period if they would or would not like to take part. If a week passes and a potential participant has not contacted the researcher, the researcher will make contact to find out their decision - it will be ensured that no pressure is put on potential participants to agree to participate or give informed consent.

5.2.1 Withdrawal of Study Participants

Participants are free to withdraw from the study at any point or a participant can be withdrawn by the Investigator. The participant will have the option of withdrawal from:

- (i) all aspects of the study but continued use of data collected up to that point. To safeguard rights, the minimum personally-identifiable information possible will be collected.



6 STUDY ASSESSMENTS

6.1 STUDY ASSESSMENTS

Assessment of Eligibility:

Clinicians working in services will be informed of the project and the researcher will present the aims of the project at a team meeting. Clinicians will be asked to consider potential participants who meet the inclusion criteria by reviewing their caseloads and approach patients who meet the criteria.

The clinician will approach potential participants to introduce the research to them and provide them with a participant information sheet. With consent from the potential participant, the clinician can discuss the participant's suitability if needed. For those recruited online, they will make contact with the researcher from study details provided in the online advert which will include the inclusion criteria – the researcher will check with the potential participant if they do meet the inclusion criteria during contact to discuss the study.

Potential participants, both those recruited via NHS services and online, who are interested in participating are able to opt-in by contacting the researcher with contact details provided on the information sheet. For those who do not wish to initiate contact with the researcher, patients who are interested in participating in the project inform their clinician that they give permission for their details (such as name and contact information) to be given to the researcher. The researcher will contact potential participants via telephone to provide details regarding the topics to be covered, the length of the interview and the medium the interview will be conducted (face-to-face, video or telephone interview). Potential participants will have the opportunity to ask further questions during the telephone call. After this phone call, participants will be asked to let the researcher know if they wish to participate by getting in contact with the researcher by email or telephone.

Informed Consent:

If interest in participating is expressed, informed consent will be gained and then a time for the interview will be agreed. Informed consent to participate will be attained before participants complete the demographic questionnaire and the interview is conducted – this will depend on the method in which the interview will be conducted. If participants wish to be interviewed by video or telephone, consent will be obtained by either posting the consent form to participants and participants can return it signed with a stamped envelope (which the researcher will send with the consent form) or they can scan it and email the consent form to the researcher. Alternatively, for participants doing remote interviews, an electronic version can be sent to them via email and participants can email the consent form completed back to the researcher. For face-to-face interviews, participants can give written consent by being given a physical copy by the researcher and give the consent form back to the researcher, before they complete the demographic questionnaire and interview.

Demographic Questionnaire:

After consent has been obtained, participants will complete a demographic questionnaire before the interview.

Interviews:

Semi-structured interviews will be conducted with each participant for up to an hour; if there are difficulties with gathering experiences, should the participant agree, another interview can be arranged for up to an hour.

Involvement with Analysis:

Participants who were interviewed will be sent a summary of the findings to see if the themes identified are representative of their experiences to ensure rigour, providing they have given



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consent to be contacted to comment on the findings. Participants can comment on the findings and will be involved in the analysis process in this way. The researcher will invite participants to comment on the analysis of the data to ensure that their views are represented appropriately. Through this respondent validation and gathering of additional perspectives, the validity of the analysis will be enhanced.

Assessment and procedures	Screening	Day 1	Day 2	Day 7	30 days	>30 days
Assessment of Eligibility Criteria	☐					
Informed consent				☐		
Demographic questionnaire					☐	
Interview					☐	
Comment on the Analysis						☐



7 DATA COLLECTION

Demographic data will be collected using an online questionnaire, prior to the interview. Interview data will be collected by the chief researcher by recording the interview and transcribing verbatim.

8 DATA MANAGEMENT

8.1.1 Personal Data

The following personal data will be collected as part of the research:

- Name
- Age
- Diagnosis
- Gender
- Sexual orientation
- Ethnicity
- Marital status
- Employment
- Education

Personal data will be stored by the chief investigator at a lockable cabinet at the Tayside Eating Disorder Service, 15 Dudhope Terrace, Dundee – the key will be kept separately from this cabinet and stored in a hidden place on site to ensure security.

It is anticipated that the majority of data will be electronic and electronic data will be stored securely on NHS Tayside's system using only the Chief Investigator's account and all files will be encrypted. The video/audio recordings will be securely stored only on NHS servers, in line with NHS Tayside's Information Governance, until the transcription process has been completed. Transcription of recordings will be done on an NHS Tayside site.

Participant data will be associated with a randomly-generated participant number. Transcript data will be encrypted and stored securely using OneDrive and SharePoint with the Chief Investigator's access via The University of Edinburgh who will act as the data holder – this has been deemed appropriate to store sensitive research data by the University's Research Data Support Team with suitable safeguards. Following completion of the study, data will be anonymised by completely and permanently deleting all personal data. The anonymised data will then be stored securely on university software DataVault for 10 years and reviewed on a yearly basis to determine whether the data is needed to be retained or to be deleted. The data will then be permanently deleted once reviewed and deemed there is no need to retain the data.

The anonymised data will then be stored securely on university software DataVault for 10 years and reviewed on a yearly basis to determine whether the data needs to be retained. The data will then be permanently deleted once reviewed.



8.1.2 Transfer of Data

Data collected or generated by the study (including personal data) will not be transferred to any external individuals or organisations outside of the Sponsoring organisations.

8.1.3 Data Controller

The University of Edinburgh and NHS Tayside are joint data controllers.

8.1.4 Data Breaches

Any data breaches will be reported to the University of Edinburgh and NHS Tayside Data Protection Officers who will onward report to the relevant authority according to the appropriate timelines if required.

9 STATISTICS AND DATA ANALYSIS

9.1 SAMPLE SIZE CALCULATION

In community-based samples, research estimates men represent 25% of ED cases in the UK (Sweeting et al., 2015). In Scotland, no data appears available regarding the numbers of men accessing ED services. The estimated caseload number of men accessing NHS Tayside's specialist adult ED service is between 10-12. Although the number of men accessing ED services is a small, by considering and planning the sampling, it is aimed that the sample size needed will be met. The homogeneity of the sample has considered both interpretative concerns (degree of similarity or variation that can be contained in the analysis of the phenomenon) and pragmatic considerations (ease or difficulty of contacting potential participants, relative to the rarity of the phenomenon). Considering both concerns, the present study defines homogeneity of the sample as participants who are male (cis-male with a male gender identity) and have EDs which share similar core psychopathology. Regarding the diagnoses in the inclusion criteria, all share the same psychopathology relevant to the research question (accounting for interpretation concerns), whilst also allowing males with different diagnoses to be sampled and not limiting the sample to one diagnosis (accounting for pragmatic considerations). This will allow for enough variation to be contained with the analysis of the phenomenon and ensures a sufficient sample can be obtained by sampling men presenting with the specified diagnoses.

9.2 PROPOSED ANALYSES

Interview data will be analysed using IPA. The interview transcripts will be transcribed verbatim and anonymised before data analysis. A step-by-step analytic procedure described by Smith et al. (2009) will be used to analyse interview transcripts.

Smith et al. (2009) suggest, given IPA's idiographic premises, each transcript should be analysed individually to "do justice to its individuality". Initial analysis will focus on each participant, before moving to a cross-case analysis. The transcript will be printed for ease of access and read several times before beginning the analytic process.

The first stage of analysis is the initial notation of the transcript. The researcher will read and re-read the transcript, then make initial notes of points of interest, such as important descriptive comments, phrases and linguistic characteristics. At this stage, the researcher will



make more interpretative conceptual comments in which they gauge if the text illustrates the participant's understanding of the phenomenon. Some comments associated with personal reflexivity will be generated if relevant.

The next stage will involve a shift to working primarily with the initial notes to develop emergent themes. The aim will be to capture and understand the words of the participants – transforming initial exploratory notes that speaks to the 'psychological quality' of the data to develop emergent themes. Themes will reflect both the participants' words and thoughts, but also the researcher's interpretation.

Next, the researcher will cluster emergent themes to identify superordinate themes by looking for connections across the emergent themes. A table will be used to illustrate how the superordinate and emergent themes have been constructed.

The above steps will be repeated for each of the other individual transcripts. Finally, a cross-case analysis will be conducted in which differences and similarities will be looked over the transcripts to identify connections and develop master themes once a deeper understanding of the data is reached.

An independent researcher (Mrs Miriam Zoeller, Trainee Clinical Psychologist at NHS Tayside) will assist with coding of some data from the anonymised interview transcripts to check the validity of themes – Mrs Zoeller will only have access to the anonymised transcripts via an NHS server.

10 RISKS

There are minimal risks anticipated for participants. During the interview, participants may experience distress if difficult content is discussed. The following steps will be taken to help decrease the risk of participants experiencing distress:

- Clinicians who identify potential participants will consider who is appropriate to be included in the study.
- The information sheet given to participants will inform them about the purpose of the interview and topics that will be covered. It is aimed that participants will feel prepared for the discussion and anticipate how they will find it; making an informed decision if they will be able to manage and tolerate anticipated distress and if not, deciding not to participate.
- At the beginning of the interview, the participants' right to withdraw and expectation that they are not required to disclose information they are uncomfortable with sharing will be discussed by the researcher. If participants seem distressed or upset, the researcher can offer to pause or terminate the interview.
- When designing the interview schedule, the researcher will consider designing questions and topics so that participants are comfortable during the interview and eased into the discussion about their experiences. The interview schedule will be consulted with supervisors and a person representative of the sample to assess the sensitivity of the questions prior to starting the interviewing phase. It is planned that a pilot of the interview schedule will be completed to test this.
- Once completing the interview, participants will be debriefed and have an opportunity to discuss any questions or concerns. Should any issues arise, the researcher will discuss them with the participant's clinician. Participants will be given the contact details for Beat's (the eating disorder charity) helpline if they required further support.



11 OVERSIGHT ARRANGEMENTS

11.1 INSPECTION OF RECORDS

Investigators and institutions involved in the study will permit trial related monitoring and audits on behalf of the sponsor, REC review, and regulatory inspection(s). In the event of audit or monitoring, the Investigator agrees to allow the representatives of the sponsor direct access to all study records and source documentation. In the event of regulatory inspection, the Investigator agrees to allow inspectors direct access to all study records and source documentation.

11.2 STUDY MONITORING AND AUDIT

The ACCORD Sponsor Representative will assess the study to determine if an independent risk assessment is required. If required, the independent risk assessment will be carried out by the ACCORD Quality Assurance Group to determine if an audit should be performed before/during/after the study and, if so, at what frequency.

Risk assessment, if required, will determine if audit by the ACCORD QA group is required. Should audit be required, details will be captured in an audit plan. Audit of Investigator sites, study management activities and study collaborative units, facilities and 3rd parties may be performed.

12 GOOD CLINICAL PRACTICE

12.1 ETHICAL CONDUCT

The study will be conducted in accordance with the principles of the International Conference on Harmonisation Tripartite Guideline for Good Clinical Practice (ICH GCP).

Before the study can commence, all required approvals will be obtained and any conditions of approvals will be met.

12.2 INVESTIGATOR RESPONSIBILITIES

The Investigator is responsible for the overall conduct of the study at the site and compliance with the protocol and any protocol amendments. In accordance with the principles of ICH GCP, the following areas listed in this section are also the responsibility of the Investigator. Responsibilities may be delegated to an appropriate member of study site staff.

12.2.1 Informed Consent

The Investigator is responsible for ensuring informed consent is obtained before any protocol specific procedures are carried out. The decision of a participant to participate in clinical research is voluntary and should be based on a clear understanding of what is involved.

Participants must receive adequate oral and written information – appropriate Participant Information and Informed Consent Forms will be provided. The oral explanation to the participant will be performed by the Investigator or qualified delegated person, and must cover all the elements specified in the Participant Information Sheet and Consent Form.



The participant must be given every opportunity to clarify any points they do not understand and, if necessary, ask for more information. The participant must be given sufficient time to consider the information provided. It should be emphasised that the participant may withdraw their consent to participate at any time without loss of benefits to which they otherwise would be entitled.

The participant will be informed and agree to their medical records being inspected by representatives of the sponsor.

The Investigator and the participant will sign and date the Informed Consent Form to confirm that consent has been obtained. The participant will receive a copy of this document and a copy filed in the Investigator Site File (ISF).

12.2.2 Study Site Staff

The Investigator must be familiar with the protocol and the study requirements. It is the Investigator's responsibility to ensure that all staff assisting with the study are adequately informed about the protocol and their trial related duties.

12.2.3 Data Recording

The Principal Investigator is responsible for the quality of the data recorded in the CRF at each Investigator Site.

12.2.4 Investigator Documentation

The Principal Investigator will ensure that the required documentation is available in local Investigator Site files ISFs.

12.2.5 GCP Training

The chief researcher (Andreas Paphiti) has undertaken GCP training (Introduction to Good Clinical Practice) with the National Institute for Health Research to understand the principles of GCP.

12.2.6 Confidentiality

All records will be identified in a manner designed to maintain participant confidentiality. All records must be kept in a secure storage area with limited access. Clinical information will not be released without the written permission of the participant. The Investigator and study site staff involved with this study may not disclose or use for any purpose other than performance of the study, any data, record, or other unpublished information, which is confidential or identifiable, and has been disclosed to those individuals for the purpose of the study. Prior written agreement from the sponsor or its designee must be obtained for the disclosure of any said confidential information to other parties.

12.2.7 Data Protection

All Investigators and study site staff involved with this study must comply with the requirements of the appropriate data protection legislation (including the General Data Protection Regulation and Data Protection Act) with regard to the collection, storage, processing and disclosure of personal information.

Computers used to collate the data will have limited access measures via user names and passwords.



Published results will not contain any personal data and be of a form where individuals are not identified and re-identification is not likely to take place

13 STUDY CONDUCT RESPONSIBILITIES

13.1 PROTOCOL AMENDMENTS

Any changes in research activity, except those necessary to remove an apparent, immediate hazard to the participant in the case of an urgent safety measure, must be reviewed and approved by the Chief Investigator.

Amendments will be submitted to a sponsor representative for review and authorisation before being submitted in writing to the appropriate REC, and local R&D for approval prior to participants being enrolled into an amended protocol.

13.2 MANAGEMENT OF PROTOCOL NON COMPLIANCE

Prospective protocol deviations, i.e. protocol waivers, will not be approved by the sponsors and therefore will not be implemented, except where necessary to eliminate an immediate hazard to study participants. If this necessitates a subsequent protocol amendment, this should be submitted to the REC, and local R&D for review and approval if appropriate.

Protocol deviations will be recorded in a protocol deviation log and logs will be submitted to the sponsors every 3 months. Each protocol violation will be reported to the sponsor within 3 days of becoming aware of the violation. All protocol deviation logs and violation forms should be emailed to QA@accord.scot

Deviations and violations are non-compliance events discovered after the event has occurred. Deviation logs will be maintained for each site in multi-centre studies. An alternative frequency of deviation log submission to the sponsors may be agreed in writing with the sponsors.

13.3 SERIOUS BREACH REQUIREMENTS

A serious breach is a breach which is likely to effect to a significant degree:

- (a) the safety or physical or mental integrity of the participants of the trial; or
- (b) the scientific value of the trial.

If a potential serious breach is identified by the Chief investigator, Principal Investigator or delegates, the sponsor (seriousbreach@accord.scot) must be notified within 24 hours. It is the responsibility of the sponsor to assess the impact of the breach on the scientific value of the trial, to determine whether the incident constitutes a serious breach and report to research ethics committees as necessary.

13.4 STUDY RECORD RETENTION

All study documentation will be kept for a minimum of 5 years from the protocol defined end of study point. When the minimum retention period has elapsed, study documentation will not be destroyed without permission from the sponsor.

13.5 END OF STUDY

The end of study is defined as the last participant's last visit.



The Investigators or the sponsor have the right at any time to terminate the study for clinical or administrative reasons.

The end of the study will be reported to the REC, and R+D Office(s) and sponsor within 90 days, or 15 days if the study is terminated prematurely. The Investigators will inform participants of the premature study closure and ensure that the appropriate follow up is arranged for all participants involved. End of study notification will be reported to the co-sponsors via email to resgov@accord.scot

A summary report of the study will be provided to the REC within 1 year of the end of the study.

13.6 INSURANCE AND INDEMNITY

The sponsor is responsible for ensuring proper provision has been made for insurance or indemnity to cover their liability and the liability of the Chief Investigator and staff.

The following arrangements are in place to fulfil the co-sponsors' responsibilities:

- The Protocol has been designed by the Chief Investigator and researchers employed by the University and NHS Tayside. The University has insurance in place (which includes no-fault compensation) for negligent harm caused by poor protocol design by the Chief Investigator and researchers employed by the University.
- Sites participating in the study will be liable for clinical negligence and other negligent harm to individuals taking part in the study and covered by the duty of care owed to them by the sites concerned. The co-sponsors require individual sites participating in the study to arrange for their own insurance or indemnity in respect of these liabilities.
- Sites which are part of the United Kingdom's National Health Service will have the benefit of NHS Indemnity.
- Sites out with the United Kingdom will be responsible for arranging their own indemnity or insurance for their participation in the study, as well as for compliance with local law applicable to their participation in the study.

14 REPORTING, PUBLICATIONS AND NOTIFICATION OF RESULTS

14.1 AUTHORSHIP POLICY

Ownership of the data arising from this study resides with the study team.