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Faculty of Environmental Life Sciences

School of Psychology

A Qualitative Exploration of Couples' Expectations and Experiences of Change Following Bariatric Surgery

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by

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Thesis for the degree of Doctorate in Clinical Psychology

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Abstract

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A QUALITATIVE EXPLORATION OF COUPLES' EXPECTATIONS AND EXPERIENCES OF CHANGE FOLLOWING BARIATRIC SURGERY

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The first chapter of this thesis comprises of a systematic review of the impact of psychological, systemic interventions on weight loss and mental health in overweight individuals. A total of 17 quantitative and qualitative articles met inclusion criteria for the narrative synthesis. The findings showed that most studies targeted weight loss goals rather than mental health outcomes, yet, systemic interventions generally facilitated improvements in both areas. Research in the use of psychological, systemic interventions with this population is in its infancy and requires wider sampling across the lifespan. The results support further research in this area and implications for developing systemic interventions with mental health as a central focus are considered.

The second chapter is an empirical study exploring the experiences of expectation and change in couples where one had undergone bariatric surgery. Sixteen joint interviews were analysed using thematic analysis (Braun & Clarke, 2006). The analysis identified five main themes; 'The patient's decision to have bariatric surgery', 'The importance of feeling supported', 'Learning to eat again', 'Improved health and quality of life' and 'Confidence and body image'. The overall findings are consistent with the systematic literature review that systemic factors are important in a bariatric patient's weight loss journey. Further research is required to explore the needs of couples from diverse socioeconomic and multicultural backgrounds. Clinical implications for the role of clinical psychologists in preparing and supporting patients and partners for change and adjustment are discussed.

Table of Contents

Table of Tables

Table of Figures

Research Thesis: Declaration of Authorship

Print name: KATHERINE ROWELL

Title of thesis: A Qualitative Exploration of Couples' Expectations and Experiences of Change Following Bariatric Surgery

I declare that this thesis and the work presented in it are my own and has been generated by me as the result of my own original research.

I confirm that:

1. This work was done wholly or mainly while in candidature for a research degree at this University;
2. Where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated;
3. Where I have consulted the published work of others, this is always clearly attributed;
4. Where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work;
5. I have acknowledged all main sources of help;
6. Where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself;
7. None of this work has been published before submission.

Signature: Katherine Rowell Date: 05/06/2020

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Chapter 1 Systematic Review of the Literature: What is the impact of psychological systemic interventions on weight loss and mental health in overweight individuals?

1.1 Introduction

Overweightness and obesity are defined by the World Health Organisation (WHO) as abnormal or excessive fat accumulation that may impair health (World Health Organisation, n.d.). Low self-esteem, increased sadness and loneliness, and mental illnesses such as anxiety and depression have been connected to being overweight (Waters & Williams, 2018). An elevated Body Mass Index (BMI) increases the risk of developing comorbid physical health conditions, including type 2 diabetes, coronary heart disease, osteoarthritis, stroke and cancers (Centers for Disease Control and Prevention, 2015). In 2016, over 1.9 billion adults were overweight and 650 million were obese. The prevalence of overweight and obesity among children and adolescents has also increased from 4% in 1975 to over 18% in 2016. Global estimations project that the respective number of overweight and obese adults will be 1.35 billion by 2030 (Kelly et al., 2008) and there is recognition that interventions to combat a worldwide obesity crisis are needed. For overweight individuals, the prospect of reducing their BMI to improve their physical and psychological health may be strong motivators for engaging in weight loss treatment. Overweight and obesity reduction has historically involved lifestyle change through behavioral modification at the individual level (Chan & Woo, 2010). However, the importance of systemic influence on the individual cannot be underestimated. For the purpose of this review, 'systemic' will refer to the interplay of different people, including families, parents and carers, and spouses, in the process of a psychological intervention.[1] Suzuki et al. (2019) stated that weight gain was positively related to perinatal, familial and socio-economic factors for young people. For adults, family structure has been thought to be associated with being overweight or obese. In romantic relationships, partners who are

[1] Not every intervention considered in this review could be categorised as 'Systemic Family Therapy' which is deleivered by accredited Family and Systemic Psychotherapists. However, each study included was recognised as having a psychological, systemic component to the intervention.

overweight and have a relatively thin partner are at greater risk of engaging in emotional eating (Markey et al., 2008). Therefore, it is important to consider how systemic influences can influence an individual's relationship with their weight and emotional wellbeing.

Obesity and overweightness are multifaceted conditions shaped by genetic, cultural, environmental and socioeconomic features (Lemstra, et al., 2016). The Government Office for Science developed a model displaying the interactions between these variables, including genetic make-up, individual psychology and the quality of food formulation (Vandenbroeck et al., 2007). Many of the variables can be considered at an individual, group, or societal scale. The model outlines over 100 variables with 300 interconnections, including feedback loops, demonstrating the complexity of overweightness. Marks' Homeostatic Theory of Obesity (2015) conceptualised such factors further by describing the 'Circle of Discontent' (COD) that associates negative affect, body dissatisfaction, overconsumption and weight gain. The theory links excess weight to negative ideas about the self and outlined some of the primary psychosocial factors that could be targeted in obesity treatment interventions. The recommendations are; (1) de-valorising the thin-ideal; (2) stopping victim-blaming, discrimination and stigma; (3) decreasing the consumption of energy-dense, low-nutrient foods and drinks; and (4) cultivating access to plant-based diets. These ideas demonstrate the influence of psychological variables on obesity and weight and suggest that systemic and environmental factors are important when supporting an individual to lose weight.

Research suggests that healthcare systems find it difficult to provide the type of support that overweight individuals feel that they need (Kirk et al., 2014). This is unsurprising when acknowledging the heterogeneity within the overweight population. Traditional weight loss approaches have focused on dietary and exercise changes to reduce BMI. The National Health Service (NHS) advises seeking GP support for weight loss recommendations and engaging in regular physical activity and eating a balanced, healthy diet (National Health Service, 2019). Yet, existing evidence about whether diet or exercise or a combination of both are most effective for weight loss is mixed. A meta-analysis by Johns et al. (2014) found that behavioural weight management groups, with the inclusion of physical activity and/or diet, were more effective for losing weight than physical activity-only or diet-only interventions. These findings indicate that a holistic approach to weight loss may be beneficial. However, the discussion regarding effective weight loss now goes beyond any reduction in body mass or health factors and involves a large change

in self-motivated behaviours (Clark, 2015). The NHS recommends that in addition to dietary and exercise changes, individuals attempting to lose weight could benefit from other strategies, such as self-monitoring, systemic involvement and accessing psychological support (NHS Choices, 2019).

Offering a psychological perspective on weight loss encourages the individual to contemplate their emotional relationship with their weight, body shape and behaviours. The most commonly utilised psychological therapies for weight loss are behavioural and cognitive therapies, in addition to relationship and attitude techniques in individualised weight loss programmes (Bunga, 2017). de Melo Boff et al. (2016) found that providing psychological input to overweight adolescents, such as cognitive behavioural therapy (CBT) and motivational interviewing, was an important component of their intervention. Successful, sustained weight loss is influenced by the individual's ability to make permanent changes to their lifestyle that involves adherence to nutritional intake and physical activity with enhanced management of emotional states with decreased dependence on eating (Bunga, 2017).

Losing weight requires personal motivation and commitment but can be influenced by the behaviours of individual's support system. Family Systems Theory (Bowen, 1978) conceives that families are not simply groups of autonomously functioning individuals, but a system in which change to one area effects other interconnected parts of the system. The theory states that when any family member alters their behaviour, it can produce anxiety or tension, resulting in other family members reacting either positively or negatively to the change. It could be hypothesised that overweightness in one family member may also affect the network and that their responses may be shaped by their view of overweightness. Yet, relatively little is known about the impact of engaging families, carers or spouses in weight loss interventions and there is uncertainty about how best to involve systems (McLean at el, 2003). Family-based interventions targeting obesity in children were found to have a moderate to large effect size for Body Mass Index (BMI) change after the intervention in a meta-analysis by Berge and Everts (2011). However, in an adult study, there was no direct relationship found between support in the overweight individual's network and weight loss success (Kiernan et al., 2012).

The current literature appears to indicate that weight loss interventions may benefit from the integration of quality of life factors, such as psychological, emotional, and social

well-being (Leske et al., 2012; Vallis, 2016). The disparity in the current evidence base about the efficacy of systemic interventions to support the overweight population warrants more detailed exploration. Greater consideration needs to be given to outcomes that consider both physical change (e.g. weight loss) and emotional wellbeing (e.g. mental health), as neither exist in isolation.

1.1.1 Review objectives

The aim of this systematic literature review is to summarise the current evidence base for the use of psychological systemic interventions in the overweight population. Efficacy will be discussed based on weight loss and mental health outcomes following an intervention. This type of narrative review systematically searches, critically appraises and synthesises information about a specific topic (Gopalakrishnan & Ganeshkumar, 2013). The review was not limited to a specific approach or age group but aimed to focus on the impact of systemic interventions for the overweight population broadly. The strengths and limitations of researching this topic are discussed and considerations are given to identified gaps in the literature and future recommendations for research. The literature search was guided by the Patient/Population, Intervention, Comparator, Outcomes, Study/Study design (PICOS) model, see Table 1.

Table 1: *PICOS table*

Review question	Weight loss and mental health outcomes following a systemic intervention
Population/participants/sample	Individuals classed as overweight or obese dependent on their BMI
Intervention	Systemic intervention with a psychological emphasis within the intervention
Comparator	Control groups/treatment as usual groups/no intervention
Outcomes	Weight loss outcome measurements and mental health outcome measurements
Setting	Community/primary care
Study design	Qualitative/quantitative/mixed methods studies

1.2 Methods

The literature review was systematically completed and uses a narrative synthesis to address the review objectives. It is important for reviews to be replicable therefore the search methodology has been described fully (Boland et al., 2017). The research protocol was registered on PROSPERO (registration number: CRD42020159767).

1.2.1 Search strategy

The databases PsychINFO, CINAHL (Cumulative Index of Nursing and Allied Health Literature), PsycARTICLES, MEDLINE and Web of Knowledge were searched for relevant research papers via EBSCO. The main search was carried out in October 2019 and the search terms were discussed with the psychology subject librarian at the University of Southampton. Scoping searches of the literature indicated that both qualitative and quantitative studies would be found, and it was decided that studies using both methods would be included.

The final search terms were: bariatric OR weight loss surgery OR roux-en-Y OR gastric band OR gastric bypass OR gastric sleeve OR obes* OR overweight OR unhealthy weight OR high BMI OR fat AND (Therap* OR practice OR psycholog* OR intervention OR psychotherap*) N1 (systemic* OR famil* OR couple*) AND weight loss or weight reduc* or “lose weight” OR mental N1 (health OR well-being).

1.2.2 Inclusion and exclusion criteria

Research articles were considered for inclusion if they met the following criteria:

- The participants were adults or children defined by the authors as overweight according to their Body Mass Index (BMI) for their age, height and gender (adult BMI ≥ 25, young person ≥ 85th percentile).

- The participants were adults or young people who had engaged in a systemic intervention e.g. family therapy or a family weight loss programmes, with a psychological underpinning.
- The study used clinical outcomes that evaluated the impact of a systemic intervention on mental health variables e.g. symptom related (depression) and/or weight loss e.g. BMI measurement.
- The study was published in peer-reviewed journal where the use of a psychological systemic intervention was evaluated.
- The study was an original study (randomised or non-randomised) for which the full texts were available.

Research articles were excluded if:

- They were case series, case reports, systematic reviews, theses, protocols or dissertations.
- Mental health outcomes were verified by Quality of Life (Qol) measures only. Qol measures were excluded due to the lack of agreed definition of Qol and variability in the dimensions of Qol.
- Family members engaged in different interventions.
- The family weight loss programme/intervention had no evidence of a psychological component.
- The study was written in languages other than English where a translation was unavailable.

1.2.3 Data extraction

There were two main outcomes for the review. The first was to consider the clinical use of psychological systemic weight loss interventions with overweight individuals. Secondly, to assess the impact of systemic interventions on weight loss and mental health outcomes in this population. Relevant data on the application of psychological systemic weight loss interventions and information about their effectiveness on weight loss and mental health were assessed.

1.2.4 Quality appraisal

Study quality was assessed using the adapted form of the ratings checklists by Kmet et al. (2004). One checklist appraised the quality of quantitative studies, the second appraised the quality of the qualitative studies and mixed methods studies were assessed using both checklists. This allowed for corresponding appraisals of different study designs. The quality checklists assessed the research question, sampling approach, study design and data analysis. Total scores were calculated according to the extent in which the study met the checklist criteria ('yes' = 2, 'partial' = 1, 'no' = 0). A summary score was obtained by summing the total score and dividing it by the total possible score. Studies were classified by their total score; 'low' quality (0–12 for quantitative, 0–11 for qualitative), 'moderate' quality (13–16 for quantitative, 12–15 for qualitative) or 'high' quality (17 or above for quantitative and 16 or above for qualitative). Each study was included in the review, irrespective of its quality. The Kmet et al. (2004) questions and ratings for the studies can be seen in Appendix A.

1.2.5 Method of analysis

A narrative synthesis was conducted following ESRC guidance (Popay et al., 2006). The guidance describes three main analytical processes; [1] developing a primary synthesis, [2] considering relationships between and within studies and [3] evaluating the robustness of the synthesis. This approach was chosen due to the principally descriptive nature of the results and the methodological variability across the studies.

1.3 Results

1.3.1 Study selection

The search found 439 records. Further screening via the search engine to remove books, dissertations and records that were not available in English resulted in 395 records. The

records were exported to a referencing management software (EndNote) where 111 duplicate records were removed. The titles and abstracts of 284 research articles were screened against the inclusion criteria. Articles that did not meet the inclusion criteria were excluded unless it was unclear if they met the inclusion criteria. These articles were read fully to clarify ambiguities. This led to 36 full text articles being considered, of which 17 met the inclusion criteria for the review. Articles were excluded for the following reasons: parent intervention only (n = 2), no psychological component to intervention (n = 7), separate interventions for parents and children (n = 4), conference paper only (n = 1), no clear weight loss or mental health outcomes (n = 3), review of an intervention with unclear systemic components (n = 1) and individualised treatment (n= 1). Reference lists of the research articles were read, and a further article was subsequently added to the review. The search process can be seen in Figure 1.

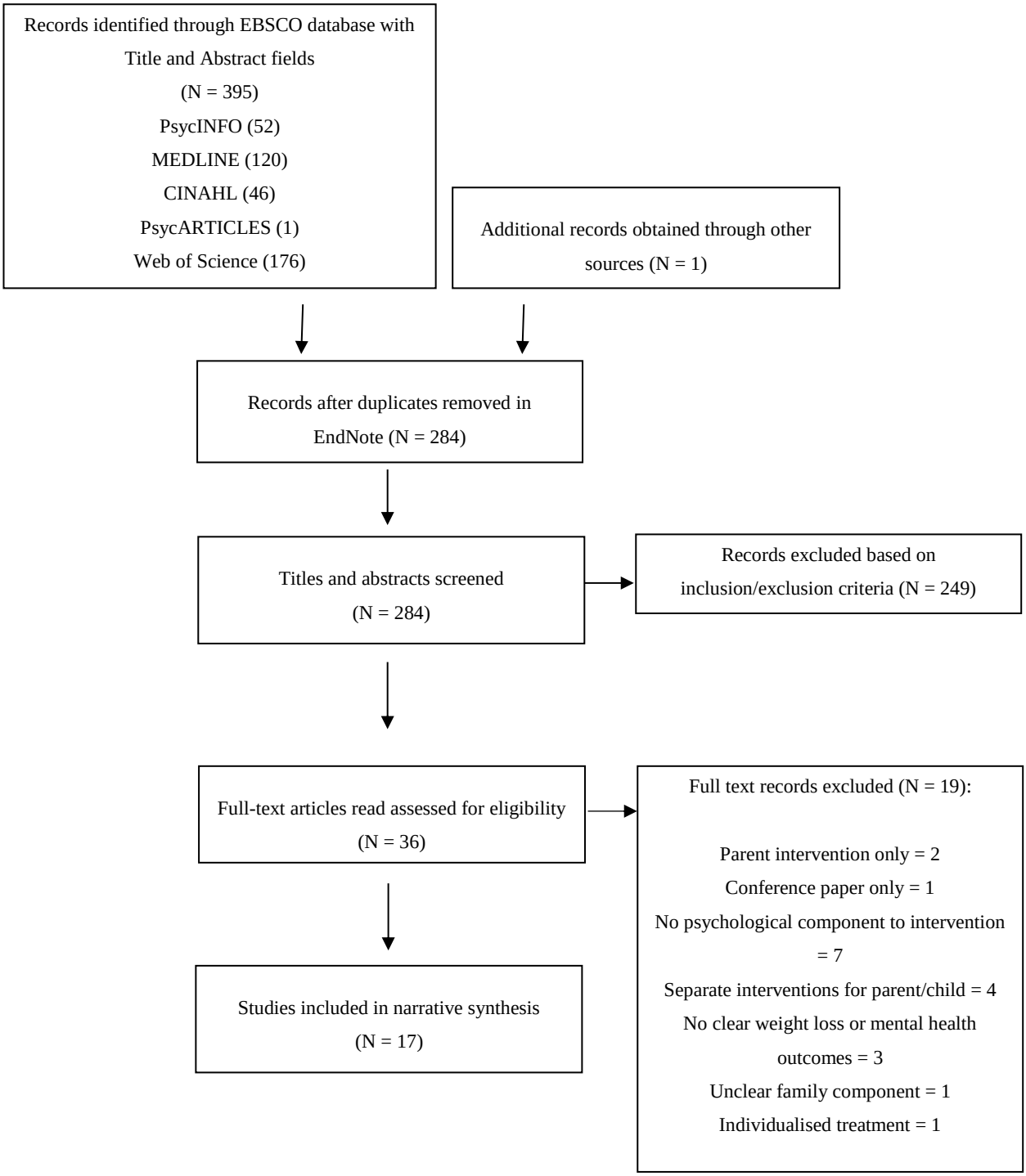

Figure 1. A flowchart of the selection process

1.3.2 Study description

The articles selected by this search were published between 1981 and 2019. In total, 17 studies were included in the review, with 14 providing quantitative data, two providing

qualitative data and one study providing both. The review included seventeen research articles and an overview of these studies can be seen in Appendix B. Studies took place in the USA (n = 8), England (n = 3), Spain (n = 1), Denmark (n = 1), Switzerland (n = 1), Sweden (n = 1), Italy (n = 1) and unspecified (n = 1). Study sample sizes varied from five families to 9563 families. Sixteen studies were child and adolescent studies which included the involvement of the family or a primary carer. One study used an overweight adult sample and the remaining 16 studies used overweight child and adolescents (aged from 6-17). Systemic participation occurred in a range of formats; the participant and their spouse (n = 1), the participant and their parents (n = 3), the participant and one parent/primary carer (n = 5) and the participant and their family (n = 8). Eleven studies assessed weight loss outcomes only, one assessed mental health outcomes only and five reported weight loss and mental health outcomes.

Of the 14 quantitative studies, four were randomised controlled trials (Croker et al., 2012; Ellis et al., 2010; Goldschmidt et al., 2010; Wilfley et al., 2007), three were randomised trials (Brownell & Stunkard, 1981; Golan et al., 2006; Naar-King et al., 2016), six were non-experimental designs (De Miguel-Etayo et al., 2018; Fagg et al., 2014; Grønbæk et al., 2009; Janicke et al., 2011; Maggio et al., 2013; Nowicka et al., 2007) and one was a non-randomised control study (Tanas et al., 2007). Two studies employed a qualitative approach; one using thematic analysis (Sweeney et al., 2019) and one using a combination of thematic analysis and content analysis (Campbell-Voytal et al., 2018). In the only article to use mixed-methodology, Jinks et al. (2013) conducted a mixed-methods case study evaluation.

Weight loss outcomes were measured using:

- Change in body weight
- Change in percentage above ideal body weight
- The Weight Reduction Index (Feinstein, 1960)
- Change in BMI (weight (kg)/height^2 (m^2)
- BMI z-scores
- Fat Mass Index (FMI) z-scores
- Percentage body fat

- Waist circumference

Mental health outcomes were considered using standardised quantitative measures:

- The Beck Depression Inventory (BDI) (Beck et al., 1961) shows high internal consistency, with alpha coefficients of 0.86 for psychiatric populations and 0.81 for non-psychiatric populations (Beck et al., 1988).
- The Perceived Competence Scale for Children (Harter, 1982). Cronbach's alpha coefficients were 0.87 for the cognitive subscales, 0.79 for the social subscales and 0.88 for the physical subscales (Nagai et al., 2018) suggesting adequate internal consistency.
- The Children's Depression Inventory (Kovacs, 1981). Finch et al. (1987) attained satisfactory test-retest reliability coefficients for two-week (0.82), four-week (0.66) and six-week (0.67) latencies in a normative sample.
- The Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1997). Internal consistency reliability was adequate with a Cronbach α above 0.70 for all scales except for peer problems and conduct (Giannakopoulos et al., 2013).
- Pediatric Quality of Life Questionnaire (PedsQL) (Varni et al., 2001). Varni et al. (2001) reported Internal consistency reliability for the total scale score as 0.88 for the child report and 0.90 for the parent report.
- Modified Rosenberg Self-Esteem Scale (Rosenberg, 1965). Wongpakaran and Wongpakaran (2012) found good internal consistency in two samples with Cronbach's alphas of 0.86 and 0.84.
- The Social Problems subscale of the Child Behaviour Checklist (CBCL) (Achenbach, 1991). Internal consistency was in the fair to excellent range for all subscales (α=0.76–0.96) and 0.81 for the SDQ Total Problems scale (Dang et al., 2017).
- The Global Severity Index of the Brief Symptom Inventory (BSI) (Derogatis, 1991) shows good psychometric properties (α=0.92) (Goldschmidt et al., 2010).
- Birleson Depression Scale (Birleson, 1981). The author reported test-retest reliability of 0.80 reflecting adequate stability.
- Children's Culture-Free Self-Esteem Inventory (Battle, 1992). An examination of internal consistency in the normative sample produced average coefficient alpha

reliabilities above 0.80 (Community-University Partnership for the Study of Children, Youth, and Families, 2011).

- Patient-Reported Outcome Measurement Information System (PROMIS) – Paediatric Short Form v1.0 – Depression Symptoms (Irwin et al., 2010). Merriwether et al. (2017) found fair to high internal consistency (Cronbach $\alpha = 0.58$ to 0.94).
- "I Think I Am" self-rating questionnaire (Ouvinen-Birgerstam, 1984). Internal consistency was shown to be adequate, with alpha coefficients of 0.71-0.82.
- The Child Dietary Self-Efficacy Scale (Parcel, Edmundson & Perry, 1995). Subscale scores showed a moderate to high degree of internal consistency (Cronbach $\alpha = 0.59$-0.87).

1.3.3 Types of intervention used

Systemic interventions included family weight loss interventions (n=10), family therapy; either alone or in comparison to a control group, a treatment as usual group or a weight loss programme (n=4), weight loss maintenance after family therapy (n=1), a weight loss programme versus an education programme (n=1) and spouse support conditions with or without medication (n=1).

The psychological components of the interventions varied. Several articles referenced aspects of learning theory, such as modelling and positive reinforcement (n=7), however, not all referred to measuring mental health outcomes. Others discussed the use of motivational interviewing (n=2) and motivational training (n=2). Some studies provided a single psychological therapy; cognitive behavioural therapy (n=1) and solution-focused therapy (n=1). Others utilised a range of psychological mechanisms; cognitive, behavioural and psychodynamic (n=1), cognitive-behavioural therapy and motivational interviewing (n=1), family systems theory, social cognitive theory and self-determination theory (n=1) and a focus on roles, responsibleness and emotional eating (n=1).

1.3.4 Findings

Narrative synthesis focused on two overarching outcomes; weight loss and mental health. The studies are synthesised by theme.

1.3.5 The impact of systemic interventions on weight loss

Sixteen of the synthesised studies produced outcomes relating to weight loss following a systemic intervention. Overall, these studies found that participants lost weight, however, in some studies with a control group, the weight loss trajectories were similar for the treatment group and the control group. The main themes noted in these studies were: weight loss maintenance, family inclusion, relationship quality, culture and diversity and shared endeavour. The consideration of socioeconomic and cultural factors was infrequent.

1.3.5.1 Weight loss maintenance

Four of the studies explored whether improvements in participants' weight were maintained beyond the end of the intervention. Grønbæk et al. (2009) explored the impact of a family weight loss programme on BMI outcomes in overweight children. Children who completed the intervention showed decreased BMI z-scores ($p<0.001$) and body fat percentage scores ($p=0.003$) post-intervention and at the follow-up phase. Weight loss maintenance was also considered in an intervention phase study by Wilfley et al. (2007), in which overweight children engaged in a family weight loss programme. The programme focused on dietary modification, behavioural change skills and physical activity. After the programme, children's body weight significantly reduced from baseline ($p<0.001$ for BMI z-score and $p<0.001$ for percentage overweight). The second phase of the study assigned children to one of three maintenance conditions; behavioural skills maintenance (BSM), social facilitation maintenance (SFM) or a treatment as usual control group. Children in the BSM and SFM groups were able to maintain their BMI z-score and percentage overweight better than children in the control group. After two years, BMI z-score maintenance was significantly better in the SFM group, although there were no significant differences between the BSM group and the control group. These findings suggest that a follow-up

phase can impact weight loss maintenance in children. The SFM approach focuses on the developmental context of the child and targets peer factors (e.g. teasing) and self-perpetual factors (e.g. body image), whereas the BSM approach takes a formalised, cognitive-behavioural approach. The outcomes observed for the SFM approach suggests that discussing contextual factors was beneficial for the participants. Cook (2018) found that personalised weight feedback alone, even with no other interventions, resulted in long-term weight loss outcomes. However, Croker et al. (2012) found no significant differences in weight loss between Family Based Behavioural Treatment (FBBT) and a waiting list control group. Both groups showed significant reductions in BMI Standard Deviation Scores (BMI SDS), but not in BMI, and changes in BMI SDS were maintained six months post-intervention. This raises questions about using FBBT in NHS settings as other less intensive and expensive treatments may be equally beneficial. The variation in the long-term weight loss assessed in these studies suggests that there is further research needed to support individuals to maintain their weight after initial weight loss. However, despite the varied results, one important consideration is the inclusivity of personalised and contextual factors both within weight loss interventions and in the follow-up phase.

1.3.5.2 Family inclusion

The subsequent themes appeared to focus on the system surrounding the overweight individual. The inclusion of the family in the intervention yielded positive weight loss outcomes for individuals. Ellis et al. (2010) compared the differences between multisystemic therapy (including extended family members) and a weight loss intervention (the adolescent and one primary caregiver only). Multisystemic therapy was associated with healthier eating and greater participation in exercise which was significantly related to lower youth mass index. The multisystemic therapy group reported increases in family support which was not evident in the weight loss intervention group. These findings suggest that the inclusion of the wider family can facilitate greater weight loss and improve the adolescent's perception of family support. Maggio et al. (2013) reported similar findings in a cohort study investigating BMI change in obese young people attending an obesity care centre. The intervention comprised of psycho-education, motivational interviewing and family goal setting. At the end of treatment, there was a statistically significant mean overall BMI z-score change ($p< 0.001$). Maggio et al. (2013) evidence

that low-intensity, family-based behavioural treatment can offer weight loss outcomes comparable to intensive multidisciplinary treatments (Waters et al., 2011). In this study, the greatest BMI z-score reductions were observed in the youngest children, which may be explained by younger children being more dependent on their parent's food choices and activity routine. These study outcomes appear to suggest that the implementation of family-centred interventions can produce positive initial losses in weight for the individual.

1.3.5.3 Relationship quality

In the following studies, the impact of an intervention in which the overweight individual attended with a parent, caregiver or spouse was explored. In a dyad study by Naar-King et al. (2016), overweight African-American youths and their primary caregivers were randomised to motivational interviewing and skills building at home or in an office-based environment. There was a significant main effect of time for both conditions at both time points; Post-Test 1 [t (317.89) = 2.11, p = .035] and at Post-Test 2 [t (317.95) = 4.22, p < .001]. The results demonstrate that participants lost weight irrespective of the setting. It could be hypothesised that the relationship between the child and carer is more integral than the intervention environment. However, Golan et al. (2006) found contrasting outcomes when comparing weight loss outcomes when parents attended an intervention alone versus attending with their child. The intervention provided both groups with nutrition education, behavioural modification techniques and ideas about coping with resistance. The study found that the treatment effect was statistically significant for the parents-only group (p=0.003). At one-year follow-up, a reduction in BMI z-scores (p=0.025) and percentage overweight status (p=0.045) was observed in the parents-only group, but an increase in BMI z-scores and percentage overweight status in the parent-child group. In contrast to the hypothesis that relational factors are of importance in the Naar-King et al. (2016) study, these results suggest that helping an overweight child to lose weight may best be facilitated by a parent engaging in a weight loss intervention alone. The third randomised trial in the synthesis yielded findings to both support and negate the impact of relational influence for weight loss outcomes. In the only couples' study in this synthesis, the effects of a behavioural therapy programme for obesity, with or without pharmacology, and with or without couples training, was assessed (Brownell & Stunkard, 1981). The researchers anticipated that individuals in the supportive spouse condition

would yield greater weight loss results. All patients who completed treatment lost weight and all treatment conditions produced significant weight losses (F (1,112) = 5.9; p< .0001). Patients tended to regain weight during the follow-up period across conditions. This suggests that the type of spousal support received did not affect weight loss. Interestingly, spouses also lost weight during the couples training intervention compared to the other conditions and obese spouses maintained significant weight loss at one-year follow-up (p< .05). The net weight loss of patients with obese spouses (6.0kg) was greater than that of the patients with non-obese spouses (1.4kg) at one-year follow-up. The study indicates that couples training was no more effective for weight loss than the two comparative conditions.

The idea of being parents acting as the agents of change when supporting a child to lose weight was identified by Jinks et al. (2013). Their evaluation of a family-centred weight management intervention considered the impact of the intervention on five overweight children. At the end of the intervention, four children had reduced BMI's. However, all but one family member had increased their BMI. Evidently, the intervention yielded weight loss benefits for the children but had the opposite effect on the adults. Ultimately, a child's influence on family eating behaviours is limited, as it is likely that the parents will take responsibility for food provisions. These findings suggest that improving parental dietary awareness may incur weight loss benefits for the child and help adults to become self-aware of their own food choices. The qualitative component of the study argued that 'family-centredness' was a key theme for weight loss success. This references an ethos of togetherness and making changes as a wider system, rather than localising responsibility in the child. In addition, De Miguel-Etayo et al. (2018) found that diet quality index for adolescents (DQI-A) was a predictor of BMI and FMI z-score changes during a 13-month follow-up of overweight adolescents in a weight loss programme. This evidences that the assessment of diet quality changes, alongside personalised context factors, could be useful in predicting body composition changes in overweight adolescents. Diet quality changes may require the support of parents to initiate, therefore, this adds weighting to offering support to adults to help facilitate such changes.

A useful aim for future research may be to explore the influence of mutual motivation on weight loss outcomes. Despite this being demonstrated in different ways in the studies, the overweight individual was more successful when their parent, caregiver or spouse (the 'supporter') was mutually invested in the prospect of weight loss, either for the

individual or for themselves. The consideration of intrinsic motivation from the 'supporter' may be an important factor in the development of future systemic interventions for weight loss.

1.3.5.4 Culture and diversity

A theme to emerge from the synthesised studies was the focus on obesity in marginalised groups and four of the intervention evaluations considered the influence of cultural factors (Fagg et al., 2014; Grønbæk et al., 2009; Janicke et al., 2011; Nowicka et al., 2007). Nowicka et al. (2007) used solution-focused therapy to examine the impact on BMI outcomes in obese children. A paired t-test between baseline and outcome data showed that 75% of children significantly decreased their BMI z-score ($p<0.001$). The study was a low-intensity intervention comprising of a mean of 3.8 sessions per family. Similar studies have offered more sessions (Braet & Van Winckel, 2000; Rudolf et al., 2006) which may require more resources and time, placing greater demand upon the family. Nowicka et al. (2007) evidenced that short-term systemic interventions can be impactful on weight loss in overweight children. A key strength of the study was the inclusion of immigrant families (30%). This advocates for the use of solution-focused therapy in culturally diverse populations. However, the study does not account for sample selection factors, such as pubertal status. A follow-up study examining the impact of this intervention on more distinct age ranges of young people may help with the generalisability of the findings.

Other studies explored cultural factors more specifically. An ANOVA was used to assess socioeconomic predictors of reduced BMI z-scores in the Grønbæk et al. (2009) study. Parental ethnicity was found to be the only significant predictor ($p=0.036$) in which children from Danish or European families lost double the amount of weight as children from families from non-European origin. Other predictors of BMI change, such as number of siblings, were not significant. Comparatively, Fagg et al. (2014) found that the amount of weight lost varied between programmes, participant and family factors. BMI decreased more dramatically in younger, white, male children with higher baseline BMI's, from families in less deprived areas, with an employed primary earner. The implications of these findings are that family variables, socio-economic variables and individual variables, such as age, gender, race and ethnicity, can play a mediating role in the weight loss. Academics

should be attuned to cultural diversity factors when designing research. These ideas are further supported by Janicke et al. (2011) who explored the impact of a behavioural family intervention (BFI) on weight management in obese young people from disadvantaged backgrounds. Child-parent dyads were randomly assigned to one of two conditions; BFI delivered in groups alongside other families or an individual standard care (ISC) condition. Despite the study finding no difference in weight status outcomes for children in the two conditions, (F (1,32) = 1.46, p= 0.24), there were differences in weight change by race. Children in the BFI identifying as "Caucasian" decreased their BMI z-scores from baseline to post-treatment, whereas children identifying as "African-American", had increased BMI z-scores. This pattern continued at follow-up with "African American" children from the BFI group increasing their BMI z-scores and "Caucasian" children showing improvements in their BMI z-scores. It has been suggested that African-Americans have difficulty complying with nutritional recommendations when changes differ to their cultural familiarity (Ard et al., 2000). This research also reported that African-American individuals may be less motivated to lose weight due to greater cultural acceptance of being a higher weight.Whilst the acknowledgement of these hypotheses is important, the authors do not consider that there may be alternative hypotheses at work. Factors such as food poverty, socio-economic deprevation and structural inequaities are all possible contributors to the findings in the study. Yet, failure to recognise such variables ratifies the underreporting of socio-econmic priviledge and disadvantage. Researchers need to take responsibility for challenging the current narrative by addressing these challenging but highly present inequalities. In summary, these findings reflect the importance of recognising the role of sociodemographic factors, as three of the studies exploring cultural factors found the greatest weight improvements in white majority ethnicity participants.

1.3.5.5 Shared endeavour

The remaining studies evidence the importance of the relationship between the obese individual and the 'supporter', as described previously, and primarily note the importance of a shared endeavour. Adolescents who successfully lost weight in the study by Campbell-Voytal et al. (2018) were more likely to work with their caregiver and to express responsibility for their weight loss. Caregiver support also influenced adolescent autonomy and motivation to adopt behavioural eating changes. The parent-adolescent dyads that were

less successful in losing weight referenced the adult 'doing for' or initiating change on behalf of the young person. The patterns of support identified are consistent with the theory of intrinsic and autonomous motivated effort and the improved upkeep of new behaviours (Koestner, et al., 2014). These themes provide useful reflections when considering tailoring parenting strategies to help support adolescents to lose weight. However, generalisability is a limitation as male adolescents and caregivers were underrepresented, and those who took part in the interviews may have had a more positive experiences of the intervention that those who did not. Tanas et al. (2007) found that shared endeavour resulted in positive weight loss outcomes. The study explored the effectiveness of a family-based therapeutic programme involving overweight children and adolescents. The study found that 73% of young people in the therapeutic programme reduced their BMI SDS compared to 43% in the traditional dietary treatment group. The total number of 'successful' children (i.e. with a stable BMI percentage) was significantly higher in the therapeutic group ($p<0.05$). A potential asset of this study is that it places the child and their family at the centre of making responsible lifestyle choices. Conversely, the traditional dietary group relied on a professionally driven, prescriptive approach.

The role of the relationship between the obese individual and the person in the 'supporter' role was frequently noted in the synthesis. A key determinant of success appeared to be the obese person taking responsibility for their choices, but with the support of their network to help motivate them. Self-Determination Theory (SDT) references the benefits of supporting an individual's autonomy to facilitate independent self-regulation and suggests that motivation differs in the degree to which it is experienced as controlled or autonomous (Deci & Ryan, 2000). It is plausible that the 'supporter' has the capability to create influence by promoting autonomy in the individual through their own behaviours. Gorin et al. (2014) found that autonomy support predicted better weight loss outcomes and that directive support hindered improvement. Similarly, Chan et al. (2009) noted the importance of personalised care in achieving lifestyle modifications.

1.3.6 The impact of systemic interventions on mental health

Six studies explored the impact of systemic interventions on mental health outcomes and two subthemes emerged; depression and psychosocial factors and psychological wellbeing.

1.3.6.1 Depression

Brownell and Stunkard (1981) found that participants' mean depression score on the BDI decreased significantly during treatment ($F(1,94) = 2.5$; $p < .05$) but increased at the one-year follow-up. Changes in depression and weight were positively correlated during treatment ($r = .17$, $p < .08$) and at follow-up ($r = .29$, $p < .005$). Despite depression scores rising as weight was regained at follow-up, the scores were significantly lower than the original scores. Jinks et al. (2013) found an overall improvement in depression scores post-intervention. 80% of children had improved depression scores and all but one child had normal scores on the Birleson depression scale (Birleson, 1981) post-intervention. However, other studies have reviewed depression as a moderator in weight loss outcomes, although the reverse relationship was not explored. Naar-King et al. (2016) assessed pre and post-intervention depression scores and the results indicated that those who had lower depression scores at baseline reduced their percent overweight by 2.55% at the end of Phase 1 compared to participants with higher depression scores at baseline (0.27%). However, this pattern was reversed between Post-Test 1 and the end of Phase 2 with those with higher levels of depression reducing their percent body weight more than those with lower depression levels. The findings indicate a marginally significant support for adolescent depression as a moderator at the end of Phase 1 but no significance at Post-Test 2. The studies suggest that systemic interventions can improve symptoms of depression in the obese population, yet, the severity of the depression appears to influence the outcomes, and this could warrant further investigation.

1.3.6.2 Psychosocial factors and psychological wellbeing

The role of psychosocial factors was explored in children who were categorised into two groups based on their scores on the Child Behaviour Checklist - Social Problems

subscale following family-based weight loss treatment (Goldschmidt et al., 2010). The HIGH group scored above the clinical cut-off score of *T*=65 and the LOW group scored below. The HIGH group had elevated levels of eating-related psychopathology, parental psychopathology and low self-worth. Parent psychopathology was measured using The Global Severity Index of the Brief Symptom Inventory (Derogatis, 1991). HIGH children and their parents showed poorer psychological functioning in comparison to LOW children and their parents, indicating that parent psychological factors may be an important consideration in predicting social problems in overweight children. The development of a model that considers both child and parent functioning may help to explain the overall profile of overweight youths with social difficulties. However, Croker et al. (2012) found that there were no significant between group differences for psychosocial outcomes for a FBBT group and the waiting list group.

A study of family-based community interventions showed improvements in self-esteem scores and a fall in psychological distress (Fagg et al., 2014). However, as with the BMI outcomes, these results were dependent on cultural, social and personal characteristics, which links to the earlier considerations of psychosocial and sociodemographic influences. Similarly, other studies demonstrated a significant increase in self-esteem after a family therapy intervention (Jinks et al., 2013; Nowicka et al., 2007). Nowicka et al. (2007) found increased scores on measures of psychological wellbeing and relating to others post-intervention. Sweeney et al. (2019) described feedback in relation to psychological wellbeing from children-parent dyads following a weight loss trial. Emergent themes were ‘positive self-talk’, ‘self-efficacy’ and ‘self-regulation’. ‘Positive self-talk’ was expressed more widely by parents than young people with comments made about positive self-image and self-encouragement. Both parents and young people expressed confidence in their own ability to initiate and maintain weight-related changes. Both parents and children also discussed personal accountability towards their weight loss goals. Wilfley et al. (2007) observed that self-efficacy in adhering to a low-fat diet increased significantly for children receiving behavioural skills support compared with the control group. This was observed in the short-term and in the long-term for children receiving social facilitation maintenance. In summary, these studies infer than engaging in short-term, low-intensity family interventions may have positive psychological outcomes for the overweight individual.

1.3.7 Summary of study quality

A wide variation of study quality was demonstrated by the quality ratings, which ranged from 0.50 to 0.88 (see Appendix B). Ten studies were appraised as being of 'high' quality, six were 'moderate quality and the mixed-methods study was assessed to be of 'moderate' quality for the quantitative analysis and 'low' quality for the qualitative analysis. Study appraisal showed that overall there was good methodological consideration of research aims, design and analyses. However, a recurring theme was the absence of control groups. Failure to use a control group makes it difficult to draw generalisable conclusions from the data, in addition to being unable to rule out bias that the outcomes may being attributed to other factors (such as developmental stages). The appraisal tool developed by Kmet et al. (2004) gives equal weighting to randomised and non-randomised studies. This could be of benefit as quasi-experimental designs can demonstrate greater ecological validity than controlled studies. However, this may also equate to lower internal validity, therefore the results must be interpreted with caution. Any impact of the quality rating on predicted weight loss and/or mental health was not evident. Weight loss outcomes were inconsistent but mental health seemingly improved across the sample. The process drew attention to the heterogeneity of the sample and the diversity of the studies.

1.4 Discussion

1.4.1 Summary

This systematic review aimed to bridge the gap between theory and empirical evidence for the use of psychological, systemic interventions when working with overweight individuals. The main objectives were to appraise and synthesise the literature on how systemic interventions have been applied and the evidence of their efficacy on weight loss and mental health. The synthesised studies provided varied results in supporting the use of systemic interventions for weight loss. The findings appear to be more consistent in showing that they can helpful for improving mental health outcomes in the overweight population.

The review found that studies exploring the impact of systemic weight loss interventions mainly targeted children and adolescents, and there was variation in the

systemic interventions delivered. The diversity of the designs suggests that there is some uncertainty about the most effective way to offer a systemic intervention. It could be suggested that services have trialled a range of interventions in the hope of finding one that would be most effective to implement on a longer-term basis. Yet it appears that there is not yet a consensus on what the most effective systemic intervention is, and this is reflected in the disparity of the review findings. Berge and Everts (2011) described the importance in identifying ways in which systemic-level support can be used in intervention delivery.

An important consideration is the limited research on overweight adults and their support systems. It was expected that there would be more research with adult samples. It may be hypothesised that services focus on providing interventions for the younger population as a preventative attempt to curb obesity, rather than investing in reactive interventions for the adult population. Additionally, services might view systemic interventions as more relevant in child and young person samples in comparison to adults, hence the lack of adult data available in this review and the larger number of studies focusing on the youth population.

There was some variation across studies in the success of systemic interventions for weight loss. It could be hypothesised that several factors contributed to this, including inconsistencies in follow-up data and the extensive range of weight loss measures used. Weight loss maintenance data would enable conclusions to be drawn about the long-term efficacy of the interventions. In addition, in children and adolescents, a standardised weight loss measure is not applicable as weight loss is measured as a percentile for their height. These complexities within the assessment of weight loss give onus to conducting a narrative synthesis due to the heterogeneity of the studies, however, it also evidences that evaluating systemic interventions in the context of weight loss is not straightforward.

The impact of systemic interventions on mental health outcomes showed more success overall. Improvements in depression, self-esteem and psychological wellbeing were consistent across studies. It is difficult to assess the extent to which the intervention played a role as many of the studies evaluated mental health as a secondary outcome to weight loss. It could be deduced that services prioritise physical wellbeing over psychological wellbeing and that resources are more heavily invested in helping overweight individuals reduce their weight. Clinical psychologists could play a pivotal role

in encouraging services to adopt a biopsychosocial approach to supporting their patients. This would allow interventions to give equal provision to biological, psychological and social factors, all of which were evidenced as important variables in this narrative synthesis.

1.4.2 Interpretation of findings and links to theory/research

It is difficult to draw meaningful conclusions from the narrative synthesis due to the disparity in the study quality and outcomes. Given the variety in age of the participants, ways of measuring reductions in obesity, stage of the intervention when measures were taken and comparator groups, it was not possible to combine results from studies in such a way as to lead to a clear conclusion. This suggests that the is still a lack of clarity concerning the most effective interventions to systemically support overweight individuals to manage their weight and support their mental health. The narrative synthesis showed some support for systemic interventions when the intervention had a family-centred ethos and the system was invested in the goals of the individual, but allowed them to take responsibility for their behaviour (Campbell-Voytal et al., 2018; Jinks et al., 2013; Tanas et al., 2007). As detailed previously, Family Systems Theory (Bowen, 1978) highlights the influence of a change on interconnecting parts of a system. The theory encourages an emphasis of systemic-level support to maintain long-term change, complimenting the findings of the synthesis that the intervention can impact all family members and that the behaviours of the 'supporter' can have implications for success. A systematic review by van der Kruk et al., (2013) exemplified this by identifying that direct approaches to engage parents were more likely to result in positive weight loss outcomes for their children than indirect methods. An interesting finding was how the system offered support to the overweight individual. For participants articulating their experiences of systemic support, intrinsic motivation and independent choice making co-existed alongside feeling validated by the network. Markey et al. (2016) described the interpersonal nature of obesity and how emotional eating can be influenced by relationships. High levels of negative affect associated with body dissatisfaction may be intensified by inadequate social support (Cohen, 2004). These theories are supported by Bolger et al. (1989) who found that emotional eating was a frequent response to relationship stress. Additionally, Heatherton and Baumeister's (1991) escape theory outlined the yearning to escape from aversive self-

awareness resulting from interpersonal stress. It is plausible that overweight individuals harbour acute sensitivity to the perceived demands of others. If these demands are unmet, the individual is exposed to adverse self-perceptions and emotional distress. This could lead to the individual disengaging from their normal inhibitions against eating. Dailey (2017) agreed that the complexities of losing weight need to be considered in a relational context and found that factors that facilitated weight loss were having a team effort in pursuing the weight loss goals. Noted obstacles included opposing viewpoints and adverse comments. Evidently, secure, open and communicative relationships appear to be central to weight loss success and to feelings of safety and self-motivation. Behaviourally, previous research has suggested that social mechanisms can influence weight change in spouses. Perry et al. (2016) reported that behavioral modelling is a key mechanism in obesity-related patterns of food and exercise behaviour. The authors equate this to partners having ample time to observe the behaviour of their partner and that having a strong attachment may increase identification with their experiences and the incentive to conform. Aron et al. (2004) outlined that individuals tend to integrate their sense of self with others close to them. If this is the case, the influence of behaviour modelling could be applied to other social ties as a mechanism to support weight loss.

Another common finding was the varied range of support systems, cultural backgrounds and sociodemographic factors. These variables were reflected in the work of Kaplan et al. (2014), who discussed perceptions of "family". They outlined that despite family-based approaches being recommended for the treatment of childhood obesity, most of the literature describes interventions that include the child and parent. They commented that this may result in inadequate representations of a "family" and the design of treatment protocols being unsuitable in a clinical environment. This is reinforced by the work of Kulik et al. (2016) who reported that adolescent females benefited from social support for healthy eating from their peers. Yet only one of the studies in the synthesis acknowledged the role of siblings or peers in the intervention (Jinks et al, 2013) and the sibling impact was not reported. Future research in this area may help to explore how social support beyond the traditional family unit may support weight loss in obesity, as the 'supporter' role may not always be someone in a parental or spousal position.

1.4.3 Methodological considerations

To the author's knowledge, this was the first systematic review with the objective of exploring the use of psychological, systemic interventions with the overweight population. A narrative about the efficacy of systemic interventions on weight loss and mental health was generated by the data. The review provides an overview of how systemic interventions are being implemented with this client group and the evidence provides some support for the use of systemic methods over individualised approaches.

By accumulating data from qualitative, quantitative and mixed methodologies, a rich analysis of the application of systemic interventions was gathered. The integrity of the outcomes was preserved preventing the conversion of quantitative findings into words or qualitative findings into numbers. Harden (2010) notes that the mixed-methods model enables the integration of quantitative estimates of benefit with the qualitative understanding from individual's lived experience. However, the variability in sample sizes, methodologies, focus of investigation and use of consistent and standardised measures across the qualitative studies impacts generalisability. The varying aims of the studies limits any steady conclusions being drawn from the review. Future reviews may want to focus on a specific systemic intervention, for example, the parent-child dyad intervention, to help improve robustness. Additionally, control group inconsistencies limit the conclusions about the efficacy of the systemic interventions. The use of a comparison group would be of benefit when future research is conducted.

A problem associated with the assessing the impact of systemic interventions in the overweight population is the lack of long-term studies. Despite some studies reporting follow-up periods (Brownell & Stunkard, 1981; De Miguel-Etayo et al., 2018; Golan et al., 2006; Grønbæk, Madsen & Michaelsen, 2009; Janicke et al., 2011), the true effects of systemic interventions on weight loss and mental health remain difficult to determine. If systemic interventions were evidenced to result in long-term weight loss and mental health improvements, there could be extensive benefits for healthcare services and how overweight patients receive treatment.

The reviewed studies were quality assessed using the adapted forms of the ratings checklists by Kmet et al. (2004) and ranged from low to high in quality. The quality appraisal was completed independently by the primary researcher but was not checked by any other individuals. Harrison et al. (2017) outlined that using a quality assurance check

helps to evaluate the study design. The application of the findings of the quality rating to the assessment of results can influence reader confidence in the interpretation. The poor-quality studies may have impacted the effect size if this was being calculated from the average quality ratings. However, it was considered that this would not provide any additional information that has not already been presented and the credibility of the results was considered when presenting the studies.

It is important to appraise the impact of excluding unpublished literature and papers not published in English in the review. It is possible that the grey literature may contain evidence that differs from the published data, and therefore the review may be biased with an imprecise evaluation of systemic interventions. It has been argued that unpublished studies are more likely to have non-significant results (Song et al., 2010). Similarly, the exclusion of studies not available in English may influence language bias and subsequently the generalisability of the findings. As discussed above, cultural differences may influence the effectiveness of systemic interventions. Although the author contacted the authors where the studies were not published in English, the practical constraints of time and non-responsiveness prevented access to English versions of the papers. It is questionable as to whether the included studies are truly representative of the literature without these excluded articles. This is a disadvantage of the review, particularly considering the highlighted importance of attending to global diversity as a recommendation from the findings.

Adult samples were under-represented in this review and this is a limitation of the current picture of research evidence. There is a potential bias towards child and adolescent obesity research and the needs of overweight adults may go overlooked. The one study that did recruit adults (Brownell & Stunkard, 1981) showed positive weight loss and mental health outcomes for the participants, in addition to positive weight loss outcomes for spouses. Despite this, the study is historic and little research to evolve these findings appears to have been carried out. The review indicates that systemic family interventions can benefit overweight young people, but more research is required for adult samples. This may be extended to peer groups, sibling systems, adoptive families and blended families to encompass modern concepts of family. Additionally, a continued emphasis on recruiting participants from diverse backgrounds and designing culturally sensitive systemic interventions will help to maximise understanding of obesity cross-culturally.

Another methodological consideration is the variation in reporting weight loss and mental health outcomes in parents. A purist systemic intervention is likely to measure outcomes for the whole system; however, this was not always considered in the reviewed studies. There is a possibility that the parents were not overweight or experiencing mental health difficulties therefore this would be a judicious reason not to assess these variables. Yet, the ethos of systemic work should have a holistic focus and without it, doubts about the true systemic nature of the intervention are called into question.

1.4.4 Clinical implications and future recommendations

The review highlighted that using systemic interventions with the overweight population is complex. The review articles were diverse in their samples, interventions, psychological influences and objectives. This draws further attention to the inconclusive nature about how best to support overweight individuals systemically. However, the review highlighted some important considerations clinically and for future research.

It is evident that the current weighing of systemic input is targeted towards overweight children and adolescents and their families. Health research indicates that parents are vital agents of change in children's exercising and eating behaviours (Golan, 2011; Williams & Mummery, 2011). The review demonstrates that the involvement of parents, either with or without their child, can have positive weight loss outcomes. Clinically, it may be helpful to devise ways of maximising a mechanism, such as behaviour modelling, that target dyads, families or social groups. The theory that the behaviour of one individual is likely to have a ripple effect to others may help to create an environment typified by reciprocated reinforcement of healthy behaviour. Devising interventions that can be disseminated to a range of age groups and systems would support services economically as well as supporting long-term behavioural change which may prevent relapse.

The quality of the patient's relationship with their system can have an impact on the success of a weight loss intervention (Campbell-Voytal et al.; 2018 Naar-King et al., 2016). It is possible that healthcare services need to be more considerate of culture, language and relationship dynamics at the outset of an intervention. It may also be helpful for services to detach themselves from the traditional idea of a 'family' and to adapt

interventions to include individuals who may not be biologically related to the patient or in a romantic relationship with them. The meaning of the relationship and the implicit and explicit support provided by the system appears to be of greater importance than the presumed relational label or title.

In line with the idea of developing systemic interventions to encompass the meaning of the relationship, services may need to update the ethos of their interventions to include emerging evidence, as suggested by Marks (2015). It appears that there is little research into the impact of systemic interventions with the primary aim of improving mental health. Given the theory about the interaction between obesity and mental health, further systemic research with an emphasis on mental health would be recommended. Developing awareness about psychological factors, such as stigma and victim-blaming, alongside increasing insight into alterative behavioural changes, such as introducing plant-based dietary alternatives, may produce innovative systemic approaches. Stigma and weight bias have been shown to affect weight gain (Phelan et al., 2015) and to have detrimental mental health implications, including increasing vulnerability to low self-esteem and depression (Tomiyama et al., 2018; Tomiyama, 2019). A review by Turner-McGrievy et al. (2017) indicated advantages to adopting plant-based diets for preventing obesity and promoting weight loss. This may also encompass an awareness of cultural issues that attend to culturally appropriate recipes for example. There are also studies that support other dietary approaches, including low-fat, diets low-carbohydrate diets, high-protein diets, and low glycaemic index diets (Makris & Foster, 2011). This emerging evidence suggests that healthcare providers may benefit from trialling some of the ideas that are being generated by developing research.

1.5 Conclusion

The current systematic review aimed to identify the influence of systemic interventions with a psychological focus on weight loss and mental health. The studies mostly used children and adolescents as their sample population, suggesting that obesity research resources are mainly invested in young people. The results generated mixed findings with some evidence for the involvement of family and carer systems and other evidence suggesting that an individualised approach, with either the patient or the carer,

would be more beneficial. Generally, the systemic interventions showed reductions in depression and psychological distress and improvements in self-esteem, however, assessing mental health outcomes was usually secondary to weight loss. It may be interesting to develop systemic interventions with mental health as the primary focus and to assess whether weight loss could be positive biproduct of the approach. Systematic interventions should be designed from a cross-cultural perspective, whilst sampling the overweight adult population. Future systemic research may also benefit from assessing how to utilise evidence for the adoption of emerging psychological and dietary alternatives and trends.

Chapter 2 A Qualitative Exploration of Couples' Expectations and Experiences of Change Following Bariatric Surgery

2.1 Introduction

Bariatric surgery can be considered for individuals who are defined as overweight or obese, in which excessive or abnormal fat accumulation presents a risk to health (World Health Organisation, 2014). Bariatric surgery can also be considered for those where other approaches to weight loss, such as dietary change, pharmacological support and psychological interventions, have not been successful. Current National Institute for Health and Care Excellence guidelines (NICE, 2014) recommend bariatric surgery for individuals with a body mass index (BMI) above 40 kg/m^2, or between 35 and 39.5 kg/m^2, if other noteworthy diseases are present that could be improved with weight loss, such as type II diabetes (Treadwell & Turkelson, 2005). It is estimated that nearly 580,000 bariatric surgeries are performed annually worldwide (Angrisani et al., 2014).

Bariatric procedures restrict the amount of food the stomach can hold. The three most common procedures in the UK are the Laparoscopic Sleeve Gastrectomy (the 'sleeve'), the Roux-en-Y Gastric Bypass (the gastric 'bypass') and the Laparoscopic Adjustable Gastric Band (the 'band') (National Health Service, 2017). In the sleeve procedure, approximately 80% of the stomach is removed and the remaining stomach is formed into a pouch. The gastric bypass involves surgical staples being used to create a pouch at the top of the stomach. The pouch is connected to the patient's small intestine, bypassing the remainder of the stomach. The band procedure uses an inflatable band that is inserted around the upper section of the stomach. This creates a small stomach pouch above the band and rest of the stomach below. In a recent study of bariatric surgery trends in the UK (Desogus et al., 2019), it was found that women were more likely to receive bariatric surgery than men (76.1%) and were more eligible (58.4%). The selection of the bariatric procedure depends on several factors including patient comorbidities, weight, surgical preference and compliance with lifestyle alterations. A meta-analysis of bariatric surgery reported that the mean percentage of excess weight loss was 61.6% for those who underwent a bypass and 47.5% for patients who had a band (Buchwald et al., 2004).

Projected UK-wide National Health Service (NHS) costs towards managing obesity are estimated to reach £9.7 billion by 2050. It is likely that bariatric services will be in greater demand if, as predicted, levels of obesity continue to rise.

2.1.1 Bariatric surgery outcomes for the patient

Bariatric surgery can result in substantial and durable weight loss (O'Brien et al., 2019) and the resolution of obesity-related comorbidities, improved quality of life and psychosocial benefits (Chang et al., 2014; Madura & Dibaise, 2012). The primary objective of bariatric surgery is for the patient to lose weight and to improve associated health outcomes. Information about the psychosocial outcomes of bariatric surgery is limited (Bruze et al., 2018). Some improvements in social relations, psychosocial status and employment opportunities have been evidenced (Herpertz et al., 2003), in addition to positive changes in self-concept, self-confidence and self-esteem (Bocchieri et al., 2002). These changes appear to be associated with improvements in body image and weight-loss satisfaction following bariatric surgery. Many studies report the patient feeling more in control and 'normal' (Coulman et al., 2017). Striving for a sense of 'normality' was also commented on by patients in a study by Coulman et al. (2020) and related to physical and psychological health, eating patterns, weight, body image and social functioning. Patients reported that the positive changes brought them closer to this idealised version of 'normality'. Berg (2019) highlighted that living with a bariatric body is underpinned by a strong feeling of responsibility for the body and for health. The process of bariatric surgery serves to reinforce responsibility to comply with treatment. Interestingly, the research reflected patient's reluctance to discuss their former obesity and problems post-surgery, for fear of being stigmatised. It is possible that worries about such outcomes may prevent patients from disclosing their feelings to their partners and therefore feeling isolated.

Alongside the positive changes, there is evidence to suggest that bariatric surgery can have some undesirable effects. Negative self-evaluation as a result of bariatric surgery can comprise of body dissatisfaction and perceived stigma (Aramburu Alegría & Larsen, 2016). Vartanian and Rardouly (2014) suggest that stigma may be driven by a misconception that bariatric surgery is the 'easy way out' and that this type of weight loss treatment does not involve any patient effort. Coulman et al. (2017) found that patients

noticed problems with confidence and low self-esteem continued to ‘drag on’. Kubik et al. (2013) describe that the impact of bariatric surgery on psychological health is often overshadowed by the significant reduction in physical comorbidities. The long-term efficacy of bariatric surgery has also been questioned with trends indicating that weight gain is typical after two years following gastric bypass surgery (Adams et al., 2012).

2.1.2 Intimate relationships and bariatric surgery

Research suggests that the positive outcomes resulting from bariatric surgery are enhanced by the presence of a stable and supportive relationship (Clark et al, 2014). The impact of spousal support has been demonstrated to help to increase weight loss, maintain weight loss and to help with adherence, which have been linked to favourable bariatric surgery outcomes (Mehta et al., 2017). Yet, it is unsurprising that the aftermath of bariatric surgery may result in some difficulties between patient and partner. Sogg and Gorman (2008) noted several potential interpersonal challenges, including envy, jealously and partners becoming ‘the eating police’. These challenges may test the relationship dynamic in a manner that it has not previously been tested. Intimacy is another important constituent of a functional relationship. In a synthesis of relationship factors and weight loss surgery among married couples, Ferriby et al. (2015) reported that sexual contact between couples increased after weight loss surgery, however, the couple’s relationship quality tended to decline. Issues such as wound complications can interfere with sexual functioning (Camps et al., 1996). The presence of excess skin can provide additional anxiety towards sexual intimacy (Kinzl et al., 2001). Moore and Cooper (2016) gathered qualitative data from male, post-operative bariatric patients. Participants emphasised unpredicted intimacy difficulties, suggesting that this outcome was not highlighted by professionals prior to surgery. In addition, participants noted increased levels of intimacy but desired even more. The third theme to emerge regarded mixed experiences of social support being provided, which may signify inconsistences in the quality of support received by bariatric patients. Holmes (2000) described that when a couple establishes their relationship and builds a life together, they also form schemas of the relationship and of each other. These norms are responsible for maintaining dynamic homeostasis and a stable view of the relationship. Significant life events may challenge and change these previously established norms. The

way the couple accept and adapt to changes may impact weight loss outcomes and the success of the relationship.

2.1.3 Bariatric surgery outcomes for the partner

There is limited research to explore the impact of bariatric surgery on the partner of a bariatric patient. Given the suggestion that a supportive relationship increases the likelihood of successful patient outcomes after bariatric surgery, expanding the focus to the patient's partner would seem valuable. In the existing literature that considers partners, the predominant data collection method is joint interviews with the patient and partner. Joint interviews recognise the existence of a reciprocal relationship between individuals and it is embraced as a source of information (Caldwell, 2014). Bruze et al. (2018) identified that most couples maintained or increased the quality in their relationship after bariatric surgery. However, instances of reported jealously and feelings of no longer being needed were also disclosed by partners. A study by Arambura Alegría and Larsen (2016) reported that partners identified negative emotions related to their spouses increased self-focus and socialisation with others and expressed concerns about threats to the relationship. One example was the patient finding confidence to go dancing which was perceived to be more exhibitionist by the partner. Romo and Dailey (2014) reported similar partner criticisms but also stated that they valued a shared healthy lifestyle. Wallwork et al. (2017) explored lifestyle factors further and found that a synergised lifestyle was reached when the partner engaged in the surgical journey with their spouse, adopted behavioural changes and adjusted to the 'new normal'. The authors recommended that care providers targeted the whole spousal unit when offering support. This may be a valuable insight when considering that there may be unexpected consequences that challenge and test the relationship post-surgery.

2.1.4 Study rationale

The current literature primarily focuses on the experiences of patients who have undergone bariatric surgery (Graham et al. 2017; Lui & Irwin, 2017). There is some research that has explored the impact on partners by interviewing them alongside the

bariatric patient (Pories et al. 2016). However, there is a lack of qualitative research that focuses on the partners and patients in equal measure. The current study aims to address whether the bariatric services could benefit by providing greater systemic inclusivity. Contextually, changes experienced by the couple following bariatric surgery have been alluded to in the literature. Yet, pre-surgical expectations and the realities of post-surgical experiences have not been investigated as fully. Homer et al. (2016) reported that bariatric patients identified feelings of shame and stigma about their weight and described feelings being reinforced by previous ineffective weight loss attempts. The expectations of surgery centered on improvements to physical and psychological health. Weight loss expectations were sometimes noted as extreme and unrealistic and patients were often found to be striving for a sense of 'normality'. The current study will attempt to explore the expectations of patients and partners and whether the outcomes matched their expectations. Consideration of whether such expectations and lived realities are linked to experiences of change is another gap in the current evidence base.

2.1.5 Research questions

The research questions addressed in this study are:

- What were the couple's expectations of bariatric surgery before the procedure?
- What are the couple's experiences of change following bariatric surgery?

2.2 Methodology

2.2.1 Design

The current study employed a qualitative research design in which bariatric patients and their partners participated in joint semi-structured interviews.

2.2.2 Joint interviews

Joint interviews are defined as interviews with two people, who have a prior relationship, at the same time (Polak & Green, 2016). Traditionally, qualitative health research has gathered data by interviewing individuals or focus groups. Yet, existing qualitative bariatric surgery studies refer to the sense of a 'joint journey' as an integral component of successful weight loss (Clark et al, 2014; Slotman, 2011). The use of joint interviews allowed for data to be generated through conversation between the participants and the creation of the interaction (Morgan et al., 2016). The study aimed to capture the shared narrative that could only be generated through joint interviews (Taylor & de Vocht, 2011).

The NHS encourages placing the patient[2] at the centre of its care (Department of Health, 2010) and NHS England extends this to the inclusion carers (NHS England, 2020). By increasing patient and carer input in the decision-making process, healthcare providers can be receptive to patient and systemic needs. The use of joint interviews allowed for the discovery of couple's perspectives and enabled the data to be simplified and managed without destroying its context and complexity. Starks and Trinidad (2007) suggest that qualitative methods are helpful in exploring social practices, identifying barriers to change and discovering successes and failures of interventions.

Valentine (1999) suggested that joint interviews may generate greater detail as corroborations, elaborations and disagreements emerge. The availability of a common reflective space may help to construct a fuller narrative than with a single perspective alone. A potential disadvantage of interviewing the couple together is the prospect of silencing one individual's account of the topic. Eisikovits and Koren (2010) note that sensitive issues may be unsaid in joint interviews. The interviewer attempted to create a safe environment by balancing the needs of both individuals. Techniques that fostered unbiassed attention to both parties were employed, for example, prompting the partner their viewpoint in relation to a change or expectation stated by the patient.

[2] The author acknowledges that there can be sensitivities to the word 'patient' and that there can be alternative preferences to this terminology (e.g. service user). 'Patient' is referred to in this paper as it was the term used by the medicalised setting that bariatric individuals were recruited from, in addition to being the term used by participants themselves.

2.2.3 Participants and recruitment

The study used a sample of patients taken from a local NHS bariatric service. Recruitment and data collection took place over a four-month period. Potential participants were identified by NHS bariatric team professionals involved in the patients care. The primary researcher wanted to ensure both positive and negative experiences of bariatric surgery were considered. The primary researcher ensured that the bariatric staff team and potential participants were aware that all viewpoints would be helpful to include to limit the possibility of selection bias.

Potential participants were given an information leaflet about the study by the bariatric team member at a follow-up appointment. Potential participants either contacted the primary researcher to state their interest or consented to their contact information being given to the primary researcher. Individuals that provided their consent to be contacted were then telephoned by the primary researcher. Telephone contact allowed the primary researcher to assess that the couple met the inclusion criteria.

2.2.4 Inclusion Criteria

- The patient to be at least 12-months post-surgery at the time of the interview
- The couple to be co-habiting at the time of the bariatric surgery and the interview
- The patient and the partner to consent to participating in the study
- The patient and the partner to be fluent English speakers

Couples were excluded from the study if they could not meet all the inclusion criteria. If the couple were suitable, the bariatric patient was sent an email by the primary researcher outlining the details of the study. Individuals sent an email reply or telephoned the primary researcher to confirm that they wished to take part and interviews were arranged.

2.2.5 The Sample

It was anticipated that 15-20 couples would be recruited to the study. Interviews were concluded when saturation was deemed to have been reached by the primary researcher and no new themes were emerging from the data. Sixteen couples were recruited which equated to 32 participants in total. The demographic characteristics of the couples can be found in Table 2.

Table 2. *Patient and partner demographic data*

Descriptive	Patient Frequency (N)	Patient Percentage (%)	Partner Frequency (N)	Partner Percentage (%)	M (SD)
Gender:					
Male	3	18.75	12	75	-
Female	13	81.25	4	25	-
Age:					
35-44	4	25	4	25	-
45-54	7	43.75	6	37.5	-
55-64	4	25	4	25	-
65+	1	6.25	2	12.5	-
Ethnicity:					
White British	13	81.25	15	93.75	-
White and Black Caribbean	1	6.25	1	6.25	-
White Irish	1	6.25	-	-	-
Caribbean	1	6.25	-	-	-
Nationality:					
British	13	81.25	13	81.25	-
English	2	12.5	3	18.75	-
Irish	1	6.25	-	-	-
Marital status:					
Married	14	87.5	-	-	-
Cohabiting	2	12.5	-	-	-
Length of relationship:					
6-10 years	3	18.75	-	-	-
11-15 years	4	25	-	-	-
16-20 years	3	18.75	-	-	-
21+ years	6	37.5	-	-	-
Type of bariatric surgery:					
Gastric Band	5	31.25	-	-	-
Gastric Bypass	5	31.25	-	-	-

Gastric Sleeve	6	37.5	-	-	-
Year of bariatric surgery:					
2011	1	6.25	-	-	-
2012	1	6.25	-	-	-
2016	1	6.25	-	-	-
2017	3	18.75	-	-	-
2018	9	56.25	-	-	-
Undisclosed	1	6.25	-	-	-
Pre-surgery weight (kgs):					139.86 (29.88)
Less than 110	2	12.5	-	-	-
111-130	2	12.5	-	-	-
131-150	6	37.5	-	-	-
151-170	3	18.75	-	-	-
More than 171	1	6.25	-	-	-
Undisclosed	2	12.5	-	-	-
Pre-surgery Body Mass Index (BMI):					50.11 (8.27)
Less than 40	2	12.5	-	-	-
41-50	1	6.25	-	-	-
51-60	6	37.5	-	-	-
Undisclosed	7	43.75	-	-	-
Post-surgery weight (kgs):					95.5 (23.07)
Less than 70	1	6.25	-	-	-
71-90	6	37.5	-	-	-
91-110	3	18.75	-	-	-
111-130	3	18.75	-	-	-
More than 131	1	6.25	-	-	-
Undisclosed	2	12.5	-	-	-
Post-surgery Body Mass Index (BMI):					28.29 (5.7)
Less than 30	5	31.25	-	-	-
31-40	2	12.5	-	-	-
Undisclosed	9	56.25	-	-	-
Total weight loss (kgs)					41.07 (19.68)
Less than 20	2	12.5	-	-	-
21-40	2	12.5	-	-	-
41-60	6	37.5	-	-	-
61-80	4	25	-	-	-
Undisclosed	2	12.5	-	-	-

Most of the patient sample was female (N=14) and most of the partner sample was male (N=13). 81% of patients and 94% of partners identified as White British. 88% of the couples were married and 56% of patients had had their bariatric surgery in 2018. The type

of surgeries was evenly distributed; Gastric Band (31%), Gastric Bypass (31%) and Gastric Sleeve (38%). The mean weight before surgery was 140kgs and mean weight post-surgery was 96kgs. The mean weight loss was 41kgs. None of the partners had had bariatric surgery themselves.

2.2.6 Data Collection

All couples requested to be interviewed at home. Couples were made aware that a private, quiet space would be needed to conduct the interview. To maximise recruitment, couples were asked to state when the most convenient time for the interview to take place would be.

An interview schedule (see Appendix C) was developed by the primary researcher to address the research questions and provided a basic interview structure. The interview questions focused on couples' perspectives of their bariatric surgery journey, specifically related to expectations and change.

Prior to the interview, the couples were given the opportunity to read the participant information sheet again and to ask questions about the study. If participants did not wish to read the information sheet again, the primary researcher recapped key points including information about data storage, audio-recording and that they could stop the interview at any time. Informed consent was ensured by checking that the couple understood the consent form before signing it. The couple signed a consent form and a demographic questionnaire each before the interview began. All interviews lasted for between 55-90 minutes.

2.2.7 Resources

Couples were provided with a participant information sheet (Appendix D). The bariatric patient completed a consent form (Appendix E) and a demographic questionnaire (Appendix F). The partner also completed a consent form (Appendix E) and a demographic questionnaire (Appendix G). Following the interview, the couple received a debrief form (Appendix H) via email and an Amazon voucher for taking part. The primary researcher

used the interview schedule as a guide to structure the interview and made brief notes during the interviews. The interviews were recorded using an audio-recorder provided by the University of Southampton.

2.2.8 Ethical Considerations

Ethical approval for this study was granted by the University of Southampton (see Appendix I) and by The Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust Research and Development department (IRAS number: 261236) (see Appendix J). Further approval was gained from the North of Scotland Research Ethics Service (see Appendix K) and The Health Research Authority and Health and Care Research Wales (HCRW) (Ref: 19/NS/0137) (see Appendix L). Data collected via the semi-structured interviews, including participant ID's and contact details, was stored on password protected computers. Numbers have been allocated to couples throughout this paper, including in excerpts from the semi-structured interviews, to protect the anonymity of the participants.

2.2.9 Data Analysis

The primary researcher and two voluntary research assistants transcribed the audio recordings of the semi-structured interviews. The transcripts were transcribed verbatim. The primary researcher ensured transcript accuracy by listening to the transcripts provided by the voluntary research assistants and checking her own transcribed data. A qualitative software programme was used to analyse the data (NVivo 12).

Sixteen joint interviews were transcribed using thematic analysis (Braun & Clarke, 2006). A thematic analysis was deemed to be an appropriate method of analysis to search for common ideas within the couple's accounts. Thematic analysis is a theoretically flexible approach that can provide rich and in-depth data. The approach was inductive, allowing for the generation of new theory via emergent themes. The six-phase analytical approach (Braun & Clarke, 2006) was applied to the study (see below).

Step 1: Familiarisation with the data

The primary researcher conducted the interviews. The interviews were transcribed by the primary researcher and two voluntary research assistants and the primary researcher checked the accuracy of all the transcriptions.

Step 2: Generating initial codes

Initial codes were developed by exploring the data using NVivo 12. The primary researcher selected sections of text that captured the meaning of an experience. The primary researcher coded the data initially and it was cross-coded by a Trainee Clinical Psychologist (JM). The two coders discussed similarities and discrepancies between the codes. The creation of a coding manual allowed for codes to be updated and refined as the data was interpreted. An excerpt of the coding manual can be found in Appendix M.

Step 3: Searching for themes

Following the coding of all transcripts in NVivo 12, codes were cross-referenced with other codes that were similar in meaning. They were subsequently collapsed and merged to create more concise themes by grouping codes together. Initial themes were discussed in supervision and sub-themes were formed. Sub-themes comprised of ideas that related to the wider theme but were viewed to be distinct enough to be separated.

Step 4: Reviewing themes

This process allowed for themes to be reviewed and revised to ensure that they were relevant to the original research questions. This was overseen by the supervising team (CB and KS) to ensure the reliability of the themes.

Step 5: Defining and naming themes

The primary researcher met with the supervising team to consider the thematic map and to clarify the names of themes. Each theme named and given a definition according to the meaning and the content of the codes within it.

Step 6: Producing the report

Data extracts, in the form of quotes, were chosen to illustrate and answer the research question, and reported in the current thesis.

2.2.10 Epistemological approach

The primary researcher took a critical realist approach to the study. Critical realism focuses on real problems, recognising the complexities of the social world (Williams, Rycroft-Malone & Burton, 2017). This stance argues that the world is layered into different domains of reality and that an observable pattern of behaviour can be explained by investigating relationships between different variables (Roberts, 2014). The primary researcher was interested in couples' experiences of bariatric surgery and was aware that these experienced would have been shaped by social processes, such as language and culture.

Price and Martin (2018) argue that there are characteristics of the critical realist approach that can be applied to social research and helped to shape the study. Firstly, critical realism engages with hermeneutically based methodologies (such as qualitative interviews). This is because in social science, language provides an 'interior' or 'inside' to the social life of those being observed or interviewed (Bhaskar, 2016). The primary researcher aimed to ensure that the interview questions were open, allowing the couple space to explore their reality of bariatric surgery and to use their language to communicate their experiences. Secondly, the critical realist approach emphasises commitment to reflexivity. Reflexivity is important in qualitative research as it enables the researcher to contemplate their role in the process (Yardley, 2000). The primary researcher had prior knowledge of working in physical health settings but no previous experience of working within a bariatric team. The primary researcher considered that not having direct experience would enable them to take a curious approach to the experiences disclosed by the couples.

The main motivating factor that led to the primary researcher's decision to conduct this project was having had personal experience of a friend undergoing bariatric surgery. The primary researcher found being part of his journey challenging and this led to her wondering about how others had experienced the process, as a supporter or as the patient. The primary researcher was mindful that she did not want her own experience to influence the way the research was conducted or to shape the participants views. However, she felt that she could not ignore her own relationship to the topic. A reflective log was kept throughout the data collection phase to allow the primary researcher to reflect on the process. An excerpt taken from the reflective log can be found in Appendix N.

2.3 Results

Analysis of the data resulted in five superordinate themes; 'The patient's decision to have bariatric surgery', 'The importance of feeling supported', 'Learning to eat again', 'Improved health and quality of life' and 'Confidence and body image'. These themes were made up of sub-themes. The themes and sub-themes will be discussed, and example quotes will be used to demonstrate the lived experiences of the couples. The themes and sub-themes can be found in Table 3.

Table 3: *Superordinate themes and sub-themes*

Superordinate themes	**Subthemes**
The patient's decision to have bariatric surgery	*Patient determination to have surgery* *Others' negative views of patient having surgery*
The importance of feeling supported	*Positive and negative experiences of care from professionals* *The desire for and value of peer support* *Lack of support for partners*
Learning to eat again	*The physical consequences of bariatric surgery on eating* *Ongoing process of adjustment* *New considerations in the dining out experience*
Improved health and quality of life	*Returning to activity* *Maintaining positive changes*
Confidence and body image	*Unforeseen disappointments* *Acceptance of body shape now*

2.3.1 Superordinate theme 1: The patient's decision to have bariatric surgery

Patients and partners reflected that the decision for the patient to undergo bariatric surgery was based on their knowledge of the process and their expectations about what the outcomes would be. Patients spoke about the changes they hoped to achieve by having surgery and what their expectations were about post-surgical life. However, they reflected that there had been opposing views of bariatric surgery from friends and family, and within the relationship. Partners spoke about the patient's determination to have surgery and that they felt there was little they could do to change their mind. Two subthemes were formed: 'Patient determination to have surgery' and 'Others' negative views of patient having surgery'

2.3.1.1 'Patient determination to have surgery'

A dominant discourse within the interviews was the patient's determination to go ahead with the surgery.

> *"I'm a bit like that though, if I think of something and I want to do something, then that's what I'm gonna do. And I'll find a way to do it, even if it means jumping through more hoops and hurdles than I need to." (Patient, Interview 6)*

Several partners recognised that the patient's mindset was focused on going ahead with the surgery.

> *"And I just thought it's something that he's decided he wants to do it, once [patient] has set his mind to do something, he will do it and I knew he would've researched it so I was just happy, so my expectations really were that he would just get on with it. And it would all be absolutely fine." (Partner, Interview 15)*

A number of partners spoke about the patient's mind being made up about having surgery and that any contrasting opinions from others was not going to change their decision.

> *"They did drum it into us quite a lot saying; 'Are you sure you want to go through this?' You know they kept on and on. 'Are you sure?' And other people might not be sure but you made your mind up right from the word go." (Partner, Interview 9)*

Patient determination was recognised as having an impact on the partner. An example of this was given by one patient who described that his wife was unhappy with his desire to have surgery, but that she supported him despite her opposition.

> *"I wanted it because my decision, and she wasn't happy with me making that decision. Yeah, but she did support it." (Patient, Interview 10)*

The partner offered her post-surgical perspective about the difficulties she experienced in accepting the changes to the patient. She commented that she preferred his size and shape before surgery.

> *"Yeah it was cuz I'm not used to him being small. Yeah, I'm used to him being quite a big lad." (Partner, Interview 10)*

2.3.1.2 'Others' negative views of patient having surgery'

Patients recurrently compared their perspectives of bariatric surgery with the views of others. Several patients reported holding differing opinions to those close to them and the challenges that this presented.

> *"I mean, a lot of people didn't know, but my close friend [friend's name]. I told her cos she was a Slimming World consultant and I thought "I'm never going to get away with not telling her anyway" and she kept saying "Oh [patient] please don't have it done, please don't have it done" and I said "I've made my mind up, I've got the appointment. It's happening, so that's it" sort of thing. She went with it, she wasn't happy, but she went with it." (Patient, Interview 11)*

The partner in this interview voiced similar concerns to the patient's friend, suggesting that his concerns were centred on the surgical procedure itself.

> *"Well I was always anxious about an operation and the operation can be, you know, you are gonna come around or whether the anaesthetic affects you or something… So there's always that little bit of anxiety there how everything's gonna go. But you always put that back behind you into the back of your mind." (Partner, Interview 11)*

Partners largely reflected their worries were about the risks associated with the operation.

"I guess there's always a chance of operations going bad isn't there? And that was a bit of a worry but as I said I'm quite good at just blanking stuff out." (Partner, Interview 6)

2.3.2 Superordinate theme 2: The importance of feeling supported

Couples reflected on the importance of both parties feeling supported during the bariatric journey. The experiences of support were sometimes in keeping with what the couple expected, for example, the patient feeling able to access the bariatric team to ask questions and being given the opportunity to attend peer support groups. However, on other occasions, the couple noted that the reality of the support had been different to their expectations, such as a lack of follow-up contact and information for the partners. When the patient had a positive experience of support, they voiced that they wanted to engage in follow-up support groups. Partner's noticed that there were gaps in the support that they received and that this left them feeling confused about how to support the patient. Within this theme, couples described three elements of support; 'Positive and negative experiences of care from professionals', 'The desire for and value of peer support' and 'Lack of support for partners'.

2.3.2.1 'Positive and negative experiences of care from professionals'

Most patients described feeling listened to and validated by their GP, but some patients reflected on feeling judged and frustrated when approaching the matter. One patient reported having both a positive and a negative experience at the early stages of entering the bariatric surgery process.

"I remember speaking to another doctor about it over the phone for my surgery and he was really quite rude. Really. There was there was some sort of something they had to confirm or something like that. And I remember I was on the bus at the time. He's like, "well, how much do you weigh?" And I was like "well, I don't really want to say", yeah, and he was like "well, what dress size?" or something like that. We got to my notes and saw how much I weighed. "Yeah, you are a big girl then". And I was just like "oh my gosh". Okay. Again, yeah, but the other doctor I saw was really supportive. Sort of a mixed bag." (Patient, Interview 14)

Patients commonly referenced feeling supported by the multidisciplinary bariatric team.

> *"And on the day of the operation I did feel looked after. I felt the anaesthetist was really good cause he listened to me. I'm not very good when I have to have anaesthetic and I kept thinking I was gonna be sick so I explained that all to him. They really did look after me in recovery really well." (Patient, Interview 5)*

However, some patients had experiences of feeling forgotten by the bariatric team. An example of this was from a patient who stated that she did not get a reply when she tried to access follow-up support.

> *"I had some follow up and then there was a lot of sickness in the department and somehow I got dropped or missed and I didn't have any intervention for about a year. And then it picked up again about a year ago. I can't remember dates now but I contacted them [the bariatric team] a couple of times with no reply and just let it go." (Patient, Interview 3)*

The nature of being considered and contacted post-surgery was valued by patients as part of the aftercare process.

> *"I like the aftercare. I didn't think I'd be bothered about that but if you'd paid for it you wouldn't have had that. Because it's on the NHS it's aftercare for life, it's not just for the first year or anything". (Patient, Interview 7)*

2.3.2.2 'The desire for and value of peer support'

Several patients commented that due to their positive experiences of working with the bariatric team, they felt motivated to share their experiences with peers. A common trend identified was patients being asked by the bariatric team to take part in support groups. These groups offered the patient an opportunity to talk about their experiences to pre-surgery individuals. This was evidenced by a patient who had facilitated a support group earlier on the day of the interview.

> *That's why I was keen to be part of the groups to go and because when we went it was, PowerPoint slides wasn't it and, you know [the dietician's] fantastic, and [the dietician] and her colleague were really thorough but there was no one that you could talk to that had been through it and that's why I said to [the dietician] when I*

was on my death-bed I just felt so ill, "I want to help you to give something back" and people today I could still be say there with them now talking because it gives them the opportunity to ask the questions that you can only ask of somebody that's been through it."

However, many patients noted that even though they wanted to attend the groups and engage with their peers, they had encountered obstacles that had prevented them from doing so.

"The only downside is I wanted to be able to help by coming along to talk to people who are also in the process, the only downside is I don't get enough notice because of my diary to then be able to get down to Bournemouth and help out." (Patient, Interview 15)

Patients frequently remarked on how they felt supported by their partner during the bariatric surgery journey. Examples of support included attending appointments together, making joint decisions and helping with low motivation. Many verbalised their appreciation and gave examples of how they had felt supported.

"I'm just really grateful that that you've supported me in the way that you have really. And we've just had such a shit time, haven't we? So, you know, I knew I was gonna do it and I would've paid for it I was that desperate, but to be supported by [partner] then meant that I didn't have to do something stupid and pay for it because I couldn't get the support." (Patient, Interview 2)

Patients often spoke about the comfort they received from their partner after surgery.

"You've got to have somebody by your side who is supportive and not negative all the time coz that doesn't help. And whereas in the beginning it was hard for us but in the end now it's subtle hints like I say, "Tomorrow is another day". Do you know what I mean, just little things? I never heard [partner] say "Oh you can't eat this, or you can't eat that". You know you've got to have somebody by your side." (Patient, Interview 16)

Several patients commented that their partners helped them to check in on their eating behaviours.

"If I'm eating a packet of crisps, I'll have you'll say to me [to partner], 2how many of those have you had and what are you having?" He won't tell me to do or not do something. But what he's saying is, are you monitoring your own behaviour?" (Patient, Interview 13)

2.3.2.3 'Lack of support for partners'

Partners acknowledged sizable lifestyle changes after the patient's surgery. These included learning to adapt to mealtime changes, emotional volatility and the financial implications of buying new clothes. However, partners often felt that there was limited support for them during the patient's bariatric surgery journey.

"We had the meetings where I was able to go along, and it was one of the things that I said to [patient] afterwards I said "it's all about yourself which is fine but there was nothing for me. For what I should expect and what kind of thing was going to happen afterwards". I'd read all about it, you know from what [patient] was given but I just felt I needed a bit more support for the partners really." (Partner, Interview 2)

This partner went on to reflect on what would have been helpful for her to feel more informed. She noted that a group for partners to share personal experiences would have been of benefit to her emotionally.

"I think probably a group for those that are gonna have to give the support on a 24-hour basis, I think a bit more understanding of what's going on and actually just to be able to talk to others, that you know; "Be careful this might happen" or "You're gonna have to watch how much food you make". And just be mindful of that kind of thing. Just, you know, others in the same situation." (Partner, Interview 2)

Yearning for support from others was highlighted by other partners during the interviews.

"Well you're the first person to phone since a long, long, long time, so you know, even if it's not so much a chat but just a phone to say, "Oh just an update, how you getting on, everything okay?" It's just that little one phone call I think it'd be not just [patient] but for me as well you know "Has it changed your life, has it this, that, are

you okay are you struggling, money okay?" You know everything." (Partner, Interview 9)

Several patients recognised the significant changes that their partner had to endure post-operatively and acknowledged the need for them to feel supported.

"Partners or the people you're living with need to be included in that conversation because it is a big life change and they need to be part of that rhetoric." (Patient, Interview 5)

However, some patients reflected that the process was not about the partner and that their involvement was less important.

"You could take your partner [to appointments] but it wasn't about him. I didn't want to concentrate on how he felt about it, as long as I knew what I was doing. I don't want to make this whole thing about both of us. It's my thing, it's not my hobby but I can't cater for him all the time." (Patient, Interview 7)

2.3.3 Superordinate theme 3: Learning to eat again

This theme developed from patients sharing their stories of the eating challenges that had emerged following bariatric surgery. Patients referenced being given information about the changes they would experience after surgery and that this awareness had helped. However, there were numerous accounts of instances when the reality of eating after surgery had been more difficult that they had anticipated. Patients spoke about the how eating impacted them physically due to the surgical restrictions in place and that adjusting to the changes was an ongoing process. Patients also reflected on the deliberations that they faced when choosing to dine out. Three subthemes emerged: 'The physical consequences of bariatric surgery on eating', 'Ongoing process of adjustment' and 'New considerations in the dining out experience'.

2.3.3.1 'The physical consequences of bariatric surgery on eating'

The impact of eating on the body after bariatric surgery was reported frequently by patients and most patients described physical difficulties with food getting stuck.

"It's inconvenient, and it's not very nice, and it's frustrating sometimes when I just really wanna eat that lamb chop. But the meat is too stringy. I throw it up and then it gets stuck in my throat, which is scary." (Patient, Interview 4)

In addition to fear, patients spoke about the anxiety they experienced when they were unable to swallow food.

"She [the dietician] did say to me that it'd be uncomfortable but actually when it very first happened it frightened me to death coz I thought; "oh my god I'm having a heart attack". (Patient, Interview 11)

A common physical consequence of eating reported by patients was pain. They commented that even though they had been informed about the possibility of pain occurring when they ate, the lived experience was more painful than they had anticipated.

"And [partner] said "Well something must've got stuck" and I said "It must've done" but when I spoke to them [the bariatric team] about it they said "Oh that's typical of what it is" you know? But they didn't say that they just said, "There might be some things that you're not able to eat", they didn't say that you'd get this horrific pain." (Patient, Interview 11)

Other patients reported discomfort if they tried to eat, or did eat, more than their stomach would allow.

"He [partner] put it down and I thought "I'm never going to eat all that" and tried to and I think the last couple of mouthfuls I get a pain here and it's like a stabbing pain and it bloody hurts. So I know if I've eaten too much." (Patient, Interview 9)

2.3.3.2 'Ongoing process of adjustment'

One longer term issue described by patients was the challenge of remembering to pace a meal. Several patients outlined that they had to remind themselves to eat slowly and that this was something that they continued to have to work towards.

"That's been the biggest problem really isn't it? That still after nearly two years learning to eat slow. I have to remind myself constantly." (Patient, Interview 9)

Another factor was having to experiment with different foods to test if they would be tolerable. This referenced being able to chew, swallow and hold down different food types. Patients described the process of trial and error with a variety of foods post-surgery.

"You've got to work for it yourself. Yeah. To find out what you can eat and what you can't eat. What your body's gonna accept. You just gotta try it and suck it and see." (Patient, Interview 10)

2.3.3.3 'New considerations in the dining out experience'

Some patients reported struggles in communicating their dietary requirements to restaurant staff when they went out for a meal. This led to feelings of frustration and worries about how the staff perceived them.

"The only thing that I would like to change is if you buy something in a restaurant that you give me what I've asked for and not have to waste food. I try I do try to explain to them and unfortunately a lot of them just don't listen, so the food goes back. But then I feel sorry for the chef coz they must think they didn't like my food." (Patient, Interview 15)

Many patients described making changes to what they ordered when they went to a restaurant. A common pattern identified was to order a smaller portion of food than they would have done previously, for example, ordering a starter as a main course.

"If we go out for a meal I'll have a starter and everyone has a main or we bring it home and I don't think it's restricted us, in, that respect." (Patient, Interview 2)

Similarly, partners commented that they had noticed changes in the patient's behaviours when dining out.

"But what has changed is that you typically don't buy a meal you have some of mine." (Partner, Interview 3)

Sharing food was one aspect of adjusting to dining out frequently mentioned by the couples. However, a number of partners identified the unexpected challenge of resisting leftover food, as the patient was eating less than they had before.

"That causes a problem coz I'll end up eating what's left. It's just like it's like; "Ohhh". And you see it's the taking it home bit coz then I end up eating it." (Partner, Interview 2)

2.3.4 Superordinate theme 4: Improved health and quality of life

This theme developed from the couples reporting a noticeable difference in the patient's physical health since undergoing bariatric surgery. Bariatric surgery appeared to facilitate a more positive attitude towards lifestyle choices, which consequently enhanced the wellbeing and quality of life of both parties in the relationship. It appeared that the couples recognised the value of the patient feeling confident to try and partake in opportunities and maintaining progress by not becoming complacent. Two subthemes emerged: 'Returning to activity' and 'Maintaining positive changes'.

2.3.4.1 'Returning to activity'

Patients talked about the satisfaction they felt about being able to join in with activities with their families, rather than being restricted by their size. This was exemplified in a statement by a patient who was able to enjoy rollercoasters with her children again, which is something she had not been able to do when she was overweight.

"Because there are limitations on, if you read loads of stuff about maximum weight and height you struggle with, so we go through them and so yeah maximum weight, and you get there and you're like; "Yeah I can't do that". Whereas now, I don't even read it, I don't have to read it, can just go and do it." (Patient, Interview 6)

Similarly, partners commented that they had noticed an increased capacity by the patient to join in with family life.

"You're able to do more things, you can help me with a hell of a lot more. You know before if we were painting the shed [patient] wouldn't be able to do it. I'd have done it all myself. But now she can help us and [son] comes and helps us so we're doing it, we're doing stuff as a family where before; "Oh mummy, oh mummy can't do that you know"." (Partner, Interview 9)

A common experience was that of patients discovering new hobbies and interests after losing weight. Patients reflected that they would not have thought it possible to be able to engage in some of the activities that they were doing since having bariatric surgery.

"It's gone from looking at the London Marathon, isn't it? Eating a bag of crisps on the settee going; "One day! One day, I'm gonna run it" to actually physically you know, doing half a marathon is a big big change." (Patient, Interview 5)

Another area discussed was that bariatric surgery had enabled the couples to undertake opportunities that they would not have been able to do before the surgery. Patients frequently described being able to walk more following surgery due to increased stamina.

"Yeah I think so, like the thing for me is a couple of years ago we went to America didn't we? And we walked up and down New York and we went on to San Francisco. I'd never ever have been able to do that trip, would I, at all?" (Patient, Interview 16)

2.3.4.2 'Maintaining positive changes'

Although couples evidenced many positive changes to their health and life quality, there was also acknowledgement by both parties that continued success was dependent on monitoring complacency. Patients described that surgery was only a tool for weight loss and that ongoing commitment to the process was crucial.

"But as I say at the beginning, I think it does help people but then the people have got to be willing to stick to it because it's not an easy fix, by any stretch of the imagination. But you get there and it's like I say, this is not a quick fix. This is something that will change your life forever and you've got to be prepared for that." (Patient, Interview 1)

The majority of partners echoed the view that the surgery was a mechanism for change only.

"It really isn't a magic bullet, it's just a tool to help people." (Partner, Interview 5)

Several patients reflected on the prospect of returning to their former selves and the worry that this illicit. They spoke about using this worry as a motivator to continue to adhere to the process.

"I think It's got to me because if it didn't, you would just put the weight back on. That's why I said, you know, you got, you've got to be mindful of how you were before. Not look in the mirror and think, "Oh, well, I lost 10 stone I can start stuff in the face again". Otherwise, you're just gonna end up where you were before. And then what was the point of everybody giving their time to help you, if you are not going to help yourself?" (Patient, Interview 10)

The impact of maintaining change from the partners perspective was also discussed. Most partners expected surgery to facilitate a healthier approach to food for both parties, however, they found the reality to be different.

"I had rose coloured glasses thinking "That's fine she'll be eating less. I'll be eating less, we'll be having heathier meals" and what have you. No. I did really well on Slimming World but now it's just like I'll lose two or three pound a week and the following week it all goes back on". (Partner, Interview 2)

Weight gain for the partner group was commonly described as an aspect of the surgical journey that they had not considered and maintaining their own weight was challenging.

"I'd probably say I'd put on a couple of stone I would say myself. Since we've started that chart and we were weighing I got down to 98 kilos or 97.3 I think it was to be precise that was my lowest and ever since I've gone up to 106.5. So that's quite a lot of gain, either me eating junk food, cause I'm on the odd occasion once or twice a week I'm eating something cause it's just me. If we're out; 'Oh I pay for that half a cheeseburger", you [patient] only ate a little bit so I ate the other half." (Patient, Interview 9)

2.3.5 Superordinate theme 5: Confidence and body image

Both patients and partners repeatedly outlined that there had been changes to the patient's confidence and body image following surgery. It was reported that there had been some sense of expectation that the surgery would promote better body confidence, however, the extent that this had evolved was sometimes reported as greater than anticipated. Yet, development of this self-assurance was complex. Although there appeared

to be a level of acceptance about the patient's appearance, reaching that phase had been a lengthy process. Patients spoke about some of the factors that had helped them reach acceptance, which included acknowledging their achievements and accepting their partner's compliments towards them. However, there were some outcomes that were disappointing for the patient, which had a secondary impact on the partner. Disappointed patients recognised that they were continuing to battle with these feelings and that their disappointments were amplified by their unexpected nature. Two distinct subthemes were formed: **'**Unforeseen disappointments' and 'Acceptance of body shape now'.

2.3.5.1 'Unforeseen disappointments'

The interviews drew attention to some of the unanticipated eventualities for some of the couples. Some patients outlined that they had not lost the weight that they had expected to lose, which had been demoralising for them. One partner spoke about the disappointment and sadness he felt for his partner.

> *"I suppose I feel, yeah I feel disappointed for [patient] and you know when you get upset about it and start going different ways about, don't you? Not just the stuff you were just talking about but the fact that you know why, things like most people with Parkinson's are underweight. They're not overweight and I think you saw, we saw that the bariatric surgery was gonna have an impact for the good and it wouldn't be this difficult, but it clearly is this difficult." (Partner, Interview 3)*

Another common post-surgery disappointment was excess skin. Patients reported that they were informed about excess skin being a problem after weight loss, however, many stated that they did not anticipate how much it would impact on their physical appearance and psychological state.

> *"The skin, all the way through, "It's fine, I don't care about the skin, I'll be thin I'll be alright, I won't care about it" and you sign paperwork to say you won't care about it. And yeah, I was devastated to the point that I ended up going to Poland and we paid to have some off. And now I want more off." (Patient, Interview 6)*

Partners of patients with excess skin often commented that the patient held stronger negative beliefs towards their excess skin post-surgery than they had held about being overweight.

"When she [patient] was bigger, she went out, never cared did you? We'd go out swimming, she wasn't bothered about other people. After, with the skin, that made a massive difference. Really self-conscious." (Partner, Interview 6)

Another partner reflected on the negative language that his wife used about her body after surgery.

"But you never used to say it's disgusting when she'd talk about the fat in bed, whereas now you'll say "This is disgusting". You'd never used to say "I'm so fat, I'm not having sex because I look disgusting". Now you'd use that word disgusting quite a bit about your skin. You would definitely say that now." (Partner, Interview 12).

2.3.5.2 'Acceptance of body shape now'

Alongside unpredicted dissatisfactions, a significant proportion of patients described that they felt contented with what they had achieved post-surgery. Yet, it was commonly reflected that this feeling of contentment had developed through re-evaluation of personal goals.

"But I purposefully made my goals more loose. Because very quickly after having the surgery, I discovered that you know, I was setting myself up to fail because, you know, I wasn't immediately a size 12 and weighing x and you know, and I'm starting to unravel and so actually being a lot more loose with my aim after having the surgery, it's been a lot more helpful for me." (Patient, Interview 13)

An additional area of interest to emerge was patients recognising that they felt more satisfied with the way they looked following bariatric surgery. Patients acknowledged this satisfaction in how they felt trying on clothes.

"I can shop in normal shops. It's like a whole world just opened up. I fit into Primark clothes. It's been nice to feel good about myself and wear nice things again." (Patient, Interview 4)

"And it's quite interesting coz I also like the clothes I can wear now and things like that. Funnily enough because I had quite a nice wardrobe before, we packed it all away and vacuum packed it and had it in the loft for ages, and once I lost the weight,

all these nice clothes could come out again. And I can wear all these shirts that I haven't worn for years." (Patient, Interview 15)

Partners also commented on how they saw the changes in the patient. In an example of this, the partner stated that he had noticed changes in the patient's demeanour when she was trying on clothes and that she had been able to offer herself a compliment.

"She [patient] came out trying some clothes on... And I looked at her face and I just said to her "that's really good, you know you look good in that". And… she goes "oh yeah actually I look okay now". She would never have said that before, never have come out with that face." (Partner, Interview 12)

Despite acknowledging the satisfaction they felt with their post-surgical bodies, many patients described the inclination to compare their weight loss the body shapes of others, which caused emotional strain.

"I mean, I'm not perfect. You know, there are people who've done better than me, but I don't want to fall into the pitfalls of comparing myself to other people. Everyone's weight loss journey's very individual and that was what was starting to panic me which was why I started seeing [the psychologist] because I was surrounded by lots of competitive people that were unhealthy. And I just felt like I was drowning, I needed the voice of reason." (Patient, Interview 13)

In contrast, other patients reflected that making comparisons with others helped with their body satisfaction.

"Yeah. I'd been before [to America] and I'd fitted in nicely because everyone was big. This time I was the skinny Minnie amongst them. Which was nice." (Patient, Interview 7)

2.4 Discussion

2.4.1 Summary

The present study aimed to explore the experiences of couples in which one member of the couple had undergone bariatric surgery. The study was particularly interested in the

experiences of expectation and change. Five superordinate themes were identified using thematic analysis: ‘The patient’s decision to have bariatric surgery’, ‘The importance of feeling supported’, ‘Learning to eat again’, ‘Improved health and quality of life’ and ‘Confidence and body image’. The findings suggest that the process of bariatric surgery yielded many positive changes, but that there were several adjustments that required ongoing commitment, in addition to some disappointments during the surgical journey that were not anticipated.

2.4.2 Discussion of themes

2.4.2.1 The patient’s decision to have bariatric surgery

The subtheme ‘Patient determination to have surgery’ brought attention to the patients voicing determination to go ahead with surgery, even if this viewpoint conflicted with the views of their support system. Park (2016) found that the more a bariatric patient’s motivation was internally regulated and related to their personal life, the more hopeful they were about the surgical outcomes they anticipated. The patients appeared confident that the choice they were making would yield positive outcomes. In turn, the patient’s partner reflected that even if they had concerns, they felt the patient would go ahead with surgery irrespective of this.

Patients described some negative responses from friends and family to the prospect of bariatric surgery in ‘Others’ negative views of patient having surgery’. Bariatric surgery can offer the potential for many positive outcomes, however, as with any type of major surgery, there are associated risks. These include complications whilst the patient is under aesthetic, in addition to problems after the operation, such as nutritional deficiencies and psychiatric difficulties (Gero et al., 2018). Partners raised more concerns about the risks of surgery than patients, whereas patients were more invested in the benefits of undertaking the procedure.

2.4.2.2 The importance of feeling supported

The theme of feeling supported was recurrent throughout the dataset. The couples described 'Positive and negative experiences of care from professionals' during the process of bariatric surgery. The varied experiences suggest that there are inconsistencies in the support received. Research suggests bariatric patients have various support needs, including addressing disordered eating behaviours, as well as being helped with the challenges in adjusting to life after surgery (Geraci et al., 2014). It is evident that professional support is required both before, after and during the surgical process and the current study highlights the need for consistent support from bariatric services. In a study by Sharman et al. (2017), focus groups explored the support needs of post-bariatric surgery patients and the authors generated recommendations for professionals based on the data. These recommendations included regularly checking patient understanding of key messages, frequent discussions about support needs, minimising loss of follow-up appointments and promotion of support groups. Another recommendation suggested filling training gaps. Ongoing education for allied care workers, such as GPs, may help to upskill and boost confidence in professionals that do not specialise in bariatric care. These endorsements reflect the diverse needs of bariatric patients. In the current study, some of these recommendations were adhered to. For example, support needs were discussed, and regular checking of understanding was implemented. A concept to emerge from the current study was the impact that bariatric surgery has on partners and couples' endorsement for providing support for partners.

'The desire for and value of peer support' related to patients wanting to show gratitude for the care they had been given to the bariatric team and their wish to help others going through the bariatric surgical journey. Reciprocity theory suggests that when a patient feels gratitude, they will want to repay the benefactor (Rashid, 2015) and patients reflected this theory in their urge to support other bariatric patients. Findings by Huang et al. (2019) demonstrated that patients who perceived satisfaction, trust, and commitment from their treatment health care provider translated their perceptions into a grateful experience, which increased patient return rates.

'Lack of support for partners' was referenced by partners acknowledging the input received by the patient but noticing that there was limited support for them. Partners highlighted a need to share their stories with others who had been through similar

experiences and that they would have appreciated wellbeing checks from the bariatric team. Despite this evidence from the interviews, there is little research exploring the impact of bariatric surgery on partners suggesting that support is mainly targeted towards the patient and that systemic factors are marginalised. Lent et al. (2016) evaluated the social environment of pre-operative bariatric surgery patients. The study found that patients reported high levels of social support and affection in their relationships and evidenced that a supportive social network enhanced a patient's motivation to implement changes to their lifestyle after bariatric surgery. However, it was reported that many of the patient's family members lived with obesity and associated comorbidities, highlighting that systemic support would be valuable in not only helping the family to care for the patient, but also in educating them in ways to help themselves. Weight loss success may be influenced by the presence of a positive, supportive environment; therefore, the inclusion of systemic support could produce valuable outcomes.

2.4.2.3 Learning to eat again

This theme related to the changes to eating experiences encountered by the couples following bariatric surgery. Patients stated that they had endured changes that were reflective of 'The physical consequences of bariatric surgery on eating'. The physical difficulties named by patients were mainly food getting stuck or discomfort when trying to swallow food. They also discussed the associated emotions of fear and anxiety. An assessment of eating behaviour after gastric bypass surgery reported that 62.7% of experienced vomiting associated with epigastric discomfort and 76.3% described plugging, defined as the sensation that food is stuck in the upper digestive pouch or track (de Zwaan et al., 2010). In a comparative study, 79.1% of patients with a gastric band reported plugging, in contrast to only 45.7% of patients who had undergone a gastric bypass (Kalarchian et al., 2014). The findings highlight that the difficulties experienced by the patients in the current study are not uncommon. Yet, despite acknowledging that they had been told about the possible side effects that could occur following surgery, the reality of what the patient experienced was worse than they expected. Kalarchian et al. (2014) recommended that individual variation in the physical symptoms experienced after bariatric surgery make it difficult for services to make clear management

recommendations. However, they define that longer-term follow-up is needed to determine how such symptoms change over time.

Understanding the need to pace eating a meal was noted as ‘Ongoing process of adjustment’ by patients. Pacing recommendations advise that a meal should take between 20-30 minutes to eat post-operatively and that food should be chewed at least 20 times before swallowing (Kingett, 2014). Several of the patients reported that they had to remind themselves to eat slowly. Adhering to active eating behaviours, such as spending 20-30 minutes eating a meal and practicing enough chewing, have been evidenced to support weight loss maintenance (Masood et al., 2019). Patients reported knowledge about pacing but reflected that adhering to the advice was difficult and required ongoing monitoring. Therefore, the importance of continuing to adapt to and maintain active eating behaviours recommended by bariatric teams can not be underestimated. Many patients experience weight regain during the first two years after surgery. This figure has been reported to range between 46% to 63%, irrespective of the type of bariatric surgery (Magro et al., 2008). This sub-theme highlights that the demands and challenges of bariatric surgery go beyond the procedure alone. Patients are required to make an ongoing commitment to the process and may need to adjust for many years post-operatively. These maintenance considerations are likely to have a secondary impact on partners who share a household with the patient.

Eating out more regularly is associated with higher BMI and higher body fat percentage (Quick et al., 2010). Couples alluded to ‘New considerations in the dining out experience’, one of which was patients citing that they ordered smaller meals. This variation is consistent with the recommendation made by McGrice and Don Paul (2015). They advised that patients avoid eating extra food and refrain from choosing high sugar or high fat options. The findings from the present study suggest that some patients found this a relatively smooth transition, but that others were challenged when craving a food that they wanted but had been advised to be cautious of eating. One of the main patient challenges was reported to be communicating their dietary needs to restaurant staff. Some patients noted frustration when their requests were not adhered to and feelings of guilt when food was left unfinished. Poria et al. (2019) found that restaurant experiences of overweight individuals can be impacted by their beliefs about the attitudes of others towards them and this was noted by patients in the interviews. These findings evidence the

emotional factors that can be a consequence of bariatric surgery and highlight the importance of monitoring psychological coping following the procedure.

An interesting reflection from several partners in the study was their inclination to eat leftover food that the patient did not eat. Madan et al. (2005) support this finding by highlighting that excess food may be eaten by the partner of the bariatric patient. The study reported that obese partners were more likely to model the "garbage can" effect, in which they felt compelled to finish leftover food, and were at greater risk of gaining weight. Comparatively, non-obese partners were found to be more likely to engage in the "mimicking" effect, in which they mimicked the habits of the patient, such as monitoring intake, thus reducing the likelihood of gaining weight. Findings from the current study highlight the importance of providing education to the partners of bariatric patients to help prepare them for the changes they may encounter themselves.

2.4.2.4 Improved health and quality of life

Couples reflected on several positive life improvements following bariatric surgery. These improvements were linked to re-engaging in activities. 'Returning to activity' referred to patients rediscovering hobbies or finding new passions that they had not been able to fulfil when they were overweight. Bylund et al. (2017) focused on the concept of attaining unity within the family unit by co-creating stability and wellbeing together post-surgery. This idea was evidenced by patients in the study who said that they felt more included in family life and this was mirrored by the partner noticing that the patient's ability to join in had increased post-operatively.

Patients reported that improved health and quality of life were satisfying outcomes but that they were aware of becoming complacent and returning to their previous behaviours. The interviews drew attention to 'Maintaining positive changes'. It is commonly referenced in the literature that bariatric surgery is a "tool" to assist patients in their weight loss goals (Larson, 2017). Natvik et al. (2014) referred to the accompanying patient-driven change and Groven et al. (2013) went further by suggesting that framing bariatric surgery as a tool indicated that lifestyle change post-surgery is not a choice but a moral responsibility. The current study findings align with these ideas, as patients expressed insight into their accountability for continued progress, and that they had to be

an agent of change in their own success. This was in conjunction with their expectations that surgery was a tool, not a cure for weight loss. An unexpected outcome was highlighted by a number of partners who reflected that their own weight had been impacted by changes to the patient's dietary changes. Partners gave examples of overeating and weight gain which suggests that maintenance factors post-surgery should be considered systematically rather than focused exclusively on the patient.

2.4.2.5 Confidence and body image

This theme reflected the changes in patient confidence and body image from both the patient and partner perspective. In some cases, 'Unforeseen disappointments' were voiced in respect to weight loss expectations not being met by the surgical procedure. Homer et al. (2016) described that pre-operative bariatric patients often expected extreme and sometimes unrealistic amounts of sustained weight loss following surgery. In a recent study by Cadena-Obando et al. (2020), a target of 50% weight reduction or more during the first 12-months after bariatric surgery was set by the surgical teams involved. The study found that 20% of patients did not lose more than 50% of their excess body weight. In comparison to patients who did meet the weight reduction target, the unsuccessful group were found to be older and had higher rates of depression and anxiety. Results also showed that 42% of the patients in the non-successful group, gained weight during follow-up. These findings are reflective of the concerns voiced by some of the couples in the interviews, where weight loss had not been achieved. These couples expressed their disappointment that their expectations of the procedure had not been met by the eventual outcomes. Mitchell at al. (2001) described that patients accessing bariatric surgery may view it as their "only chance" to gain relief from their weight difficulties. If this is not achieved, they may feel that they have lost their last hope and the emotional strain of such feelings is likely to impact on their partner.

Excess skin is a commonly occurring consequence of bariatric surgery. It can be aesthetically unpleasant for the patient and it can impact social, physical and psychological functioning, which can influence evaluation of body image (Bertoletti et al., 2019). Estimates suggest that 60-80% of adults would like cosmetic surgery to remove excess skin after a significant weight loss, but only a small percentage are able to access such procedures (Baillot et al., 2017). The interviews revealed that patients were told about the

possibility of excess skin and that there were differing responses to it. Several patients reported feelings of disgust towards the excess skin and wanted it to be removed. Another common perspective was that the patient was more concerned about their skin following surgery than they had been when they were overweight. Kaly et al. (2008) reported that bariatric surgery patients had unrealistic weight loss and appearance expectations, despite being given realistic information about these factors. The study found that these expectations neglected the personal effort required for the weight loss and body's process of transformation. It is possible that there can be a mismatch between the patients' expectations in how they believe they will react to body changes and the lived reality of the experience. Interestingly. many of the couples in the current study voiced that the patient was more concerned with their excess skin than their partner was. In a study by Ramalho et al. (2014) excess skin was found it impair daily life and sexual functioning in the women's relationships, which were associated with depression and poor body image. These results indicate that the difficulties experienced by patients with excess skin the current study are globally experienced. It is also evident that the psychological variables can impact on intimacy in the patient's relationship, for example, patients being self-conscious. The issue raised is the differentiation between how the patient feels about themselves and how the partner views them, which may lead to conflict in the relationship.

Although some couples were deeply affected by minimal weight loss or excess skin, there was an alternative narrative from other couples in which body confidence was reported.'Acceptance of body shape now' reflected a level of satisfaction had been reached and that there was a sense of pride in the weight loss success. Webb et al. (2015) outlined that body functionality is a central feature of positive body image following bariatric surgery. Body functionality refers the sense of appreciating what the body can to do after major weight loss and that functional gains, such as mobility, are celebrated. As previously discussed, couples recognised the ability to return to activity post-operatively and this may be linked to having a positive body image. Additionally, patients reflected that they had to alter their expectations of body image satisfaction as their recovery period evolved, to allow for realistic goals. A recent cross-sectional analysis assessed body image dissatisfaction and body avoidance in patients who had undergone bariatric surgery (Legenbauer et al., 2020). The bariatric group (SURG) was compared to an obesity control group (OC) and a conventional treatment group (CONV), who accessed non-surgical treatment for one year, comprising of nutritional counselling and behavioural modification.

The SURG group showed the greatest improvement in the degree of body dissatisfaction change, [$F(2,269) = 55.849$, $p < 0.001$, $\eta_p^2 = 0.293$], compared to no changes in the other two groups. However, the level of body dissatisfaction, nine years post-operatively, was lower in the SURG group compared to CONV ($p > 0.001$) and equivalent to that of OC ($p = 1.0$). These findings indicate that there can be a significant shift in how satisfied bariatric surgery patients are with their bodies after surgery, however, the surgery itself is not enough to alleviate feelings of dissatisfaction altogether, which was reflected in the joint interviews.

2.4.3 Theory

Self Determination Theory (SDT) (Ryan & Deci, 2000) emphasises that individuals can be proactive or passive, according to the social conditions in which they are involved. The first assumption of this theory is that people are actively driven towards gaining mastery over challenges. The second assumption focuses on motivation being fuelled by intrinsic sources. In the case of patients who have undergone bariatric surgery, SDT would predict appears to underpin some of the main themes that were reflected in the interviews. Patients described their determination to go ahead with surgery, even when faced with adverse reactions from others. Partners also recognised this strong intrinsic motivation in the patient. The common reflection that bariatric surgery was only a tool rather than a cure, emphasised the ownership that patients took about their own role in the process. In regards to the passive element of SDT, some patients reported significant distress in relation to excess skin and frustration about which foods they could and couldn't tolerate. These are aspects of bariatric surgery that are out of the patient's control which may harness greater feelings of discomfort. The implications of this may be that the patient seeks out mechanisms to help them to reduce uncertaintly and to feel in control. During the interviews, possible examples of these behaviours were asking for more surgery to remove excess skin and adopting a trial and error approach to tolerating different foods.

With consideration to the systemic component of this research study, The Main Effect Model (Cohen & Wills, 1985) outlines that social support impacts health through modelling of behaviour, self-worth and positive affect. The Main Effect Model proposes that success may rely on the support offered by the patient's support system. This was

referenced by the couples, who talked about the importance of support. The couples noted that they were challenged when support misaligned with their expectations of what it should be, for example, not being provided with follow-up appointments. Therefore, the importance of regular communication from healthcare professionals during the process of bariatric surgery is crucial.

The role of attachment theory (Bowlby, 1988) may provide further insight into some of the themes raised. Attachment styles are patterns of affect regulation and interpersonal interactions that describe how individuals perceive others and cope with distress (Black & Wilson, 1996). Attachment styles have been shown to be linked with using emotional eating as a coping mechanism (Mikulincer, Shaver & Pereg, 2003). Nancarrow at al. (2018) found that bariatric patients reported higher anxious attachment than normal weight participants. The current study highlighted the emphasis that patients placed on feeling supported. This suggests the desire to form secure attachments in which the patient can express their emotions, hold positive expectations of the availability of others and use effective means of coping. Partners reflected that they found this support to be lacking from bariatric services, contributing to feelings of uncertainty.

2.4.4 Strengths

This is the first study identified by the author that has specifically considered the areas of expectation and change and given equal weighting to the views of both members of the couple. King (2004) suggested that using thematic analysis is useful when exploring the perspectives of different research participants. The primary researcher's objective was to gain insight about the experiences of both the patient and partner, therefore, the use of thematic analysis allowed for similarities, differences and unanticipated eventualities to be captured. The process of co-narration in the joint interviews allowed for the construction and sharing of topics.

The structured nature of thematic analysis contributed to the researcher being able to summarise the key features of multiple perspectives (King, 2004). Starks and Trinidad (2007) highlighted that a researcher is an instrument in the analysis as they make decisions about context, coding and themes. The researcher aimed to demonstrate a pledge to transparency by keeping a reflective account through the process of data collection and

analysis. It is acknowledged that the findings are subjective, based on the researcher's interpretation. However, the analysis process was reinforced by using supervision to discuss the process.

2.4.5 Limitations

The absence of diversity within the participant pool is a limitation of the study. Most patients and partners defined themselves as White English or White British. This may be reflective of the demographics within the location that the research was conducted. Additionally, 13 of the 16 patients interviewed were female living with male partners. Men are known to be a minority group in the field of bariatric research, with estimates that between 70-80% of participants in bariatric studies are female (Groven et al., 2015). Only one same sex couple was recruited to the study. The under-representation of cultural variance, male patients with female partners and same sex couples within the sample makes it difficult generalise the findings to a wider population.

A sampling limitation is that couples self-selected to take part in the study. Self-selection bias can create a distorted representation of the true population and can make it difficult to generalise the findings. In this study, self-selection bias may have resulted in a sample with strong views about bariatric surgery, but these views may not have been wholly reflective of the attitudues of the population under consideration. However, many qualitative researchers believe generalisability is not a feasible or legitimate aim of research, and that it should aim to provide a rich and enlightening insight into specific situation. Therefore, despite the limitation surrounding sampling in this study, it has provided some new information about the experiences of couples during the bariatric surgery journey.

The joint nature of the interviews was carefully considered when designing the study. The aim was to create a reflective space for views to be shared. Sakellariou et al. (2013) stated that joint interviews can offer valuable information about how couples co-construct meaning. However, it is possible that joint interviews may prevent each partner from having an equal voice in the discussion, leading to fragmented data (Zarhin, 2018). The researcher attempted to provide suitable opportunities for both partners to express their

opinions, yet, on some occasions, it was felt that the partner had a more marginalised role as they did not have direct surgical experience.

It is inevitable that the analytical process and subsequent interpretation of the results will have been shaped by the researcher's personal experiences (Willig, 2003) and the researcher's parallel corroboration with the therapist role. Borbasi et al. (2005) outlined that the clinician-researcher position is privileged, as there is responsibility to the study participants, balanced with the research method. Gardner (1996) reported that a clinician-researcher can enable participants to talk with freedom and comfort which can generate rich data. However, the researcher noticed that there was occasionally a blur between the therapist and researcher distinction. It is plausible that this distortion was sometimes responsible for the interviews drifting to unrelated topics and the researcher finding it difficult to guide the conversation back to the question. Clancy (2007) suggested that researcher's may struggle to dissociate from their clinical identity whilst conducting research. In addition, participants can bring predetermined ideas which are autonomous from the desired position (Burns et al., 2012). The participants were aware that the researcher was a trainee clinical psychologist and they may have held expectations about the meaning of this role and that it differentiated from the researcher role.

2.4.6 Clinical implications

An important aspect of this research was to understand the expectations and changes experienced by couples. The themes that have emerged from the study may act as helpful indicators to guide bariatric clinicians and service providers, in addition to supporting non-expert practitioners, such as GP's. Patients reported the value of feeling supported but noted barriers to engaging with post-operative support groups. A systematic review of social support following bariatric surgery (Livhits et al., 2011) found a positive association between post-operative support groups and weight loss. However, Hameed et al. (2018) found that there was an unmet requirement for post-operative support groups. These findings, in combination with the themes identified in the study, provide a rationale for services encouraging patient attendance at support groups and helping to reduce attendance obstacles. Giving extended notice about when the groups are being held and finding venues with childcare facilitates may help to enhance uptake. The use of remote platforms, such as

online webinars and video conferencing, may help to increase accessibility to bariatric information and resources. Partners also evidenced that they wished to be included. Providing similar groups for partners would enable partners to share their experiences with others who have been in similar positions.

It has been evidenced that most post-bariatric surgery patients and their partners report a preserved or increased quality in the relationship (Clark et al., 2014). However, the changes experienced and the partners' responses to these changes may impact the dynamics of the relationship (Bruze et al., 2018). A novel finding from the current study was the type of support that partners expressed a need for, which has not been reported in the literature previously. The desire to receive tailored information and support during the patient's journey through surgery was commonly described, as they felt the impact of adjusting to life after surgery, as the patient did. Therefore, the importance of supporting the patient's spouse in their journey to help them learn and adapt to change, is an important consideration. Partners commented that they would appreciate follow-up contact from the bariatric team and their own support groups. If this is not possible within service remits, an alternative could be to involve partners within the patient support framework, or to provide more up scalable resources, including leaflets.

Couples identified that their main struggles during the surgical journey occurred when their expectations were not met. Bariatric patients have an inclination for idealising surgery as a miracle that will solve life's problems (da Silva & da Costa Maia, 2012). Zentner (2018) summarised the importance of clinicians establishing the patient's incentive for surgery to help determine their expectations of the procedure and to prevent patients from entering the process without a sense of the implications. Addressing the complexities of post-surgical body image may also help to alleviate potential disappointments and frustrations with the process. Clinical psychologists can play a key role in helping patients to prepare for change, manage expectations and adjust to life after surgery. Clinical psychologists currently help to assess the suitability of patients for bariatric surgery and during the assessment phase, expectations about bariatric surgery maybe discussed. However, there is a lack of funding within the NHS for clinical psychologists to provide psychological interventions to bariatric patients and such interventions could support patients to gain insight into their difficulites and process the emotional aspects of life changing surgery. The maintenance of this support throughout the process would enable patients to feel secure in their attachment to the bariatric team. Psychologists are also able

to use systemic interventions and this approach may be of benefit to patients who would like their spouse to be included in their treatment pathway.

The use of a body image questionnaire, such as The Sahlgrenska Excess Skin Questionnaire (SESQ) (Biörserud et al., 2013), would also be a consideration. The questionnaire includes statements about body image, physical symptoms and problems in specific body areas due to excess skin. Gathering quantitative information may allow services to tailor their information more specifically to patient concerns about body image.

2.4.7 Recommendations for future research

The need to understand the experiences of bariatric surgery from a multi-cultural perspective is an important consideration when devising future research. The Research Governance Framework requires research studies to take account of sex, age, race, culture, disability, sexual orientation, and religion, in how they are designed and undertaken (Department of Health, 2005). Future research may involve exploring the views of couples from minority backgrounds. This would help to decipher if the themes in the current study are replicated in other cultural backgrounds. Similarly, exploring the views of male patients, female partners and same sex couples would facilitate the expansion of qualitative information about expectations and change.

2.4.8 Conclusion

This study built on the growing literature surrounding patient experiences of bariatric surgery but also considered the inclusion of partners, which is an under-considered area of interest. The main findings resulted in the development of five themes; ‘The patient’s decision to have bariatric surgery’, ‘The importance of feeling supported’, ‘Learning to eat again’, ‘Improved health and quality of life’ and ‘Confidence and body image’. These themes appear to reflect the individualised experiences of couples with expectations being met and exceeded in some cases. Some patients noted improved quality of life, increased confidence and health benefits associated with weight loss, in addition to feeling supported. However, there were instances in which expectations were not met. Some

patients had not lost weight, had to manage physical difficulties or were left with excess skin, leading to body dissatisfaction. In turn, these difficulties impacted on partners, as they felt shared disappointed. These findings are promising as they can help to shape bariatric education, information and aftercare. Patients would benefit from being given honest information about the potential side effects of surgery, such as excess skin, with individualised time to ask questions and consider the impact that this may have on them. Partners would benefit from bespoke information about the possible impact of surgery on them and by being offered support from the bariatric team. Widening participant diversity would encapsulate the experiences of bariatric patients and partners from multicultural and socioeconomic backgrounds.

Quality Assessment Scores Using the Kmet et al. (2004) Appraisal Tool

Appendix A

Qualitative checklist criteria

1. Question / objective sufficiently described?
2. Study design evident and appropriate?
3. Method of subject/comparison group selection or source of information/input variables described and appropriate?
4. Subject (and comparison group, if applicable) characteristics sufficiently described?
5. If interventional and random allocation was possible, was it described?
6. If interventional and blinding of investigators was possible, was it reported?
7. If interventional and blinding of subjects was possible, was it reported?
8. Outcome and (if applicable) exposure measure(s) well defined and robust to measurement / misclassification bias? Means of assessment reported?
9. Sample size appropriate?
10. Analytic methods described/justified and appropriate?
11. Some estimate of variance is reported for the main results?
12. Controlled for confounding?
13. Results reported in sufficient detail?
14. Conclusions supported by the results?

Quantitative checklist criteria

1. Question / objective sufficiently described?
2. Study design evident and appropriate?
3. Context for the study clear?
4. Connection to a theoretical framework / wider body of knowledge?
5. Sampling strategy described, relevant and justified?
6. Data collection methods clearly described and systematic?
7. Data analysis clearly described and systematic?
8. Use of verification procedure(s) to establish credibility?
9. Conclusions supported by the results?
10. Reflexivity of the account?

Quantitative checklist															
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**Total score**
Wilfley et al. (2007)	Partial (1)	Yes (2)	Yes (2)	Yes (2)	Yes (2)	N/A	No (0)	Yes (2)	Yes (2)	Yes (2)	Yes (2)	Yes (2)	Yes (2)	Yes (2)	23/26
Naar-King et al. (2016)	Yes (2)	Yes (2)	Yes (2)	Yes (2)	Yes (2)	Partial (1)	No (0)	Yes (2)	Yes (2)	Yes (2)	Partial (1)	Yes (2)	Yes (2)	Yes (2)	24/28
Golan et al. (2006)	Partial (1)	Yes (2)	Yes (2)	Yes (2)	Yes (2)	No (0)	Yes (2)	Yes (2)	Yes (2)	Yes (2)	No (0)	Yes (2)	Yes (2)	Yes (2)	23/28
Fagg et al. (2004)	Partial (1)	Yes (2)	Yes (2)	Yes (2)	N/A	N/A	N/A	Yes (2)	Yes (2)	Yes (2)	No (0)	Partial (1)	Yes (2)	Yes (2)	18/22
Goldschmidt et el. (2010)	Yes (2)	Yes (2)	Partial (1)	Yes (2)	Partial (1)	No (0)	No (0)	Yes (2)	Yes (2)	Yes (2)	Yes (2)	Yes (2)	Yes (2)	Yes (2)	22/28
Nowicka et al. (2007)	Yes (2)	Yes (2)	Partial (1)	Partial (1)	N/A	N/A	N/A	Yes (2)	Yes (2)	Yes (2)	No (0)	Partial (1)	Yes (2)	Yes (2)	17/22

Croker et al. (2012)	Yes (2)	Yes (2)	Yes (2)	Yes (2)	Partial (1)	No (0)	No (0)	Yes (2)	Yes (2)	Yes (2)	Partial (1)	Partial (1)	Yes (2)	Yes (2)	21/28
De Miguel-Etayo et al. (2018)	Yes (2)	Yes (2)	Yes (2)	Yes (2)	No (0)	No (0)	No (0)	Yes (2)	Yes (2)	Yes (2)	Partial (1)	Partial (1)	Yes (2)	Yes (2)	20/28
Ellis et al. (2010)	Yes (2)	Yes (2)	Yes (2)	Yes (2)	Partial (1)	No (0)	No (0)	Yes (2)	Yes (2)	Yes (2)	No (0)	Partial (1)	Yes (2)	Yes (2)	20/28
Janicke et al. (2011)	Yes (2)	Yes (2)	Partial (1)	Yes (2)	Partial (1)	N/A	No (0)	Yes (2)	Yes (2)	Yes (2)	No (0)	No (0)	Yes (2)	Yes (2)	18/26
Grønbæk et al. (2009)	Partial (1)	Partial (1)	Partial (1)	Yes (2)	N/A	N/A	N/A	Yes (2)	Yes (2)	Yes (2)	No (0)	No (0)	Yes (2)	Yes (2)	15/22
Maggio et al. (2013)	Partial (1)	Yes (2)	Partial (1)	Yes (2)	N/A	N/A	N/A	Partial (1)	Yes (2)	Yes (2)	No (0)	No (0)	Yes (2)	Yes (2)	15/22
Jinks et al. (2013)	Yes (2)	Yes (2)	No (0)	No (0)	N/A	N/A	N/A	Yes (2)	Partial (1)	Partial (1)	No (0)	No (0)	Partial (1)	Yes (2)	13/22
Brownell & Stunkard (1981	Partial (1)	Yes (2)	Partial (1)	Partial (1)	Yes (2)	Yes (2)	No (0)	Partial (1)	Partial (1)	No (0)	Partial (1)	No (0)	Partial (1)	Yes (2)	15/28

Tanas et al. (2007)	Partial (1)	Partial (1)	Partial (1)	Partial (1)	No (0)	No (0)	No (0)	Yes (2)	Yes (2)	Yes (2)	No (0)	No (0)	Yes (2)	Yes (2)	14/28

Qualitative checklist											
Sweeney et al. (2019)	Yes (2)	Yes (2)	Yes (2)	Yes (2)	Partial (1)	Yes (2)	Yes (2)	Yes (2)	Yes (2)	No (0)	17/20
Campbell-Voytal et al. (2018)	Yes (2)	Yes (2)	Yes (2)	Partial (1)	Partial (1)	Partial (1)	Yes (2)	Yes (2)	Yes (2)	No (0)	15/20
Jinks et al. (2013)	Yes (2)	Yes (2)	Yes (2)	Partial (1)	Partial (1)	No (0)	Partial (1)	No (0)	Yes (2)	No (0)	11/20

Appendix B Studies Included in the Systematic Review

Author, year and country	Study title	Sample	Objectives and Methodology	Outcomes	Quality appraisal rating
Wilfley, Stein, Saelens, Mockus, Matt, Hayden-Wade, Robinson Welch, Schechtman, Thompson & Epstein (2007) – USA	Efficacy of maintenance treatment approaches for childhood overweight: a randomized controlled trial	204 children aged 7-12 years (20% to 100% above median body mass index) for age and sex, with at least one overweight parent.	*Aim:* To determine the efficacy of two weight maintenance approaches vs no continued treatment control following standard family based behavioural weight loss treatment for childhood overweight, and to examine children's social functioning as a moderator of outcome. *Method:* Quantitative *Procedure:* Participants attended a five-month, family-based weight loss intervention and were then randomly assigned to one of three conditions; (1) Behavioural skills maintenance (BSM) (2) Social facilitation maintenance (SFM) (3) Control or usual care *Analyses:* ANOVA, chi-square ($\chi 2$) tests, Fisher exact test.	*Weight loss outcomes:* BSM or SFM maintained relative weight significantly better than children assigned to the control group from randomisation to post-weight maintenance. *Mental health outcomes:* No specific mental health outcomes assessed but increased perceived self-efficacy in adhering to a low-fat diet in SFM and BSM compared to controls.	0.88

Naar-King, Ellis, Idalski Carcone, Templin, Jacques-Tiura, Brogan Hartlieb, Cunningham & Kai-Lin (2016) – USA	Sequential Multiple Assignment Randomized Trial (SMART) to Construct Weight Loss Interventions for African American Adolescents	181 adolescents and their primary caregivers	*Aim:* To compare adolescents' percent overweight after completing three months of home-based cognitive-behavioural weight loss skills treatment integrated with MI (Home-based MI Skills; HB-MIS) versus office-based delivery of the same intervention (OB-MIS). *Method:* Quantitative *Procedure:* Sequential multiple assignment randomized trial – participants randomized to 3 months of home-based versus office-based delivery of motivational interviewing plus skills building. *Analyses:* Linear mixed effects model, bivariate statistics	*Weight loss outcomes:* Decreases in percentage overweight. There were significant main effects of time for Phase 1 treatments at Post-Test 1 and at Post-Test 2 suggesting that weight loss was achieved irrespective of assignment to treatment condition. *Mental health outcomes:* Participants with higher levels of depression reduced their percent overweight by 2.51% as compared to those with lower levels of depression who reduced their percent overweight by 0.04% Those with higher executive functioning lost more weight.	0.86
Sweeney, Wilson, Loncar & Brown (2019) – USA	Secondary benefits of the families improving together (FIT) for weight loss trial on cognitive and social factors in African American	41 adolescents and 41 parents	*Aim:* To evaluate whether adolescents and parents perceived positive changes in health-related factors, family social dynamics and cognitive outcomes from the programme. *Method:* Qualitative *Procedure:* Parent-adolescent dyads randomised to either the motivational plus	*Weight loss outcomes:* Benefits of family and group support on weight loss (parent perspective) and benefits of communication with parents (adolescent perspective). Importance of social support in weight loss efforts.	0.85

	adolescents		family weight loss condition (M+FWL) or the comprehensive health education (CHE) programme. Qualitative data collected during group discussions, which were conducted during week 8 of the face-to-face M+FWL programme. *Analyses:* Thematic analysis	*Mental health outcomes:* Families did not make any comments about mental health outcomes.	
Golan, Kaufman & Shahar (2006) – Not explicitly stated	Childhood obesity treatment: targeting parents exclusively v. parents and children	32 families with obese children aged 6–11 years	*Aim:* To evaluate the relative efficacy of treating childhood obesity via a family-based health-centred intervention, targeting parents alone v. parents and obese children together. *Method:* Quantitative *Procedure:* Families randomised to educational and behavioural programme (parents-only) or educational and behavioural programme (parents and the obese child). *Analyses:* One-way ANOVA with Bonferroni's tests, mixed model repeated-measures ANOVA, chi-square ($\chi 2$) tests, t tests and analysis of covariance, Pearson's correlation coefficients, multiple stepwise regression.	*Weight loss outcomes:* Weight loss in parent-only group (treatment effect statistically significant at the end of the intervention). Weight loss maintained in parent-only group at one-year follow up. Percentage overweight status increased at one-year follow up in parents-children group. *Mental health outcomes:* None.	0.82

Fagg, Chadwick, Cole, Cummins, Goldstein, Lewis, Morris, Radley, Sacher & Law (2014) – England	From trial to population: a study of a family-based community intervention for childhood overweight implemented at scale	Data from 9563 families in 1788 programmes across England	*Aim:* To assess how outcomes associated with participation in a family-based weight management intervention for childhood overweight or obesity implemented at scale in the community vary by child, family, neighbourhood and programme characteristics. *Method:* Quantitative *Procedure:* Families (participating child and one parent/carer) attend two sessions/week for 10 weeks. Sessions address diet and physical activity through education, skills training and motivational enhancement. *Analyses:* Four sets of two-stage analyses were conducted for each outcome. In the first stage, relationships between the outcome and each covariate were tested in multilevel models adjusted for the outcome measured at baseline. If the relationship between the covariate and the outcome was statistically significant, the covariate was carried forward to a multilevel multivariable model.	*Weight loss outcomes:* Improvements in BMI. BMI fell more for children who were male and with higher baseline BMI. *Mental health outcomes:* Improved self-esteem scores. Reduction in psychological distress scores.	0.82
Goldschmidt, Sinton, Tibbs, Stein, Saelens, Frankel,	Psychosocial and familial impairment among overweight youth	201 overweight children (aged 7–12 years)	*Aim:* To examine the clinical significance of social problems among overweight youth.	Weight loss outcomes: None. *Mental health outcomes:*	0.79

Epstein & Wilfley (2010) – USA	with social problems		*Method:* Quantitative *Procedure:* Randomised controlled trial of two weight maintenance interventions following family-based behavioural weight loss treatment. *Analyses:* Hierarchical regression and MANOVA	Children with high scores on the Child Behaviour Checklist Social Problems subscale and their parents showed poorer psychological functioning relative to low scoring children. This suggests that socially impaired overweight youth may have greater difficulties in maintaining treatment gains due to interfering pathology.	
Nowicka, Pietrobelli & Flodmark (2007) – Sweden	Low-intensity family therapy intervention is useful in a clinical setting to treat obese and extremely obese children	54 obese children (aged 6-17 years)	*Aim:* To assess the influence of low-intensity solution-focused family therapy with obese and extremely obese paediatric subjects on body mass index (BMI) and self-esteem. *Method:* Quantitative *Procedure:* Families attended systemic, solution-focused therapy and completed outcome measures. *Analyses:* Mixed-effects regression model, paired t-test, ANOVA, Wilcoxon signed rank test.	*Weight loss outcomes:* 75% of children decreased their BMI z-score and 25% increased their BMI z-score. Approximately 80% of the children who were extremely obese, resulted in significantly reduced BMI z-scores ($p<0.0001$). *Mental health outcomes:* Improvements on self-esteem and psychological wellbeing scores.	0.77
Croker, Viner, Nicholls, Haroun,	Family-Based Behavioural Treatment of	72 children aged 8-12 years old and their families.	*Aim:* To examine the acceptability and effectiveness of 'family-based behavioural treatment' (FBBT) for childhood obesity in	*Weight loss outcomes:* Treatment and control group experienced reductions in BMI	0.75

Chadwick, Edwards, Wells & Wardle (2012) – England	childhood obesity in a UK National Health Service setting: randomised controlled trial		an ethnically and socially diverse sample of families in a UK National Health Service (NHS) setting. *Method:* Quantitative *Procedure:* Families randomised to either FBBT or waiting list control. *Analyses:* Independent t-tests or Mann-Whitney tests (continuous variables) or chi-squared tests (categorical variables), Multivariate analysis of covariance (MANCOVA) tests, Paired t-tests or Wilcoxon signed-rank tests.	SDS (Body Mass Index Standard Deviation Scores) but not for BMI. No significant between group differences. *Mental health outcomes:* None	
Campbell-Voytal, Brogan Hartlieb, Cunningham, Jacques-Tiura, Ellis, Jen & Naar-King (2018) – USA	African American Adolescent-Caregiver Relationships in a Weight Loss Trial	136 adolescent-caregiver dyads	*Aim:* (1) To describe the perspectives of African American adolescents and caregivers on participating in an evidence-based weight loss trial. (2) To explore experiential differences of adolescent-caregiver dyads who achieved adolescent weight loss compared to those who did not. *Method:* Qualitative *Procedure:* A two-year FIT Families intervention followed by a semi-structured exit interview. *Analyses:* Content and thematic analysis.	*Weight loss outcomes:* Families that achieved the greatest weight loss identified the importance of working together, adolescent self-motivation and engaged carer support. *Mental health outcomes:* None.	0.75

De Miguel-Etayo, Moreno, Santabarbara, Martín-Matillas, Azcona-San Julian, Marti del Moral, Campoy, Marcos & Garagorri (2018) – Spain	Diet quality index as a predictor of treatment efficacy in overweight and obese adolescents: The EVASYON study	117 overweight and obese adolescents	*Aim:* To assess whether compliance to the dietary intervention (a multidisciplinary obesity treatment programme for adolescents) and the overall quality of the diet can predict body composition changes. *Method:* Quantitative *Procedure:* The EVASYON treatment programme *Analyses:* Cohen's d, non-parametric Spearman's rho correlation coefficients, random coefficient regression modelling.	*Weight loss outcomes:* Quality of diet is a predictor of BMI and FMI (Fat Mass Index). Mean BMIs were similar at 2-month and 13-month follow up. *Mental health outcomes:* None.	0.71
Ellis, Janisse, Naar-King, Kolmodin, Jen, Cunningham, & Marshall (2010) – USA	The Effects of Multisystemic Therapy on Family Support for Weight Loss Among Obese African-American Adolescents: Findings From a Randomized Controlled Trial	49 obese adolescents	*Aim:* To evaluate the effects of multisystemic therapy (MST) on family support for changes in eating and exercise behaviours. *Method:* Quantitative *Procedure:* Families randomised to either MST or Shapedown (a group weight loss intervention). *Analyses:* Bivariate analyses	*Weight loss outcomes:* Participants who reported increased family support for exercise showed lower body mass indexes, lower body fat percentage and smaller % overweight at the end of treatment. *Mental health outcomes:* None.	0.71
Janicke, Gray, Mathews, Simon, Lim,	A Pilot Study Examining a Group-Based	40 obese children (aged 6-12) years	*Aim:* To evaluate the efficacy of a behavioural family intervention delivered via group contacts on child body mass	*Weight loss outcomes:* No difference in weight	0.69

Dumont-Driscoll & Silverstein (2011) – USA	Behavioral Family Intervention for Obese Children Enrolled in Medicaid: Differential Outcomes by Race	and their parents	index (BMI) z score compared to an individual standard of care treatment in overweight and obese school-age children and their parents from economically disadvantaged backgrounds. *Method:* Quantitative *Procedure:* Child–parent dyads randomly assigned to one of two treatment conditions: a behavioural family intervention delivered via group meetings with other families or an individual standard care condition. *Analyses:* ANCOVA, correlation analyses	outcomes across conditions but trends to suggest difference in weight change by race. *Mental health outcomes:* None.	
Grønbæk, Madsen & Michaelsen (2009) – Denmark	Family involvement in the treatment of childhood obesity: the Copenhagen approach	100 children (10–12 years old)	*Aim:* To assess the impact of a family-based childhood obesity treatment on anthropometry and predictors of dropout and successful weight loss. *Method:* Quantitative *Procedure:* The 18-month treatment intervention (including physical exercise, nutritional guidance, family psychotherapy, child group sessions and a one-year follow-up) *Analyses:* Chi-square ($\chi 2$) tests, ANOVA	*Weight loss outcomes:* More than 80% of children who completed the full treatment programme lost weight (significant decrease in BMI Z score from 2.9 at baseline to 2.6 at the end of the intensive phase). There was a further significant decrease during the follow-up period from 2.6 to 2.4 (p=0.003). *Mental health outcomes:* None.	0.68

Maggio, Saunders Gasser, Gal-Duding, Beghetti, Martin, Farpour-Lambert & Chamay-Weber (2013) – Switzerland	BMI changes in children and adolescents attending a specialized childhood obesity center: a cohort study	283 children and adolescents (aged 3-17 years)	*Aim:* To investigate changes in body mass index (BMI) in obese children and adolescents attending a specialized obesity care centre. *Method:* Quantitative *Procedure:* Patients attended paediatrician appointments in which an integrative approach that included cognitive behavioural techniques and motivational interviewing was used. Families part of the consultation. *Analyses:* Independent t-test, paired t-test and ANOVA with Bonferroni post-hoc test, Spearman coefficient correlations	*Weight loss outcomes:* Significant reduction in BMI scores. The BMI z-score reduction was to the same extent as more intensive multidisciplinary group interventions. *Mental health outcomes:* None.	0.68
Jinks, English & Coufopoulos (2013) – England	Evaluation of a family-centred children's weight management intervention	Overweight children aged 8-14 years old and their families (n = 18 participants).	*Aim:* To conduct an in-depth quantitative and qualitative evaluation of a family-based weight loss and healthy life style programme for clinically obese children in England. *Method:* Mixed-methods *Procedure:* 12 education and activity sessions. Family meetings offered every 6-8 weeks. *Analyses:* *Quantitative analysis:* Descriptive analyses.	*Weight loss outcomes:* All but one child had reduced BMI percentiles at the end of the intervention. *Mental health outcomes:* Improvements in quality of life, levels of depression and self-esteem.	0.59 (quantitative checklist rating) 0.55 (qualitative checklist rating)

			Qualitative analysis: Principles of grounded theory.		
Brownell & Stunkard (1981) – USA	Couples training, pharmacotherapy, and behaviour therapy in the treatment of obesity	124 obese adults, 112 completed treatment	*Aim:* To assess the effects of a behaviour therapy programme with and without couples and training and with and without pharmacology. *Method:* Quantitative *Procedure:* Participants assigned to one of six conditions (3 x 2 design). Spouse conditions: 1. Cooperative spouse – couples training 2. Cooperative spouse – subject alone 3. Uncooperative spouse. Half participants prescribed an appetite suppressant, half no medication. *Analyses:* ANOVA, Pearson correlation coefficients	*Weight loss outcomes:* Pharmacology group produced greater weight loss but regained weight more rapidly in 12-month maintenance period. No differences between spouse conditions. Large weight losses occurred among the spouses of patients in the couples training condition. *Mental health outcomes:* Patient mean depression score decreased significantly during treatment *(F* = 2.5; *df*= 1,94; *P* < .05) and then increased and non-significantly at the one-year follow-up.	0.54
Tanas, Marcolongo, Pedretti & Gilli (2007) – Italy	A family-based education program for obesity: a three-year study	190 overweight children	*Aim:* To assess the efficacy of a family-based, therapeutic education programme for childhood obesity. *Method:* Quantitative *Procedure:* 85 treated with a therapeutic education programme and 105 matched	*Weight loss outcomes:* Greater percentage reduction in BMI for education group versus traditional dietary treatment group. *Mental health outcomes:*	0.50

	children treated with traditional dietary approach. *Analyses:* ANOVA-RM, chi-square ($\chi 2$) tests, linear regression	None.

Appendix C Interview Schedule

Participant introduction and interview set-up

- Introduce myself to the participants.
- I am writing my doctoral thesis on couples' experiences of bariatric surgery. I am interested in couples' expectations of bariatric surgery and the changes they have noticed since the procedure. The information gathered will help to inform and develop services that offer bariatric surgery.
- The interview will last for approximately 60-90 minutes.
- I will record the interview, so I can listen again to what has been said. I will write up what you said during the interview word-for-word. When writing this up, I will take out anything that identifies you so it will all be anonymous. Also, everything we talk about here will be confidential.
- Do you have any questions about any aspects of the interview?
- Take consent and ask to complete demographic questionnaire.
- There are no right or wrong answers. Please say any thoughts that come to mind, even if you think they might not be important. Your views are important so the more you can tell me the better.
- If you have any questions during the interview, I will be very happy to answer them but it's probably best if I answer them at the end.
- We can take a break at any time you like, please just let know and I can pause the recording.
- Is there anything you would like to ask me at the moment?
- If you are happy, I will start recording now.

Experiences of bariatric surgery

1. What were your experiences of bariatric surgery?
    - How would you describe your experience of bariatric surgery?

Expectations of bariatric surgery

2. What were your expectations of bariatric surgery before the operation?

- How did you find out about bariatric surgery?
- What did you know about bariatric surgery before you went for it?
- What information did you discuss together?
- How did you come to the decision to undergo bariatric surgery?
- What were your hopes for undergoing the operation?

3. What were your expectations of bariatric surgery after the operation?
    - What expectations have been met since having the bariatric surgery?
    - Have any of your expectations of surgery not been met?

Changes following bariatric surgery

4. How did you expect surgery to change things in your life?
    - What were the positive changes you expected?
    - What have been the negative changes, if any?
    - Could you tell me about any physical changes you have noticed?
        - How did these changes affect you?
        - How did you adjust to these changes?
        - How did you expect these things to change after surgery?
    - Could you tell me about any eating changes you have noticed?
        - How did these changes affect you?
        - How did you adjust to these changes?
        - How did you expect these things to change after surgery?
    - Could you tell me about any emotional changes you have noticed?
        - How did these changes affect you?
        - How did you adjust to these changes?
        - How did you expect these things to change after surgery?
    - Could you tell me about any social changes you have noticed?
        - How did these changes affect you?
        - How did you adjust to these changes?

        - How did you expect these things to change after surgery?
    - Could you tell me about any relationship changes you have noticed?
        - How did these changes affect you?
        - How did you adjust to these changes?
        - How did you expect these things to change after surgery?

5. What have been the unexpected changes since having bariatric surgery, if any?
    - How have you coped with these unexpected changes?
    - What information would have helped to prepare you for these changes?
    - How do you think having this information would have affected you?

Expectations for the future

6. What are your expectations for your life now that you have had the surgery?

Appendix D Participant Information Sheet

Participant Information Sheet

Study Title: A qualitative exploration of couples' expectations and experiences of change following bariatric surgery.

Researcher: Katherine Rowell
ERGO number: 47331

You are invited to take part in the above research study. To help you decide whether you would like to take part or not, it is important that you understand why the research is being done and what it will involve. Please read the information below carefully and ask questions if anything is not clear or you would like more information before you decide to take part in this research. You may like to discuss it with others but it is up to you to decide whether or not to take part. If you are happy to participate you will be asked to sign a consent form.

What is the research about?
My name is Katherine Rowell and I am a Trainee Clinical Psychologist at Southampton University. This piece of research will contribute to my doctoral thesis and I will be the primary researcher in this study. The purpose of this study is to interview couples about their experiences when one of the couple has undergone bariatric surgery. The aim of the study is to explore couples' expectations of bariatric surgery and the changes they have noticed post-surgery. You will be asked questions about your views of the surgery, how you anticipated the surgery would impact your life and about how your life has changed since the procedure. This will help to develop greater understanding of how best to prepare and support both patients and partners in the process of bariatric surgery; both before and after.
The study will be sponsored by the University of Southampton:

Research Integrity and Governance Manager
Room 2029,
Building 28,
University Road,
Highfield Campus,
Southampton,
SO17 1BJ

Why have I been asked to participate?
You have been asked to take part as either yourself, or your partner, has undergone bariatric surgery more than 12 months ago. The study is interested in the real life experiences of couples who have been through the process of bariatric surgery. There will be between 10-20 couples taking part in the research interviews.

What will happen to me if I take part?
Participants will be asked to take part in an interview alongside their partner which is expected to last for between 60-90 minutes. This will be arranged at a time and location which best suits you both; at home or at The Royal Bournemouth Hospital. The interview will comprise of questions about your expectations of the bariatric surgery and about the changes that you have noticed in your life since undergoing the surgery. You have the right to refuse to answer any question during the interview without explanation.
[19.08.19] [Version number: 4] [Ergo number: 47331/IRAS number: 261236]

The interviews will be recorded using a digital audio-recording device and will be transcribed into a written format for the purpose of analysis. It is a requirement to record the interviews in order to analyse the information at a later date. You will both be asked to sign a consent form stating that you agree to have your interview recorded for research purposes. Your information will be kept securely and confidentially. The interviews will be analysed using a thematic analysis which looks at patterns and trends found within information.

Are there any benefits in my taking part?
A potential benefit of participating in the study is that you will have time to reflect upon your experiences of the bariatric surgery process as a couple. It is possible that others will benefit from your contribution as there is a lack of research about the lived experiences of couples who have been through the process of bariatric surgery.

Are there any risks involved?
It is possible that you may find some questions in the interview upsetting. If this is the case, you can stop the interview at any time for a break. You can also choose to withdraw from the study. If any further support is required, I can direct you to the appropriate support services e.g. talking therapies services.

What data will be collected?
Each participant be asked to complete a short written questionnaire prior to the interview and this will be anonymised after the interview. The questions will ask about demographic details (e.g. age, gender, relationship duration, type of bariatric surgery undergone). Identifiable information will be removed and an ID number and alternative name will be assigned to each participant to ensure anonymity. All identifiable information, such as consent forms, demographic questionnaires and master transcripts of recordings, will be stored in a locked filing cabinet in a locked room.
Interviews with each couple will be conducted and recorded digitally by myself, the primary researcher. The digitally recorded data will be kept confidentially and securely at all times. Data will be retained for transcription purposes. Recordings will be stored on encrypted, password protected storage equipment, as outlined in university policy, and recordings will be destroyed once the data has been transcribed.
Interviews will be transcribed by the primary researcher and a voluntary research assistant(s). The voluntary research assistant(s) will sign a confidentiality agreement prior to accessing the audio data. If a voluntary research assistant recognises either member of a couple in the interview, they must declare this to the primary researcher and they will not transcribe that interview.
Quotes will be selected sensitively to reflect a theme or pattern and will be quoted under the pseudonym allocated to the individual who is quoted. Anonymised extracts from the interviews will be quoted in the written thesis. The transcribed, anonymised interviews will be destroyed after 5 years, in line with university policy, but personal details will be destroyed when the study has been completed.

Will my participation be confidential?
Your participation and the information we collect about you during the course of the research will be kept strictly confidential. Only members of the study research team, the bariatric team responsible for your care and responsible members of the University of Southampton may be given access to data about you for monitoring purposes and/or to carry out an audit of the study to ensure that the research is complying with applicable regulations. Individuals from regulatory authorities (people who check that we are carrying out the study correctly) may require access to your data. All of these people have a duty to keep your information, as a research participant, strictly confidential.

If either you or your partner disclose any information that indicates a risk to you or others, this will be shared with their clinical team within the bariatric service.

Do I have to take part?
No, it is entirely up to you to decide whether or not to take part. However, both you and your partner must consent to taking part. If you decide you want to participate, you will both need to sign a consent form to show you have agreed to take part.

What happens if I change my mind?
You have the right to change your mind and withdraw at any time without giving a reason and without your participant rights or routine care being affected. You are free to withdraw from the study up to the point where the interview has been transcribed into written form and all identifiable information has been removed. If you or your partner withdraw from the study, the information that you have both provided up until that time will be destroyed. You may contact me on the contact details listed if you wish to withdraw. It will not be possible to withdraw consent after your interview has been transcribed.
If you or your partner lose capacity to consent before or after the interview has been conducted, all data acquired to that point will be destroyed and not used in the study.

What will happen to the results of the research?
Your personal details will remain strictly confidential. Research findings made available in any reports or publications will not include information that can directly identify you without your specific consent. The results of the study will be disseminated to the bariatric service responsible for you or your partner's care to inform future service development. The final project will be written up and submitted to the university to be marked and moderated. If the study is deemed worthy of publication, it is possible that it will appear in a psychological or health journal in the future. If you wish to receive a copy of the results of the study, you can request them by contacting me.

Where can I get more information?
If you would like any further information or would like to discuss the project in more detail, please contact me using the details, below:

Katherine Rowell
Trainee Clinical Psychologist,
Department of Psychology,
University Road,
Highfield Campus,
Southampton,
SO17 1BJ
Tel: 02380 595320
Email: kr5e14@soton.ac.uk

Alternatively, you can also contact Dr Lisa Cant (Clinical Psychologist), who is the field supervisor for this project, for further information:

Dr Lisa Cant
Clinical Psychologist,
Bariatric Department,
Royal Bournemouth Hospital,
Castle Lane East,
Bournemouth,
BH7 7DW
Tel: 01202 704319
Email: Lisa.Cant@nhs.net

What happens if there is a problem?
If you have a concern about any aspect of this study, you should speak to the researchers who will do their best to answer your questions.

If you remain unhappy or have a complaint about any aspect of this study, please contact the University of Southampton Research Integrity and Governance Manager (02380 595058, rgoinfo@soton.ac.uk).

If you have a complaint about the study that you would like to raise, please contact the Patient Information and Liaison Service (PALS):
Email: complaints@rbch.nhs.uk
Tel: 01202 704886

Data Protection Privacy Notice
The University of Southampton conducts research to the highest standards of research integrity. As a publicly-funded organisation, the University has to ensure that it is in the public interest when we use personally-identifiable information about people who have agreed to take part in research. This means that when you agree to take part in a research study, we will use information about you in the ways needed, and for the purposes specified, to conduct and complete the research project. Under data protection law, 'Personal data' means any information that relates to and is capable of identifying a living individual. The University's data protection policy governing the use of personal data by the University can be found on its website (https://www.southampton.ac.uk/legalservices/what-we-do/data-protection-and-foi.page).

This Participant Information Sheet tells you what data will be collected for this project and whether this includes any personal data. Please ask the research team if you have any questions or are unclear what data is being collected about you.

Our privacy notice for research participants provides more information on how the University of Southampton collects and uses your personal data when you take part in one of our research projects and can be found at http://www.southampton.ac.uk/assets/sharepoint/intranet/ls/Public/Research%20and%20Integrity%20Privacy%20Notice/Privacy%20Notice%20for%20Research%20Participants.pdf

Any personal data we collect in this study will be used only for the purposes of carrying out our research and will be handled according to the University's policies in line with data protection law. If any personal data is used from which you can be identified directly, it will not be disclosed to anyone else without your consent unless the University of Southampton is required by law to disclose it.

Data protection law requires us to have a valid legal reason ('lawful basis') to process and use your Personal data. The lawful basis for processing personal information in this research study is for the performance of a task carried out in the public interest. Personal data collected for research will not be used for any other purpose.

For the purposes of data protection law, the University of Southampton is the 'Data Controller' for this study, which means that we are responsible for looking after your information and using it properly. The University of Southampton will keep identifiable information about you for 5 years after the study has finished after which time any link between you and your information will be removed.

To safeguard your rights, we will use the minimum personal data necessary to achieve our research study objectives. Your data protection rights – such as to access, change, or transfer such information - may be limited, however, in order for the research output to be reliable and accurate. The University will not do anything with your personal data that you would not reasonably expect.

If you have any questions about how your personal data is used, or wish to exercise any of your rights, please consult the University's data protection webpage (https://www.southampton.ac.uk/legalservices/what-we-do/data-protection-and-foi.page) where you can make a request using our online form. If you need further assistance, please contact the University's Data Protection Officer (data.protection@soton.ac.uk).

Thank you for taking the time to read the information sheet and considering taking part in the research.

Appendix E Participant Consent Form

IRAS ID: 261236

Centre Number:

Study Number:

Participant Identification Number for this trial:

CONSENT FORM

Title of Project: A qualitative exploration of couples' expectations and experiences of change following bariatric surgery

Name of Researcher: Katherine Rowell

Please initial box

1. I confirm that I have read the information sheet (dated 09.08.19, version 3) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my medical care or legal rights being affected. ☐
3. I understand that relevant sections of the data collected during the study, may be looked at by individuals from The University of Southampton, from regulatory authorities or from the NHS Trust, where it is relevant to my taking part in this research. I give permission for these individuals to have access to my records. ☐
4. I understand that taking part in the study involves audio recording the interview which will be transcribed and subsequently destroyed for the purposes set out in the participation information sheet. ☐
5. I understand that the voice recording made in this interview will be typed up and anonymised (all information that could identify you as an individual is removed) and this anonymised data and quotations may be used for research and clinical purposes. ☐

6. I agree to take part in the above study ☐

Name of Participant	Date	Signature
Name of Person taking consent	Date	Signature

Appendix F Patient Demographic Questionnaire

UNIVERSITY OF Southampton

Demographic questionnaire: Patient

Please tick the responses that apply to you.

ID number:

What is your gender?

◯ Male

◯ Female

◯ Transgender

◯ Other

◯ Prefer not to say

What is your age?

◯ 18 – 24

◯ 25 – 34

◯ 35 – 44

◯ 45 – 54

◯ 55 – 64

◯ Over 65

What is your ethnic group?

White

◯ English / Welsh / Scottish / Northern Irish / British
◯ Irish
◯ Gypsy or Irish Traveller
◯ Any other White background, *please describe*

……

Mixed / Multiple ethnic groups

◯ White and Black Caribbean
◯ White and Black African
◯ White and Asian
◯ Any other Mixed / Multiple ethnic background, *please describe*

Asian / Asian British

◯ Indian
◯ Pakistani
◯ Bangladeshi
◯ Chinese
◯ Any other Asian background, *please describe*

……..

Black / African / Caribbean / Black British

◯ African
◯ Caribbean
◯ Any other Black / African / Caribbean background, *please describe*……

Other ethnic group

◯ Arab
◯ Any other ethnic group, *please describe*

……

What is your nationality?

…….

What is your marital status?

◯ Married

◯ Divorced

◯ Cohabiting

◯ Single

How long have you been with your partner?

◯ 0 – 2 years

◯ 2 – 5 years

◯ 6 – 10 years

◯ 10 – 15 years

◯ 16 – 20 years

◯ 21 years or more

Do you live with your partner?

◯ Yes

◯ No

What type of bariatric surgery did you have?

◯ Gastric band

◯ Gastric bypass

◯ Sleeve gastrectomy

When did you have your surgery? *(Please specify the date)*

__ __ / __ __ / __ __

What was your Body Mass Index (BMI) before surgery, if you know?

……

What was your weight before surgery? *(Please state unit of measurement e.g. kilograms)*

……

What was your height before surgery? ***(Please state unit of measurement e.g. centimetres)***

……

What is your Body Mass Index (BMI) now, if you know?

……

What is your weight now? ***(Please state unit of measurement e.g. kilograms)***

……

What is your total weight loss to date?

……

Appendix G Partner Demographic Questionnaire

UNIVERSITY OF Southampton

Demographic questionnaire: Partner

Please tick the responses that apply to you.

ID number:

What is your gender?

◯ Male

◯ Female

◯ Transgender

◯ Other

◯ Prefer not to say

What is your age?

◯ 18 – 24

◯ 25 – 34

◯ 35 – 44

◯ 45 – 54

◯ 55 – 64

◯ Over 65

What is your ethnic group?

White

◯ English / Welsh / Scottish / Northern Irish / British

◯ Irish

◯ Gypsy or Irish Traveller

◯ Any other White background, *please describe* ……

[10.05.19] [Version number: 2] [Ergo number: 47331/IRAS number: 261236]

Mixed / Multiple ethnic groups

◯ White and Black Caribbean

◯ White and Black African

◯ White and Asian

◯ Any other Mixed / Multiple ethnic background, *please describe*

Asian / Asian British

◯ Indian

◯ Pakistani

◯ Bangladeshi

◯ Chinese

◯ Any other Asian background, *please describe*……

Black / African / Caribbean / Black British

◯ African

◯ Caribbean

◯ Any other Black / African / Caribbean background, *please describe*……

Other ethnic group

◯ Arab

◯ Any other ethnic group, *please describe* ……

What is your nationality?

……

What is your marital status?

◯ Married

◯ Divorced

◯ Cohabiting

◯ Single

How long have you been with your partner?

◯ 0 – 2 years

◯ 2 – 5 years

◯ 6 – 10 years

◯ 10 – 15 years

◯ 16 – 20 years

◯ 21 years or more

Do you live with your partner?

◯ Yes

◯ No

What type of bariatric surgery did your partner have?

◯ Gastric band

◯ Gastric bypass

◯ Sleeve gastrectomy

When did your partner have their surgery? *(Please specify the date)*

__ __ / __ __ / __ __

Have you ever undergone bariatric surgery yourself?

◯ Yes

◯ No

If yes, please answer the following questions…

What type of bariatric surgery did you have?

◯ Gastric band

◯ Gastric bypass

◯ Sleeve gastrectomy

When did you have your surgery? ***(Please specify the date)***

__ __ / __ __ / __ __

What was your Body Mass Index (BMI) before surgery?

……

What was your weight before surgery? ***(Please state unit of measurement e.g. kilograms)***

……

What was your height before surgery? ***(Please state unit of measurement e.g. centimetres)***

……

What is your Body Mass Index (BMI) now, if you know?

……

What is your weight now? ***(Please state unit of measurement e.g. kilograms)***

……

What is your total weight loss to date?

……

Appendix H Participant Debrief Form

UNIVERSITY OF Southampton

Study title: A qualitative exploration of couples' expectations and experiences of change following bariatric surgery.

Debriefing Statement: (Version number 2, date: 10.05.19)

ERGO ID: 47331

The aim of this research was to explore couples' expectations and experiences of change following a bariatric surgery procedure. It is expected that the physical expectations of surgery may have been met by staff prior to surgery, however, it may be that less information and advice was considered regarding emotional expectations wellbeing. It is expected that couples will identify significant changes in their lifestyle and relationships since the surgery.

Your data will help our understanding of how bariatric services can best support couples to manage physical and emotional expectations of bariatric surgery before the procedure and cope with post-surgical adjustments. Once again, results of this study will not include your name or any other identifying characteristics. The research did not use deception. You may have a copy of this summary if you wish and a summary of the results of the study will be available on request.

If you have any further questions please contact me, Katherine Rowell on 02380 595320 or kr5e14@soton.ac.uk or Dr Lisa Cant on 01202 704319 or Lisa.Cant@nhs.net

Thank you for your participation in this research. Please sign to confirm you have read this information and that you have received your Amazon voucher for taking part.

Signature: _____ Date: _____

Name: _____

If you have questions about your rights as a participant in this research, or if you feel that you have been placed at risk, you may contact the University of Southampton Research Integrity and Governance Manager (023 8059 5058, rgoinfo@soton.ac.uk).

If you experience any distress following the interview, it is important you contact a suitable aftercare service for further support. You can contact your GP or a local talking therapies service. I can provide you with information about services local to you on request.

[10.05.19] [Version number: 2] [Ergo number: 47331/IRAS number: 261236]

Appendix I University of Southampton University Ethics Approval

UNIVERSITY OF Southampton

23 May 2019

Project title: A qualitative exploration of couples' expectations and experiences of change following bariatric surgery

ERGO submission number: 47331

This letter is to confirm that the University of Southampton has agreed to act as Sponsor for the above research study under the terms of the UK Policy Framework for Health and Social Care Research (2017). We encourage you to become fully conversant with the terms of this Policy Framework (UKPF):

https://www.hra.nhs.uk/planning-and-improving-research/policies-standards-legislation/uk-policy-framework-health-social-care-research/

Sponsorship will remain in effect until the completion of the study and the ongoing responsibilities of the Chief Investigator have been met. Should the Chief Investigator fail to notify the Research Integrity and Governance Team of an amendment to the study, this may result in incorrect indemnity or sponsorship cover and may invalidate our agreement to sponsor.

If your study has been designated a Clinical Trial of an Investigational Medicinal Product, I would like to remind you of your responsibilities under the Medicines for Human Use Act regulations (2004/2006), The Human Medicines Regulations (2012) and EU Directive 2010/84/EU regarding pharmacovigilance. If your study has been designated a 'Clinical Investigation of a Medical Device' you also need to be aware of the regulations regarding conduct of this work.

Further guidance can be found:

http://www.mhra.gov.uk/

The University of Southampton fulfils the role of Sponsor in ensuring management, monitoring and reporting arrangements for research. As the Chief Investigator you are responsible for the daily management for this study, and you are required to provide regular reports on the progress of the study to the Research Integrity and Governance Team on this basis.

Please also familiarise yourself with the Terms and Conditions of Sponsorship attached, including reporting requirements of any Adverse Events to the Research Integrity and Governance Team and the hosting organisation.

If your project involves NHS patients or resources please send us a copy of your NHS REC and Trust approval letters when available. Please also be reminded that you may need a Research Passport to apply for an honorary research contract of employment from the hosting NHS Trust: https://intranet.soton.ac.uk/sites/researcherportal/Lists/Services1/testing.aspx?ID=607&RootFolder=%2A

Failure to comply with our Terms may invalidate your ethics approval and therefore the insurance agreement, affect funding and/or Sponsorship of your study; your study may need to be suspended and disciplinary proceedings may ensue.

Please do not hesitate to contact this office should you require any additional information or support. I would like to take this opportunity to wish you every success with your research.

Yours sincerely,

Dr Alison Knight

Research Integrity and Governance Team

rgoinfo@soton.ac.uk

Tel No. 02380 598580

Appendix J Research and Development Department Ethics Approval

Dear All,

RE: IRAS 261236. Exploring couples' expectations and experiences of bariatric surgery

Full Study Title: A qualitative exploration of couples' expectations and experiences of change following bariatric surgery.

This email confirms that Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust has the capacity and capability to deliver the above referenced study.

Our recruitment target has been agreed as a range of `15-20`.

We agree to start this study as soon as possible when the sponsor has given the go ahead to commence recruitment.

PLEASE NOTE: we must not commence recruitment until the study sponsor has approved we can by formally issuing their `Green Light to Recruit` email or letter.

If you wish to discuss further, please do not hesitate to contact me.

Kind regards

Mr Oliver Hopper | Research & Development Coordinator

Research and Development

01202 962380 | oliver.hopper@rbch.nhs.uk | www.rbch.nhs.uk

NHS
The Royal Bournemouth and Christchurch Hospitals
NHS Foundation Trust

Appendix K North of Scotland Research Ethics Service Ethics Approval

North of Scotland Research Ethics Service
Summerfield House
2 Eday Road
Aberdeen
AB15 6RE

Telephone: 01224558458
Facsimile: 01224558609
Email: nosres@nhs.net

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

9 August 2019

Miss Katherine Rowell
Psychology Department
Highfield Campus
University of Southampton
SOUTHAMPTON
SO17 1BJ

Dear Miss Rowell

Study title:	**A qualitative exploration of couples' expectations and experiences of change following bariatric surgery.**
REC reference:	**19/NS/0137**
Protocol number:	**N/A**
IRAS project ID:	**261236**

Thank you for your email of 9 August 2019, responding to the Committee's request for further information on the above research and submitting revised documentation.

The further information has been considered on behalf of the Committee by the Chair.

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.

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 forresearch 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

It is a condition of the REC favourable opinion that all clinical trials are registered on a publicly accessible database. For this purpose, clinical trials are defined as the first four project categories in IRAS project filter question 2. For clinical trials of investigational medicinal products(CTIMPs), other than adult phase I trials, registration is a legal requirement.

Registration should take place as early as possible and within six weeks of recruiting the first research participant at the latest. Failure to register is a breach of these approval conditions, unless a deferral has been agreed by or on behalf of the Research Ethics Committee (see herefor more information on requesting a deferral: https://www.hra.nhs.uk/planning-and-improving-research/research-planning/research-registration-rese arch-project-identifiers/

As set out in the UK Policy Framework, research sponsors are responsible for making information about research publicly available before it starts e.g. by registering the research project on a publicly accessible register. Further guidance on registration is available at: https://www.hra.nhs.uk/planning-and-improving-research/research-planning/transparency-responsibilit ies/

You should notify the REC of the registration details. We will audit these as part of the annualprogress reporting process.

It is the responsibility of the sponsor to ensure that all the conditions are complied withbefore 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 guidanceon 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

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 listed in the application subject to confirmation of Capacity and Capability (in England, Northern Ireland and Wales) or managementpermission (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 theapplication, subject to site management permission being obtained prior to the start of the study atthe site.

Approved documents

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

Document	*Version*	*Date*
Copies of advertisement materials for research participants: Participant Information Flyer	1	27 March 201
Evidence of Sponsor insurance or indemnity (non NHS Sponsors only): Professional Indemnity and Clinical Trials Insurance		24 May 2019
Interview schedules or topic guides for participants: Indicative Interview Schedule - Participant Introduction and Interview Set-up	2	19 June 2019
IRAS Application Form: IRAS Form 09082019	261236/1357441/37/489	9 August 201
IRAS Checklist XML: Checklist 09082019		9 August 201
Letter from Sponsor	1	23 May 2019
Letters of invitation to participant	3	19 June 2019
Patient Reply Slip	2	10 May 2019

Document	*Version*	*Date*
Non-validated questionnaire: Demographic Questionnaire - Patient	2	10 May 2019
Non-validated questionnaire: Demographic Questionnaire - Partner	2	10 May 2019
Response to Provisional Opinion		9 August 2019
Participant Consent Form	2	9 August 2019
Participant Information Sheet (PIS)	3	9 August 2019
Participant Debrief Sheet	2	10 May 2019
Referee's report or other scientific critique report: Gatekeeping Letter from Field Supervisor - Lisa Cant		26 March 2019
Research protocol or project proposal	1.0	June 2019
Summary CV for Chief Investigator (CI): Katherine Rowell		19 June 2019
Summary CV for Student: Katherine Rowell		19 June 2019
Summary CV for Supervisor (student research): Lisa Cant		19 June 2019
Summary CV for Supervisor (student research): Katy Sivyer		19 June 2019
Summary CV for Supervisor (student research): Catherine Brignell		19 June 2019

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for ResearchEthics 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 andthe application procedure. If you wish to make your views known please use the feedback formavailable on the HRA website:
http://www.hra.nhs.uk/about-the-hra/governance/quality-assurance/

HRA Learning

We are pleased to welcome researchers and research staff to our HRA Learning Events andonline learning opportunities – see details at:
https://www.hra.nhs.uk/planning-and-improving-research/learning/

19/NS/0137	**Please quote this number on all correspondence**

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

Yours sincerely

Dr Ruth Stephenson
Chair

Enclosures: "After ethical review – guidance for researchers" SL-AR2

Copy to: Ms Alison Knight

Appendix L HRA and Health and Care Research Wales (HCRW) Ethics Approval

Miss Katherine Rowell
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20 August 2019

Dear Miss Rowell

HRA and Health and Care Research Wales (HCRW) Approval Letter

Study title:	**A qualitative exploration of couples' expectations and experiences of change following bariatric surgery.**
IRAS project ID:	**261236**
Protocol number:	**N/A**
REC reference:	**19/NS/0137**
Sponsor	**Southampton University**

I am pleased to confirm that **HRA and Health and Care Research Wales (HCRW) Approval** has been given for the above referenced study, on the basis described in the application form, protocol, supporting documentation and any clarifications received. You should not expect to receive anything further relating to this application.

Please now work with participating NHS organisations to confirm capacity and capability, in line with the instructions provided in the "Information to support study set up" section towards the end of this letter.

How should I work with participating NHS/HSC organisations in Northern Ireland and Scotland?
HRA and HCRW Approval does not apply to NHS/HSC organisations within Northern Ireland and Scotland.

If you indicated in your IRAS form that you do have participating organisations in either of these devolved administrations, the final document set and the study wide governance report (including this letter) have been sent to the coordinating centre of each participating nation. The relevant national coordinating function/s will contact you as appropriate.

Please see IRAS Help for information on working with NHS/HSC organisations in Northern Ireland and Scotland.

How should I work with participating non-NHS organisations?
HRA and HCRW Approval does not apply to non-NHS organisations. You should work with your non-NHS organisations to obtain local agreement in accordance with their procedures.

What are my notification responsibilities during the study?

The document "*After Ethical Review – guidance for sponsors and investigators*", issued with your REC favourable opinion, gives detailed guidance on reporting expectations for studies, including:

- Registration of research
- Notifying amendments
- Notifying the end of the study

The HRA website also provides guidance on these topics, and is updated in the light of changes in reporting expectations or procedures.

Who should I contact for further information?
Please do not hesitate to contact me for assistance with this application. My contact details are below.

Your IRAS project ID is **261236**. Please quote this on all correspondence.

Yours sincerely,

Helen Penistone
Approvals Specialist

Email: hra.approval@nhs.net
Telephone: 0207 104 8010

Copy to: *Ms Alison Knight*

Appendix M Excerpt of Coding Manual

Superordinate theme 1: The patient's decision to have bariatric surgery

Subtheme	Code	Description	Example quote
Patient determination to have surgery	Patient willpower	Patients describe being strongly motivated to have bariatric surgery	*"I've always been quite headstrong anyway, I'm around, you know, and I'm one of these people if I make my mind up It really. It's gotta be really severe for me to change. Once I made up my mind, I will achieve it." (Patient, Interview 10)*
	Accepting partner's determination	Partners talk about having to accept the patient's decision to have bariatric surgery	*"I know how determined [patient] is, do you know what I mean? So I knew she'd you know, grab it and run with it so I just wanted it to get started". (Partner, Interview 5)*
	Partner concerns	Partners describe their worries about the operation risks	*"It's a lot you know you think well if they get that wrong they can't stick it back on you know. Whereas if they get the band they can go back in and take the band off. So that was my worry in terms of that permanence of it." (Partner, Interview 12)*
Others' negative views of patient having surgery	Bad experiences of others	Couples spoke about negative experiences of bariatric surgery that they had been told about	*"I knew a couple of people who got gastric bands. So but, it just didn't appeal to me because of the problems they were having with it." (Patient, Interview 10)*

Superordinate theme 2: Superordinate theme 2: The importance of feeling supported			
Subtheme	**Code**	**Description**	**Example quote**
Positive and negative experiences of care from professionals	GP referral	Patients describe their experience of the referral process via their GP	*"I decided, talking to my GP that I wanted to be referred for bariatric surgery. And so, she didn't think it would go through but she referred me and it did." (Patient, Interview 3)*
	Continuity of care	Couples acknowledge the continuation of support received from the bariatric team	*"I got a lot of support, the [dietician] is very good, I can phone her up anytime. And I still do, you know." (Patient, Interview 1)*
	Frustration with the process	Patients express feelings of annoyance when there were difficulties with the surgical journey	*"[The process] was very disjointed. And I don't think it did me any favours having it stretch out that long because it's very difficult to keep yourself on the boil with having to wait all this time in between." (Patient, Interview 8)*
The desire for and value of peer support	Longing to share experiences	Couples report yearning for a forum to be able to share their stories of bariatric surgery	*"They didn't have a group where people could just sort of sit down and talk about their different experiences." (Patient, Interview 1)*
	Togetherness	Couples express the importance of being in the process together	*"Be in it together I think. As long as you've got someone or somebody with you that, well if you're on your own I know it's difficult but, if you've got a good friend maybe try to have somebody coz you do need that support. You do need some support at times." (Patient, Interview 10)*

	Wishing to show gratitude	Patients spoke about feeling driven to give back to the bariatric service to show appreciation	*"And my intention is to go to the next meeting. And help them raise funds for the department because it's about giving back now. They've given me this opportunity and I want to be able to support that." (Patient, Interview 5)*
Lack of support for partners	Information not targeted towards partners	Partners express difficulties in not being given tailored information	*"To be fair not really. It's not really pointed at me. Do you know what I mean? Apart from being involved and not being bothered if I come to the small meetings that we are having. I didn't go to the group thing. But I wasn't allowed to go into that. But other than that it's, no not really I mean it's a nice place with nice people but they don't really point it towards the partner." (Partner, Interview 5)*
	Missing advice	Partners describe not knowing how to support the patient leading to feelings of uncertainty	*"But it was all to do with [patient]. Nothing to help me, nothing to say; "Oh you should do this to help your partner". Nothing is, nothing to do with the partner whatsoever in that whole time." (Partner, Interview 9)*

Superordinate theme 3: Superordinate theme 3: Learning to eat again

Subtheme	**Code**	**Description**	**Example quote**
The physical consequences of bariatric surgery on eating	Problems with food getting stuck	Patients report problems in swallowing food following surgery	*"Because it's here [points to location of band], the food will only go there [points to same location] and of course if you have spicy food, see this is all things I've learned in the last year really, the spicy food will sit on top of the band before it can go through. So it's causing like an issue because it's sitting there." (Patient, Interview 16)*

	Discomfort due to overeating	Patients talk about pain and physical discomfort after eating too much	*"He put it down and I thought; "I'm never going to eat all that" and tried to and I think the last couple of mouthfuls I get a pain here and it's like a stabbing pain and it bloody hurts. So I know if I've eaten too much." (Patient, Interview 9)*
Ongoing process of adjustment	Pacing a meal	Patients describe the ongoing challenge of remembering to eat a meal slowly	*"Yeah, and that's the other thing, it's the 20-minute rule. 20 minutes chewing which gets on my nerves coz I'm chewing and chewing and chewing and chewing. And it's just instilled in my brain now so it's 20 minutes chewing, 20 mouthfuls and then giving it up after a particular period of time. Which I must admit I'm not as good at." (Patient, Interview 16)*
	Food tolerance	Patients explain the process of trial and error in finding out what foods they can eat after surgery	*"I mean, initially a big sort of scary thing for me was I'm a massive chicken fiend. I was vegetarian for a long time, but I eat chicken. I eat fish. And after surgery, it was too dense. I couldn't eat it, mortifying. So, Quorn became a big saviour and then I just add more fish prawns, tuna, salmon, you know, that kind of stuff. Yeah. But I just I just kept going back to it, to eating smaller portions to be able to tolerate it." (Patient, Interview 13)*
New considerations in the dining out experience	Limited understanding	Couples spoke about the struggles they experience in communicating the patient's dietary needs to restaurant staff	*"The worst part about it was the waiter said, what was it? "Do you want me to double it up?" Like the main course size not the starter size. Like; "No, that's why we're asking for a starter". People don't get it." (Patient, Interview 1)*
	Ordering smaller	Couples describe adjusting to	*"We go to lots of places where they do small plates. That's how we*

	portions	dining out by having smaller meals	*socialise so yeah, we go somewhere where we can eat small plates or we can control what we eat." (Patient, Interview 13)*
	Leftovers for the partner	Couples acknowledge that leftover food can be consumed by the partner	*"And I've got, like a human garbage disposal over here [points to partner] that likes my left overs." (Patient, Interview 4)*

Superordinate theme 4: Improved health and quality of life

Subtheme	**Code**	**Description**	**Example quote**
Returning to activity	Being able to join in	Couples note the patient's ability to be part of activities with their families	*You're able to do more things, you can help me with a hell of a lot more. You know before if we were painting the shed [patient] wouldn't be able to do it. I'd have done it all myself. But now she can help us and [son] comes and helps us so we're doing it, we're doing stuff as a family where before; "Oh mummy oh mummy can't do that you know?" (Partner, Interview 9)*
	The opportunity to do more	Couples describe the patient's ability to engage in more activities	*"Yeah I suppose we can go out and about more. You know without having to stop every five minutes for a rest or a coffee or something." (Partner, Interview 16)*
Maintaining positive changes	Awareness of complacency	Patient's acknowledge potential setbacks if they allow themselves to become complacent	*"You need someone to when you get a bit near to falling off the wagon and eating ten doughnuts You need someone to say; "Really?" (Patient, Interview 5)*
	Patient worries about	Patients describe fears about	*"It worries me going back and you know I and I'll say to [partner]; "I feel*

	returning to former self	becoming overweight again	*really fat today, do you think I've put on weight?" and I get really, don't I? But I won't weigh myself." (Patient, Interview 2)*
	Bariatric surgery is a tool not a cure	Couples acknowledge that bariatric surgery is a mechanism to facilitate weight loss but not a magic solution	*"Basically my expectation was to be able to use it as a tool to help lose weight. And also to appreciate that it's not a magic bullet, it doesn't mean you can eat what you want after you have the surgery, you know it doesn't mean that. And sort of sit there and eat gallons of ice cream and doughnuts because you've had surgery therefore you can't gain weight, and a lot of people don't appreciate that." (Patient, Interview 15)*
	Partner monitoring personal food intake	Partners reflect on their experiences of managing their own weight by noting their food intake following the patient's surgery	*"It's also hard for me to be eating healthy meals, because she'll come home sometimes, and she's had whatever at work and she's not hungry. So I sit there and think well there's not much point, it's not worth me cooking a meal just for me so I end up eating crap." (Partner, Interview 2)*

Superordinate theme 5: Confidence and body image

Subtheme	**Code**	**Description**	**Example Quote**
Unforeseen disappointments	Minimal weight loss	Patients describe the unexpected eventuality of not losing weight as was predicted	*"She [GP] is trying to with the tablets I mean, but my blood sugars aren't high, not what I call high. To some people's high, I run about nine I suppose, but I thinks it's because they can't give me any more tablets. And she just keeps saying; "You need to lose weight, you need to lose weight". So I said: "Right" and I have been back to the bariatric people. She sort of agrees with me; [dietician] agrees with me that this band isn't working. For some reason it is not working." (Patient, Interview 11)*

	Excess skin	Couples talk about their experiences of coping with excess skin post-surgery	*"The physical changes are the skin. You're left with a lot of skin. And I've only noticed that probably eight months into it. You have, depending on I guess I'd got to about seven stone by then, all of a sudden, this hanging skin. And that is quite distressing when you suddenly realise it's there." (Patient, Interview 7)*
Acceptance of body shape now	Making comparisons to others	Patients describe the impact of comparing their weight loss and body shape to others	*"I mean, I was getting tinier and all that. I think I'm lighter than my dietician now which she's not pleased with cause she said that's never happened before. I thought that was funny." (Patient, Interview 9)*
	Patient satisfaction with their body	Patients spoke about feeling content with how they look following bariatric surgery	*"Yeah I do feel good about myself. Or better about myself. Not good but better." (Patient, Interview 7)*
	Clothes shopping as a positive experience	Patients report the ease and enjoyment associated with buying clothes since losing weight	*"I couldn't do that, I had to get between 24's and 30's and bulk buy heaps of different sizes to just see which one fit. Now I can go in and be like; "I'll either be a 10-12 or a 12-14", if it's that shop in that size and I can pick something up and not have to try it on. Because I know that it will fit now." (Patient, Interview 6)*

Appendix N Selected Extracts from my Reflective Log

Initial recruitment

I started making some phone calls today to follow-up on enquiries that had been made about the study. I was a bit worried about ringing people in case they had changed their minds or weren't interested once I'd explained what participation would involve. I also thought about the possibility of burdening people or inconveniencing them. But, the calls went quite well. People seemed curious about the project and how they may be able to help. There was some hesitance about whether partners would be as willing, but most people said they'd ask them and get back to me. I think actively making follow-up calls reminded me that people can say no to taking part. One person decided they weren't interested after hearing abut the nature of the questions that she and her husband would be asked. She explained that these were sensitive topics that she didn't feel she'd wish to talk about with a stranger, which I completed respected. Overall, it felt positive to make contact with people and talk about the project. I'm hopeful that I'll have a few consenting couples soon.

Arranging interviews

I have four interviews booked in for the next few weeks. It's reassuring that people are getting back to me about taking part and I'm managing to secure dates to interview them. Some participants live quite far away. One couple that I'm due to see live in Salisbury so that's roughly an hour in the car. I just feel very grateful that people are willing to give me some of their time to conduct my interview, so the travel feels insignificant in that respect.

Before first interview

I'm due to meet the first couple to interview today. I'm feeling apprehensive as it's the first one and I don't really know what to expect. I've tried to prepare myself as best I can by familiarising myself with the interview schedule and by making sure I know what

paperwork I need to explain and get signed. My biggest concern is that the interview goes off track and that I struggle to get it back on topic.

After first interview

I feel really relieved that the first interview is complete. The couple I met were very open and willing to share their story with me, which put me at ease and helped with the interview process. I was struck that the patient had lost 11 stone through having bariatric surgery and it seems to have really impacted his life in a positive way. It's clear he's in a supportive and loving partnership with his wife and I could really sense the love they have for each other from their language and gestures during the interview. However, it was hard to hear about the physical pain and discomfort the patient experienced post-surgery. He commented that he didn't always feel very cared for by hospital staff when he was recovering, and I felt sad when he told me this. I felt empathy for him when he talked about having a loss of control whilst his recovery was in the hands of other people. It made me think about how helpless that might feel.

Systemic teaching day

I was encouraged to think about the systemic influences that were playing a part in my interviews today. We talked about the use of circular questions to help enrich the data collection process and it was helpful to consider how circular questions could have enhanced the design of my interview schedule. An example question may have been; "Knowing what you know now, what would you or the service have done differently?" I think this type of question would have encouraged the couple to reflect on what would've helped them on their journey and this would link well with the research areas of expectations and change. I'm aware that I don't want to stray away from the interview schedule I've created, as I want consistency across the interviews. But I'm thinking about how I may interweave some circular questions into my follow-up questions if this feels appropriate and relevant in future interviews.

After interview four

I've listened to four audio recordings of the interviews now and it's come to my attention that I talk too much between questions. I think this may be the therapist-type inclination that I have to try to make sense of what the couple are saying. I don't think it's coming across as intrusive, but I want as much data as I can from the couple and by spending time talking myself, I'm jeopardising that a little bit. I know I struggle with silence so it may be that I'm talking to try to prevent that. However, this is something I need to get better at sitting with. I'm going to try to be less vocal in the remaining interviews to allow the couple the reflective space they deserve to talk about their experiences.

Transcribing

I've found the process of listening to the interviews back and transcribing the data so far quite challenging. I think that some of the stories I've heard have been emotional and listening to the accounts again has highlighted that. I feel frustrated for some of the patients who have not had their expectations met by bariatric surgery. I imagine it must be so daunting to go through major surgery and then so upsetting not getting the desired outcome. The impact that these disappointments and struggles have on the partner too are apparent from what is said. The sense of sadness and disappointment is felt by both parties and I wonder if there was some transference to me in these cases. As I write this, it makes me think about the pressures placed upon bariatric surgery to change the patient's life, and in turn, the huge responsibility that lies with the bariatric team and the patient to deliver it.

List of References

Adams, T. D., Davidson, L. E., Litwin, S. E., Kolotkin, R. L., LaMonte, M. J., Pendleton, R. C., Strong,… Hunt, S.C. (2012). Health Benefits of Gastric Bypass Surgery After 6 Years. *JAMA, 308*(11), 1122–1131. doi: 10.1001/2012.jama.11164

Achenbach, T.M. (1991). *Manual for the Child Behavior Checklist/4-18 and 1991 profile*, Burlington, VT: University of Vermont Department of Psychiatry.

Angrisani, L., Santonicola, A., Iovino, P., Vitiello, A., Zundel, N., Buchwald, H. & Scopinaro, N. (2014). Bariatric Surgery and Endoluminal Procedures: IFSO Worldwide Survey 2014. *Obesity Surgery*, *27*(9):2279.

Aramburu Alegría, C. & Larsen, B. (2016). Contextual care of the patient following weight-loss surgery: Relational views and maintenance activities of couples, *Journal of the American Association of Nurse Practitioners*, *29*, 1, 17-25.

Ard, J. D., Rosati, R., & Oddone, E. Z. (2000). Culturally-sensitivity weight loss program produces significant reduction in weight, blood pressure and cholesterol in eight weeks. *Journal of the National Medical Association, 92*, 515–523.

Aron, A., Aron, E. N., Tudor, M., & Nelson, G. (2004). Close relationships as including other in the self. In H. T. Reis & C. E. Rusbult (Eds.), *Close relationships: Key readings* (pp. 365-379). Philadelphia, PA: Taylor & Francis.

Baillot A, Brais-Dussault E, Bastin A, Cyr C, Brunet J, Aimé A… Bernard, P. (2017). What Is Known About the Correlates and Impact of Excess Skin After Bariatric Surgery: A Scoping Review. *Obesity Surgery*, *27*(9), 2488-2498.

Battle, J. (1992). *Culture-Free Self-Esteem Inventories* (2nd ed.). Pro-Ed: Austin, TX

Beck, A.T., Ward, C. H., Mendelson, M., Mock, J. & Erbaugh, J. (1961) An inventory for measuring depression. *Archives of General Psychiatry,* 4, 561-571.

Beck, A. T., Steer, R.A. & Garbin, M.G. (1988) Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation. *Clinical Psychology Review,* 8(1), 77-100.

Berge, J. M., & Everts, J. C. (2011). Family-Based Interventions Targeting Childhood Obesity: A Meta-Analysis. *Childhood obesity (Print)*, *7*(2), 110–121. https://doi.org/10.1089/chi.2011.07.02.1004.berge

Bertoletti, J. Aparicio, M. J. G., Bordignon, S. & Trentini, C. M. (2019). *Bariatric Surgical Practice and Patient Care*, 14(2), 81-92. doi.org/10.1089/bari.2018.0036

Bhaskar, R. (2016). *Enlightened Common Sense: The Philosophy of Critical Realism*. London: Routledge.

Biörserud, C., Nielsen, C., Staalesen, T., Elander, A., Olbers, T. & Olsén, M. F. (2013). Sahlgrenska Excess Skin Questionnaire (SESQ): a reliable questionnaire to assess the experience of excessive skin after weight loss. *Journal of Plastic Surgery and Hand Surgery*, *47*, 50–59.

Birleson, P. (1981). "The validity of depression disorder in childhood and the development of a self-rating scale. A research report", *Journal of Psychology and Psychiatry, 22(1),* 73-88.

Black, C. M. & Wilson, G. T. (1996). Assessment of eating disorders: interview versus questionnaire. *International Journal of Eating Disorders*, *20*(1), 43–50.

Bocchieri, L. E., Meana, M. & Fisher, B. L. (2002). A review of psychosocial outcomes of surgery for morbid obesity, *Journal of Psychosomatic Research*, *52*(3) 155–165.

Boland, A., Cherry, M. G. & Dickson, R. (Eds.) (2017). *Doing a systematic review: a student's guide* (2nd ed.). Los Angeles; London: SAGE

Bolger, N., DeLongis, A., Kessler, R.C. & Schilling, E.A. (1989). Effects of daily stress on negative mood. *Journal of Personality and Social Psychology, 57*, 808–818.

Borbasi S, Jackson D, Wilkes L. (2005). Fieldwork in nursing research: positionality, practicalities and predicaments. *Journal of Advanced Nursing, 51*(5):493–501.

Bowen M. (1978). *Family Therapy in Clinical Practice*. New York, NY: Aronson.

Bowlby, J. (1988). *A secure base: parent-child attachment and healthy human development*. New York: Basic Books.

Braet, C. & Van Winckel, M. (2000). Long-term follow-up of a cognitive behavioural treatment program for obese children. Behavioural Therapy, 31, 55-74.

Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101. doi: 10.1191/1478088706qp063oa.

Brownell KD, Stunkard AJ. Couples training, pharmacotherapy, and behavior therapy in the treatment of obesity. *Arch Gen Psychiatry*. 1981;38(11):1224-1229. doi:10.1001/archpsyc.1981.01780360040003

Buchwald, H., Avidor, Y., Braunwald, E., Jensen, M. D., Pories, W., Fahrbach, K. & Schoelles, K. (2004). Bariatric Surgery: A Systematic Review and Meta-analysis. *JAMA, 292*(14), 1724–1737. doi:10.1001/jama.292.14.1724

Bunga, R. A. (2018). Psychological perspectives in obesity. *Appetite, 1*, 56-71. doi: org/10.5281/zenodo.1161392

Burns, E., Fenwick, J., Schmied, V. & Sheehan, A. (2012). Reflexivity in midwifery research: the insider/outsider debate. *Midwifery*, *28*(1):52–60.

Bruze, G., Holmin, T. E., Peltonen, M., Ottosson, J., Sjöholm, K., Näslund, I… Svensson, P. A. (2018). Associations of Bariatric Surgery With Changes in Interpersonal Relationship Status: Results From 2 Swedish Cohort Studies. *JAMA surgery*, *153*(7), 654–661. https://doi.org/10.1001/jamasurg.2018.0215

Bylund, A., Benzein, E., & Sandgren, A. (2017). Stabilizing family life after gastric bypass surgery. *International journal of qualitative studies on health and well-being*, *12*(1), 1325674. https://doi.org/10.1080/17482631.2017.1325674

Cadena-Obando, D., Ramírez-Rentería, C., Ferreira-Hermosillo, A., Albarrán-Sanchez, A., Sosa-Eroza, E., Molina-Ayala, M. & Espinosa-Cárdenas, E. (2020). Are there really any predictive factors for a successful weight loss after bariatric surgery? *BMC Endocrine Disorders*, 20. doi.org/10.1186/s12902-020-0499-4

Caldwell, K. (2014). Dyadic interviewing: a technique valuing interdependence in interviews with individuals with intellectual disabilities. *Qualitative Research*, *14*(4), 488–507. https://doi.org/10.1177/1468794113490718

Campbell-Voytal, K. D., Hartlieb, K.B., Cunningham, P. B., Jacques-Tiura, A. J., Ellis, D. A., Kai-Lin, C. J. & Naar-King, S. (2018). African American Adolescent-Caregiver Relationships in a Weight Loss Trial. *Journal of Child and Family Studies, 27*(3), 835-842. doi:10.1007/s10826-017-0920-4

Camps, M. A., Zervos, E., Goode, S. & Rosemurgy, A. S. (1996). Impact of bariatric surgery on body image perception and sexuality in morbidly obese patients and their partners. *Obesity Surgery, 6*(4), 356-360.

Chan, R. S., Lok, K. Y., Sea, M. M., & Woo, J. (2009). Clients' experiences of a community based lifestyle modification program: a qualitative study. *International journal of environmental research and public health*, *6*(10), 2608–2622. doi.org/10.3390/ijerph6102608

Chan, R. S. & Woo, J. (2010). Prevention of overweight and obesity: how effective is the current public health approach. *International journal of environmental research and public health*, *7*(3), 765–783. doi.org/10.3390/ijerph7030765

Chang, S., Stoll, C.R.T., Song, J., Varela, J.E., Eagon, C.J. & Colditz, G.A. (2014). The Effectiveness and Risks of Bariatric Surgery: An Updated Systematic Review and Meta-analysis, 2003-2012. *JAMA Surgery, 149*(3), 275–287. doi:10.1001/jamasurg.2013.3654

Clark, J.E. (2015) Diet, exercise or diet with exercise: comparing the effectiveness of treatment options for weight-loss and changes in fitness for adults (18–65 years old) who are overfat, or obese; systematic review and meta-analysis. *Journal of Diabetes & Metabolic Disorders*, *14*(31). doi.org/10.1186/s40200-015-0154-1

Clark, S. M., Saules, K. K., Schuh, L. M., Stote, J. & Creel, D. B. (2014). Associations between relationship stability, relationship quality, and weight loss outcomes among bariatric surgery patients, *Eating Behaviours*, *15*(4), 670-672. doi.org/10.1016/j.eatbeh.2014.09.003.

Cohen S. (2004) Relationships and health. American Psychologist 59: 676–684.

Cohen, S. & Wills, T.A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, *98*(2), 310–57.

Community-University Partnership for the Study of Children, Youth, and Families (2011). *Review of the Culture-Free Self-Esteem Inventories, Third Edition (CFSEI-3).* Edmonton, Alberta, Canada.

Cook, W. (2018). The effect of personalised weight feedback on weight loss and health behaviours: Evidence from a regression discontinuity design. *Health Economics, 28*(1), 161-172. doi.org/10.1002/hec.3829

Coulman, K. D., MacKichan, F., Blazeby, J. M., & Owen-Smith, A. (2017). Patient experiences of outcomes of bariatric surgery: a systematic review and qualitative synthesis. *Obesity reviews: an official journal of the International Association for the Study of Obesity, 18*(5), 547–559. doi:10.1111/obr.12518.

Croker H, Viner RM, Nicholls D, et al. Family-based behavioural treatment of childhood obesity in a UK National Health Service setting: randomized controlled trial. *Int J Obes (Lond)*. 2012;36(1):16-26. doi:10.1038/ijo.2011.182

Dailey, R.M. (2017). Exploring the role of the romantic relationship context in weight loss. *Journal of Social and Personal Relationships, 35(*5), 679-701. doi: org/10.1177/0265407517693430

Dang, H. M., Nguyen, H., & Weiss, B. (2017). Incremental validity of the Child Behavior Checklist (CBCL) and the Strengths and Difficulties Questionnaire (SDQ) in Vietnam. *Asian journal of psychiatry*, *29*, 96–100. doi:org/10.1016/j.ajp.2017.04.023

da Silva, S. S. & da Costa Maia, A. (2012). Obesity and treatment meanings in bariatric surgery candidates: a qualitative study. *Obesity Surgery,* 22, 1714–22. doi:10.1007/s11695-012-0716-y

Deci, E.L. & Ryan, R.M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11,* 227–268.

de Melo Boff, R., Araujo Liboni, R. P., de Azevedo Batista, I. P., de Souza, L. H. & da Silva Oliveira, M. (2016). Weight loss interventions for overweight and obese adolescents: a systematic review. *Eating and Weight Disorders – Studies on Anorexia, Bulemia and Obesity,* 22, 211–229. doi.org/10.1007/s40519-016-0309-1

De Miguel-Etayo P, Moreno LA, Santabárbara J, et al. Diet quality index as a predictor of treatment efficacy in overweight and obese adolescents: The EVASYON study. *Clin Nutr*. 2019;38(2):782-790. doi:10.1016/j.clnu.2018.02.032

Department of Health. (2005). *Research governance framework for health and social care, 2nd ed*. London.

Department of Health. (2010). *Liberating the NHS: Legislative Framework and Next Steps.* Retrieved from: http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/@ps/documents/digitalasset/dh_122707.pdf

Derogatis, L.R. (1991). *The Brief Symptom Inventory (BSI); Administration, Scoring and Procedures Manual-II*. Baltimore, MD: Clinical Psychometric Research Inc.

Desogus, D., Menon, V., Singhal, R. & Oyebode, O. (2019). An Examination of Who Is Eligible and Who Is Receiving Bariatric Surgery in England: Secondary Analysis of the Health Survey for England Dataset. *Obesity* Surgery, 29, 3246–3251. doi.org/10.1007/s11695-019-03977-3

de Zwaan, M., Hilbert, A., Swan-Kremeier, L., Simonich, H., Lancaster, K., Howell, L. M… Mitchell, J. E. (2010). Comprehensive interview assessment of eating behaviour 18–l35 months after gastric bypass surgery for morbid obesity. *Surgery for Obesity Related Disorders, 6*, 79–85.

Eisikovits, Z., Koren, C. (2010). Approaches to and outcomes of dyadic interview analysis. *Qualitative Health Research, 20*, 1642–1655. doi:10.1177/1049732310376520

Ellis, D. A., Janisse, H., Naar-King, S., Kolmodin, K. Catherine Jen, K. L., Cunningham, P. & Marshall, S. (2010). The effects of multisystemic therapy on family support for weight loss among obese African-American adolescents: findings from a randomized controlled trial. *Journal of Developmental & Behavioral Pediatrics, 31(*6), 461-468. doi:10.1097/DBP.0b013e3181e35337

Fagg, J., Chadwick, P., Cole, T. J., Cummins, S., Goldstein, H., Lewis, H., … Law, C. (2014). et al. From trial to population: a study of a family-based community intervention for childhood overweight implemented at scale. *International Journal of Obesity (London), 38*(10), 1343-1349. doi:10.1038/ijo.2014.103

Faria, G. R. (2017). A brief history of bariatric surgery. Porto Biomedical Journal, 2(3), 90–92. Madura, J. A. & Dibaise, J. K. (2012). Quick fix or long-term cure? Pros and cons of bariatric surgery. *F1000 medicine reports, 4*(19). doi:10.3410/M4-19

Feinstein, A.R. (1960). The treatment of obesity: an analysis of methods, results, and factors which influence success. *Journal of Chronic Diseases*, 11, 349-293.

Finch, A.J. Jr, Saylor, C.F., Edwards, G.L. & McIntosh, J.A. (1987). Children's Depression Inventory: Reliability over repeated administrations. *Journal of Clinical Child Psychology,16*(4), 339–341.

Gardner, G. (1996). The nurse researcher: an added dimension to qualitative research methodology. *Nursing Inquiry, 3*(3), 153–8.

Geraci, A. A., Brunt, A., & Marihart, C. (2014). The Work behind Weight-Loss Surgery: A Qualitative Analysis of Food Intake after the First Two Years Post-Op. *ISRN obesity, 2014*, 427062. https://doi.org/10.1155/2014/427062

Gero, D., Hulesch, B. & Bueter, M. (2018). Mindset and Communication Barriers in the Diffusion of Bariatric Surgery. *Current Atherosclerosis Reports, 20*, 38. https://doi.org/10.1007/s11883-018-0738-6

Giannakopoulos, G., Dimitrakaki, C., Papadopoulou, K., Tzavara, C., Kolaitis, G., Ravens-Sieberer, U. & Tountas, Y. (2013). Reliability and validity of the Strengths and Difficulties Questionnaire in Greek adolescents and their parents. *Health, 5*, 1774-1783. doi: 10.4236/health.2013.511239.

Gill, P., Stewart, K., Treasure, E., & Chadwick, B. (2008). Methods of data collection in qualitative research: interviews and focus group. *British Dental Journal, 204*(6), 291-295. Doi: 10.1038/bdj.2008.192.

Golan, M. (2011). Parents as agents of change in childhood obesity – from research to practice. *International Journal of Pediatric Obesity, 1*, 66–76.

Golan, M., Kaufman, V. & Shahar, D. R. (2006). Childhood obesity treatment: targeting parents exclusively v. parents and children. *British Journal of Nutrition, 95*(5), 1008-1015. doi:10.1079/bjn20061757

Goldschmidt, A. B., Sinton, M. M., Aspen, V. P., Tibbs, T. L., Stein, R. I., Saelens, B. E.,… Wilfley, D. E. (2010). Psychosocial and familial impairment among overweight youth with social problems. *International Journal of Pediatric Obes*ity, *5*(5), 428-435. doi:10.3109/17477160903540727

Goodman, R. (1997). The Strengths and Difficulties Questionnaire: a research note. *Journal of Child Psychology, 38*, 581–586.

Gopalakrishnan, S. & Ganeshkumar, P. (2013). Systematic Reviews and Meta-analysis: Understanding the Best Evidence in Primary Healthcare. *Journal of family medicine and primary care*, *2*(1), 9–14. doi:10.4103/2249-4863.109934

Gorin, A. A., Powers, T. A., Koestner, R., Wing, R. R., & Raynor, H. A. (2014). Autonomy support, self-regulation, and weight loss. *Health psychology: official journal of the Division of Health Psychology, American Psychological Association*, *33*(4), 332–339.

Graham, Y., Hayes, C., Small, P. K., Mahawar, K. & Ling, J. (2017). Patient experiences of adjusting to life in the first 2 years after bariatric surgery: a qualitative study. *Clinical obesity*, *7*(5), 323–335. doi:10.1111/cob.12205

Grønbaek, H. N., Madsen, S. A. & Michaelsen, K. F. (2009). Family involvement in the treatment of childhood obesity: the Copenhagen approach. *The European Journal of Pediatrics, 168*(12), 1437-1447. doi:10.1007/s00431-009-0944-x

Groven, K. S., Galdas, P. & Solbrække, K. N. (2015). Becoming a normal guy: Men making sense of long-term bodily changes following bariatric surgery. *International Journal of Qualitative Studies on Health and Well-being, 10*(1), 29923, doi: 10.3402/ qhw.v10.29923

Groven, K. S., Råheim, M., Braithwaite, J. & Engelsrud, G. (2013). Weight loss surgery as a tool for changing lifestyle? *Medicine, Health Care and Philosophy*, *16*, 699-708. doi:10.1007/s11019-013-9471-7

Ferriby, M., Pratt, K.J., Balk, E., Feister, K., Noria, S. & Needleman, B. (2015). Marriage and Weight Loss Surgery: a Narrative Review of Patient and Spousal Outcomes. *Obesity Surgery*, *25*, 2436–2442. doi.org/10.1007/s11695-015-1893-2.

Hameed, S., Salem, V., Tan, T. M., Collins, A., Shah, K., Scholtz, S….Chahal, H. (2018). Beyond Weight Loss: Establishing a Postbariatric Surgery Patient Support Group-What Do Patients Want?. *Journal of Obesity*. https://doi.org/10.1155/2018/8419120

Harden, A. (2010). *Mixed-Methods Systematic Reviews: Integrating Quantitative and Qualitative Findings National Center for the Dissemination of Disability Research (NCDDR): United States, 2010*(Report No. 25). Retrieved from the Center on Knowledge Translation for Disability and Rehabilitation Research (KTDRR) website: https://ktdrr.org/ktlibrary/articles_pubs/ncddrwork/focus/focus25/Focus25.pdf

Harrison, J. K., Reid, J., Quinn, T. J., & Shenkin, S. D. (2017). Using quality assessment tools to critically appraise ageing research: a guide for clinicians. *Age and Ageing*, *46*(3), 359-365. Doi 10/1093/ageing/afw223.

Harter, S. (1982). The Perceived Competence Scale for Children. *Child Development, 53*, 87–97.

Heatherton, T. F., & Baumeister, R. F. (1991). Binge eating as escape from self-awareness. *Psychological Bulletin*, *110*(1), 86–108. https://doi.org/10.1037/0033-2909.110.1.86

Hebebrand, J. & Herpertz-Dahlmann, B. (2009). Psychological and psychiatric aspects of paediatric obesity. *Child Adolescent Psychiatry*, *18*(1), 49–65.

Herpertz, S., Kielmann, R., Wolf, A., Langafel, M., Senf, W. & Herebrand, J. (2003). Does obesity surgery improve psychosocial functioning? A systematic review. *International Journal of Obesity, 27*, 1300–1314. doi.org/10.1038/sj.ijo.0802410.

Holloway, I., Todres, L. (2003). The status of method: Flexibility, consistency and coherence. *Qualitative Research, 3*, 345–357. doi:10.1177/1468794103033004

Holmes, J. *(*2000*).* Social relationships: The nature and function of relational schemas. *European Journal of Social Psychology, 30,* 447–495. doi: 10.1002/1099-0992

Homer, C. V., Tod, A. M., Thompson, A. R., Allmark, P. & Goyder, E. (2016). Expectations and patients' experiences of obesity prior to bariatric surgery: a qualitative study. *BMJ Open* 6:e009389. doi: 10.1136/bmjopen-2015-009389

Huang, C. H., Wu, H. H., Lee, Y. C. & Li, L. (2019). What Role Does Patient Gratitude Play in the Relationship Between Relationship Quality and Patient Loyalty? *Inquiry: a journal of medical care organization, provision and financing*, *56*, 46958019868324. doi.org/10.1177/0046958019868324

Irwin, D.E., Stucky, B., Langer, M.M., Thissen, D., DeWitt, E.M., Lai, J.S. & DeWalt, D.A. (2010). An item response analysis of the pediatric PROMIS anxiety and depressive symptoms scales. *Quality of Life Research, 19*, 595–607. doi: 10.1007/s11136-010-9619-3

Janicke, D. M., Gray, W. N., Mathews, A. E., Simon, S. L., Lim, C. S., Dumont-Driscoll, M., & Silverstein, J. H. (2011). A pilot study examining a group-based behavioral family intervention for obese children enrolled in Medicaid: Differential outcomes by race. *Children's Health Care, 40*(3), 212-231. doi.org/10.1080/02739615.2011.590394

Jinks A, English S, Coufopoulos A. Evaluation of a family-centred children's weight management intervention. Health Educ Behav. 2013;113(2):88–101.

Johns, D. J., Hartmann-Boyce, J. & Jebb, S. A. (2014). Diet or Exercise Interventions vs Combined Behavioral Weight Management Programs: A Systematic Review and Meta-Analysis of Direct Comparisons. *Journal of the American Academy of Nutrition and Dietetics, 114*(10), 1557-68. doi: 10.1016/j.jand.2014.07.005

Kalarchian, M. A., Marcus, M. D., Courcoulas, A. P., Cheng, Y., & Levine, M. D. (2014). Self-report of gastrointestinal side effects after bariatric surgery. *Surgery for obesity and related diseases: official journal of the American Society for Bariatric Surgery*, *10*(6), 1202–1207. doi.org/10.1016/j.soard.2014.08.007

Kaly, P., Orellana, S., Torrella, T., Takagishi, C., Saff-Koche, L. & Murr, M. M. (2008). Unrealistic weight loss expectations in candidates for bariatric surgery. *Surgery of Obesity Related Disorders, 4*(1):6–10.

Kaplan, S.G., Arnold, E.M., Irby, M.B., Boles, K.A., Skelton, J.A. (2014). Family systems theory and obesity treatment applications for clinicians. *Infant Child Adolescent Nutrition, 6*, 24–29.

Kelly, T., Yang, W., Chen, C., Reynolds, K. & He, J. (2008). Global burden of obesity in 2005 and projections to 2030. *International Journal of Obesity, 32,* 1431–1437. doi.org/10.1038/ijo.2008.102

Kiernan, M., Moore, S. D., Schoffman, D. E., Lee, K., King, A. C., Taylor, C. B.,… Perri, M. G. (2012). Social support for healthy behaviors: scale psychometrics and prediction of weight loss among women in a behavioral program. *Obesity (Silver Spring, Md.), 20*(4), 756–764. /doi.org/10.1038/oby.2011.293

King, N. (2004). *Using templates in the thematic analysis of text*. In Cassell, C., Symon, G. (Eds.), Essential guide to qualitative methods in organizational research (pp. 257–270). London, UK: Sage.

Kingett, H. (2014). *A guide to eating and drinking after Gastric Bypass*. [Brochure]. London: University College Hospital.

Kinzl, J. F., Trefalt, E., Fiala, M., Hotter, A., Biebl, W. & Aigner, F. (2001). Partnership, sexuality, and sexual disorders in morbidly obese women: Consequences of weight loss after gastric banding. *Obesity Surgery*, *11*(4), 455 – 458.

Kirk, S., Price, S., Penney, T., Rehman, L., Lyons, R., Piccinini-Vallis, H. & Aston, M. (2014). Blame, shame, and lack of support: A multilevel study on obesity management. *Qualitative Health Research*, 24(6), 790–800. doi: 10.1177/1049732314529667.

Kmet, L., Lee, R. & Cook, L. (2004). *Standard Quality Assessment Criteria for Evaluating Primary Research Papers from a Variety of Fields.* Alberta Heritage Foundation for Medical Research (AHFMR), Edmonton.

Koestner, R., Powers, T. A., Milyavskaya, M., Carbonneau, N. & Hope, N. (2014). Goal internalization and persistence as a function of autonomous and directive forms of goal support. *Journal of Personality*, 83, 179– 190.

Kovacs, M. (1981). Rating scales to assess depression in school-aged children. *Acta paedopsychiatrica, 46*, 305–315.

Kubik, J. F., Gill, R. S., Laffin, M. & Karmali, S. (2013) The impact of bariatric surgery on psychological health. Journal of Obesity, 837989.

Kulik, N., Valle, C. G., & Tate, D. F. (2016). Friend and Family Support for Weight Loss in Adolescent Females. *Childhood obesity (Print), 12*(1), 44–51. doi.org/10.1089/chi.2015.0044

Larson C. (2017) Nutritional Considerations Following Bariatric Surgery. In: Temple, N., Wilson, T. & Bray, G. (Eds)., *Nutrition Guide for Physicians and Related Healthcare Professionals (Nutrition and Health)*. Basel, Switzerland; Humana Press.

Legenbauer, T., Müller, A., de Zwaan, M., & Herpertz, S. (2020). Body Image and Body Avoidance Nine Years After Bariatric Surgery and Conventional Weight Loss Treatment. *Frontiers in psychiatry*, *10*, 945. https://doi.org/10.3389/fpsyt.2019.00945

Lemstra, M., Bird, Y., Nwankwo, C., Rogers, M. & Moraros, J. (2016). Weight loss intervention adherence and factors promoting adherence: a meta-analysis. *Patient preference and adherence*, *10,* 1547–1559. doi:10.2147/PPA.S103649

Lent, M. R., Bailey-Davis, L., Irving, B. A., Wood, G. C., Cook, A. M., Hirsch, A. G…. Franceschelli-Hosterman, J. (2016). Bariatric Surgery Patients and Their Families: Health, Physical Activity, and Social Support. *Obesity surgery*, *26*(12), 2981–2988. doi.org/10.1007/s11695-016-2228-7

Leske, S., Strodl, E. & Hou, X. (2012). A qualitative study of the determinants of dieting and non-dieting approaches in overweight/obese Australian adults. *BMC Public Health, 12*(1086). doi:org/10.1186/1471-2458-12-1086

Liu, R.H. & Irwin, J.D. (2017). Understanding the post-surgical bariatric experiences of patients two or more years after surgery. *Quality of Life Research, 26*, 3157–3168. doi:10.1007/s11136-017-1652-z.

Livhits, M., Mercado, C., Yermilov, I., Parikh, J. A., Dutson, E., Mehran, A… Gibbons, M. M. (2011). Is social support associated with greater weight loss after bariatric surgery?: a systematic review. *Obesity Review, 12*(2), 142–8.

Madan, A.K., Turman, K.A. & Tichansky, D.S. (2005). Weight Changes in Spouses of Gastric Bypass Patients. *Obesity Surgery, 15*, 191–194.

Maggio, A. B., Saunders Gasser, C., Gal-Duding, C., Beghetti, M., Martin, X. E., Farpour-Lambert, N. J. Chamay-Weber, C. (2013). BMI changes in children and adolescents attending a specialized childhood obesity center: a cohort study. *BMC Pediatrics*, *13*, 216. doi:10.1186/1471-2431-13-216

Magro, D. O., Geloneze, B., Delfini, R., Pareja, B. C., Callejas, F. & Pareja, J. C. (2008). "Long-term weight regain after gastric bypass: a 5-year prospective study," *Obesity Surgery*, *18*(6), 648–651.

Makris, A., & Foster, G. D. (2011). Dietary approaches to the treatment of obesity. *The Psychiatric clinics of North America*, *34*(4), 813–827. https://doi.org/10.1016/j.psc.2011.08.004

Markey, C. N., August, K. J., Bailey, L. C., Markey, P. M., & Nave, C. S. (2016). The pivotal role of psychology in a comprehensive theory of obesity. *Health psychology open*, *3*(1), 2055102916634365. doi:10.1177/2055102916634365

Markey, C.N, Gomel, J.N. & Markey, P.M. (2008). Romantic relationships and eating Regulation: An investigation of partners' attempts to control each others' eating behaviors. *Journal of Health Psychology 13*(3): 422–432.

Marks, D. (2015). Homeostatic theory of obesity. *Health Psychology Open*, 1-30. doi: 10.1177/2055102915590692

Masood, A., Alsheddi, L., Alfayadh, L., Bukhara, B., Elawad, R. & Alfadda, A.A. (2019). Dietary and lifestyle factors serve as predictors of successful weight loss maintenance postbariatric surgery. Journal of Obesity, 7295978.

McGrice, M., & Don Paul, K. (2015). Interventions to improve long-term weight loss in patients following bariatric surgery: challenges and solutions. *Diabetes, metabolic syndrome and obesity: targets and therapy*, *8*, 263–274. doi.org/10.2147/DMSO.S57054

McLean, N., Griffin, S., Toney, K. & Hardeman, W. (2003). Family involvement in weight control, weight maintenance and weight-loss interventions: a systematic review of randomised trials. *International Journal of Obesity; 27*, 987–1005.

Mehta, A., Hutfless, S., Blair, A. B., Karcher, M., Nasatka, S., Schweitzer, M., … Nguyen, H. T. (2017). Outcomes of Partnered Individuals Undergoing Bariatric Surgery Together: A Single Institution Case Series. Obesity surgery, 27(8), 2207–2210. doi:10.1007/s11695-017-2728-0.

Merriwether, E. N., Rakel, B. A., Zimmerman, M. B., Dailey, D. L., Vance, C., Darghosian, L.,… Sluka, K. A. (2017). Reliability and Construct Validity of the Patient-Reported Outcomes Measurement Information System (PROMIS) Instruments in Women with Fibromyalgia. *Pain medicine (Malden, Mass.), 18*(8), 1485–1495. doi:org/10.1093/pm/pnw187

Mikulincer, M., Shaver, P. & Pereg, D. (2003). Attachment theory and affect regulation: the dynamics, development, and cognitive consequences of attachment-related strategies. *Motivation & Emotion, 27*(2), 77–102. doi:10.1023/A:1024515519160.

Mitchell, J. E., Lancaster, K. L., Burgard, M. A., Howell, L. M., Krahn, D. D., Crosby, R. D… Gosnell, B. A. (2001). Long-term follow-up of patients' status after gastric bypass. *Obesity Surgery, 4,* 464–468.

Moore, D. D. & Cooper, C. E. (2016). Life After Bariatric Surgery: Perceptions of Male Patients and Their Intimate Relationships. *Journal of Marital and Family Therapy, 42*(3), 495-508. doi.org/10.1111/jmft.12155

Morgan, D. L., Eliot, S., Lowe, R. A., & Gorman, P. (2016). Dyadic Interviews as a Tool for Qualitative Evaluation. *American Journal of Evaluation, 37*(1), 109–117. doi.org/10.1177/1098214015611244

Naar-King, S., Ellis, D. A., Idalski Carcone, A., Templin, T., Jacques-Tiura, A. J., Hartlieb, K. B.,… Kai-Lin, C. J. (2015). Sequential multiple assignment randomized trial (SMART) to construct weight loss interventions for African American adolescents. *Journal of Clinical Child & Adolescent Psychology, 45(*4):428-41.

Nagai, Y., Nomura, K., Nagata, M., Kaneko, T., & Uemura, O. (2018). Children's Perceived Competence Scale: reevaluation in a population of Japanese elementary and junior high school students. *Child and adolescent psychiatry and mental health, 12,* 36. doi.org/10.1186/s13034-018-0241-4

Nancarrow, A., Hollywood, A., Ogden, J. & Hashemi, M. (2018). The Role of Attachment in Body Weight and Weight Loss in Bariatric Patients. *Obesity Surgery*, *28*, 410–414 doi.org/10.1007/s11695-017-2796-1

National Health Service (2017). *Overview: Weight loss surgery*. Retrieved from https://www.nhs.uk/conditions/weight-loss-surgery/

National Institute for Health and Care Excellence. (2014). *Obesity: identification, assessment and management: guidance and guidelines*. (NICE Guideline No. 189). Retrieved from: https://www.nice.org.uk/guidance/cg189/

Natvik, E., Gjengedal, E., Moltu, C. & Raheim, M. (2014). Reembodying eating: Patients' experiences 5 years after bariatric surgery. Qualitative Health Research, 24, 17001710. doi: http://dx.doi.org/10.1177/1049732314548687

NHS Choices [NHS]. (2019). Treatment: Obesity [online]. Available at: https://www.nhs.uk/conditions/obesity/treatment/. [Accessed 28 February 2020]

NHS England (2020). Involving people in their own care. [online] NHS England. Available at: https://www.england.nhs.uk/ourwork/patient-participation/ [Accessed 8 March 2020].

Nowicka, P., Pietrobelli, A., & Flodmark, C. E. (2007). Low-intensity family therapy intervention is useful in a clinical setting to treat obese and extremely obese children. *International Journal of Pediatric Obesity*, *2*(4), 211-217. doi:10.1080/17477160701379810

O'Brien, P. E., Hindle, A., Brennan, L., Skinner, S., Burton, P., Smith, A., … Brown, W. (2019). Long-Term Outcomes After Bariatric Surgery: a Systematic Review and Meta-analysis of Weight Loss at 10 or More Years for All Bariatric Procedures and a Single-Centre Review of 20-Year Outcomes After Adjustable Gastric Banding. Obesity surgery, 29(1), 3–14. doi:10.1007/s11695-018-3525-0.

Parcel, G.S., Edmundson, E. & Perry, C.L. (1995) Measurement of self-efficacy for diet-related behaviors among elementary school children. *Journal of School Health, 65*(1), 23-27.

Park, J. (2016). Self-determination and motivation for bariatric surgery: a qualitative study. *Psychology, Health & Medicine, 21*(7), 800-5. doi: 10.1080/13548506.2015.1131996.

Perry, B., Ciciurkaite, G., Brady, C. F., & Garcia, J. (2016). Partner Influence in Diet and Exercise Behaviors: Testing Behavior Modeling, Social Control, and Normative Body Size. *PloS one*, *11*(12). doi.org/10.1371/journal.pone.0169193

Phelan, S. M., Burgess, D. J., Yeazel, M. W., Hellerstedt, W. L., and Ryn, M. (2015). Impact of weight bias and stigma on quality of care and outcomes for patients with obesity. *Obesity Review*, *16*, 319–326. doi: 10.1111/obr.12266

Polak, L., & Green, J. (2016). Using Joint Interviews to Add Analytic Value. *Qualitative Health Research, 26*(12), 1638–1648. https://doi.org/10.1177/1049732315580103.
Pories, M.L., Hodgson, J., Rose, M.A, Pender, J., Sira, N. & Swanson, M. (2016). Obesity Surgery, 26(54). Doi:10.1007/s11695-015-1720-9

Popay, J., Roberts, H., Sowden, A., Petticrew, M., Arai, L., Rodgers, M., … Duffy, S. (2006). *Guidance on the Conduct of Narrative Synthesis in Systematic Reviews.* ESRC Methods Programme: University of Lancaster, UK.

Poria, Y., Beal, J. & Shani, A. (2019). Does size matter? An exploratory study of the public dining experience of obese people. *Journal of Hospitality and Tourism Management, 39,* 49-56.

Price, L. & Martin, L. (2018). Introduction to the special issue: applied critical realism in the social sciences, *Journal of Critical Realism, 17*(2), 89-96, DOI: 10.1080/14767430.2018.1468148
Roberts J.M. (2014). Critical realism, dialectics, and qualitative research methods. Journal for the Theory of Social Behaviour, 44(1), 1–23.

Public Health England (2017). *Health matters: obesity and the food environment.* Retrieved from https://www.gov.uk/government/publications/health-matters-obesity-and-the-food-environment/health-matters-obesity-and-the-food-environment--2

Puder, J.J. & Munsch, S. (2010). Psychological correlates of childhood obesity. *International Journal of Obesity, 34*(2), 37–43.

Obesity and overweight. (n.d.). [online]. Available at: https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight [Accessed 4 February 2020]

Ouvinen-Birgerstam P. (1984). *Identitetsutveckling hos barn. En ja¨mfo¨relse mellan finska, jugoslaviska och svenska barn* [Development of identity in children. Comparison of Finnish and Yugoslavian Immigrant Children and Native Swedish Children]. Lund, Sweden: Studentlitteratur.

Quick, V., Wall, M., Larson, N., Haines, J. & Neumark-Sztainer, D. (2013). Personal, behavioral and socio-environmental predictors of overweight incidence in young adults: 10-yr longitudinal findings. *International Journal Behavioural Nutrition and Physical Activity*, *10*, 37.

Ramalho, S., Bastos, A. P., Silva, C., Vaz, A. R., Brandão, I., Machado, P. P. P. & Conceição, E. (2014). Excessive skin and sexual function: relationship with psychological variables and weight regain in women after bariatric surgery. *Obesity Surgery*, *25*(7), 1149-1154. doi:10.1007/s11695-014-1514-5

Rashid, T. (2015). Positive psychotherapy: a strength-based approach. *Journal of Positive Psychology*, *10*(1), 25-40.

Redwood, S. & Gill, P. S. (2013). Under-representation of minority ethnic groups in research--call for action. *The British journal of general practice: the journal of the Royal College of General Practitioners*, *63*(612), 342–343. doi.org/10.3399/bjgp13X668456

Romo, L. K. & Dailey, R. M. (2014). Weighty Dynamics: Exploring Couples' Perceptions of Post-Weight-Loss Interaction, Health Communication, *29*(2), 193-204, doi: 10.1080/10410236.2012.736467

Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.

Rudolf, M. C. J., Christie, D., McElhone, S., Sahota, P., Dixey, R., Walker, J. & Wellings, C. (2006). WATCH IT: a community based programme for obese children and adolescents. *Archives of Disease in Childhood*, *91*, 736-9.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*, 68-78.

Sakellariou, D., Boniface, G. & Brown, P. (2013). Using Joint Interviews in a Narrative-Based Study on Illness Experiences. *Qualitative Health Research*, *23*(11), 1563–1570. doi.org/10.1177/1049732313508014

Sharman, M., Hensher, M., Wilkinson, S., Williams, D., Palmer, A., Venn, A., & Ezzy, D. (2017). What are the support experiences and needs of patients who have received bariatric surgery?. *Health expectations: an international journal of public participation in health care and health policy*, *20*(1), 35–46. doi.org/10.1111/hex.12423

Sjoberg, R.L., Nilsson, K.W. & Leppert, J. (2005). Obesity, shame, and depression in school aged children: a population-based study. *Paediatrics, 116*(3), 389–392.

Slotman, G.J. (2011). Gastric bypass: a family affair—41 families in which multiple members underwent bariatric surgery. Surgery for Obesity and Related Diseases, 7(5), 592-598.

Song, F.; Parekh, S.; Hooper, L.; Loke, Y. K.; Ryder, J.; Sutton, A. J.; Hing, C.; Kwok, C. S.; Pang, C.; Harvey, I. (2010). "Dissemination and publication of research findings: An updated review of related biases". *Health Technology Assessment (Winchester, England), 14*(8): iii, iix–xi, iix–193. doi:10.3310/hta14080. PMID 20181324.

Starks, H., Trinidad, S. B. (2007). Choose your method: A comparison of phenomenology, discourse analysis, and grounded theory. *Qualitative Health Research, 17*, 1372–1380. doi:10.1177/1049732307307031

Suzuki, W., Wuren & Kuriki, K. (2019). Associations between family factors and body weight gain from 20 years old. *BMC Women's Health, 19*(33), 1-10. doi.org/10.1186/s12905-019-0719-0.

Sweeney, A. M., Wilson, D. K., Loncar, H. & Brown, A. (2019). Secondary benefits of the families improving together (FIT) for weight loss trial on cognitive and social

factors in African American adolescents. *International Journal of Behavioral Nutrition and Physical Activity, (16)*47. doi.org/10.1186/s12966-019-0806-5

Tanas, R., Marcolongo, R., Pedretti, S. & Gilli G. (2007). A family-based education program for obesity: A three-year study. *BMC Pediatrics, 7*, 33.

Taylor, B. & de Vocht, H. (2011). Interviewing separately or as couples? Considerations of authenticity of method. *Quality Health Research, 21*(11):1576–87.

The Health Effects of Overweight and Obesity. (2015). [online]. Available at: https://www.cdc.gov/healthyweight/effects/index.html [Accessed 4 February 2020]

Tomiyama, A. J. (2019). Stress and obesity. *Annual Review of Psychology, 70*, 703–718.

Tomiyama, A. J., Carr, D., Granberg, E. M., Major, B., Robinson, E., Sutin, A. R. & Brewis, A. (2018). How and why weight stigma drives the obesity 'epidemic' and harms health. *BMC Medicine, 16*(123). doi: 10.1186/s12916-018-1116-5

Treadwell, J.R. & Turkelson, C.M. (2005). Systematic Review of Bariatric Surgery. *The Journal of the American Medical Association, 293*(14). doi:10.1001/jama.293.14.1726-a

Turner-McGrievy, G., Mandes, T. & Crimarco, A. (2017). A plant-based diet for overweight and obesity prevention and treatment. *Journal of geriatric cardiology: JGC, 14*(5), 369–374. doi.org/10.11909/j.issn.1671-5411.2017.05.002

Valentine, G. (1999). Doing household research: Interviewing couples together and apart. *Area, 31*, 67–74.

Williams, L., Rycroft-Malone, J. & Burton, C. (2017). Bringing critical realism to nursing practice: Roy Bhaskar's contribution. *Nursing Philosophy*, 18(2), 1-11. doi: 10.1111/nup.12130.

Vallis, M. (2016). Quality of life and psychological well-being in obesity management: Improving the odds of success by managing distress. *International Journal of Clinical Practice*, 70(3), 196–205. doi:10.1111/ijcp.12765

Vandenbroeck, I. P., Goossens, J., Clemens, M. (2007). Foresight: Tackling obesities: Future choices—Obesity system atlas. London, England: Government Office for

Science. Retrieved from https://www.gov.uk/government/publications/reducing-obesity-obesity-system-map

van der Kruk, J. J., Kortekaas, F., Lucas, C., & Jager-Wittenaar, H. (2013). Obesity: a systematic review on parental involvement in long-term European childhood weight control interventions with a nutritional focus. *Obesity reviews: an official journal of the International Association for the Study of Obesity*, *14*(9), 745–760. doi.org/10.1111/obr.12046

Varni J.W., Seid, M. & Kurtin, P.S. (2001). PedsQL 4.0: reliability and validity of the Paediatric Quality of Life Inventory version 4.0 generic core scales in healthy and patient populations. *Medical Care, 39*, 800–812.

Vartanian, L. R. & Fardouly, J. (2013). The stigma of obesity surgery: negative evaluations based on weight loss history. *Obesity Surgery*, 23, 1545- 1550.

Vartanian, L. R. & Fardouly, J. (2014). Reducing the stigma of bariatric surgery: benefits of providing information about necessary lifestyle changes. *Obesity*, *22*(5), 1233-7. doi: 10.1002/oby.20721.

Wallwork, A., Tremblay, L., Chi, M. & Sockalingham, S. (2017). Exploring Partners' Experiences in Living with Patients Who Undergo Bariatric Surgery. *Obesity Surgery*, *27*, 1973–1981.doi:10.1007/s11695-017-2594-9

Waters, E., de Silva-Sanigorski, A., Hall, B.J., Brown, T., Campbell, K.J., Gao, Y.,… Summerbell, C.D. (2011). Interventions for preventing obesity in children. *Cochrane Database Systematic Review*, *7*(2), 3 – 36. doi:10.1002/14651858.CD001871.pub3/epdf/full

Waters, L. & Williams, C. (2018). Psychology and mental health issues in obesity. In C. Hankey (Ed.), *Advanced Nutrition and Dietetics in Obesity* (pp. 71-78). Retrieved from http://cpncampus.com/biblioteca/files/original/8b1d39783657ab16f2a9d1df431ef11d.pdf#page=87

Webb, J. B., Wood-Barcalow, N. L. & Tylka, T. L. (2015). Assessing positive body image: contemporary approaches and future directions. *Body Image, 14*, 130–145.

Wilfley, D. E., Stein, R. I., Saelens, B. E., Mockus, D. S., Matt, G. E., Hayden-Wade, H. A.,… , Epstein, L. H. (2007), Efficacy of maintenance treatment approaches for childhood overweight: a randomized controlled trial. *JAMA 298*, 1661–1673

Williams, S.L. & Mummery, W.K. (2011). Links between adolescent physical activity, body mass index, and adolescent and parent characteristics. *Health Education & Behavior*, *38*, 510–520.

Willig, C. (2013). *Introducing qualitative research in psychology third edition.* Maidenhead: Open University Press.

Wongpakaran, T., & Wongpakaran, N. (2012). A comparison of reliability and construct validity between the original and revised versions of the Rosenberg Self-Esteem Scale. *Psychiatry investigation*, *9*(1), 54–58. doi:org/10.4306/pi.2012.9.1.54

World Health Organisation (2014). *Global Strategy on Diet, Physical Activity and Health*. Retrieved from https://www.who.int/dietphysicalactivity/childhood_what/en/

Yardley, L. (2000). Dilemmas in qualitative health research. *Psychology and health*, *15*(2), 215-228.

Zarhin, D. (2018). Conducting Joint Interviews With Couples: Ethical and Methodological Challenges. *Qualitative Health Research*, *28*(5), 844–854. doi.org/10.1177/1049732317749196

Zentner, A. (2018). Clinical assessment to determine a patient's suitability for bariatric surgery. *British Columbia Medical Journal*, *60*(3), 151-155.