

# **Experiences of the bariatric pre-surgery evaluation process in the NHS**

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## **Chapter 1 – Executive summary**

## **INTRODUCTION**

This thesis investigated different aspects of the bariatric surgery pathway in the NHS. Bariatric surgery in the NHS is characterised by a long and complex process, involving pre-surgery (e.g., life-long weight struggle, initial access, and pre-surgery evaluation), surgery (e.g., surgery procedures) and post-surgery (e.g., lifestyle changes, weight-regain) considerations. Notably, each stage is uniquely impacted by the dynamic interplay between patients, health professionals (HP), services and wider national resources, agendas and policies. It is therefore unsurprising to note that the bariatric surgery pathway is fraught with many yet unaddressed challenges at each stage of the process. In identifying some of these unaddressed challenges, this thesis aimed to provide a more comprehensive understanding of the bariatric surgery pathway. Consequently, the systematic review (Chapter 2) attempted to investigate the effectiveness of the psychological interventions following bariatric surgery, whereas the empirical study (Chapter 3) explored the lived experiences of the pre-surgery evaluation process in the NHS. In the final chapter, the author integrates the outcomes of both projects, and provides a reflective overview of the development and dissemination of the thesis.

### **Chapter 2: Systematic review**

#### ***Introduction***

Some bariatric surgical patients regain a considerable portion of their lost weight following surgery which is traditionally considered as poor surgery outcome. However, given the multifaceted nature of obesity, weight-loss alone as an outcome measure post-surgery has been subjected to debate, as the goal for many individuals also include improvements in health and quality of life. Generally, poor outcome

(whether defined as weight-regain or general health) has been associated with several pre-surgery psychosocial factors and post-surgery adjustment difficulties. Psychological interventions at the post-surgery stage may optimise post-surgery outcome and adjustment. To date, no review has evaluated the effects of psychological intervention following bariatric surgery on psychosocial outcomes. Thus, the objective of this paper was to review prospective trials of psychological interventions for improving weight-related outcomes, as well as eating behaviours/disorder, psychological status, and general health, physical activity, functional status and QoL following bariatric surgery amongst adults.

### ***Method***

The review search was conducted in March 2019 – January 2020, and restricted to MEDLINE, PsychInfo, and studies that were i) written in English, ii) published between 1977–2019, iii) included adult participants, and iv) were accessible. Titles, abstract and descriptors were screened, and potentially eligible prospective trial studies were assessed in depth based on inclusion criteria. The author assessed the methodological quality and risk of bias according to The Cochrane ROBINS-I.

### ***Results***

Sixteen articles, representing fourteen trials, reporting on 834 participants from Canada, Germany, Greece, UK and US were included in this review. The review highlighted considerable variability in intervention setting (e.g., clinic, home, mixed), format (e.g., group, individual, e-therapy, phone-therapy, letter), modality (e.g., CBT, acceptance and mindfulness, IPT, DBT), frequency (i.e., number of sessions) and intensity (i.e., session length). Likewise, most studies used a combination of multiple weight-related, eating behaviour/disorder, psychological status, and health, physical activity, functional status or QoL outcomes. The overall quality of the included studies

was considered to be relatively weak; five studies were rated as having ‘critical’ overall risk of bias, whereas six studies were rated as having ‘serious’ overall risk of bias. Only three studies were rated as ‘moderate’ risk of bias. The review found mixed evidence to support the effectiveness of psychological intervention following bariatric surgery on weight-loss, eating behaviour/disorder, psychological status, health, physical activity, functional status or QoL. Most studies reported both significant and non-significant effects of the intervention, which likely represents the use of multiple outcome measures of the same domain.

### ***Discussion***

Due to the variability in outcome and poor quality of the studies, the review was unable to provide conclusive evidence to support the effectiveness of psychological interventions following BS on weight-loss, or improved eating behaviours/disorder, psychological status, health, physical activity, functional status and/or QoL. Nevertheless, psychological intervention may yet benefit some selected individuals with specific needs or profile in the postoperative stage. There is a clear need for higher quality research with strengthened methodological rigour, and consensus on what constitutes clinically important and meaningful demographic information and bariatric post-surgery outcome(s).

## **Chapter 3: Empirical study**

### ***Introduction***

Bariatric surgery requires significant lifestyle changes, and therefore candidates are required to undergo a pre-surgery evaluation (PSE) on their readiness and suitability for surgery, involving psychological, surgical, dietetic and medical review. However, the function of the PSE, the roles of the different HPs, and surgery selection process

remain unclear and vary between services. Consequently, the PSE process has been reported as one of the most challenging aspects of the bariatric surgery process. However, there is currently little understanding of patients' experiences and expectations of the PSE process within the NHS, despite the known benefits of utilising service users' perspectives on service delivery and clinical outcomes. Thus, this study undertook a qualitative study that explored the experiences and expectations of the bariatric PSE amongst patients who had undergone bariatric surgery within the NHS using Interpretative Phenomenological Analysis (IPA). The study aimed to address the following research questions; i) What are participants' understanding and expectations of the bariatric PSE process? ii) What is participants' experience of the bariatric PSE process? iii) What are participants' coping strategies for dealing with the bariatric PSE process?

### ***Method***

Qualitative methodology is useful at the early stages of inquiry to understand under-researched phenomena. IPA in particular is suitable for identifying and understanding meaningful subjective experiences or perspectives. It is a psychological qualitative method involving a comprehensive examination of the details (i.e., idiography) of lived experience (i.e., phenomenology) as well as an in-depth interpretation (i.e., hermeneutics) of each participant's experience and the meaning which the experience holds for the individual. An expert-by-experience was involved in the process of recruitment, developing interview schedule, validation of analysis and advice on dissemination. A reflective journal was kept throughout the research process to enable identification of preconceptions. A convenience sampling method was used to recruit participants, although the expert-by-experience was also asked about recommendations for potential research participants. Four participants were recruited

from NHS bariatric surgery support groups in London, UK. Three interviews were held face-to-face in reserved rooms on University Campus. One interview was held online via Skype due to practical constraints in meeting in person. Semi-structured interviews were conducted using an interview schedule to guide the process. The interview started with a ‘warm-up’ opening question to reduce the interviewee’s tension and get them ready to discuss more sensitive or personal issues. The software program NVivo 11 facilitated data management. The analytical process involved four steps that were inductive and iterative.

### ***Results***

Analysis revealed three superordinate and eleven subordinate themes. All superordinate and most subordinate themes were endorsed by all participants, although there was considerable divergence in how these experiences were perceived. The three superordinate themes are closely interwoven with considerable overlap between them. Notably, feelings of loss of control and subsequent attempts to regain or maintain it appeared to permeate all three superordinate themes.

Central to the experience was the first superordinate theme ‘PSE was challenging but essential’. Most participants had conflicting feelings about the PSE process. PSE was experienced as challenging, which reflected the length, uncertainty and difficulty of receiving approval for surgery. Participants also felt intensely scrutinised and perceived the psychological assessment as the biggest barrier to surgery approval. Consequently, participants reported the need to prove or defend suitability for surgery, which had a negative impact on their sense of control and emotional and physical well-being. Equally, PSE provided valuable time for self-reflection and information gathering, which was considered to be essential for preparing for the surgery and a successful post-surgery adjustment. The second superordinate theme,

‘Coping processes to deal with the PSE’, reflected external and internal strategies in navigating the PSE process. These strategies often functioned as attempts to regain or maintain a sense of control over the process, and to increase chances of surgery approval. The third and final superordinate theme was related to a sophisticated evaluation process of the HPs and service. It reflected participants’ capacity to think about their own and other bariatric patients’ needs, in the context of advanced knowledge and understanding of BS and its impact. Most of the feedback discussed were related to the challenges that the participants experienced throughout the PSE process, and suggested a motivation to improve the bariatric service.

### ***Discussion***

The themes presented in this study are consistent with the existing literature on bariatric service delivery and the PSE. Notably, the themes endorsed the ambiguity of the PSE, particularly the psychological evaluation, wherein participants held perceptions that contentious contraindications could be used to deny surgery, resulting in expressions of frustrations and fear over a potential surgery refusal. The study also extends the existing literature by highlighting participants’ conflicting feelings towards the PSE. The PSE was experienced as unnecessarily long due to service errors and had a significant negative impact on the psychological and physiological wellbeing of the participants. Simultaneously, however, the lengthened process was perceived to provide time for a valued self-evaluation and growth process that was considered necessary for a successful outcome. Moreover, several external and internal coping processes that helped participants navigate the challenges of the PSE process were noticed. Finally, the study highlighted participants’ advanced knowledge of BS and its impact and aspects that need improvement (e.g., level of information). Notably, there was a preference for a targeted evaluation approach, as most participants recognised

the unique needs and circumstances of each individual, and the unpredictable effects of surgery. Overall, the narratives of the participants appeared to suggest perceptions that the service model reflected an unhelpful ‘paternalistic’ approach to evaluation that constrained the patient-professional relationship. Consequently, there was a motivation to improve the service.

There were several limitations to the study, including a relatively heterogenous sample (note that IPA samples need to be relatively homogenous), fairly small sample size, although it was still within the recommended limit for a professional doctorate, and inability to validate demographic data.

Future research needs to build on the current qualitative study using other methodologies, including mixed and quantitative to further elaborate the validity and reliability of the processes and constructs identified. Moreover, the study encourages academics and clinicians working in the bariatric field to consider ways to involve service users in influencing the service delivery and model in a way that is appropriate and beneficial. A starting point for services is perhaps to audit patients’ perspective using the findings from this study as a rough guiding template.

## **Chapter 4: Integration, impact and dissemination**

### ***Integration***

The present thesis attempted to provide a more comprehensive understanding of the bariatric surgery pathway, involving both the pre-surgery evaluation (empirical study) and post-surgery management (systematic review). Whereas the empirical study highlighted challenges in service model that may constrain the patient-professional relationship, the review contextualised the need for a PSE in identifying appropriate support needs post-surgery. Notably, specific areas that can be improved in these areas

can be facilitated by further exploring service users' perspectives and involving them more in research and service delivery.

### ***Impact***

The systematic review and empirical study provided a more comprehensive understanding of the bariatric surgery pathway. Particularly, the importance of a patient-centred approach to bariatric service model and delivery was highlighted. However, active involvement in service delivery appears to be still lacking in the PSE process, despite a clear motivation and need amongst the participants of this study to be involved in improving the bariatric service. Thus, a long-term hope was that this thesis will inspire future opportunities for involving service users in both research development and service strategy within the NHS. Although service user perspectives and involvement have many recognised benefits, there remains several barriers to its implementation in practice. There are different degrees of user and carer involvement and different ways of supporting it. The author presents the 'Ladder of engagement' and proposes Simpson and House's (2003) six stages of service user involvement in service planning.

### ***Dissemination***

Although the original dissemination plan will need to be adapted due to the government's response to the COVID-19 pandemic, the author has considered several venues where they intend to disseminate the results of the study. This includes directly to the participants of the study and bariatric surgery support groups as well as bariatric surgery, obesity and health organisations, and peer-reviewed journals.

**Chapter 2 - A systematic review of the effectiveness of psychological intervention  
on bariatric post-surgery outcome in adults**

## **ABSTRACT**

### **Background**

Psychological interventions at the bariatric post-surgery stage have a likely and important role in successful outcome.

### **Objectives**

The objective of this systematic review is to determine the effectiveness of psychological interventions, or support groups with clear elements of psychological provision, in improving weight-related outcomes, as well as eating behaviours/disorder, psychological status, and general health, physical activity, functional status and quality of life (QoL) following bariatric surgery amongst adults.

### **Search methods**

The search strategy followed published guidelines. Studies were obtained from MEDLINE and PsychInfo and supplemented with searches of reference lists.

### **Selection criteria**

The review included randomised and non-randomised trials with or without control that investigated the effectiveness of psychological interventions on weight-related outcomes, as well as eating behaviours/disorder, psychological status, and general health, physical activity, functional status and QoL following bariatric surgery amongst adults.

### **Data collection and analysis**

Data were extracted and analysed for quality by one reviewer. Another reviewer also independently assessed the quality of the trials.

### **Main results**

Fourteen studies reporting trials on 834 participants were included in this review. The overall quality of the included studies was considered to be poor. Most studies used

a combination of multiple weight-related, eating behaviour/disorder, psychological status, and health, physical activity, functional status or QoL outcomes. The review found mixed evidence to support the effectiveness of psychological intervention following bariatric surgery on weight-loss, eating behaviour/disorder, psychological status, health, physical activity, functional status or QoL.

### **Author's conclusions**

Due to mixed results, different outcome measures used and methodological issues (See next sections), The review is unable to provide conclusive evidence to support the effectiveness of psychological interventions following bariatric surgery on weight-loss, or improved eating behaviours/disorder, psychological status, health, physical activity, functional status and/or QoL. There is a clear need for higher quality research with strengthen methodological rigour.

## INTRODUCTION

### Background

#### *Description of the population*

Bariatric Surgery (BS) is a recognised effective treatment for morbidly obese patients (NICE, 2014). The evidence for the effectiveness of BS is well documented, with expected outcomes to include significant reduction in weight, comorbidities, mortality, and demand on healthcare services (Chang et al., 2014; Colquit et al., 2014; Gulliford et al., 2014; National Bariatric Surgery Registry; NBCR, 2014; Sjostrom et al., 2004).

Currently, patients who meet criteria outlined by the NICE guidelines and NHS Commissioning Board for Complex and Specialised Obesity Surgery are eligible for surgery (NHS, 2020; NICE, 2014). NICE (2014) guidance recommends surgical interventions for those with a body mass index (BMI) in the morbidly obese category (BMI of  $40 \text{ kg/m}^2$  or more) who have additional significant condition(s) (e.g., Type 2 diabetes) that could be improved, and where non-surgical interventions have failed and the patient commits to long-term follow-up.

It is commonly recognised that most bariatric surgical patients regain some portion of their lost weight following surgery and after their nadir (i.e., lowest recorded) weight (Christou et al., 2006; Lauti et al., 2016). Some of these individuals experience a significant weight-regain and are at increased risk of recurrence of diabetes, poorer psychological outcomes (e.g., recurrence binge-eating, substance misuse) and deterioration in quality of life (QoL; Bak et al., 2015; Courcoulas et al., 2013; King et al., 2017; Kubic et al., 2013; Lauti et al., 2017; Westerveld & Yang, 2016). However, the rates of weight-regain vary according to studies. For instance, a systematic review reported the rates of weight-regain can increase with 5.7 % at two years to up to 75.6 %

at six years relative to the nadir weight-loss (Lauti et al., 2016). Conversely, a longitudinal study suggested that weight-regain typically stagnates between six- and ten-years post-surgery to an average weight reduction of 16% (Karlsson et al., 2007). One reason for this variability is that there is currently no standardised way of reporting weight-regain, as it is poorly defined. Most commonly, weight-regain has been defined as an increase of at least 10 kg from nadir weight-loss (Lauti et al., 2016; Lauti et al., 2017). However, this does not provide clinically meaningful information in terms of individual impact (e.g., on comorbidities) and comparability between studies (Brolin, 2007; Lauti et al., 2016; Nedelcu et al., 2016). More recently, relative measures, such as BMI, percentage excess weight-loss, or total weight change are being utilised, which may be more clinically meaningful in guiding the choice of surgery procedure (Nedelcu et al., 2016).

Generally, poor outcome and weight-regain post-surgery have been associated with several psychosocial factors, including health-related behaviours (e.g., dietary non-compliance, physical inactivity, return to pre-surgery lifestyle and eating habits), psychiatric and mental health issues (e.g., eating disorder, depression, motivation), new or unexpected social and relational challenges, and cognitive functioning (e.g., impulsivity; Bak et al., 2015; Kalarchian & Marcus, 2003, 2015; Karmali et al., 2013, 2019; Rudolph & Hilbert, 2013), although the relationship between these factors, obesity and weight maintenance remain inconsistent and poorly understood (Pull et al., 2010).

It has been suggested that BS patients' progress through various stages post-surgery, where each stage is associated with specific concerns and needs. Typically, the first six months following surgery is often characterised by a physical adjustment period (e.g., improved physical functioning and return to normal activities), and referred to as

the ‘honeymoon’ period, where patients generally experience rapid weight-loss and improved self-esteem and mood (Myers, 2005). At about 6 to 18 months post-surgery, many patients start to experience further changes in their physical appearance (e.g., excessive skin), psychosocial environment (e.g., sexual and peer relationships), emotional well-being, and show increased variability in weight and eating behaviours, as dietary restrictions become more volitional (Myers, 2005; Ogden et al., 2019; Sjostrom et al., 2004). This ‘psychosocial adjustment’ stage may be difficult for some individuals, especially for those with a pre-existing psychiatric diagnosis or other psychosocial difficulties (e.g., marital issues; Herpertz et al., 2004; Jumbe et al., 2017). Notably, these factors are appropriate targets for psychological interventions (Kalachian & Marcus, 2003, 2019).

### ***Description of treatment***

Psychological interventions for obesity are used in combinations with lifestyle interventions for weight difficulties, although they also exist as stand-alone (NICE, 2014; Shaw et al., 2005). There is currently no ‘standardised’ protocol for psychological interventions for bariatric patients during the post-operative phase (Rudolph & Hilbert, 2013), and there is a large variability in treatment formats (e.g., individual, group, e-therapy or phone-therapy), modality (e.g., behavioural, cognitive-behavioural; CBT, or acceptance, and mindfulness) and dosage (i.e., duration, frequency, intensity; Rudolph & Hilbert, 2013).

Generally, psychological interventions for bariatric patients aim at reducing psychological barriers to health behaviour change (e.g., non-compliance to medical and behavioural recommendations) and facilitate psychosocial adjustment (Kalachian & Marcus, 2003; Myers, 2005). Arguably, CBT has been utilised most frequently, as it

has a larger evidence-base supporting its effectiveness in maintaining weight-loss (Kalarchian & Marcus, 2003; Rudolph & Hilbert, 2013; Shaw et al., 2005), although more recently, ‘third-wave CBTs’ (i.e., acceptance, and mindfulness therapies) are increasing in popularity (Lawlor et al., 2020).

CBT has typically two phases; the initial phase involves problem identification, formulation and strategy implementation (i.e., what the barriers for weight-loss are, how these are maintained, and what can be done to overcome them), whereas the second phase focuses on relapse prevention (i.e., weight maintenance; Mead & Boyland, 2018). Common therapeutic techniques involve psychoeducation, motivational interviewing, self-monitoring, promotion of coping and problem-solving skills, thought challenge and social support in context of living a healthier lifestyle and utilising adaptive dietary strategies (Kalarchian & Marcus, 2003; Shaw et al., 2005; Wing & Greeno, 1994).

Third-wave CBT (e.g., Acceptance and Commitment Therapy; Hayes et al., 2012, Mindfulness-Based Cognitive Therapy; Segal et al., 2013; Compassion Focused Therapy; Gilbert, 2009; Dialectical Behaviour Therapy; Linehan, 1993) have many similarities with CBT (e.g., psychoeducation and promotion of coping skills), although they also involve acceptance practices, value-driven living, emotion-regulation strategies, experiential exercises and meditation or awareness training (Rogers et al., 2017). Worth noting, however, is that key components can vary depending on the specific type of therapy.

Although other approaches, such as psychodynamic (focus on hidden inner conflicts, e.g., psychoanalysis) and humanistic (focus on meaning in lives, and living consistent with values, e.g., person-centred therapy) are available, the research demonstrating effectiveness have been mixed (Baron, 1998) and they are therefore less commonly provided (Shaw et al., 2005).

### ***How the intervention might work***

CBT is rooted in cognitive and behavioural theories (e.g., Beck, 1969, 1970; Ferster, 1973; Lewinsohn, 1974), which assumes that unhelpful cognitions and behaviours are crucial to the development and maintenance of maladaptive behavioural and emotional responses. More specifically, negative life events and stress may trigger physiological reactions, assumptions and behavioural responses that are initially adaptive. With prolonged exposure to such negative events and stressors, most or all stressful cues gradually become associated with the initial experience and coping responses through classical conditioning (e.g., negative assumptions, avoidance). Over time, however, the cumulative impact of this process further exacerbates symptoms, leading to now maladaptive and unhelpful cognitions, behaviours (e.g., over-eating, low physical activity) and physiological reactions through operant conditioning (Dalle-Grave et al., 2013). In the context of the bariatric post-operative phase where focus is particularly on weight maintenance, the aim is to identify, increase awareness of stress cues (i.e., antecedents and consequences) and modify or replace unhelpful thoughts and behaviours hypothesised to be maintaining weight gain with more helpful coping skills to promote progress towards weight-loss (Kalarchian & Marcus, 2003).

Third-wave CBTs instead focused on the persons' relationship to thoughts and emotions and the context in which these occur (Hayes & Hofmann, 2017). The aim is to promote flexibility to internal (e.g., thoughts, reactions) and external (e.g., interpersonal, environment) experiences, regardless of whether they are positive, negative or neutral, through increasing mindfulness or awareness and acceptance or openness to experiences as well as clarifying and encouraging valued-driven actions (Rogers et al., 2017).

In the context of obesity and the bariatric post-operative phase, such strategies are hypothesised to act by promoting self-regulation, attention to cues that may trigger unhelpful eating behaviours, and awareness of bodily experiences, including hunger and satiety, whilst promoting coping strategies to address these events. Other secondary gains may include reduced emotional distress, increased motivation, enriched supportive relationships, or alterations in biological pathways affecting health, such as the immune or metabolic system (Ludwig & Kabat-Zinn, 2008; Mead & Boyland, 2018; Ost, 2008; Rogers et al., 2017).

Several key reviews have supported the effectiveness of current psychological interventions in obesity on weight outcome (Lawlor et al., 2020; McGuire et al., 1999; Peckmezian & Hay, 2017; Shaw et al., 2005). In relation to bariatric post-surgery, two systematic reviews found modest, but significant effect of psychological interventions on weight-loss, although considerable methodological and conceptual issues in the included studies were noted (Beck et al., 2012; Rudolph & Hilbert, 2013). These reviews reported that patients who received psychological intervention following surgery experienced on average 2-12.1% greater degree of weight-loss, relative to patients who did not. Interestingly, it has been suggested that psychological interventions are best optimised prior to the ‘psychosocial adjustment’ stage post-surgery, where weight-regain is yet to become a significant issue (Kalarchian & Marcus, 2015).

### ***Why this review is unique and important***

The NICE guidelines (2014) recommend that BS should only be undertaken by a multidisciplinary team that can provide psychological support before and after surgery. Moreover, a recent review article on the provision of psychological support

for patients pre- and post-BS both within the NHS and private sector, recommended the inclusion of psychology in all services using a stepped care model, whereby psychological interventions are delivered in a targeted manner based on patient needs and staff expertise (Ogden et al., 2019).

Although it remains unclear whether psychological intervention should be offered pre- or post-surgery, a study suggested that therapy completion rate is increased when offered post-surgery (Leahey et al., 2009). Given the correlation between psychopathology and obesity, and the unique challenges and changes experienced following surgery (e.g., diet changes, physical activity or relationships), psychological interventions at the post-surgery stage has a likely and important role in successful outcome (NICE, 2014; Kalarchian & Marcus, 2003; Rudolph & Hilbert, 2013).

The most recent systematic reviews only included behavioural interventions (Beck et al., 2012; Rudolph & Hilbert, 2013; Stewart & Avenell, 2016), and to date, no review has evaluated the effects of psychological intervention on psychosocial outcomes (Kalarchian & Marcus, 2019). Weight-loss alone may not be a sufficient outcome measure after BS, as the goals of obesity surgery also include improvement in general health and QoL for many patients (Herpertz et al., 2004). Thus, a new review of the effectiveness of all psychological interventions on weight-loss and psychosocial outcomes following BS is warranted.

### ***Objectives***

The objective of this systematic review is to determine the effectiveness of psychological interventions, or support groups with clear elements of psychological provision, in improving weight-related and psychosocial outcomes following BS amongst adults.

## METHODS

### **Criteria for considering studies for this review**

Justifications for inclusion criteria are outlined in Appendix 1.

#### ***Type of studies***

The types of studies included in this review were randomised and non-randomised studies with or without control group. Eligible non-randomised study designs included pre-post controlled, pre-post, pilot/feasibility, historically controlled, and uncontrolled longitudinal. Case studies and cohort studies were excluded.

#### ***Types of participants***

This review included studies that were confined to those with individuals that were 18 years and above and had previously undergone BS. Thus, studies that included participants below 18 years, and who had not previously undergone a BS were excluded. There were no restrictions on the type of BS participants had undergone.

#### ***Types of interventions***

Studies were included if they provided psychological intervention following BS. Psychological intervention was defined as any on-going therapeutic activity involving promoting coping, problem-solving and/or mindfulness skills, facilitating motivation and/or acceptance, addressing cognitive/thinking style or psychoeducation of weight- and health-related issues over more than a single session. There were no restrictions on the profession of the intervention provider, unless the intervention was a support group, in which case it had to be provided or facilitated by a health professional (HP). Studies

were excluded if i) the intervention was delivered before the BS, ii) the intervention was delivered before and after BS, iii) there was insufficient description of the intervention, iv) it involved single lab-based experiments (e.g., single session priming), and v) the control group (if included) consisted of non-bariatric subjects.

### ***Types of outcome***

The primary outcome was measure of weight (in kg) or BMI (defined as weight divided by height squared) following the intervention. Studies that did not include weight measures as outcome were excluded from the review.

Secondary outcomes were measures of eating behaviours (e.g., dietary habits) or disorders (e.g., Eating Disorders Examination Questionnaire), psychological status (e.g., Beck's Depression Inventory), health (e.g., diabetes), physical activity, (e.g., The Physical Fitness and Activity Questionnaire), functional status (e.g., The Dartmouth Cooperative Functional Assessment Charts) or QoL (e.g., Quality of Life-Lite). Studies that did not include at least one secondary outcome were excluded from the review.

### **Search methods for identification of studies**

#### ***Electronic searches***

The search strategy followed recommended guidelines of the *Cochrane Handbook for Systematic Reviews of Interventions* (Higgins & Green, 2008), where practically possible.

A search in MEDLINE and PsychInfo was performed between 15/8/2019 and 16/08/2019 (Appendix 2). Following identification of a study in January 2020 through Google Scholar, a second ‘update’ search was conducted, although no further new studies were identified. MEDLINE was chosen as it is considered to be one of the most

important sources to search for reports of trials, whilst PsychInfo was chosen as it is a psychology-specific database (Higgins & Green, 2008). The review was restricted to only two databases and studies written in English due to practical limitations of the doctoral clinical psychology programme (i.e., not sufficient time to review more than two databases and insufficient funds to provide translation). The search was further restricted to 1977 – 2019, as the first modern gastric bypass was developed and performed in the late 1970s (Faria, 2017; Jaunoo & Southall, 2010), adult (18 years or older) and available papers. This review also searched reference lists of other systematic reviews and empirical articles on relevant topics and Google Scholar. All potential studies were identified by the review author.

### **Data collection and analysis**

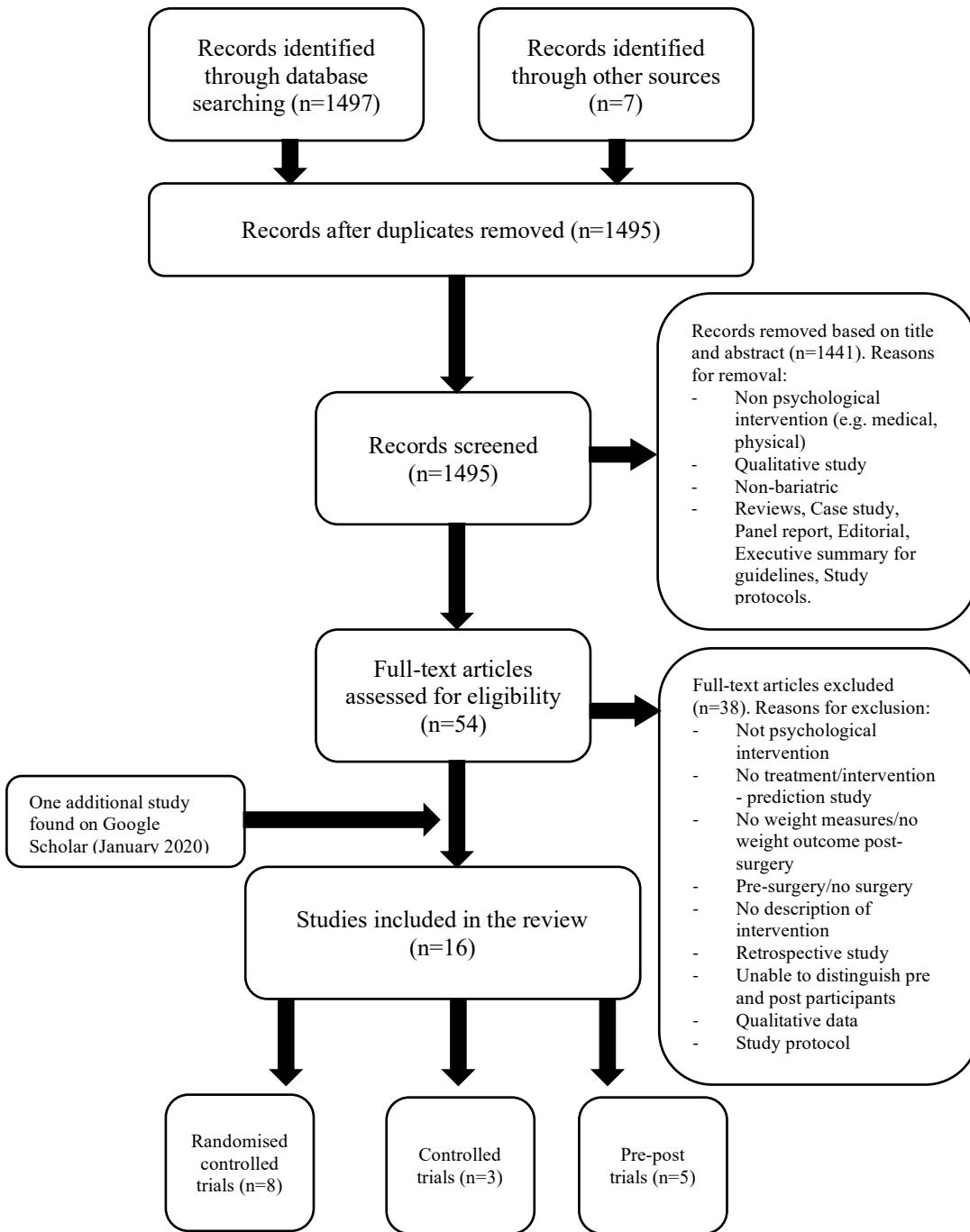
The PRISMA flowchart in Figure 1 demonstrates the flow of studies throughout the selection process (Moher et al., 2009).

### ***Selection of studies***

Method of selecting studies was broadly based on the *Cochrane Handbook for Systematic Reviews of Interventions* (Higgins & Green, 2008). The review author screened the title, abstract, and descriptors of identified studies for possible inclusion. From the full text, the same author assessed potentially eligible trials for inclusion. However, if information was insufficient and additional information was necessary, no contact with the authors was attempted due to time constraints.

### **Figure 1**

*PRISMA flowchart*



### ***Data extraction and management***

Data were extracted from trials that met the inclusion criteria by the review author. The main consideration for being included in the study were as follows; i) participants in the study had undergone BS, ii) inclusion and description of any psychological intervention or support groups with elements of active psychological

support present post-surgery, iii) weight data reported following psychological intervention, where weight data is defined as total weight-loss or BMI, iv) quantitative data, v) prospective design (i.e., pre-post trial; PPT, controlled trial; CT, randomised controlled trial; RCT), vi) written in the English language, and vii) conducted between 1977 and 2019. Data extracted for each study is presented in Table 1.

**Table 1**

*Items Recorded for Each Study*

<b>Method</b>	<b>Participants</b>	<b>Intervention</b>	<b>Results</b>
Sample size	Age	Intervention classification	Incomplete/missing data
Type of design	Pre-treatment weight	Format	Intention-to-treat
Participant selection	Additional diagnosis	Frequency	Measurement of outcomes
Allocation blinding (where appropriate)	Time since surgery	Number of groups	Primary outcome measures (weight)
Outcome measurements used	Previous psychological treatment	Type of interventions	Secondary outcome measures (Eating behaviour, psychological, medical/health, physical and functional status, quality of life)
	Education level	Profession of the provider	
	Employment status	Intervention integrity	
	Ethnicity		
	Gender		
	Marital status		

## **Assessment of risk of bias in included studies**

The review author (rater 1) assessed the methodological quality and risk of bias of each of the selected trials and rated them according to The Cochrane Risk of Bias in Non-randomised Studies of Interventions (ROBINS-I; Sterne et al., 2016). The ROBINS-I is concerned with evaluating the risk of bias in the results of non-randomized studies of the effects of interventions that compare the health effects of one or more interventions and is based on the Cochrane risk of bias tool for randomized trials (Higgins & Green, 2008). The ROBINS-I tool covers seven domains of risk of bias, including i) systematic baselines differences (i.e., confounders), ii) participant selection, iii) intervention classification, iv) intervention deviation, v) incomplete or missing data, vi) measurement of outcomes and vii) selective reporting. However, as this review included RCTs, an additional domain, ‘allocation blinding’ was added where appropriate. In the ROBINS-I, risk of bias in each domain can be judged as, i) low risk of bias (the study is comparable to a well-performed randomised trial with regard to this domain), ii) moderate risk of bias (the study is sound for a non-randomised study with regard to this domain but cannot be considered comparable to a well-performed randomised trial), iii) serious risk of bias (the study has some important problems in this domain), iv) critical risk of bias (the study is too problematic in this domain to provide any useful evidence on the effects of intervention), and v) no information on which to base a judgement about risk of bias for this domain.

All of the included studies were also appraised by a second reviewer (rater 2), independent to the review (trainee clinical psychologist), using the same methodology. Interrater concordance was 82.5% (Cohen’s  $\kappa=.797$ ) indicating high interrater reliability (Appendix 3).

The seven domains of risk of bias were judged on the basis of the information provided in the studies as being low, moderate, high or critical risk of bias, no information (if sufficient information was not available) or not applicable (e.g., allocation blinding on non-RCT studies). The reviewers were not blinded to the authors, institutions, or the publishing journal of the included studies.

## **RESULTS**

### **Description of studies**

For characteristics of included studies see Table 2.

### **Results of the search**

The search strategies identified a total of 1497 references. Additionally, seven references were found through other sources (e.g., reference lists, Google Scholar; Figure 1). Studies were selected in two screening phases. In the first phase, studies were preliminary selected based on the examination of titles and abstracts (exploring if they fulfilled the inclusion criteria). Duplicates, spurious and non-accessible articles were removed. Following this process, 54 references were obtained for consideration.

### **Included studies**

In the second phase, studies were reviewed in more depth and subsequently eliminated based on the following reasons: i) non-psychological intervention, ii) qualitative study, iii) population were non adults, iv) article was a review, case study, correlational or cross-sectional study, v) no surgery or pre-surgery intervention, vi) participants did not have BS, vii) inadequate description of experimental/intervention group, and viii) weight-loss not reported as an outcome. Following this process, 15

studies satisfied the inclusion criteria. One additional study was identified on Google Scholar (January 2020) that satisfied the inclusion criteria. Overall, 16 studies, reporting on 14 trials, were included in this systematic review (Table 2).

## **Design**

Six studies reported to use RCT design (Chacko et al., 2016; Lent et al., 2019; Nijamkin et al., 2012, 2013; Papalazarou et al., 2009; Tucker et al., 1991; Wild et al., 2015, 2017), although only three of these adequately reported randomisation procedures (Chacko et al., 2016; Lent et al., 2019; Wild et al., 2015). Three studies reported to use CT (Galle et al., 2017a, 2017b; Jassil et al., 2015) and five studies reported to use PPT design (Bradley et al., 2016a, 2016b; Himes et al., 2015; Leahey et al., 2008; Sockalingam et al., 2016).

Of the RCTs and CTs, all but one trial (Galle et al., 2017a) included two groups; one intervention, and one control, group. Galle et al., 2017a included three treatment arms; one control group and two different intervention groups with different modalities (interpersonal therapy; IPT vs. dialectical behavioural therapy; DBT).

## **Study location**

Studies included in this review were conducted in the US, Canada, UK, Germany and Greece. Included trials were set in hospitals/clinics (Bradley et al., 2016a; Chacko et al., 2016; Galle et al., 2017a, 2017b; Himes et al., 2015; Jassil et al., 2015; Leahey et al., 2008; Lent et al., 2019; Nijamkin et al., 2012, 2013; Papalazarou et al., 2009), at home electronically (i.e., e-therapy; Bradley et al., 2016b), at home over the phone (Sockalingam et al., 2016), mixed clinic and at home through video-conferencing (Wild et al., 2015, 2017), and mixed clinic and mail (Tucker et al., 1991).

### **Sample sizes**

Included studies ranged in sample size from 7 (Leahy et al., 2008) to 154 (Galle et al., 2017b), with a median of 35.5 (range: 147) and mean of 59.6 (sd: 67). The total sample size across studies summed up to 834 participants. See Table 3.

**Table 2***Study Design and Outcome Summary*

Study	Design	Outcome measure(s)	Primary outcome		Secondary outcomes	
			Weight	Eating	Psychological	Health, Physical, functional, QoL
Bradley et al., 2016a	PPT	<u>Weight</u> : Scale for weight & BMI.  <u>Eating</u> : EES, FCQ-T, EI, EDE-Q, non-validated Grazing questionnaire.  <u>Psychological</u> : PHLMS, DDS, FRAAQ, PAAQ.	Significant WL post Tx ( $p=.01$ ).	Medium to large Cohen's d on EI & EES scores ( $d=0.20-0.81$ ).  No significant changes in eating variables ( $p>0.05$ ), except for EI Internal ( $p=.04$ ).	Significant change in food-related acceptance ( $p=.01$ , Cohen's $d=2.11$ ), mindfulness ( $p=.04$ , Cohen's $d=.81$ ). Non-significant change in defusion ( $p=.21$ , Cohen's $d=.74$ ), physical activity acceptance ( $p=.07$ , Cohen's $d=.83$ ).	N/A
Bradley et al., 2016b	PPT	<u>Weight</u> : Digital scale (self-report) to measure weight & BMI.  <u>Eating outcome</u> : Online self-monitoring calorie intake; EDE-Q, EI, EES, non-validated Grazing questionnaire, FCQ-T.  <u>Psychological outcome</u> : PHLMS, DDS, FRAAQ, PAAQ.  <u>Physical</u> : PPAR	Significant WL post-Tx ( $p=.01$ ).	Significant reduction in EDE-Q ( $p=0.09$ ), EI disinhibition, cognitive restraint & internal ( $p=<.01-.02$ ) & EES anxiety ( $p=.02$ ) scores. No difference in calorie intake, FCQ-T scores and EES external, anger & depression scores.	Significant increase in DDS ( $p=0.02$ ) & FAAQ ( $p<0.01$ ) scores. Non-significant changes in PHLMSacceptance and PAAQ scores.	Non-significant change on PPAR scores.
Chacko et al., 2016	RCT	<u>Weight</u> : Digital scale for weight & BMI.  <u>Eating outcome</u> : TFEQ, BES.	No group difference in changes in WL or BMI at 12 weeks, & 6 months post-intervention. Trends in weight increase in the E group.	Significant decrease in TFEQ emotional eating in E-group>C-group( $p=.03$ ) at 6 months. No difference in BES.	Nonsignificant difference in any outcomes.	Significant greater improvement in HbA1C in E-group>C-group No other significant difference in physical activity recall, METs, IWQOL, SF-36.

		<u>Psychological outcome:</u> CES-D, PSS, Brief COPE, WEL-SF.			
		<u>Medical, Health &amp; Physical status, QoL:</u> 7-day physical activity recall, METs, IWQOL-Lite, SF-36.			
Galle et al., 2017a	CT	<u>Weight:</u> Self-reported. <u>Psychological:</u> SCID-II	Significant group differences - greater BMI reduction in E1 & E2 groups > C group at post-Tx (p<.01). Significant reduction in BMI pre to post Tx in E1 & E2 (p<.01) but not C group.	N/A	Significant difference in meeting SCID-II BPD criteria between groups (p<.01), favouring E-group.  N/A
Galle et al., 2017b	CT	<u>Weight:</u> Not reported <u>Medical:</u> Diabetes <u>OSAS, HBP (from medical records).</u>	Significant group differences - higher % total WL in E group>C group, (p<.001). No difference pre-post % total WL in E group. Significant different in C group (p<.001).	N/A	Significant improvement of HBP (p=.02) & OSAS (p=.03) in E group > C group. No group difference in diabetes status (P>0.05).
Himes et al., 2015	PPT	<u>Weight:</u> Not reported <u>Eating:</u> EDE-Q; Food records (eating episodes & snacks per day). <u>Psychological:</u> SCID-I/P; DTS; BDI-II	Significant WL post Tx. BMI reduction post Tx (P≤0.01). Total % WR reduced from 37% to 34 %.	Significant decrease in subjective binge eating, $\bar{x}$ snack per day, number of eating episodes per day (P≤0.01-0.03) post-Tx. No difference in purging or unplugging.	Significant improvement in mood post Tx (P≤0.01). Non-significant change in distress tolerance.  N/A
Jassil et al., 2015	CT	<u>Weight:</u> Not reported <u>Eating:</u> EBFQ, food diary. <u>Physical:</u> PFAQ, DCOOP, 6MWT, PAL	Significant changes in weight, BMI, & total %WL pre-post Tx (p<.05). However, at 12 months, there were no group differences for %WL or $\bar{x}$ BMI at 12 months after surgery.	Significant increase in fruit & vegetable intake (p<.05).  No group differences in EBFQ scores.	Significant increase in PAL, and PFAQ, 6MWR & DCOOP Change in Health scores (p<.05) post Tx. No group differences in physical activity (P>0.05).

Leahy et al., 2008	PPT	<u>Weight</u> : Not reported <u>Eating</u> : EDE-Q, EES, ESES. <u>Psychological</u> : BDI-II, DERS, SOCRATES.	$\bar{X}$ WL pre-post Tx: 6.7Kg (descriptive data only)	Reduction in loss of control of eating (n=7, d=1.47). Reduction in eating concerns (n=6, d=.82). Reduction in eating-related guilt (n=4, Cohen's d=1.26).	Nearly all experienced reduction in depressive symptomatology (d=1.50). Emotion regulation difficulties were reduced (d=0.57).	N/A
Lent et al., 2019	RCT	Weight: Medical record. Eating: LOCES, EES, dietary adherence Likert scale (non-standardised). Psychological: PHQ-9, STAI, WEL-SF. Health & Physical status: The SF-36, PPAQ.	No difference in %WL between groups.	Better adherence to postoperative diet in E-group>C-group; Cohen's d=0.927). No differences between & within (pre-post) groups in LOCES or EES scores.	No difference between and within (pre-post) groups on PHQ-9, STAI or WEL-SF scores.	Greater SD-36 social functioning score in E-group > C-group (Cohen's d=0.69). No difference in physical activity between groups on PPAQ scores.
Nijamkin et al., 2012, 2013	RCT	<u>Weight</u> : Digital scale and medical records for weight & BMI <u>Eating</u> : Dietary recall, Diet Analysis Plus (nutrient intake). <u>Psychological</u> : BDI-II, <u>Physical</u> : SQUASH.	Significant group differences - greater excess WL & BMI reduction in E group > C group (P<0.001) at 12 months.	Greater $\bar{x}$ protein intake in C group > E group (P=0.02). No group differences in daily energy intake & meal numbers.	Significant group differences at 12 months post-treatment – less pessimism (p<.01), past failure, loss of pleasure, self-dislike, self-criticism and worthlessness (P<.05) in E group > C group.	Significant increase in physical activity in E-group>C-group (p<.001) No group differences in activity behaviour.
Papalazarou et al., 2009	RCT	<u>Weight</u> : Digital scale for weight and BMI <u>Eating</u> : DEBQ, Food diary (Type & amount, beverage) <u>Physical</u> : APAQ.	Significant group differences – greater WL at 12, 24 & 36 months post-surgery in E group, even after adjusting demographics (p<.001 -.01).	Significantly lower DEBQ total, Restraint, & Externality (p<.001) scores, decreased sweet intake and increased fruit & vegetable intake at 36 months in E group > C group (p<.05). No group	N/A	Significantly increased physical activity & lower TV viewing in E group > C group at 36 months (p=.039.).

				difference in DEBQ Emotionality & breakfast consumption.	
Sockalingam et al., 2016	PPT	<u>Weight</u> : Not reported  <u>Eating</u> : BES, EES,  <u>Psychological</u> : PHQ9, GAD7.	No significant weight-loss at 6 months following Tx.	Significant reduction in BES ( $p<.001$ ) & EES Total, Anxiety & Anger ( $p<.001-.04$ ), but not EES depression ( $p=.08$ ) post-Tx.	Significant reduction in depressive PHQ-9 ( $p=.02$ ) & GAD-7 scores ( $p<.01$ ) post Tx.  N/A
Tucker et al., 1991	RCT	<u>Weight</u> : Not reported  <u>Eating</u> : Food diary (meal, snack number), Recall food & liquid consumption during the past 24 h.  <u>Psychological</u> : Unvalidated Physical appearance and psychosocial questions (family relations, marital relations and emotional health)  <u>Medical/Physical</u> : Health diary (nausea, vomiting, stomach pain, difficulty swallowing, heartburn) and self-ratings (physical activity per day).	No group differences, but significant WL in pre-post Tx in both groups at 3, 6, 12 & 24 months.	Significant reduction in fat & protein consumption in Tx group > control group ( $p<.05$ ). No difference in daily calorie or carbohydrate intake.	Significantly higher marriage positivity rating ( $p<.02$ ), but no significant difference in family relations, & emotional health rating.  Significantly better subjective physical health & frequent daily physical activity in E group > C group ( $p<.05$ ). No group difference in frequency of nausea, vomiting, stomach pain, difficulty swallowing, & heartburn.
Wild et al., 2015, 2017	RCT	<u>Weight</u> : Not reported  <u>Eating</u> : EDE-Q,  <u>Psychological</u> : PHQ-9, GSE.  <u>Health status</u> : SF-36.	No group differences in WL at 1 & 3-year post-intervention.	No significant difference in eating disorder psychopathology	No group difference in GSE & PHQ-9 scores in at 1-year post-intervention (2015 study).  Significant group difference at 3-year post-surgery (2017 study) – lower PHQ-9 ( $p<.03$ , ES=.51) scores and higher No group difference in SF-36 scores.

GSE (p=.03, ES=.60)  
scores in E-group>C-  
group.

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**Legends:** QoL – Quality of Life; E - Experimental; C – Control; QoL – Quality of life; ES = Effect Size; WR – Weight-regain; WL – Weight-loss; Tx – Treatment; RCT – randomised controlled trial; CT – controlled trial; PPT – pre and -post trial; EES – Emotional Eating Scale; FCQ-T - The Food Cravings Questionnaire-Trait; EI - The Eating Inventory; EDE-Q – Eating Disorder Examination Questionnaire; TFEQ - Three Factor Eating Questionnaire Revised-18; BES - The Binge Eating Scale; EDDS - The Eating Disorder Diagnostic Scale; EBFQ - Eating Behavior and Food Frequency Questionnaire (non-standardised); ESES- The Eating Self-Efficacy Scale; DEBQ – The Dutch Eating Behavior Questionnaire-9; LOCES - Loss of control over eating scale-brief; PHLMS - The Philadelphia Mindfulness Scale; DDS- The Drexel Defusion Scale; FRAAQ - The Food-Related Acceptance and Action Questionnaire; PAAQ - The Physical Activity Acceptance Questionnaire; CES-D – Center for Epidemiologic Studies Depression Scale; PSS - Perceived Stress Scale; SCID-II - Structured Clinical Interview for DSM-IV Axis II Disorders; SCID-I/P - Structured Clinical Interview for DSM-IV Axis I Disorders; DTS - Distress Tolerance Scale; BDI-II - Beck Depression Inventory II; DERS - The Difficulties in Emotion Regulation Scale; SOCRATES - The Stages of Change Readiness and Treatment Eagerness Scale; PHQ-9 – The Patient Health Questionnaire; GAD-7 - Generalized anxiety disorder; GSE - General Self Efficacy Scale; STAI - State-trait anxiety inventory; PPAR - Paffenbarger Physical Activity Recall; WEL-SF - Weight efficacy life-style Questionnaire-Short Form; IWQOL- Lite - Quality of Life-Lite; SF-36 - Medical Outcomes Study Short-Form-36; PFAQ - The Physical Fitness and Activity Questionnaire; DCOOP - The Dartmouth Cooperative Functional Assessment Charts; 6MWT - Six-Minute Walk Test; PAL – Physical Activity Level; SQUASH - Short Questionnaire to Assess Health Enhancing Physical Activity; APAQ - Harokopio Physical Activity Questionnaire; BPD – Borderline Personality Disorder; OSAS - obstructive sleep apnea; HBP – Hypertension.

## **Participant characteristics**

All participants had undergone BS. Most studies identified this through hospital records, although it was unclear in one study (Bradley et al., 2017b). Generally, the majority of participants included were female (range: 59-100%) Caucasians (range 50-100%) with a mean age of 44 years (sd: 8) who had undergone gastric bypass BS (mean: 56%, sd: 27) and were 6 months (mode and median) post-surgery (range: 61, mean: 16 months, sd: 20). Based on five studies (Bradley et al., 2016a, 2016b; Galle et al., 2017a; Leahey et al., 2008; Nijamkin et al., 2012, 2013) who reported employment status, full-time or part-time employment among participants ranged from 50% to 100%. Only two studies reported whether participants had received previous psychological treatment that was unrelated to the study, which were 27.3% (Bradley et al., 2016a) and >10% (Tucker et al., 1991) of the participants. Five studies reported additional diagnoses amongst their participants, including borderline personality disorder (BPD; Galle et al., 2017a & 2017b), bulimia, obstructive sleep apnea syndrome (OSAS; Galle et al., 2017b), diabetes, hypertension (Galle et al., 2017b; Jassil et al., 2015; Leahey et al., 2008), asthma, fibromyalgia (Jassil et al., 2015), hyperlipidemia, depression (Leahey et al., 2008; Wild et al., 2015, 2017), social phobia, panic disorder and binge eating disorder (Wild et al., 2015, 2017). Seven studies reported educational level, where participants who had more than 12 years of education ranged from 7.5% (Galle et al., 2017a) – 100% (Chacko et al., 2016) of the total sample. Demographic data is presented in Table 3.

**Table 3***Baseline and Demographic Data*

<b>Study</b>	<b>Location</b>	<b>Sample size</b>	<b>Age (<math>\bar{x}</math> years)</b>	<b>Baseline weight/ BMI (<math>\bar{x}</math> kg/BMI)</b>	<b>Comorbidity</b>	<b>Surgery type (% GB)</b>	<b>Time since surgery (<math>\bar{x}</math> months)</b>	<b>Previous <math>\Psi_{Tx}</math> (%)</b>	<b>Employment % (F/T or P/T)</b>	<b>Education (% <math>&gt;12</math> years or <math>\bar{x}</math> years)</b>	<b>Ethnicity (% Caucasian)</b>	<b>Gender (%Female)</b>	<b>Marital status (% married/ partner)</b>
Bradley et al., 2016a	US	15	53	NR	NR	73	43	27	55	NR	82	63	64
Bradley et al., 2016b	US	20	54	NR	NR	75	61	NR	60	NR	80	85	55
Chacko et al., 2016	US	18	53 (E) 54 (C)	89kg (E) 97kg (C)	NR	44 (E) 56 (C)	31	NR	NR	100	67 (E) 78 (C)	90 (E) 78 (C)	NR
Galle et al., 2017a*	Italy	153	33 (E1), 34 (E2) 32 (C)	115kg (E1) 113kg (E2) 115kg (C)	BPD	62 (E1) 68 (E2) 58 (C)	1	NR	50 (E1) 54 (E2) 51 (C)	12 (E1) 10 (E2) 7.5 (C)	NR	100	NR
Galle et al., 2017b*	Italy	154	33	NR	BPD, T2D, OSAS, HBP, Bulimia	53	1	NR	NR	NR	100	74	NR
Himes et al., 2015	US	28	53	36 BMI	NR	100	48	NR	NR	NR	100	93	NR
Jassil et al., 2015*	UK	10	44	98 kg, 39 BMI	T2D, HBP, Asthma, FM	25	5	NR	NR	NR	50	100	NR
Leahy et al., 2008	US	7	54	41 BMI	HBP, T2D, HLD, MDD	30	6	NR	100	71	85	85	NR
Lent et al., 2019	US	50	48 (E), 46 (C)	47 BMI (E), 50 BMI (C)	NR	66	7	NR	NR	NR	94	82	NR
Nijamkin et al., 2012, 2013	US	144	44	94 kg (E), 100 kg (C)	NR	100	0	NR	57	14 ( $\bar{x}$ years)	100	83	61 (E) 47 (C)
Papalazarou et al., 2009	Greece	30	33	49 BMI (E), 45 BMI (C)	NR	0	6	NR	NR	7 (E) 27 (C)	NR	100	40

Sockalingam et al., 2016*	Canada	47	46	NR	NR	100*	7	NR	NR	NR	NR	86	71
Tucker et al., 1991*	US	41	40	115 kg (E), 103 kg (C)	T2D, HBP	31	6	19	NR	13 ( $\bar{x}$ years)	NR	66	63
Wild et al., 2015, 2017*	Germany	117	42 (E) 40 (C)	148 kg	MDD, SP, PD, BED	39 (E) 34 (C)	3	NR	NR	15	NR	59 (E) 80 (C)	52%

**Legends:** E – experimental group; C – control group;  $\bar{x}$  - mean; BMI – body-mass index; kg – kilogram; NR – not reported; BPD – borderline personality disorder; T2D – Type 2 Diabetes; OSAS – obstructive sleep apnea disorder; FM – fibromyalgia; HBP – hypertension; MDD – major depression disorder; HLD – Hyperlipidemia

\*data based on participants included in study analysis

## Treatment characteristics

For characteristics of interventions see Table 4.

### ***Intervention group(s)***

**Format and modality.** All participants received some form of psychological intervention. The psychological interventions were characterised by a large variation in format and modality. Seven studies delivered treatment in group (Bradley et al., 2016a; Chacko et al., 2016; Himes et al., 2015; Leahey et al., 2008; Lent et al., 2019; Nijamkin et al., 2012; Wild et al., 2015), two studies delivered treatment individually and in groups (Galle et al., 2017b; Jassil et al. 2015), three studies delivered treatment individually (Galle et al., 2017a; Papalazarou et al., 2009; Tucker et al., 1991), one study delivered treatment electronically (i.e., e-therapy; Bradley et al., 2017b) and another study delivered treatment over telephone (i.e., tele-therapy; Sockalingam et al., 2016). All modalities used in the studies were adapted to bariatric patients, and included principles from acceptance-behavioural (Bradley et al., 2016a, 2016b), mindfulness-behavioural/mindfulness-CBT (Chacko et al., 2016; Leahey et al., 2008), IPT and DBT (Galle et al., 2017a, 2017b), behavioural with or without lifestyle intervention (Jassil et al., 2015; Lent et al., 2019; Nijamkin et al., 2012, 2013; Papalazarou et al., 2009), and CBT with or without psychoeducation (Sockalingam et al., 2016; Wild et al., 2015, 2017) models.

**Duration, frequency and intensity.** There was a large variation in duration, number and intensity (in minutes) of sessions. Intervention duration ranged from 6 weeks (Jassil et al., 2015; Sockalingam et al., 2016) to 156 weeks (Papalazarou et al., 2009), with an average duration of 36 weeks (sd: 45, mode: 10 weeks, median: 10

weeks). Session frequency ranged from 6 sessions (Himes et al., 2015; Nijamkin et al., 2012, 2013; Sockalingam et al., 2016) to 52 sessions (Galle et al., 2017a, 2017b) with an average of 17 sessions offered (sd: 16, range: 46, mode: 10 sessions, median: 10 sessions). Finally, the intensity (i.e., duration of each sessions) ranged from 55 minutes (Sockalingam et al., 2016) to 120 minutes (Jassil et al., 2012), although it was either variable (Galle et al., 2017b; Wild et al., 2015, 2017) or unclear (Bradley et al., 2016b; Papalazarou et al., 2009; Tucker et al., 1991) in five studies. Based on nine studies with clearly specified and constant treatment intensity, the average length of each session was 70 minutes (sd: 13.5, range: 35, mode: 60 minutes, median: 60 minutes).

**Profession of intervention provider.** Three studies used ‘qualified’ or supervised psychology graduates (Bradley et al., 2016b; Sockalingam et al., 2016; Tucker et al., 1991); three studies used trainee clinical psychologists (Bradley et al., 2016a; Leahey et al., 2008; Lent et al., 2019), two studies used dietitians (Nijamkin et al., 2012, 2013; Papalazarou et al., 2009), two studies used therapists (Galle et al., 2017a, 2017b), one study used multidisciplinary professionals (physiotherapist, specialist dietician, exercise specialist and psychologist; Jassil et al., 2015) and one study used a qualified mindfulness instructor (Chacko et al., 2016). Two studies did not report the profession of the intervention provider (Himes et al., 2015; Wild et al., 2015, 2017).

### ***Control group(s)***

Nine studies included a control arm. Six of these studies included care as usual (Galle et al., 2017a, 2017b; Lent et al., 2019; Papalazarou et al., 2009; Tucker et al., 1991; Wild et al., 2015, 2017). The remaining studies included one-hour individualised counselling sessions (Chacko et al., 2016), historical control patients (Jassil et al., 2015)

and brief printed guidelines for healthy eating and physical activity (Nijamkin et al., 2012, 2013).

## **Outcomes measures**

Outcome measures used are presented in Table 2. Most studies used a combination of weight-related outcomes, eating behaviour/disorder outcomes, psychological status outcomes, and health, physical activity, functional status or QoL outcomes. Six studies had two assessment points; pre-treatment (baseline) and post-treatment (Galle et al., 2017a, 2017b; Jassil et al., 2015; Leahey et al., 2008; Lent et al., 2019; Nijamkin et al., 2012, 2013; Sockalingam et al., 2016). The remaining studies had multiple assessment points, involving pre-treatment (baseline), mid-treatment, post-treatment and follow-up.

### ***Objective measures***

**Anthropometric measures.** Five studies used a digital weight scale onsite to measure participants' total weight (Bradley et al., 2016a; Chacko et al., 2016; Nijamkin et al., 2012, 2013; Papalazarou et al., 2009). One study obtained pre- and post-treatment anthropometric data from medical records in the hospital they recruited from (Lent et al., 2019). Two studies reported BMI by measuring participants' height using a stadiometer (Nijamkin et al., 2012, 2013) or medical records (Papalazarou et al., 2009). The remaining studies did not report how anthropometric data (e.g., total weight, BMI) was obtained.

**Health or physical activity measures.** Three studies used objective measures of health or physical activity (Chacko et al., 2016; Galle et al., 2017b; Jassil et al., 2012). Two studies used biomedical tests onsite (Chacko et al., 2016) or medical records

(Galle et al., 2017b) to assess metabolic functioning. Jassil et al. (2015) used a six-minute walk test conducted by an exercise specialist to measure functional capacity.

### ***Subjective measures***

**Weight measure.** Two studies relied on self-reports of anthropometric information that were taken at home, although the studies required the participants to have or buy a digital scale to be eligible for the study (Bradley et al., 2016b; Galle et al., 2017a).

**Eating behaviour and/or disorder measure.** All but two studies (Galle et al., 2017a, 2017b) measured eating behaviour/disorder as an outcome. The most common measures of eating behaviour were the Emotional Eating Scale, unvalidated diaries and questionnaires of eating habits (e.g., grazing, snacks, meals, liquids), although most studies included more than one measure of eating behaviour/disorders.

**Psychological status measures.** Eleven studies measured psychological status as an outcome (Bradley et al., 2016a, 2016b; Chacko et al., 2016; Galle et al., 2017a; Himes et al., 2015; Leahey et al., 2008; Lent et al., 2019; Nijamkin et al., 2013; Sockalingam et al., 2016; Tucker et al., 1991; Wild et al., 2015, 2017). The measures used typically depended on the modality of intervention being investigated, and most studies included more than one measure.

**Table 4***Intervention Summary*

<b>Study</b>	<b>Format</b>	<b>Group number</b>	<b>Intervention</b>	<b>Content of intervention</b>	<b>Profession</b>	<b>Duration</b>	<b>Frequency</b>	<b>Intensity</b>	<b>Control</b>
Bradley et al., 2016a	Group	1	Acceptance-Behavioural	Promoting acceptance of internal experiences mindfulness, defusion, commitment to core values. The intervention also included standard behavioural techniques for weight loss including self-monitoring, stimulus control, and psychoeducation	Trainee clinical psychologist	10 weeks	10 sessions	75 minutes	None
Bradley et al., 2016b	E-therapy	1	Acceptance-Behavioural	Promoting acceptance of internal experiences mindfulness, defusion, commitment to core values. The intervention also included standard behavioural techniques for weight loss including self-monitoring, stimulus control, and psychoeducation	Trained advanced graduate	10 weeks	Approx. 10 sessions (variable)	Unspecified	None
Chacko et al., 2016	Group	2	Mindfulness-behavioural	Mindfulness (meditative practice, patience, acceptance, self-compassion) was integrated with adapted versions of traditional behavioural strategies for obesity (e.g. goal setting, problem-solving, stimulus control, self-monitoring, social support).	Qualified mindfulness instructor	10 weeks	10 sessions	90 minutes	1-hour counselling with a dietician
Galle et al., 2017a	Individual	3	IPT & DBT	Adapted version of IPT and DBT to obesity	Advanced therapist	52 weeks	52 sessions	60 minutes	Care as usual
Galle et al., 2017b	Group & individual	2	DBT	Adapted version of DBT to obesity	Therapist	52 weeks	52 sessions	120-150 minutes	Care as usual
Himes et al., 2015	Group	1	DBT	Adapted version of DBT to obesity	Not reported	6 weeks	6 sessions	60 minutes	None
Jassil et al., 2015	Group & individual	2	Behavioural and lifestyle	Group discussion on lifestyle and teaching self-regulatory behaviour change techniques (self-monitoring using a food and exercise diary, barrier identification/problem solving, and weekly behavioural goal setting). All patients were taught the principles of SMART (specific, measurable, attainable, realistic, and timely) goal setting.	MDT (physiotherapist, dietician, clinical psychologist)	8 weeks	8 sessions	60 + 60 minutes	Historical Control Patients (n=16)

Leahy et al., 2008	Group	1	CBT mindfulness	Traditional CBT adapted for obesity integrated with teaching and increasing mindfulness techniques (e.g., not engaging in other activities whilst eating).	Trainee Clinical Psychologist	10 weeks	10 sessions	75 minutes	None
Lent et al., 2019	Group	2	Behavioural Intervention	Coping with potential psychosocial changes after surgery and developing skills for postoperative diet and adherence.	Clinical psychologist or trainee clinical psychologist	16 weeks	8 sessions	60 minutes	Care as usual
Nijamkin et al., 2012, 2013*	Group	2	Behavioural-motivation & psychoeducation	Promoting dietary recommendations, physical exercise and motivation, self-esteem and emotional regulation techniques.	Dietician	12 weeks	6 sessions	90 minutes	Healthy eating & physical activity printed guidelines
Papalazarou et al., 2009	Individual	2	Lifestyle involving behavioural	A patient-centred collaborative approach with behaviour modification technique (self-monitoring, self-evaluation, goal setting, reinforcement, stimulus control, and relapse prevention).	Dietician	156 weeks	30 sessions	40 minutes + usual care	Care as usual
Sockalingam et al., 2016	Telephone	1	Tele-CBT	Traditional CBT adapted to obesity.	Psychology MSc graduate	6 weeks	6 sessions	55 minutes	None
Tucker et al., 1991	Individual	2	Behavioural	Patients were provided with written material on behavioural approach to weight management, post-surgery diet & nutritional information, problem-solving and maintenance strategies. This was combined with behavioural consultation.	Psychology grad-student	104 weeks	6 + 12 sessions	Unclear	Care as usual
Wild et al., 2015, 2017*	Group	2	Psychoeducational	Covered following topics: information, postoperative nutrition, coping with stress, relaxation, body image, physical activity, and self-care. Self-monitoring was implemented to facilitate an in-depth analysis of relevant topics	Not reported	52 weeks	5 sessions + 6 sessions + 3 sessions	90 minutes + 50 minutes + unclear	Care as usual

**Legends:** MDT – Multidisciplinary team, IPT – Interpersonal Psychotherapy, DBT – Dialectical Behaviour Therapy

\*studies report the same intervention and sample.

**Health, physical activity, functional status or QoL measures.** Seven studies measured self-reported health, physical activity or QoL as an outcome (Bradley et al., 2016b; Chacko et al., 2016; Jassil et al., 2015; Lent et al., 2019; Nijamkin et al., 2012; Papalazarou et al., 2009; Tucker et al., 1991). Most studies included more than one measure.

### **Excluded studies**

Common reasons for exclusion included pre-surgery intervention or had not had surgery yet, cross-sectional study, no weight measures, insufficient description of the psychological intervention or support group (e.g., unclear whether sessions were more than one, or in support groups whether it was facilitated by a health professional).

### **Risk of bias in included studies**

The quality of the studies considered for inclusion was assessed using the data extraction tool described above (See Table 5). For a comprehensive review see Appendix 4.

### ***Systematic baseline differences (confounders)***

Three studies (Bradley et al., 2016a, 2016b; Galle et al., 2017b) were rated as having ‘critical’ risk of bias due to systematic baseline differences (confounders). These studies did not present important baseline data (e.g., pre-surgery weight, additional diagnosis) and did not conduct inferential analysis to evaluate differences between groups. It was not possible to determine the impact of confounders on the outcome(s) as these were not controlled. Thus, the studies cannot rule out the possibility of pre-existing differences between groups (Sterne et al., 2016). Two studies were rated as

having ‘serious’ risk of bias (Papalazarou et al., 2009; Sockalingam et al., 2016). These studies did not obtain or include important baseline data (e.g., pre-surgery weight, employment, ethnicity, previous psychological treatment, additional diagnosis) in their analysis of confounding variables. In the Sockalingam et al. (2016) study, non-completers had significantly less percentage total weight-loss before psychological treatment ( $p=.01$ ) compared to completers. Eleven studies, representing nine trials, were rated as having ‘moderate’ risk of bias (Chacko et al., 2016; Galle et al., 2017a; Himes et al., 2015; Jassil et al., 2015; Lent et al., 2019; Leahey et al., 2008; Nijamkin et al., 2012, 2013; Tucker et al., 1991; Wild et al., 2015, 2017). These studies did not obtain some demographic data (e.g., employment, previous psychological treatment, additional diagnosis).

### ***Participant selection***

Four studies were rated as having ‘serious’ risk of bias (Bradely et al., 2016a, 2016b; Galle et al., 2017a, 2017b) due to participant selection, as group allocation relied on participant choice or participants were financially compensated to partake in the study, leading to motivation bias. Ten studies, representing eight trials, were rated as having ‘low’ risk of bias in this domain (Chacko et al., 2016; Himes et al., 2015; Jassil et al., 2015; Leahey et al., 2008; Lent et al., 2019; Nijamkin et al., 2012, 2013; Tucker et al., 1991; Wild et al., 2015, 2017). It was not possible to rate the risk of bias for two studies (Papalazarou et al., 2012; Sockalingam et al., 2016) as they did not provide sufficient information about the selection process.

### ***Allocation blinding***

Nine studies, representing seven trials, included more than one group and were rated based on their allocation blinding procedures (Chacko et al., 2016; Jassil et al., 2015; Lent et al., 2019; Nijamkin et al., 2012, 2013; Papalazarou et al., 2008; Tucker et al., 1991; Wild et al., 2015, 2017). One study (Jassil et al., 2015) was rated as having ‘serious’ risk of bias as they used historical control, and therefore randomisation was not possible. Four studies, representing three trials, were rated as having ‘low’ risk of bias in this domain (Chacko et al., 2016; Lent et al., 2019; Wild et al., 2015, 2017). It was not possible to rate the remaining studies (Nijamkin et al., 2012, 2013; Papalazarou et al., 2009) due to insufficient information on their randomisation procedures.

### ***Intervention classification***

Two studies were rated as having ‘serious’ risk of bias due to intervention classification (Bradley et al., 2016b; Tucker et al., 1991). These studies provided poor or inadequate definition of the study intervention (e.g., session length or intensity and whether these differed between participants). The remaining studies were rated as having either ‘moderate’ (Wild et al., 2015, 2017) or ‘low’ risk of bias in this domain.

### ***Intervention deviation***

One study was rated as having ‘critical’ risk of bias due to intervention deviation (Tucker et al., 1991). In this study, the intervention integrity was not controlled and ensured, as the key therapeutic component (i.e., written material/lessons and quizzing of these materials/lessons) was undertaken by the participants in their own home without formal/objective assessment, recording or supervision. This potentially introduces variability in the intervention and confounds the key intervention component (e.g., another person completes the quiz or some participants receiving additional help).

Additionally, there was no consistency of the timings of behavioural consultations (“Usually on the same day as the medical visits the behavioral consultations for treatment subjects were conducted...” p. 692), which suggests that some participants may have had their consultations on different occasions. Two studies were rated as having ‘serious’ risk of bias in this domain (Bradley et al., 2016a, 2016b). In Bradley et al. (2016a) study participants received financial compensation to complete mid-, and post-, treatment assessments, which is not typical practice (Sterne et al., 2016). In Bradley et al. (2016b) study the intervention duration varied between individuals and the completion rate was only 60%. The remaining studies were rated as having ‘moderate’ (Lent et al., 2019) or ‘low’ risk of bias in this domain.

### ***Incomplete or missing data***

Seven studies were rated as having ‘serious’ risk of bias due to incomplete or missing data (Bradley et al., 2016a; Galle et al., 2017a, 2017b; Himes et al., 2016; Jassil et al., 2015; Sockalingam et al., 2016; Tucker et al. 1991). These studies did not address missing data appropriately (e.g., did not use intention-to-treat, did not report reasons for missing data) or did not report their analysis in the report, despite significant results. It was not possible to rate the risk of bias for the Papalazarou et al. (2009) study, as they did not provide sufficient information about how they handled missing data. The remaining studies were rated as having ‘moderate’ (Wild et al., 2015, 2017) or ‘low’ risk of bias in this domain.

### ***Measurement of outcomes***

Ten studies, representing nine trials, were rated as having ‘serious’ risk of bias due to measurement of outcomes (Bradley et al., 2016b; Galle et al., 2017a, 2017b;

Himes et al., 2015; Jassil et al., 2015; Leahey et al., 2008; Sockalingam et al., 2016; Tucker et al., 1991; Wild et al., 2015, 2017). In these studies, the primary outcome (i.e., weight) was either obtained subjectively (i.e., self-report rather than measured on-site by researcher) or not described. In the Jassil et al. (2012) study, secondary outcome data was not obtained for both groups, and some of the outcome measures were not standardised. The remaining studies were rated as either ‘moderate’ (Bradley et al., 2016a) or ‘low’ risk of bias in this domain (Chacko et al., 2016; Lent et al., 2019; Nijamkin et al., 2012, 2013; Papalazarou et al., 2009).

### ***Selective reporting***

Two studies were rated as having ‘critical’ risk of bias due to selective reporting (Himes et al., 2015; Leahey et al., 2008). The Himes et al. (2015) did not report several outcome measures and analyses in the results section (e.g., intent-to-treat) and failed to highlight or discuss non-significant results. The Leahey et al. (2008) study only used effect size comparing the two groups; however, they did not report the effect size for weight, and did not report any other inferential statistics. Four studies were rated as having ‘serious’ risk of bias in this domain (Bradley et al., 2016a, 2016b; Galle et al., 2017a; Jassil et al., 2015; Tucker et al., 1991). These studies typically included analyses that were not consistent with a-priori plan, failed to highlight or discuss non-significant results, or outcome measure was analysed in multiple ways (e.g., t-test to evaluate BMI difference and using ANOVA to evaluate mean BMI). The remaining studies were rated as either ‘moderate’ (Chacko et al., 2016; Galle et al., 2017b; Papalazarou et al., 2009) or ‘low’ risk of bias (Nijamkin et al., 2012, 2013; Papalazarou et al., 2009; Sockalingam et al., 2016).

### ***Overall risk of bias***

According to the ROBINS-I tool, declaring a study to be at a particular level of risk of bias for an individual domain will mean that the study as a whole has a risk of bias at least this severe (for the outcome being assessed).

Five studies were rated as having ‘critical’ overall risk of bias (Bradley et al., 2016b; Galle et al., 2017b; Himes et al., 2015; Leahey et al., 2008; Tucker et al., 1991), whereas seven studies, representing six trials, were rated as having ‘serious’ overall risk of bias (Bradley et al., 2017a; Galle et al., 2017a; Jassil et al., 2015; Papalazarou et al., 2009; Sockalingam et al., 2016; Wild et al., 2015, 2017). The remaining four studies, representing three trials, were rated as ‘moderate’ risk of bias (Chacko et al., 2016; Lent et al., 2019; Nijamkin et al., 2012, 2013).

### **Effects of interventions**

Any form of statistical analysis was not conducted in this review, but study results were summarised for the effects on the primary and secondary outcomes.

The primary outcome for this systematic review was measures of weight-related data (e.g., weight or BMI). Secondary outcomes were measures of eating behaviour/disorder, psychological and health, physical activity, functional status or QoL.

Twelve studies included eating behaviour/disorder, eleven studies included psychological status, and seven studies included health, physical activity, functional status or QoL as outcome measures. Data are presented in Table 2.

**Table 5***Risk of Bias Quality Assessment*

<b>Study</b>	<b>Rater</b>	<b>Systematic baseline differences (confounding)</b>	<b>Participant selection</b>	<b>Allocation blinding</b>	<b>Intervention classification</b>	<b>Intervention deviation</b>	<b>Incomplete or missing data</b>	<b>Measurement of outcomes</b>	<b>Selective reporting</b>	<b>Overall judgement</b>
Bradley et al., 2016a	Rater 1	Serious	Serious	N/A	Low	Serious	Serious	Moderate	Serious	Serious
	Rater 2	Moderate	Serious	N/A	Moderate	Serious	Serious	Moderate	Serious	Serious
Bradley et al., 2016b	Rater 1	Critical	Serious	N/A	Serious	Serious	Low	Serious	Serious	Critical
	Rater 2	Serious	Serious	N/A	Serious	Serious	Low	Serious	Serious	Serious
Chacko et al., 2016	Rater 1	Moderate	Low	Low	Low	Low	Low	Low	Moderate	Moderate
	Rater 2	Low	Low	Low	Low	Low	Low	Low	Moderate	Moderate
Galle et al., 2017a	Rater 1	Moderate	Serious	N/A	Low	Low	Serious	Serious	Serious	Serious
	Rater 2	Low	Serious	N/A	Low	Low	Moderate	Serious	Serious	Serious
Galle et al., 2017b	Rater 1	Critical	Serious	N/A	Low	Low	Serious	Serious	Moderate	Critical
	Rater 2	Serious	Critical	N/A	Low	Low	Serious	Serious	Low	Critical
Himes et al., 2015	Rater 1	Moderate	Low	N/A	Low	Low	Serious	Serious	Critical	Critical
	Rater 2	Low	Low	N/A	Low	Low	Serious	Serious	Critical	Critical
Jassil et al., 2015	Rater 1	Moderate	Moderate	N/A	Low	Low	Serious	Serious	Serious	Serious
	Rater 2	Low	Moderate	N/A	Low	Low	Serious	Serious	Serious	Serious
Leahy et al., 2008	Rater 1	Moderate	Low	N/A	Low	Low	Low	Serious	Critical	Critical
	Rater 2	Low	Low	N/A	Low	Low	Low	Serious	Critical	Critical
Lent et al., 2019	Rater 1	Moderate	Low	Low	Low	Moderate	Low	Low	Low	Moderate
	Rater 2	Low	Low	Low	Low	Moderate	Low	Low	Low	Moderate
Nijamkin et al., 2012, 2013	Rater 1	Moderate	Low	No info	Low	Low	Low	Low	Low	Moderate
	Rater 2	Low	Low	No info	Low	Low	Low	Low	Low	Low
Papalazarou et al., 2009	Rater 1	Serious	No info	No info	Low	Low	No info	Low	Moderate	Serious
	Rater 2	Serious	No info	No info	Low	Low	No info	Low	Moderate	Serious

Sockalingam et al., 2016	Rater 1	Serious	No info	N/A	Low	Low	Serious	Serious	Low	Serious
	Rater 2	Serious	No info	N/A	Low	Low	Serious	Serious	Low	Serious
Tucker et al., 1991	Rater 1	Moderate	Low	No info	Serious	Critical	Serious	Serious	Serious	Critical
	Rater 2	Low	Low	No info	Serious	Critical	Serious	Serious	Serious	Critical
Wild et al., 2015, 2017	Rater 1	Moderate	Low	Low	Moderate	Low	Moderate	Serious	No info	Serious
	Rater 2	Low	Low	Moderate	Moderate	Low	Low	Serious	No info	Serious

N/A – Not applicable

Based on The Cochrane ROBINS-I (Sterne, Higgins, Elbers & Reeves, 2016)

## **Primary outcome**

The primary outcome in this systematic review were defined as total weight-loss or BMI.

## ***Randomised controlled and controlled designs.***

Eleven studies, representing nine trials, used RCT/CT designs. Overall, five studies, representing four trials, reported significantly greater weight-loss (total weight in kg) and/or reduction in BMI in the intervention group compared to control group (Galle et al., 2017a, 2017b; Nijamkin et al., 2012, 2013; Papalazarou et al., 2009; p<0.05). Papalazarou et al. (2009) study indicated that this effect remained at 36 months post-surgery. In the Galle et al. (2017b) study, the difference in total percentage weight-loss in the intervention group was non-significant between pre- and post-intervention (p=.08), whereas a significant difference was found in the control group (p<0.001). The Jassil et al. (2015) and Tucker et al. (1991) studies did not find a significant group effect (i.e., intervention vs. control groups) on body weight, BMI and total percentage weight-loss. They did, however, find a significant time effect (i.e., pre-treatment vs. post-treatment) in the intervention group on body weight, BMI, and total percentage weight-loss at circa 14 weeks after the baseline assessment (p<0.05).

## ***Pre- and post-designs***

Five studies used PPT. Overall, three studies reported significant weight-loss, lower BMI, and/or weight-regain reduction at post treatment (Bradley et al., 2016a, 2016b; Himes et al., 2015; p≤.01). Leahey et al. (2008) found an average weight-loss of 6.7kg following treatment but did not report the effect size or p-value of the effects of intervention on weight-loss. Chacko et al. (2016) noted a trend in weight-loss among

participants in the intervention group, although this did not reach a significant value at 3-months and 6-months post-intervention ( $p=.27$  and  $p=.15$ , respectively).

### **Secondary outcome**

Secondary outcome in this systematic review constituted eating behaviours/disorder, psychological and health, physical activity, functional status or QoL. All studies included at least one of these outcomes in their study.

#### ***Randomised controlled and controlled designs***

**Eating behaviours and/or disorders.** Two (Galle et al., 2017a, 2017b) of the eleven studies did not include any measure of eating behaviours/disorders. The results were mixed as all studies used more than one measure. Overall, six studies, representing five trials, reported significantly improved scores on at least one eating behaviour/disorder measure (e.g., emotional eating, post-surgery diet adherence, protein and fat intake, snacking, restraint eating, external eating, binge eating) in the intervention group compared to control group (Chacko et al., 2016; Lent et al., 2019; Nijamkin et al., 2012, 2013; Papalazarou et al., 2009; Tucker et al., 1991). All six studies also reported non-significant differences between the groups in at least one measure (e.g., binge eating, loss of control eating, number of meals, breakfast consumption, eating disorder psychopathology).

**Psychological status.** Three (Galle et al., 2017b; Jassil et al., 2015; Papalazarou et al., 2009) of the eleven studies did not include any measure of psychological status. Three studies reported significantly improved scores on at least one psychological measure (e.g., criteria, pessimism, past failure, loss of pleasure, self-dislike, self-

criticism, worthlessness, and marriage positivity; Galle et al., 2017a; Nijamkin et al., 2013; Tucker et al., 1991) in the intervention group compared to the control group. One trial reported significantly improved depressive symptoms and self-efficacy at three-years (Wild et al., 2017), but not at one-year (Wild et al., 2015) post intervention. The remaining two studies reported non-significant changes in coping, stress, self-efficacy, mood and depressive symptoms (Chacko et al., 2016; Lent et al., 2019).

**Health, physical activity, functional status, or QoL.** All but one (Galle et al., 2017a) of the eleven studies included at least one measure of health, physical status or QoL. The results were mixed as more than one measure was used. Overall, all but one trial (Wild et al., 2015, 2017) reported significant improvements in at least one measure, including improvement in physical health (e.g., hypertension, obstructive sleep apnea syndrome, physical level activity, exercise tolerance, functional status, and social functioning QoL). Conversely, all but one study (Papalazarou et al., 2009) also reported non-significant changes in at least one measure, including physical health symptoms (e.g., nausea, vomiting, stomach pain, heartburn), status (e.g., diabetes), physical level activity (e.g., frequency exercising), and QoL.

### *Pre- and post-designs*

**Eating behaviours and/or disorders.** All five studies included at least one measure of eating behaviours/disorder. One study (Leahy et al., 2008) only used effect size to analyse the impact of their intervention. Another study (Bradley et al., 2016a) used both inferential statistics and effect size. The results were mixed as all studies used more than one measure. Overall, three (Bradley et al., 2016b; Himes et al., 2015; Sockalingam et al., 2016) of four studies with inferential statistics reported significant

reduction in at least one measure, including reactivity to internal cues, eating disorder symptoms, eating disinhibition and restraint, emotional eating, binge eating, snacking, meals per day;  $p<0.05$ ). Leahey et al. (2008) found large effect size in the reduction of loss of control of eating ( $d=1.47$ ), eating concerns ( $d=.82$ ) and guilt associated with eating ( $d=1.26$ ). Bradley et al. (2016a) also found medium to large effect size of change in eating disorder symptomology. Conversely, three studies (Bradley et al., 2016a, 2016b; Sockalingam et al., 2016) also reported non-significant improvement in at least one measure, including grazing, binge eating, loss of control eating, emotional eating, food craving and calorie intake ( $p>0.05$ ).

**Psychological status.** All five studies included at least one measure of psychological status. One study (Leahey et al., 2008) only used effect size to analyse the impact of their intervention. Another study (Bradley et al., 2016a) used both inferential statistics and effect size. The results were mixed as all studies used more than one measure. All four studies that used inferential statistics reported significant improvement in at least one measure, including food-related acceptance, mindfulness, defusion, mood and depression and anxiety ( $p<0.05$ ). All studies also reported non-significant changes in at least one measure, including defusion, physical activity acceptance, mindfulness and distress tolerance. Leahey et al. (2008) found large effect size on reduction in depressive symptomatology ( $d=1.50$ ) and a medium effect size on reduction in emotion regulation difficulties ( $d=0.57$ ).

**Health, physical activity, functional status, or QoL.** Only one study (Bradley et al., 2016b) included a measure of physical activity, although they found no significant change following intervention ( $p>0.05$ ).

## **DISCUSSION**

### **Summary of main findings**

Sixteen studies reporting on fourteen trials were considered in this review. Overall, there were six RCTs, three CTs and five PPT designs. The total number of participants across all included studies was 834. Most participants were white middle-aged females and at six months post-surgery. Consistent with the literature, the psychological interventions were characterised by a large variation in format (e.g., group, individual, e-therapy, phone-therapy), modality (CBT, acceptance and mindfulness, IPT, DBT), number of sessions offered (range: 46), and session intensity (mean: 70 minutes, sd: 13.5).

This review found mixed evidence to support the effectiveness of psychological intervention on weight-loss. Overall, half of the included trials (n=7) reported statistically significant effect of a psychological intervention on either weight-loss or BMI. Specifically, four RCT/CT studies reported significantly greater weight-loss (total weight in kg) and/or reduction in BMI (kg/m<sup>2</sup>) in the intervention group compared to control group (Galle et al., 2017a, 2017b; Nijamkin et al., 2012; Papalazarou et al., 2009; p<0.05). Three PPT studies reported significantly greater weight-loss (total weight in kg) and/or reduction in BMI following intervention (Bradley et al., 2016a, b; Himes et al., 2015).

This review found mixed evidence to support the effectiveness of psychological intervention on eating behaviour/disorder, psychological status, health, physical activity, functional status and/ or QoL. Overall, five RCT/CT studies reported significant improvement in at least one eating behaviour/disorder measure (Chacko et al., 2016; Lent et al., 2019; Nijamkin et al., 2012; Papalazarou et al., 2009; Tucker et al., 1991), three reported significant improvements in at least one measure of

psychological status (Chacko et al., 2016; Nijamkin et al., 2013; Wild et al., 2017), and seven studies reported significant improvements in at least one measure of health, physical activity, functional status or QoL (Chacko et al., 2016; Galle et al. 2017b; Jassil et al., 2015; Lent et al., 2019; Nijamkin et al., 2012; Papalazarou et al., 2009; Tucker et al., 1991), relative to control group(s). Three PPT studies reported significant improvement in at least one eating behaviour measure (Bradley et al., 2016b; Himes et al., 2015; Sockalingam et al., 2016) and four studies reported significant improvement in at least one measure of psychological status (Bradley et al., 2016a, 2016b; Himes et al., 2015; Sockalingam et al., 2016). Only one PPT study included a measure of physical activity (Bradley et al., 2016b). This study found a non-significant change in physical activity following intervention. Conversely, all studies also reported non-significant outcome in at least one measure of eating behaviour/disorder, and most studies reported non-significant outcome in at least one measure of psychological status, health, physical activity, functional status and/ or QoL.

It is possible that the mixed results are due to biases in measurement of outcomes and selective reporting (See ‘Risk of bias in included studies’). Several outcomes were obtained subjectively (or lacked information), did not follow a-priori plan, or analysed the outcome measure in multiple ways. It should also be highlighted that there was considerable variability in outcome definitions and domains investigated (e.g., BMI vs. total weight-loss, different eating habits, anxiety vs. depression vs. ‘mood’, physical activity, functional status). Although this is likely to reflect the absence of a consensus on the most important clinical outcomes within the literature, it incurs difficulties in cross-comparison and interpretation of the results due to variable operationalisation of different outcome measures (Coster, 2013).

Most of these studies were constrained by methodological limitations with ‘critical’ or ‘serious’ risk of bias (n=11). Therefore, due to mixed results, different outcome measures used and methodological issues (See next sections), the review is unable to provide conclusive evidence to support the effectiveness of psychological interventions following BS on weight-loss, or improved eating behaviours/disorder, psychological status, health, physical activity, functional status and/or QoL.

It should be noted that a recent systematic review also investigating the effects of psychological intervention on weight-related and psychosocial outcomes was recently published (David et al., 2020). There were some similarities between the reviews, including database searched, post-surgery trials included, and conclusions drawn (i.e., the evidence is relatively weak and mixed). There were also some differences; the David et al. (2020) review had a broader inclusion criterion, involving studies that investigated both pre- and post-surgery intervention as well as studies that did not include weight as outcome. The combined effect of both pre- and post-surgery psychological interventions may confound the independent contribution of either the pre- or post-surgery intervention. Conversely, the current review was more focused as it was limited to studies investigating post-surgery interventions and included *both* weight and psychosocial outcomes.

## **Quality of findings**

The overall quality of the studies was relatively poor, where most studies were rated as having either ‘critical’ or ‘serious’ level of risk (See Table 4). Most studies included and controlled for important demographic variables, although five studies were rated as having ‘critical’ or ‘serious’ level of risk due to systematic baseline differences (confounding). These studies did not report or analyse important baseline

data (e.g., weight). Half of the studies reported appropriate participant selection procedures, although two studies (Papalazarou et al., 2009; Tucker et al., 1991) did not provide an adequate description. The remaining studies were seriously biased, as selection involved financial compensation or choice, leading to motivation bias. Among the RCT studies, half of the studies did not provide an adequate description of the randomisation process. Most studies provided an adequate description of the intervention, and intervention integrity was well maintained. In the ‘intervention deviation’ domain, one study (Tucker et al., 1991) was rated as having ‘critical’ level of risk, and two studies (Bradley et al., 2016a, 2016b) were rated as having ‘serious’ level of risk. The Tucker et al. (1991) study failed to control variability within the intervention (e.g., whether participants received additional help at home), whereas the Bradley et al. (2016a, 2016b) studies included financial compensation, which deviates from normal practice for psychological interventions. Half of the studies did not handle missing data appropriately and were rated as having ‘serious’ level of risk in this domain (Bradley et al., 2016a, Galle et al., 2017a, 2017b; Himes et al., 2015; Jassil et al., 2015; Sockalingam et al., 2016; Tucker et al., 1991), as they did not use intention-to-treat analysis or had a relatively large attrition rate. Most studies did not adequately address measurement of outcomes, and there were a diverse set of outcome measures across the studies, making it difficult to compare the results. Typically, these studies either failed to report how anthropometric data were obtained or obtained it through self-reports. In one study (Jassil et al., 2012), secondary outcome data was not obtained for both groups, and some of the outcome measures were not standardised. Likewise, most studies were noted to be selective in their reporting of results, as they typically included analyses that were not consistent with a-priori plan.

## **Potential biases in the review process**

There are several limitations in the current systematic review. Firstly, the review was conducted by a single author (KS), and no independent part crosschecked whether procedures of search strategy and data extraction were accurately followed, and to provide input in cases that were not clear-cut. Thus, the decisions of whether a study was eligible relied on the judgment of one individual. Secondly, only two electronic databases were searched for a short period of time, and inclusion criteria were restricted to English language and availability. Finally, no attempts were made with authors to clarify information and/or resolve issues (e.g., following a-priori plan).

The biases in the review process may potentially have constrained the amount of studies that could have been included, be unrepresentative on a wider perspective since they were restricted to English and undermined the reliability and validity of the quality assessment. Therefore, the scope of this review is limited. Nevertheless, the method for search and selection strategy, as well as data extraction and management followed an established and recommended guideline for systematic reviews (Higgins & Green, 2008). Study appraisal was carried out using a validated quality assessment tool (Sterne et al., 2016), and further validated by high concordance with a second independent reviewer.

## **AUTHOR'S CONCLUSIONS**

### **Implication for practice**

Despite the limitations of this review, there are two main implications for clinical practice for bariatric patient care worth considering. Firstly, the mixed results of this review combined with the variability of the impact of psychological difficulties on weight-loss outcome post-surgery noted in the literature (Pull et al., 2010) suggest

that some selected individuals with specific needs or profile may yet benefit from psychological intervention in the postoperative stage. At present, however, it remains unclear what these specific needs or profile might be due to methodological limitations in the literature, such as insufficient demographic data and multiple outcomes used (See ‘Quality of findings’ section). Secondly, although there is some evidence to suggest that psychological intervention may be most effective at, or before, the ‘psychosocial adjustment’ phase, at about 6 to 18 months post-surgery (Kalarchian & Marcus, 2015; Ogden et al., 2019), it is possible that the onset of this phase may vary considerably between individuals. For instance, the Wild et al. (2015, 2017) studies found a significant effect of psychological intervention on depressive symptoms at three-year post-surgery, but not at one-year. Conversely, other studies (e.g., Papalazarou et al., 2012) found significant effect of psychological intervention on weight-loss and improved eating behaviour/disorders, psychological status, health, physical activity and/or QoL at zero to six months post-surgery. It is likely that this variability in adjustment period reflects a complex and multi-layered adjustment process in the context of the medical and psychiatric comorbidities as well as the psychosocial and cognitive challenges associated with obesity pre- and post-surgery (Bak et al., 2015; Kalarchian & Marcus, 2003, 2015; Karmali et al., 2013, 2019; Rudolph & Hilbert, 2013) that can generate unique set of individual needs. It will be important that HPs evaluating prospective bariatric patients are aware of these correlates and consider these in their formulations and interventions.

Overall, these implications are consistent with the recently proposed stepped care model advocating routine assessment to identify bariatric patients at risk for developing weight-loss or psychosocial difficulties post-surgery and tailored

psychological input or interventions based on patient complexity and need (Ogden et al., 2019).

### **Implications for research**

There are several implications for research. Firstly, there is a clear need for higher quality research with strengthen methodological rigour, including RCTs. The review suggests particular issues in measurement of outcomes and selective reporting. Most studies either relied on subjective measures where this was not appropriate (e.g., self-reported weight), used non-validated measures, or multiple outcome measures (for both primary and secondary outcomes). These issues made comparison of results between studies difficult and suggest that the poor definition of weight-loss or weight-regain also extends to psychosocial and other outcomes. Therefore, there is a need for a consensus on what constitutes clinically important and meaningful outcome variables following BS including weight and psychosocial. Future studies also need to consider analytical procedures more carefully, and follow *a priori* analysis plan, as well as highlight and discuss non-significant findings to limit publication bias and selective reporting. Moreover, in some studies, extraneous variables were typically poorly addressed or controlled for at different stages of the study process (e.g., baseline, selection procedure, intervention integrity), increasing risk of random and systematic error and making causal inferences difficult. Future studies need to ensure and improve control by developing and following study and intervention protocol, particularly of intervention delivery and adherence. Secondly, consistent with the literature, the interventions in this review varied considerably in terms of format (e.g., individual, group, e-therapy), modality (e.g., CBT, IPT), facilitator profession, and dosage (i.e., duration, intensity, frequency). As such, comparisons and causal inferences become

difficult, and the key ‘ingredient’, or optimal intervention characteristics, responsible for change or effectiveness remains unclear. Thus, there is a need for a greater consistency between interventions delivered following BS so that they can be empirically evaluated more rigorously, which will allow direct comparisons and causal inferences. Such endeavour likely requires a combination of practice- and evidence-based approaches. Alongside this, future studies could directly compare the efficacy of low vs. high intensity interventions, which may improve cost-effectiveness and accessibility, consistent with the stepped-care model. Finally, it was notable that recorded baseline demographic information varied considerably between studies, and only six studies reported comorbidities that are associated with obesity and surgery outcome (e.g., Pull et al., 2010; Westerveld & Yang, 2016). This may, however, reflect the general variability within this population (e.g., Kubic et al., 2013; Westervel & Yang, 2016) or practical and statistical constraints. However, a more in-depth analysis of patient characteristics in relation to both surgery and psychological intervention outcome could allow for identification of patients at risk and need for post-operative psychological intervention. Further research could then investigate their relationship to the onset of the adjustment phase post-surgery, and the effectiveness of the psychological interventions on different sub-groups of patients (e.g., depression vs. eating disorder), as there may be different effects. The recommendations in this review may elucidate specific processes underlying weight-loss following BS and guide targeted interventions more effectively.

**Chapter 3 – Experiences of the bariatric pre-surgery evaluation process in the  
NHS**

## **ABSTRACT**

### **Introduction**

There is currently little understanding of bariatric patients' experiences and expectations of the bariatric pre-surgery evaluation process within the NHS. Consequently, this study undertakes a qualitative study to explore the experiences and expectations of bariatric pre-surgery evaluation amongst patients who had undergone bariatric surgery within the NHS using Interpretative Phenomenological Analysis.

### **Method**

A convenience sampling method recruited four participants from NHS bariatric surgery support groups in London, UK. Individual semi-structured interviews were recorded, transcribed verbatim and analysed using Interpretative Phenomenological Analysis.

### **Results**

Three inter-related superordinate themes were presented; i) PSE was challenging but essential', ii) 'Coping processes to deal with the PSE', and iii) 'Staff and service evaluation'. Most participants had conflicting feelings about the PSE process as it had both positive and negative impact on their wellbeing. Consequently, participants utilised both external and internal coping strategies to navigating the PSE process. Participants' experiences encouraged them to provide feedback about the staff and service, which revealed a preference for a tailored evaluation process.

### **Discussion**

The findings are discussed in relation to extant literature and issues in current bariatric service delivery that may constrain patient-professional relationship are raised.

## **INTRODUCTION**

Bariatric surgery (BS) is an effective treatment for people who are very obese (NICE, 2014). It can lead to significant weight-loss, help improve obesity-related conditions, such as Type 2 Diabetes or hypertension, and reduce mortality and demand on healthcare services (Chang et al., 2014; Colquit et al., 2014; Gulliford et al., 2014; NBCR, 2014; Sjostrom et al., 2004). BS is a major operation where the surgeon restricts the stomach through a variety of procedures, thereby limiting the amount of food that can be consumed. It involves significant lifestyle changes and risks, including blood clots, infections, blocked gut, malnutrition, anaemia and death, and does not guarantee weight-loss (NHS, 2020; Sarwer et al., 2005). Therefore, surgery typically needs to be considered in cases where non-surgical weight-loss interventions have failed and obesity-related conditions are likely to be improved (NHS, 2020; NICE, 2014). In the UK and NHS, bariatric surgery candidates (BSCs) are generally required to undergo a complex pre-surgery evaluation (PSE) on their readiness for surgery, involving surgical, medical, dietetic and psychological review.

### **Experiences prior to bariatric surgery**

BSCs' experiences prior to surgery typically include weight-management difficulties, obesity-related distress, and barriers in surgery access. Most BSCs report having made multiple, unsuccessful attempts to lose weight over several years prior to their surgery referral, and often consider surgery as a last resort (Earvolino-Ramirez, 2008; Gibbons et al., 2017; Homer et al., 2016; Ogden et al., 2006; Owen-Smith et al., 2016; Wysoker, 2005). Generally, these unsuccessful individuals report several barriers to weight-loss, such as mobility difficulties, low self-esteem or practical issues (e.g., work commitments interfering with clinical appointments and routines), leading to a

sense of loss of control of their weight, social avoidance, lower self-esteem and self-worth as well as poor quality of life (DaSilva & Costa-Maia, 2012; Engstrom et al., 2011; Homer et al., 2016; Ogden et al., 2006).

Studies also highlight that patients experience multiple barriers in accessing BS, including insufficient support, information and referrals to secondary care despite meeting eligibility criteria for BS. For instance, some patients are unaware of the availability of BS until referral is made, and do not know where to access further support following referral to surgery (Homer et al., 2016; Owen-Smith et al., 2016).

### **Expectations of bariatric surgery**

Due to the challenges of weight-loss through traditional means, studies suggest that some patients hold unreasonably high expectations of BS outcomes. Specifically, it has been reported that these patients assume that surgery will help them regain control over eating and weight, improve psychosocial functioning and independence without appreciating the behavioural and lifestyle changes needed for postoperative weight management (Bauchowitz et al., 2005; Bauchowitz et al., 2007; DaSilva & Costa-Maia, 2012; Engstrom et al., 2011; Kaly et al., 2008; Ogden et al., 2006; Wysoker, 2005). For instance, in a study with 284 BSCs who were asked to categorise their weight-loss expectations, Kaly et al. (2008) concluded that BSCs had unrealistic expectations of weight-loss despite being informed about surgery effects on weight-loss. DaSilva and Costa-Maia (2012) noted that BSCs viewed themselves as passive participants in the treatment process and considered surgery as ‘the miracle moment that will solve all life’s problems’ (p. 1716). Likewise, Homer et al. (2016) reported that although some BSCs viewed surgery as a precipitant for lifestyle change, other BSCs viewed surgery

as the solution for their problems and did not indicate an ability or willingness to implement behavioural and lifestyle changes themselves.

Engström et al. (2011) argued that BSCs perceive themselves as powerless in weight-loss management and therefore have a high reliance on surgery. Despite the impact of patients' expectations on clinical outcome (Fisher et al., 2014), many unrealistic expectations are not always detected, challenged or modified adequately throughout the BS pathway. For instance, Homer et al. (2016) noted that information about BS was only encountered following referral.

### **Pre-surgery evaluation and candidate selection process**

Given the aforementioned difficulties, the PSE process has been reported as one of the most challenging aspects of the BS process, involving a multi-disciplinary review as well as education, expectations management and post-operative planning (e.g. behavioural and lifestyle adaptations; Neff et al., 2013). There is also no consensus regarding the function of the evaluation, the utility or objective of psychological testing, and the reasons for denial or delay (Owen-Smith et al., 2015; Ratcliffe et al., 2014).

Existing recommendations do not specify and differentiate the roles within the multi-disciplinary team (MDT) in the PSE process nor give guidance to help a specific patient, and there is great variability in how services implement official guidelines (Ratcliffe et al., 2014; Royal College of Physicians; RCP, 2013). For instance, whereas some services aim to identify psychosocial challenges and risk factors, and provide appropriate support throughout to improve surgery outcome, other services consider the PSE a platform to identify 'successful' candidates to avoid poor surgery outcomes (i.e., 'gatekeeping'; Ratcliffe et al., 2014). It has been suggested that this latter service model may be reinforced by the existence of rationing resources within the NHS where

resources are limited (Owen-Smith et al., 2013; Owen-Smith et al., 2015; National Bariatric Surgery Registry Data Committee; NBSR Data Committee, 2014). Indeed, a nationwide survey of 22 bariatric services in the UK indicated that 68% of psychologists carrying out psychological pre-surgery assessments felt they were perceived as controlling access to BS through ‘gatekeeping’ (Ratcliffe et al., 2014). Likewise, a qualitative study suggested that clinicians are faced with prioritisation dilemmas wherein a number of different rationing techniques, including exclusion, deterrence and delay, are used to deny surgery due to the limited resources available to offer surgery (Owen-Smith et al., 2015). Moreover, some services have introduced additional conditions, such as poor pre-surgery weight-loss management, surgery knowledge and unmanaged psychiatric status or symptoms, to postpone, or even deny, surgery (Fabricatore et al., 2006; Glinski et al., 2001; Owen-Smith et al., 2015). However, the predictive utility of psychopathology and pre-surgery weight-loss on post-surgery outcomes remains contentious and are not included in official guidelines, as it is thought that they should not be considered in isolation during the PSE process due to the inconsistent relationship and bias in studies investigating contraindications to surgery (Collazo-Clavell et al., 2006; Fabricatore et al., 2006; Livhits et al., 2011; Neff et al., 2013; NICE, 2014; Pull, 2010; Ratcliffe et al., 2014; Schlottmann et al., 2018; Wadden et al., 2007). Consequently, many BSCs express inadequate support and information as well as frustration over the lengthened process. They also report fear of being refused a highly valued and life-changing service and are therefore typically very determined to show the commitment required (Neff et al. 2013; Owen-smith 2016).

Challenging experiences of accessing a limited, but desired resource may potentially influence perceptions and behaviours towards evaluative processes (e.g. Leary & Kowalski, 1991). Several reports suggest that BSCs engage in impression

management (IM) during PSE as a coping mechanism to present themselves as healthy to receive recommendation to proceed with surgery (Ambwani et al., 2013; Fabricatore et al., 2007; Heinberg, 2013; Rosik, 2005). Unfortunately, these individuals may not receive the necessary support to adjust to the life changes surgery entails, leading to exacerbation of existing psychosocial distress and poor post-surgery outcome. For instance, a study showed that patients engaging in IM were more likely to be readmitted to hospital within 30 days of surgery for non-specific symptoms (Heinberg et al., 2017).

### **Study rationale, aims and research questions**

Previous studies have investigated patients' experiences and expectations of accessing bariatric services at the tiers 1-2 (universal and lifestyle interventions) and 3 (specialist MDT services; e.g., Homer et al., 2016; Ogden et al., 2006; Owen-Smith et al., 2016). However, BSCs perspective and experiences of the PSE process (tier 4) within the NHS have been overlooked in the literature. Given the literature on patient expectations of bariatric surgery outcome, service user perspective and involvement (SUPI) is perhaps particularly relevant during the PSE. SUPI in service delivery is an international and national agenda, to which understanding the patient as an individual is central (Department of Health, 2008; NICE, 2012; World Health Organisation, 2013). Several studies have highlighted the benefits of SUPI to service delivery, including improved information and accessibility, coordination of care, patient-health professional (HP) relationship, identification of needs and preferences, and positive clinical outcomes (Cegal et al., 2007; Coulter & Ellis, 2007; Crawford et al., 2002).

Accordingly, there is a clinical need to better understand patients' experiences and expectations of the PSE process within the NHS as it appears to be particularly

challenging. This study undertakes a qualitative study to explore the experiences and expectations of bariatric PSE amongst patients who have undergone BS within the NHS using Interpretative Phenomenological Analysis (IPA).

The study will aim to address the following research questions:

- What are participants' understanding and expectations of the bariatric PSE process?
- What is participants' experience of the bariatric PSE process?
- What are participants' coping strategies for dealing with the bariatric PSE process?

## METHODS

### Design

#### *Rationale for using qualitative approach and IPA*

Given the aim to explore experiences and the limited research investigating this topic, a qualitative methodology was considered to be the most appropriate approach. This approach is particularly useful at the early stages of inquiry of a particular phenomenon (Sofaer, 1999), and suitable for identifying and understanding meaningful subjective experiences or perspectives (Hammerberg et al., 2016). In this context, IPA is particularly useful for understanding under-researched phenomena or perspectives (Peat et al., 2019).

IPA is a psychological qualitative approach involving a comprehensive examination of the details of lived experience as well as an in-depth interpretation of each participant's experience, and the meaning which the experience holds for the individual (Smith et al., 2009). Thus, IPA encourages an inductive approach allowing novel and unanticipated topics or themes to emerge from the raw data.

### ***Epistemological position and theoretical underpinnings of IPA***

The epistemological position of this empirical study is rooted within the critical-realist framework, wherein a ‘real’ reality can only be accessed and understood through the subjective perceptions and experiences of an individual (Fletcher, 2017). This is consistent with the philosophical and theoretical underpinnings of IPA, namely phenomenology, hermeneutics, and idiography. Phenomenology relates to the dynamic and unique experiences, perceptions and meanings of objects or events by an individual in the context of the individual’s relationship with their world. In IPA, however, an individual’s relationship to the world is necessarily interpretative (i.e., needing to be understood), and is therefore strongly connected to the hermeneutic approach (i.e., methodology of interpretation), wherein the analyst is concerned with interpreting an individual’s interpretation of their experience of an event (i.e., double hermeneutics, or ‘make sense of participant’s meaning making’; Pietkiewicz & Smith, 2012, p. 162). Finally, IPA is committed to the details of an experience and event from the perspective of a particular individual, in a particular context (Smith et al., 2009).

### ***Why other methods were not chosen***

Three approaches were considered as alternative methods for this project, Thematic Analysis (Braun & Clarke, 2006), Grounded Theory (Glaser & Strauss, 1967) and Discourse Analysis (Potter & Wetherell, 1995). Thematic Analysis and Grounded Theory were deemed inappropriate as their main focus is to seek patterns among individuals or provide a theoretical explanation of findings (Smith et al., 2009). This contrasts with the idiographic approach and purpose of this study, which is to explore the distinct perspectives and experience of the bariatric PSE process of each participant.

Discourse Analysis' heavy emphasis on the impact of language in the construction of reality means that it does not sufficiently attend to other important variables, such as cognitive and emotional processes, relevant to this research.

### **Ethical considerations and confidentiality**

The study received full ethical approval from the Psychology Department, Royal Holloway, University of London (Appendix 5).

Issues pertaining to potential risk, confidentiality, anonymity and data collection were outlined in the information sheet (Appendix 6). This was reiterated by the researcher when gaining informed consent prior to the interview. Data collected was held in accordance with the UK Data Protection Act (2018). No immediate risks due to participation were identified, although distress could have been elicited by the interview process (i.e., discussing a potentially challenging experience). Participants were informed of this possibility through the information sheet at least a day in advance and before starting the interview. They were told that they could refrain from answering a question or withdraw without needing to provide a reason for doing so.

### **Inclusion and exclusion criteria**

The inclusion criteria required participants to be English-speaking adults aged 18 years or above, have undergone BS in the UK through the NHS, and lived in the Greater London area at the time of the study. Exclusion criteria constituted refusal of recording of interview, surgery occurred more than 10 years ago, and diagnosis of DSM-V Axis I (dementia, schizophrenia, paranoid disorder, or abuse of alcohol and/or drugs) or Axis II disorders (personality disorder). These were identified through self-reports.

## **Service user involvement**

One expert-by-experience, who had undergone PSE and BS in the NHS, was recruited to provide consultation throughout the research process (Appendix 7). They were involved in the interview schedule development, recruitment, analysis and dissemination. Specifically, they shared their experience and perspective on bariatric PSE, surgery and post-surgery life to highlight important and relevant topics or issues that may arise in the interview. This influenced the interview questions, wording and order, helping the interview process to become smoother and efficient (Smith et al., 2009). They reviewed and provided feedback on the information sheet, consent form and debrief statement, and were consulted about ways to recruit participants. They also evaluated and provided feedback on the analysis and themes generated from the data as well as the conclusions of the study, helping them to be meaningful and relatable. Finally, they made suggestions about how findings could be disseminated in an accessible and meaningful way.

## **Recruitment procedure**

IPA recommends a purposive sampling (e.g., referrals or ‘snowballing’) to deliberately select participants based on their characteristics, as individuals are recruited for their unique experiences and perspectives. Accordingly, the sample needs to be fairly homogenous to provide access to a particular perspective on phenomena, although this should be considered a practical endeavour. A more pragmatic approach, where homogeneity is loosely defined, can be undertaken where populations are small and access is limited (Smith et al., 2009). Access to BS in the UK remains limited (Booth et al., 2016; Gulliford et al., 2014), reducing availability and access of possible

samples. Also, reaching and recruiting stigmatised groups (e.g., individuals who are obese or have undergone BS; Puhl & Heuer, 2020) is challenging, even with the help of associated organisations (e.g., charities, clinics). This is particularly the case where responses cannot be categorically anonymous, (i.e., face-to-face interviews; Heckathorn, 2011; Maestre et al., 2018; Vartanian & Fardouly, 2014).

In this study, homogeneity was defined as having undergone PSE and BS within the NHS in the UK. A convenience sampling method was used to recruit participants. The expert-by-experience was also consulted about ways to recruit and about recommendations for potential research participants (i.e., snowballing). Over approximately five months, weight-loss, obesity and BS support groups (e.g., hospital groups), online forums (e.g., Patient.co.uk), and organisations (e.g., WLSinfo) based in London, UK were contacted through email or telephone (See Appendix 8 for organisations contacted and correspondence with potential participants that did not enter the study). Permission was obtained to advertise or promote the study on their website or attend events in person (e.g., support group meetings).

It should be noted that recruitment was affected by the progress of COVID-19 in February 2020, as potential participants were worried about its effects on their health. The recruitment was terminated prematurely in March 2020 as the UK government announced lockdown.

### **Sample size and context**

In IPA, study samples are usually small to enable a very detailed and rich analysis, consistent with its commitment to idiography. Smith et al. (2009) highlights that decisions regarding sample size need to be contextual and pragmatic to account for accessibility to population and resources to recruit. For a thesis on a doctoral level, they

recommend having four to ten participants, as it allows analysis in greater depth of each participant whilst retaining the opportunity to compare participants.

Four participants were recruited from NHS BS support groups in London, UK. No financial incentives were provided for participation, although travel costs were reimbursed (up to £10). Additional four participants had initially expressed interest but withdrew prior to the interview due to other commitments (Appendix 8).

Three interviews were held face-to-face in a reserved room on Bedford Square Campus (Royal Holloway, Central London Campus) or university library (Royal Holloway, Main Campus, Egham). One interview was held online via Skype due to practical constraints of meeting in person.

### **Participant characteristics**

Demographic information was obtained from three participants. They were female between the ages 29 to 61 years (mean: 47, SD: 16.37) and not in employment at the time of the interview. Two were married and one was single. One participant held a postgraduate degree, and the other two had A-levels or lower (English college leaving qualification). Two participants classified themselves as ‘White/Caucasian’, and one as ‘Black/African/Caribbean/Black British’. Two participants had Sleeve Gastrectomy and one had Gastric Bypass. One participant also had Gastric Banding and Gastric Bypass in a private hospital. Waiting time for surgery ranged from 12 to 48 months (mean: 30.75, sd: 19.95), and time since surgery ranged from 0 to 3 years. Two participants completed Tier 3 weight management programme. One participant did not return the demographic questionnaire. The demographic characteristics in this study are broadly consistent with the characteristics reported in the bariatric literature (See Table 3 in Chapter 2 for comparison). Demographic information is presented in Table 6.

**Table 6***Demographic Data*

<b>Participant (pseudonym)</b>	<b>Gender</b>	<b>Age</b>	<b>Marital status</b>	<b>Ethnicity</b>	<b>Education level</b>	<b>Currently in employment (Y/N)</b>	<b>Hospital name (pseudonym)</b>	<b>Type of BS</b>	<b>Time since post- surgery</b>	<b>Waiting time since referral from GP (NHS)</b>	<b>Tier 3 completion (weight management)</b>
George	Male	No info	No info	No info	No info	No info	Wallace Hospital	No info	2019*	48 months**	No info
Holly	Female	51	Married	White/Caucasian	Master's level	No	Wallace/Stanford Hospital	Gastric Banding (private) Gastric Bypass (private) Sleeve Gastrectomy (NHS)	2012 2013 2016	12 months	No
Sabina	Female	29	Single	Black/African/Caribbean/Black British	A-levels	No	Hillsdale Hospital	Sleeve Gastrectomy (NHS)	2019	48 months*	Yes
Rachel	Female	61	Married	White/Caucasian	>A-levels	No	Wallace Hospital	Gastric Bypass (NHS)	2018	15 months	Yes

\*participant estimated their waiting time as they could not accurately recall time of referral by their GP.

\*\*researcher obtained the information from the interview recording. Note that waiting time is an estimation as participant could not accurately recall time of referral.

## **Interview procedure**

All participants were given the information sheet and consent form through email at least 24 hours in advance of the interview to have sufficient time to review the documents. Upon meeting, participants were asked if they had read the information sheet and understood what participation involved. A hard or electronic copy of the information sheet was also available.

Prior to starting the interview, important details from the information sheet (e.g., study summary, data protection, participants' rights) were reiterated verbally and participants were given an opportunity to ask questions. Participants were then asked to sign a written consent and complete a demographic questionnaire (Appendix 9). One participant who was unable to meet in person did not return a signed written consent but provided verbal consent for his data to be used at the interview.

Semi-structured interviews were conducted using an interview schedule to guide the process (Appendix 10). The interview schedule was developed following published guidance (Pietkiewicz & Smith, 2012; Smith et al. 2009) and through discussions with the study supervisor and an expert-by-experience. This involved a 'warm-up' opening question to reduce potential tension and get interviewees ready to discuss more sensitive or personal issues. This was followed by more specific questions combined with prompts to facilitate clarification of abstract concepts and/or expansion of areas of interest or unforeseen areas.

The interviews, which lasted between 38 - 58 minutes (mean: 48 minutes, sd: 8), were carried out between October and November 2019. All interviews were audio-recorded, transcribed verbatim, and anonymised.

## **Data analysis**

Data were analysed by the study author. The data were reviewed by the study supervisor, expert-by-experience and a peer who was familiar with IPA. The analysis procedure was consistent with IPA principles and broadly followed published guidelines (Pietkiewicz & Smith, 2012; Smith et al., 2009) as well as suggestions from the study supervisor. Notably, IPA guidelines should not be treated as a recipe but used flexibly and creatively (Pietkiewicz & Smith, 2012).

The software program NVivo 11 facilitated data management. The analysis process was inductive and iterative. This means that the analysis and interpretation process started from the raw data of each participant ('inductive') and source material were continuously cross-checked ('iterative') to ensure that themes were grounded within each particular transcript. The following stages of analysis were repeated for each participant.

## ***Close reading and initial notes***

The researcher immersed himself in the data by manual transcribing of the interview and close reading of the transcription multiple times. This process included listening to the audio recording whilst reading the completed transcript to help recall the non-verbal information. The researcher made initial notes of his observations and reflections on the interview experience or thoughts of potential importance. At this stage, most notes reflected the content (i.e., what was actually said), language use (e.g., metaphors) and reflexivity (i.e., impact of interviewer's characteristics), although some notes involved basic initial interpretations. This process commenced following the first interview to inform and develop subsequent interviews (Smith & Osborn, 2008).

### ***Developing emerging themes***

The researcher began exploring, evaluating and working on the notes, transforming them to concise phrases ('emerging themes') that capture the essence of the original text. This process involved formulation at a slightly higher level of abstraction, reflecting a more psychological conceptualisation.

### ***Connecting the themes***

Emerging themes were grouped or merged according to their conceptual similarities, creating superordinate themes. Some of the emerging themes were dropped if they were considered to have a weak evidential base (i.e., not supported by sufficient data from the transcript) or not fit well with the overall structure of the participant's narrative.

### ***Moving to the next participant and identifying shared themes***

The inductive approach was combined with a 'top-down' analysis, whereby the themes from the previous participant(s) were used to orient superordinate themes for subsequent participant. This process helped to acknowledge new idiographic issues emerging whilst also discerning repeating patterns, thus achieving the aim of exploring convergences and divergences (Smith et al., 2009). Throughout the research process, super- and subordinate themes were dropped, re-categorised or reorganised to capture the highest level of abstraction, better fit with the research aims and questions and the experience of participants, as interpreted by the researcher.

## **Reflexivity**

Reflexivity serves to enhance the overall research process and is consistent with IPA's principle of double hermeneutic. A reflective journal was kept throughout the research process to enable identification of preconceptions (Appendix 11).

This report needs to be considered from the viewpoint of a Central Asian male trainee clinical psychologist, who has never experienced a serious health condition, nor struggled with weight at a clinical level. Conversely, most of the participants were White females with additional health conditions. This may have an impact on the rapport established and content generated during interviews as well as the interpretations made in the analysis. However, drawing upon related experiences is a fundamental means of connecting with others whilst serving to enhance the credibility of the study interpretation (Patton, 2001). 'Weight' has been a recurrent topic of conversation within my family and social network throughout my life, and I have experienced the pressures to conform to ideals of maintaining an 'optimal' weight through strict diet and physical activity. Furthermore, I have engaged in extensive discussions with the study's supervisor and expert-by-experience as well as conducted a literature review of this field. This has provided me with invaluable and rich insight into the lived experiences of obesity and BS, including pre-surgery challenges, surgery procedures and post-surgery adjustment or complications. Additionally, I have a longstanding interest and extensive professional and personal experience in the process of psychological adjustment to chronic and serious health conditions, although my specific interest in BS only originated with the current study. Finally, I remained transparent about my experience and knowledge throughout the recruitment stage, positioning myself as a curious researcher whilst assuming expertise of their personal health and BS within the participant. This approach is not only consistent with the

epistemological position of qualitative traditions, but also helpful in improving rapport, as it mitigates some of the power imbalance and separation inherent in these contexts (i.e., researcher vs. researched; Karnieli-Miller et al., 2009; Raheim et al., 2015).

### **Methodological integrity**

To ensure methodological integrity, the study adhered to Yardley's (2000) and Smith's (Smith, 2011; Smith et al., 2009) principles and guidelines for qualitative and IPA research.

It is hoped that this study will lead to improvements in the overall bariatric process, including post-surgery adjustment. Specifically, the exploration of service users' perspective of the PSE process may clarify unhelpful (mis)perceptions of service delivery and the PSE process as well as provide useful information to guide future recommendations, service delivery and patient support.

To demonstrate creditability, the study aimed to remain closely linked to the systematic review to provide the reader a comprehensive introduction to the topic. Additionally, the study ensured consistency between aims (exploration of unique experiences), epistemological position (realist framework) and methodological approach (IPA; Smith et al., 2011), whilst adapting clinical interviewing skills, developed through a professional doctorate, to a research context to facilitate rapport and content. Furthermore, interpretations were advanced and validated through a rigorous process involving repetitive cross-checking of source material, and evaluation by the study supervisor, expert-by-experience and an independent peer. This process also ensured that arguments were coherent and logical. The report also provides a carefully structured and detailed description of the research process stages, including tables and figures where appropriate. Data was documented and filed through Nvivo to

allow audit trail transparency (all coding decisions made can be easily traced back to the original source data; Appendix 12) and easy file sharing so that any individual can follow the chain of evidence from initial documentation through the final report (Smith et al., 2009). Finally, to provide additional context, commitment and transparency, the influence of researcher's characteristics on the research process was considered (Meyrick, 2006).

## **ANALYSIS**

Analysis revealed three superordinate, and eleven subordinate themes, as represented in Table 7. All superordinate, and most subordinate themes were endorsed by all participants, although there was considerable divergence in how these experiences were perceived. The three superordinate themes are closely interwoven with considerable overlap between them. Notably, feelings of loss of control and attempts to regain or maintain it was a recurrent theme for all participants throughout the PSE process. However, 'control' was not proposed as a theme, as it was understood to permeate or underlie all three superordinate themes.

**Table 7**

*Master Table of Themes*

<b>Superordinate themes</b>	<b>Subordinate themes</b>	<b>Number of transcripts contributing to theme</b>
PSE was challenging but essential	A long but necessary PSE	4
	Scrutiny and suitability	4
	'Psych' as a wall	4
Coping processes to deal with the PSE	Psychological coping strategies	3
	Doing your own research	4

	Support systems	4
	Past experiences influencing current perspectives	4
	Self-perception	4
Staff and service evaluation	A tailored PSE	3
	Level of information	4
	Praise and criticism of service	4

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The themes and their data will be presented in a narrative account, and the most representative transcript extract from each participant will be used to support each theme and author's interpretations (Smith et al., 2009; Appendix 13).

To ensure confidentiality, pseudonyms were used for participant and hospital names. Some quotations have been edited (e.g., redundant utterances, words or phrases, such as 'um', 'like') or combined, indicated by '[...]' or '[text]', to maintain clarity and aid interpretation made by the researcher.

### **Superordinate theme one – ‘PSE was challenging but essential’**

Central to the experience is the first superordinate theme, ‘PSE was challenging but essential’. It is comprised of three subordinate themes, ‘A long but necessary PSE’, ‘Scrutiny and suitability’, and ‘Psych as a wall’, each related to a different aspect of the PSE process.

Most participants had conflicting feelings about the PSE process. PSE was experienced as challenging, which reflected the length, uncertainty and difficulty of receiving approval for surgery. Participants felt that they were intensely scrutinised whilst perceiving the ‘psych’ as a gatekeeper to surgery, which led to the need to prove or defend suitability for surgery. Equally, PSE provided valuable time for self-

reflection and information gathering, which was considered to be essential for preparing for the surgery and a successful post-surgery adjustment. All subordinate themes were endorsed by all participants.

***A long but necessary PSE – ‘It could be shorter, but it gives you time to reflect...’***

Most participants expected a comprehensive but essential process involving appointments with different HPs to make sure they were suitable and prepared for the surgery procedure and post-surgery life.

*‘And then they mentioned that obviously it would be quite a process, it’s not something that happens overnight. That I would need to obviously see dietitians and a psychologist or psychiatrist...’ – George*

*‘people are in for this quite long lengthy thing’ – Holly*

*‘So, I understood that it should be about 2-year wait’ – Sabina*

Participants felt that the length allowed time for research and self-reflection which may have enhanced the decision-making process;

*‘I do think that the process is definitely needed because it allows you to properly look at everything that you are just about to embark on...’ - George*

*'Umm a few things were highlighted to me that I hadn't actually thought of. [...] I needed to go research those, so I could tick it off in my head that I got it understood' – Holly*

For Rachel, the importance of this comprehensive process was only recognised in hindsight, as she realised the impact on her post-surgery adjustment and self-concept;

*It's only going through the whole process [...] that] I understood the reasons behind it and how it's so important to understand that you have to be a participant in this [...] It made me think that this was more serious... [...] it made me realise that whatever I'm gonna do, this has lifelong consequences. [...] This process [...], it's given me time to think about myself, rather than blundering through not being aware of myself or... I've reached this stage at 60, I'm only starting to understand me. I'm only just finding me. [...] that's when I felt able to think about me and that process of going through this has helped with the psychology sides of things.' - Rachel*

Conversely, for some, the process was felt to be fraught with interruptions, related to undiscovered health issues and service errors, that prolonged the evaluation and had a significant emotional impact;

*'I got lost in the system. So, whilst the whole evaluation process was taking place, [...] they forgot about me. And it only because I phoned [...]and they were like, oh you've got lost in the system, and I was like, what that is not good enough so they then got me back on [...] but I then had to have kind of follow-*

*ups and I said I know all this because I spoke to the last guy... so I think [that] has affected the emotion you feel like you have to repeat yourself.' – George*

*'they told me that [...] I've been taken off the whole system, and I was like, how can I be taken off the whole system, when I last saw the surgeon, I got an OK, [...]. So, it was waste of travel going down there, and then have to wait months to see her again [...] you know during that process, it was like a stressful time for me, and, I was like comfort eater, so I had put on a lot of weight during that [...] I was really depressed because I just thought didn't know I was coming or going, I'd waited so long, I was just thinking, this whole process is pointless because I'm waiting like 3 years at the time [...] and I don't think I'll be having this surgery'" – Sabina*

The above extracts illustrate a sense of loss of control that George and Sabina experienced due to the prolonged process. The powerful expression, '*they forgot about me*' and use of agency '*only because I phoned*', in George's extract, indicates a sense of being under-valued in an already long process. For Sabina, the prolonged process further signified uncertainty ('*didn't know I was coming or going*') of surgery recommendation, which led to a vicious cycle of frustrations ('*waste of travel*'), hopelessness ('*I don't think I'll be having this surgery*'), low mood, emotional eating and weight-gain.

The conflicting perspective of valuing sufficient time to make an informed decision whilst also feeling frustrated with the prolonged process is illustrated in the extract below:

*'To put it in perspective, a good friend of mine she's gone and have the surgery done privately... and the difference is hers was rushed, she made the decision within a week, within a week she'd had all her appointments and she was having surgery [...] although mine's been longer than normal because we've had hiccups along the way... I think that were it longer process it allows you to absorb what you going to embark on and what you're going to have done.' – George*

George signified that his friend's '*rushed*' surgery did not allow self-reflection and informed decision, like his longer process had done. Yet, he commented on his unusually long PSE due to an interruption ('*hiccups*'), which highlights that for him the process was not faultless.

#### ***Scrutiny and suitability – 'they properly grilled me'***

Participants described a process of intense and threatening scrutiny resulting in considerable pressures to demonstrate and defend one's surgery suitability for surgery;

*'I would have to prove I can lose weight and keep off for a certain amount of time... [...] aaand work out... [...] I was very stressed because I didn't know how I was going to keep my weight off. Yes, I was going to Slimming World, Yes, they knew I was going to Slimming World.' – Sabina*

*'I was expecting to go and be grilled on what you eating which is why I had my Slimming World book proof, 'this is what I'm eating, I keep food diaries' and*

*'they were like, 'have you been honest?' and I was like, 'yes because you can see on that day I ate like a horse'* – George

George resorted to a risky negative IM strategy ('ate like a horse') to evocatively emphasise his honesty, even though this may have gone against him, illustrating the desperation he experienced in this meeting. Indeed, there was a perception that poor weight management or mental health were contraindications for surgery, which resulted in considerable sense of anxiety ('that was a fear') at the possibility of having surgery rejected (e.g., 'go against you');

*'there was an idea that you couldn't put on weight... that if you were gaining weight then that could go against you so it was... [...] and that was a fear because during the pre... whilst I was waiting [...] to be accepted, I had obviously gained... weight and I was like, this is going against me cuz I'm not showing them I'm losing weight [...]. That was stressful in itself because obviously you're waiting to find out whether you can have a life-changing operation and then you're trying to work on maintaining or losing weight...' –*

George

*'I was thinking that she might say that I'm too depressed, and that my goals are unrealistic because she did have a word with me about [my expectation of becoming] size 10 [post-surgery] and, you need to let this go, because you may never reach size 10, and what are you going to do if you don't reach size 10?.'*

- Sabina

For George, and particularly Sabina, intense scrutiny facilitated the aforementioned vicious cycle, as the pressure to demonstrate suitability (i.e., weight or mental health) caused considerable distress and anxiety over self-management (i.e., not showing weight-loss or good psychological wellbeing). This led to weight-gain ('spirals into putting on weight'), low mood and hopelessness over surgery approval;

*'I was feeling a lot down, because again I was thinking I'm not going to get the surgery. And then, that spirals into putting on weight, so yeah it did affect my life a lot.'* - Sabina

Rachel's feelings towards being intensely scrutinised and needing to prove herself was more conflicting and dynamic. She recounted anger and emptiness ('cross', 'what's left?'), a desperation for surgery, struggle with self-management, and eventual insight of the necessity of the evaluation process to her success;

*'I was a bit cross cuz they were taking something else away from me [...] my food had gone, my cigarettes, [...] All I had left was to have a drink, and they were gonna take that bit of enjoyment away from me. And I had to go through this whole thing about what's left.'* - Rachel

*'I was looking forward to getting to the end of it so I could get my operation. There was the light at the end of the tunnel, so I did toe the line, I'm not very good at being told what to do but I toed the line because I knew if I stepped out of that line, I would end up being at back of the queue.'* - Rachel

*'I've [now] got a positive attitude towards [PSE] because my life has changed massively. I'm not saying I haven't had to input cuz I really have, it's been hard but the outcome from going into this operation, thinking it might not work for me, nothing else has ever worked [...] I still went in for the operation cuz it was last chance to live.' – Rachel*

Rachel was very motivated ('*light at end of the tunnel*') and desperate to achieve her goal, as she described it in ultimate terms ('*nothing else has ever worked*', '*last chance to live*'), and therefore complied unwillingly ('*toes the line*'). In hindsight, however, she noted that the strict pre-surgery management was necessary and contributed to her successful post-surgery adjustment by contrasting her past and current self, using absolute terms (e.g., '*completely*', '*never*');

*'So, when they said I had to lose two stones that was so hard. [...] I was so lazy. If I couldn't drive to the doorstep, I went home. I wouldn't even walk anywhere; I was so lazy. I never went out for a walk for pleasure or anything like that. And now I'm gymin almost every day, its completely changed my life. I'm glad they did it [...] Because I don't think things would've worked so well for me now in my mindset... if they hadn't been so strict with me.[...] Yeah, I suppose then I was a bit of a mess, and I had to be straightened out. It's a simple way of putting it.' – Rachel*

### ***'Psych' as a wall – they can make-or-break surgery***

The psychological assessment was considered to be the most important aspect of the PSE process. Specifically, it was perceived an obstacle ('*she must be a wall*') to

surgery as it was believed to have a leading influence on the decision-making process of surgery approval ('make-or-break'), which placed significant emotional strain on some participants. Note that 'psych' was used synonymously to refer to both 'psychologist' and 'psychiatrist', which may be related to the ambiguous role that 'psych' has in this process (Ratcliffe et al., 2014).

*'I was told that the psychiatrist... that was quite an important meeting because they would kind of the ones that would also sign off to say yes [...]. As I said I think I was just worried that that was the ['psych'] appointment that could make-or-break it.'* - George

*'Seeing the psychiatrist, I was really stressed, and really down because I was thinking, 'what is she going to say, she must be a wall... refuse me for surgery, and then that's that'* - Sabina

There was also an expectation that the 'psych' attempted to deliberately seek contraindications to surgery, which lead to anxieties about revealing surgery contraindications, as well as refusal to attend, information regulation and increased self-monitoring;

*'I was expecting they would be trying to figure ways to trip you up to say that you weren't suitable'* - Holly

*'Well, cuz she went on to about the drinking, did I smoke and all of this. She wanted to suss me out I suppose'* – Rachel

*'I think maybe in the back of my mind I was always conscious about not saying the wrong thing, not that I did... because you have to be honest... but that's what I think I also worried about that I could say the wrong thing and that could go against me'* – George

*'I think just kind of went there knowing... what I was going say and what I wasn't going to say [because of] fear of her saying no'.* – Sabina

This expectation led to defensiveness and implicit IM (*'in the back of my mind I was always conscious about not saying the wrong thing'*), as participants felt unable to trust and be open with the ‘psych’.

### **Superordinate theme two – ‘Coping processes to deal with the PSE’**

This superordinate theme reflected external and internal strategies to deal with the PSE process. It is comprised of five subordinate themes, entitled; ‘Psychological coping strategies’, ‘Doing your own research’, ‘Support systems’, ‘Past experiences influencing current perspectives’, and ‘Self-perception’

The former three subordinate themes characterised external strategies, whereas the latter two describes internal processes of navigating throughout the PSE. These strategies often reflected attempts to increase, regain or maintain a sense of control in the context of the challenges experienced throughout the PSE. All participants discussed at least one form of coping strategy.

#### ***Psychological coping strategies – ‘is it a case of going through the motions?’***

This subordinate theme reflects participants approach towards the PSE process. Overall, participants' narratives suggested a sense of loss of control in relation to complying with service expectations and conditions and was expressed through negative attitudes;

*'it was a case of going through the motions on... going through admin on that team [...but] If I had to go through the psychologist there, it would been a lip-service/me getting very angry [...] so I deemed that a total waste of time.' – Holly*

*'they was like, she's adamant that she's getting into a size 10. [...] I was really conflicted because when I saw the dietitian like I said to you, 'you only lose X amount of weight, you'll never lose more than that, [...] and then going to monthly [support] group meetings, then that dietitian and the nurse that was there saying, 'well actually you can lose as much weight as you want to, as long as you're exercising within that first year', but then... I'm like, well that doesn't make any sense, cuz the other dietitian said something completely different.' – Sabina.*

*'I toed the line because I knew if I stepped out of that line, I would end up being at back of the queue. [...] I felt like I'd been singled out to jump through these hoops, and not everybody else [...]. So, I was quite cross at that time [because] they're doing it to delay my operation and take away the goal. I didn't realise I had to go through this process and get myself straightened out before' - Rachel*

Most participants relinquished their own needs and instead acted according to service expectations and conditions to increase chances of approval, although coping techniques were unique to the individual;

*'I think that if I were had went in there still saying that I was gonna get to a size 10, they would've refused me.' - Sabina*

*'And didn't want to go to the pace class either because I didn't want to meet people [...] cuz they had their date [...] so I didn't want to engage with any of that, until I knew I was having my op. And I passed all the hoops that I had to jump through.' – Rachel*

*'I've never been... the meek and mild approach. [I like it] logically, I... will have everything ticked in the box and I just need the information and the answer.' - Holly*

Paradoxically, these strategies appear to also represent attempts to recover the loss of sense of control which resulted from the long and intense scrutiny. Sabina conceded to the service expectations unwillingly to ensure surgery approval; Rachel avoided, or perhaps even denied, upsetting events to maintain wellbeing; and Holly preferred a direct, or ‘cut to the chase’, approach to the process to remain informed.

### ***Doing your own research – ‘or you won’t be successful’***

All participants strongly endorsed the importance of conducting their own research on BS (e.g., PSE, surgery procedures, post-surgery life), which was considered to facilitate agency and control as well as necessary for a successful outcome;

*'the day after surgery, I knew more about what I could eat and what I couldn't eat than the nurse that came to see me. All she did was give me diet sheets, and now I said I've got all that and I know all that.' – George*

*'I don't think they're going to have as much success as the people that do the research, their own research for their own questions, and go into it with their eyes wide open...' – Holly*

*'in the appointment at Stanford Hospital, I very much took the lead, with the nurse [...] So, she was happy to be guided on the research I've done. [...] my [surgeon] has treated me now, I'm on a level pegging with him... because I've had to research so much.' – Holly*

*'once I got to that stage, I was mentally much more prepared and ready for my operation. I think a lot of people they go in quickly and blind and not given this information, then aren't as successful afterwards as somebody who's been given all of that to start with.' – Rachel*

Participants discussed how undergoing the surgery required candidates to be responsible over their health by taking lead and being inquisitive, as information from HPs could be incorrect or insufficient for an informed decision;

*'I think again we all have an onus that we have to ask questions, there's no point going into an appointment and not kind of leading that to some degree, cuz you're in charge on your own kind of destiny, so I made it very clear that I wanted to know exactly what was happening...' - George*

*'I also think each person needs to get it sorted within enough research. I think we need to take control of our destiny and not be led by doctors who think they're very clever. [...] I don't think the information that I hear from [HPs] is adequate to make a decision' – Holly*

Notably, participants' attitude towards active involvement in the PSE process through information gathering may reflect the importance of choice and shared decision-making to maintain or facilitate a sense of control over their health.

The main source of information on the PSE process was the internet and support group, rather than the HPs. The support group was particularly a valuable source of practical information on the PSE process;

*'but yeah it was definitely the support group, it was like, I've got this appointment coming up, what should I expect? what question do they going to ask? how long is the appointment going to last? things like that.' – George*

*'And the way I had to do that was to go onto Google to find where they were and then I went on to patient groups in each of the hospitals just to get the vibe on what was going on.' - Holly*

*'The internet, a lot [and] Wallace's they have a thing, a monthly [support group], where you can go there and see other people's experiences [...] I went there and that's how I got some more knowledge.' - Sabina*

It is notable that the language used (e.g., '*it was definitely*', '*The internet, a lot*') suggests that most of the information derived from the support group or the internet, rather than from structured sources (i.e., the bariatric service). This may reflect inaccessibility of information from HPs across the tiers (Homer et al., 2016; Owen-Smith et al., 2016).

#### ***Support systems – 'you're kinda on your own without a support network'***

This subordinate theme reflected the sources of support that participants described as important in relation to the PSE.

Having an HP's support was reassuring and facilitated the PSE process practically;

*'The consultants... I got what I eventually expected [i.e., standards of care], which was a knowledgeable person would listen to my individual concerns and... fight my corner for me as opposed to... whatever the NHS says. [...] I had a lot of confidence that I would be taken seriously.' – Holly.*

*'Seeing the surgeon, my daughter came with me cuz they didn't, my family didn't want me to have this operation. [...]. I felt that I'd got really excellent input from the Hillsdale Hospital' – Rachel*

*'I think because my GP had put in a really good case where she could... because the application for the weight-loss I mean that was a 15-page document my GP had to fill out.' – George*

Formal psychological input throughout the PSE process was also utilised and deemed helpful with pre- and post-surgery adjustment process. Consequently, access to formal psychological support was highlighted, particularly following the psychological assessment as this was considered very distressing;

*'So, then counselling [sought privately] looked at some of the issues around surgery and stuff like that. I do think again, that is something that should be offered... [particularly...] after the psychiatry appointment that would've kind of made that a bit easier – George*

*'I still had to see the psychiatrist [talking therapy] locally, [...] they had to keep me on the straight and narrow. And yeah, I just stuck with it and eventually after about 18 months, it becomes a way of life. [...] It was all such a big deal with the beginning cuz it was something so new. And it is the same with the food.' – Rachel*

*'it doesn't matter if you don't get to the crux of why you overeat, operation or not operation, that is still gonna be there. And you'll still gonna want it. And if you can't have [food] when you really want it that's gonna add you more problems than before, so that has to all be straightened out first.'* - Rachel

*'[The psychological evaluation] was a one-off evaluation [...] so I had to do something myself to make sure that I will be okay after surgery'.* – Sabina

There is a recognition in Rachel and Sabina's extracts that there is a need for on-going psychological input through the post-surgery stage ('*if you don't get to the crux of why you overeat*') to facilitate adjustment and lifestyle changes. This implies that concerns about weight management difficulties may persist post-surgery, and psychological support might represent a safety net to ensure that the underlying issue of obesity is addressed (e.g., '*keep me on the straight and narrow*', '*make sure that I will be okay after surgery*'). This perhaps reflects an attitude towards surgery as a 'trigger for change' (Homer et al., 2016, p.8), as there is a recognition that surgery does not cure obesity ('*crux of why*').

George contextualised the need for accessible psychological support by considering diverse needs within the wider social system;

*'I mean thankfully I've got a support network but if you haven't got that [...] I mean some people even now at group they're not comfortable talking to others at the group. So, if you don't have a support network at home... you're kind of on your own.'* - George

The support group was considered an essential source of support as the shared experience of the surgery process facilitated empathy;

*'It's all very well to speak to friends and family but if they haven't gone through it... they don't appreciate or understand what you're going through. Whereas people at group, the support group do. [...] So, I do think, I mean even now post-surgery that support group is a mechanism' - George*

### ***Past experiences influencing current perspectives***

Previous negative experiences of health services and HPs highlighted emotional vulnerabilities (e.g., fear of negative evaluation), which then guided expectations and approach to the PSE process;

*'I think that's because [...] medical professionals that I've seen over the years have been very quick to judge that I am the size I am because I'm lazy, I eat too much, and things like that [...] I think it's being prejudged... I mean because it was not knowing what to expect... it was having those prejudgetments already made.' - George*

*'I think it's just through a life of some particular hard knocks that... I've tended to be a strong person I think, and... some incidents happened when I was at work not long before I had the surgery... may be into a 'don't mess with me' type of the person. [...] Yeah but its character forming.' - Holly*

*'because I had lost weight before but I still was very depressed, so I knew that I had to [seek psychological therapy]. So I prepared in that way'* - Sabina

George appeared to anticipate judgement, which perhaps allowed him to prepare and buffer against negative evaluations he had experienced in the past. Holly explained that her difficult life experiences allowed her to be more assertive. Sabina had acknowledged the relationship between her obesity and depression following previous weight-loss, and therefore prepared by seeking structured psychological support.

#### ***Self-perception – ‘psychological functioning and the need for psychological input’***

The need for psychological input was based on perceptions of its purpose and self-perception of one’s own psychological functioning. A unidimensional view of the purpose of psychological input (e.g., for people who ‘comfort eat’ or are ‘blubbery’) and self-perception of strong psychological functioning, resulted in a belief that it was unnecessary;

*'I... am of the opinion I'm fairly well enough to stand on my own two feet, and don't need my head examined. So while some people are blubbery and use food as a tool, I did, started BS to try and buy myself time for my diabetes [...] So, the whole morals of why you comfort eat and all the rest of it, I did not think applied to me'* – Holly

Conversely, a more dynamic perception of psychological functioning in relation to post-surgery adjustment resulted in acknowledging and valuing the PSE process and receiving psychological input;

*'after when I saw that psychiatrist I said to her even in that meeting I'm going to see someone [referring to a mental HP] on a regular basis because I knew that was paramount for me even though I think that is paramount of everyone that has this surgery because it's not just... even though [inaudible] about what is going on in your mind, so I knew I had to do that for me...' - Sabina*

*'But I think a lot of it also stems from me being so unhappy about the size I am. Because now, I'm so much happier person, I still get cross but that's just my personality. [...] I'm not a nice laid-back person, I'm you know quite autistic that way, its gotta wrapping and its gotta wrapping, how I want it to... and if it doesn't, then I will be cross. It's just the way I am, I've accepted I am that way. I understand myself a lot more going through this process as well.' – Rachel*

### **Superordinate theme three – ‘Staff and service evaluation’**

This superordinate theme is related to a sophisticated evaluation process of the HPs and service. It reflects participants' capacity to think about their own and other bariatric patients' needs in the context of advanced knowledge of BS and its impact. This feedback process also appeared to be attempts to exert a form of control over the PSE in response to the challenges experienced.

It is comprised of three subordinate themes; ‘A tailored PSE’, ‘Level of information’, and ‘Praise and criticism of service’.

### ***A tailored PSE – ‘everybody is different’***

Most participants acknowledged individual differences, needs and circumstances, and therefore preferred a tailored PSE approach.

Some participant recognised that surgery could have unpredictable effects and required major lifestyle changes unique to the individual in relation to their life-stage. Major but unique lifestyle changes were considered to influence the decision-making process of having surgery, and therefore should be considered as an essential topic to be discussed in the evaluation process.

*‘everybody is different. You also learn along the way that... this operation has an effect on an individual person that is not known until you've had the operation. [...] as I was an older person, I feel that that wasn't such a big decision as a person saying in the 30s, because that's a hell of a lot longer, you have to have these life changing things for than I do’ – Rachel*

*‘Also, like lifestyle... [...] I think depending on what age you have this, [...] so I'm quite a younger patient so [...] I'm single, I go out and things like that, so obviously for me I had to think of that aspects. Like you can't drink for the first year and things like that, whereas I think if you're an older patient you're not going to have the same... [...] lifestyle. And again I think that need to be looked at an early stage because it is a lifestyle change’ – George*

Holly felt that the psychological assessment was less relevant to her, and she should therefore be prioritised. This is likely related to her unidimensional perception

of the purpose of psychological evaluations and positive self-perception of her emotional well-being (See ‘Self-perception subordinate theme). In the below extracts, she positioned herself as an ideal candidate for surgery;

*'I don't think it was suitable for me... and it could have been very much streamlined. I am fairly sure that no... not as many people going into the surgery are quite as logical and intelligent about it as I've been.' - Holly*

*'So for the people that, unfortunately, stuff themselves because they were abused as a three-year-old, and now they're 50, I logically would need to see a tie cut in that, so they are... weak... weaker people and I think they would need a lot of hand holding. There needs to be a fast track for people like me and that are very strong emotionally and is clear and logical' – Holly*

Overall, these extracts imply a level of motivation to influence service delivery, which may reflect a form of exerting control over the PSE process by suggesting service improvements that may benefit future surgery candidates.

### ***Level of information***

All participants were unsatisfied with the level of information that they received from the service about the PSE process, particularly the psychological assessment. This had a considerable emotional impact on most participants as they felt unprepared to cope with the process;

*'I don't think I was as prepared... and also because she was looking at [...] emotional kind of issues so it brought up things that I... so I lost my mom when I was young and it brought that back so I mean I came out of that meeting bursting into tears...' – George*

*'I think that they need to have like a booklet or something, or even if they did like a video, and it's on their public page, even if its private or NHS and it's on their page to explain each tier and what they expect of the patient, so people aren't in the dark, and they don't know what the next steps are and what is going to happen after surgery...' - Sabina.*

*'I think I would've coped further in the beginning, [...], if I'd have been given a schedule. [...] I was working blind I didn't know any of that. If I would've known that... [long waiting period] I would have been a bit more prepared for that. I found all that a little bit shocking [laughing].' - Rachel.*

Sabina felt lost in the process ('so people aren't in the dark') and Rachel's laugh after describing the lack of information as 'shocking' perhaps signifies that she thought this was unbelievable, as their anxieties could have been buffered by additional information;

*'that could have been prewarned that you will have a psychiatrist appointment and it will look at these issues. [...] I think it's maybe... like a timeline of, you'll meet this person to begin with and then what kind of should happen. Now that*

*would be very helpful and that would also... I mean that would have probably reduced my anxieties.' - George.*

Consequently, there was a greater reliance on obtaining practical information from people who had undergone the process;

*'on the Facebook group there's people now as I said that are questioning what to expect and those of us that had it done we then go on and put, 'this is our experience, what they asked, what they're likely to cover.' – George*

*'I felt like she didn't give me any information on what might eating would be like after surgery. The only way I kind of knew those things was going to those monthly [support group] meeting.' - Sabina*

By contrast, Rachel was generally positively surprised about the information given on the surgery and post-surgery processes, which made her feel more confident;

*'I didn't expect as much as I got to be honest. I didn't expect to get so much information, like meetings about pre-op, and after the op, so I could be, once I got to that stage, I was mentally much more prepared and ready for my operation' – Rachel.*

It is possible that her positive expectation was anchored by the initial poor information on the PSE process. It is also notable that Rachel is the only participant from a different hospital (See 'Critical Appraisal' for elaboration).

### **Praise and criticism of the service**

This subordinate theme reflects participants' opinions of the service they felt they received.

Some participants expressed dissatisfaction towards the HPs actions and aspects of the service delivery. Participants described poor rapport with, and trust in the HPs due to perceptions of lack of understanding and empathy. Specifically, some participants felt that the HPs worked against, rather than alongside their goals and expectations;

*'the psychiatrist, [...] I... don't think they're there for you, and I... am hard with them then. [...] initially, I actually refused to go and see this... psycho-woman... just because I thought it was a waste of my time. I won't be let anything up.'* -

Holly

*'Well... I kind of feel the dietitian, she wasn't sympathetic [...] she kept telling me, you're not going to meet this goal and you'll never get there, and so there is something in my notes that says, this patient thinks that she will get to a UK dress size 10, but I've explained to her that this is unrealistic, and then, that went to [the MDT]. So, [the 'psych'] had discussed it with me as well, saying, do you still think that you're going to get to a size 10, this is unrealistic [...] But she was wrong because I've lost more than that!' – Sabina*

The above extracts illustrate a poor relationship between candidates and professionals, characterised by considerable distrust and reservation. This is likely

related to the perceptions of intense and threatening evaluation as well as ‘gate-keeping’, which appear to foster a sense of ‘us vs. them’ attitude during the PSE that resulted in a struggle of ‘one-upmanship’ for Sabina (*‘But she was wrong because I’ve lost more than that! ’*).

Most participants had also several positive remarks about the HPs and the service, and felt gratitude and obligation to reciprocate, mainly through the support group;

*‘I mean I feel like I owe lot to Wallace because obviously what they’ve given me [...] so by giving something back, I make an effort to go to the support groups [...] to kind of show them and to say thank you to Wallace’s cuz I appreciate what they’ve done for me - George*

*‘the dietitian, I have an excellent one at Wallace’s and he is very... skilled in basing his... opinions at every single price level. [...] he has never given me the last word, whatever is I said I can’t do, he’s always come up with another suggestion for you to try, which I have done.’ – Holly*

*‘The staff were all very lovely, they always said, if you have a problem, give us a call. [...] Well I think my role, is why I go to the support group, is to help others’ - Rachel.*

It is notable that these participants felt a sense of loyalty and gratitude towards the service despite the negative impact the delivery of the service had on their well-being and self-value (e.g., distress, being forgotten). In addition to the value surgery

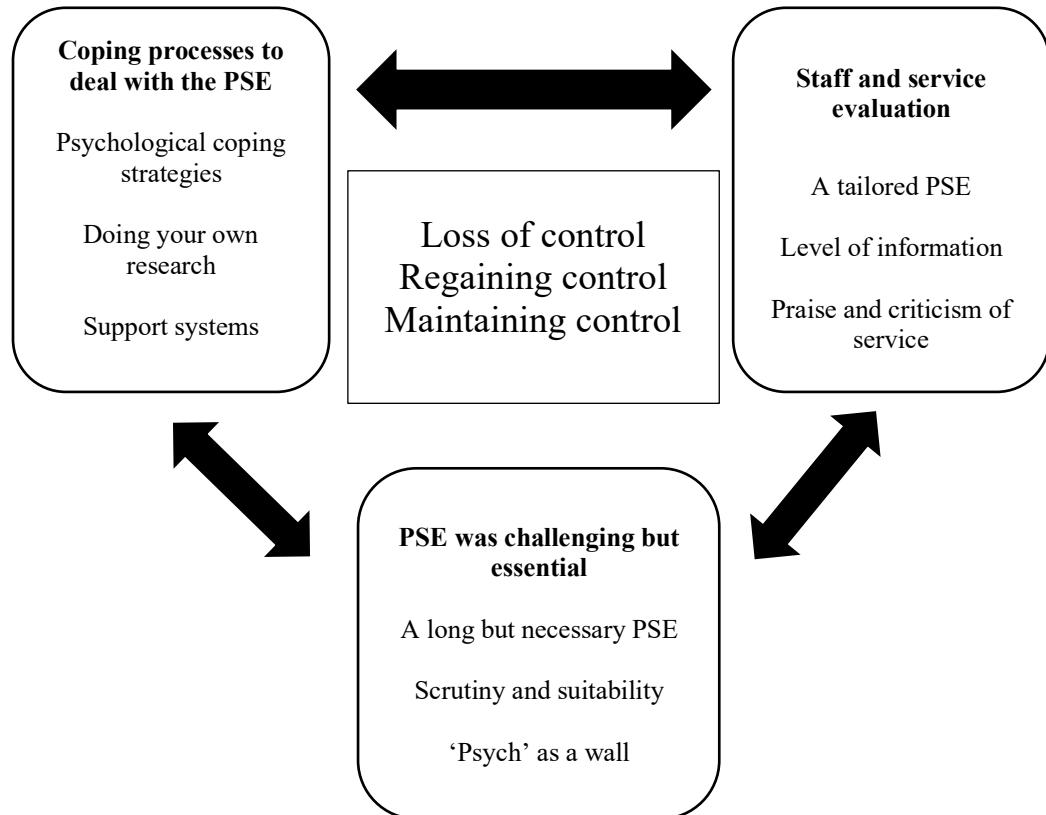
holds for participants (e.g., '*last chance to live*'), this conflicting feeling may also reflect a motivation to be involved in influencing and improving service delivery.

## DISCUSSION

This study explored the experiences of the bariatric PSE process in the NHS, including understanding, expectation and coping strategies, using IPA. The data analysis revealed three interlinked superordinate and eleven subordinate themes (Table 7). Central to the experience was the first superordinate theme, 'PSE was challenging but essential'. The PSE was experienced as challenging, which reflected the length, uncertainty and difficulty of receiving approval for surgery. Conversely, PSE provided valuable time for self-reflection and information gathering, which was considered to be essential for preparing for the surgery and a successful post-surgery adjustment. The second superordinate theme, 'Coping processes to deal with the PSE'. This reflected strategies in navigating the PSE process, often functioning as attempts to regain or maintain a sense of control over the process, and to increase chances of surgery approval. The third superordinate theme reflected participants' capacity to think about their own and other bariatric patients' needs in the context of advanced knowledge and understanding of BS and its impact. Most of the feedback discussed were related to the challenges that the participants experienced throughout the PSE process, and suggested a motivation to improve the bariatric service. Notably, feelings of loss of control, attempts to regain control and attempts to maintain control appeared to permeate or underlie all three superordinate themes for all participants. See Figure 2.

### Figure 2

*Visual representation of the themes*



### Themes within the wider context

The themes presented in this study overlap with the challenges and perceptions reported within the extant literature on bariatric service delivery and PSE (e.g., Neff et al., 2013). In particular, there is a recognition in the extant literature that the function of the PSE, and particularly the psychological evaluation, remains challenging and ambiguous, wherein contentious contraindications are used as ‘gatekeeping prioritisation’ in some services (Collazo-Clavell et al., 2006; Fabricatore et al., 2006; Glinski et al., 2001; Neff et al., 2013; Owen-Smith et al., 2015; Pull, 2010; Ratcliffe et al., 2014; RCP, 2013; Schlottmann et al., 2018; Wadden et al., 2007). Concurrently, there is an acknowledgement that there is variability in patients’ perception of level of support and information experienced which has been linked to a sense of loss of control (e.g., Homer et al., 2016; Neff et al. 2013; Ogden et al., 2006; Owen-smith 2016).

The study analysis also presents a nuanced extension to the extant literature. Notably, it highlighted the conflicting feeling participants had towards the PSE. Participants expressed frustrations over an unnecessarily lengthened process and fear of potential surgery refusal, which led to a sense of loss of control that had a considerable negative impact on psychological and physiological wellbeing. Specifically, for the participants, the sense of loss of control was expressed through feeling of being caught in a vicious cycle of demonstrating and defending suitability, which led to emotional eating, weight-gain, depression and hopelessness. Simultaneously, however, the long process provided time for a self-evaluation and growth that was considered necessary for a successful surgery outcome and adjustment. This involved reflection on the relationship between psychological functioning, self-concept, readiness to surgery, and post-surgery adjustment. The analysis also discovered several external and internal coping processes that helped participants regain, maintain or facilitate a sense of control when navigating the challenges of the PSE. These included positive and *negative* IM, psychological coping style, agency and responsibility, help-seeking, and utilisation of previous experience to guide expectations. Finally, the study highlighted participants' advanced knowledge and realistic expectations of BS outcome as well as ability to provide constructive feedback about service delivery (e.g., level of information). Notably, these factors reflected a way to exert control over the PSE process, where participants showed motivation to be more involved in shaping and improving the service delivery. For instance, participants were actively engaged in the support group to provide better service to other BSCs. There was also a preference for a targeted evaluation approach, as most participants recognised the unique needs and circumstances of each individual, and the unpredictable effects of surgery.

The experiences and perceptions of most of the participants appear to represent a service model that considers the PSE a platform to predict ‘successful’ candidates to avoid poor surgery outcomes through identification of contraindications to surgery, rather than aiming to identify support needs to increase post-surgery success. This is consistent with the findings in the extant literature, where the PSE in some services was reported to have been influenced by the rationing culture within the NHS (Owen-Smith et al., 2013; Owen-Smith, Donovan & Coast, 2015; Ratcliffe et al., 2014; NBSR Data Committee, 2014) due to a discrepancy between demand and supply of BS (Booth et al., 2016; Gulliford et al., 2014; Welbourn et al., 2016). Notably, this context and model reflects an unhelpful ‘paternalistic’ approach to evaluation that may undermine the patient-HP relationship (Dzeng & Smith, 2013; McKinstry, 1992), particularly as the contraindications to bariatric surgery are considered to be contentious and not included in official guidelines (e.g., NICE, 2014; Pull, 2010). Specifically, when patients are active agents, as were the participants in this study, in managing their health, a paternalistic approach may reduce choice and foster a sense of loss of autonomy, poor communication and distrust (Hall et al., 2001; Ogden et al., 2006; Ommen et al., 2010). This may reduce overall service satisfaction, hinder identification of needs (e.g., non-adherence to diet) and implementation of appropriate support (King & Hoppe, 2013). By contrast, a patient-centred approach to the PSE process can have beneficial effects on patient outcomes, particularly when patients are actively involved in their treatment (Michie et al., 2003; Stewart, 1995). This approach appears to be consistent with the preferences of the participants of the study who showed motivations to influence service delivery through constructive feedback and support group contributions. It is also in line with the national agenda promoting SUPI and stepped care model proposed

by Ogden et al (2019) advocating a tailored psychological input based on patient complexity and need.

The importance of a tailored patient-centred approach to the PSE is particularly important in the current context of the COVID-19 pandemic. Existing data suggests that people with obesity develop more severe COVID-19 symptoms and have a higher death rate (World Obesity Federation, 2020). Accordingly, the government has acknowledged the link between ill health, obesity and coronavirus and have set to renew their anti-obesity strategy (Forsyth, 2020; House of Commons Deb, 2020). Consequently, in an open letter to the Prime Minister, Boris Johnson, the British Obesity and Metabolic Surgery Society (2020) urged the backing of increased access to bariatric surgery to provide a ‘quick-fix’ against the suffering and death caused by COVID-19. Moving forward with this perception, however, it will be essential that the complexity and life-long adjustment challenges of undergoing bariatric surgery is not undermined, as this may negatively affect surgery outcomes and post-surgery adjustment (e.g., Bauchowitz et al., 2007; Kaly et al., 2008). In this context, the PSE has a central role in identifying needs and supporting individuals to achieve successful outcomes.

## Critical evaluation

### *Strengths*

The main strength of the study is that it addressed a clinically meaningful (service user experience and perspective) area that had been overlooked in the literature. It did not only provide a very rich and detailed representation of the PSE experience from the candidate’s perspective, but also identified previously unrecognised constructs and processes. Another key strength were the efforts to maintain ‘satisfactory’ quality

in context of the author's experience in using IPA (Smith, 2011). Notable features included i) sensitivity to context through comprehensive introduction and reflexivity, ii) credibility through consistency in aims, framework (critical realist) and method (IPA), as well as supervision, expert-by-experience and peer involvement throughout the research process, and iii) transparency through systematic documentation of research process (e.g., using Nvivo).

### ***Limitations***

Several limitations of the study need consideration that may have constrained the scope of the research. Firstly, there was some heterogeneity within the sample which may have affected recollection of and perceptions towards the PSE. Specifically, there were differences in i) hospital attended, which may have affected the service received (Ratcliffe et al., 2014), ii) participation in pre-surgery weight management, which may have affected well-being (e.g., additional stressor), iii) type of surgery procedures, which may have affected post-surgery adjustment as different surgery procedures are associated with unique risks and complications (Neff et al., 2013), and iv) time since post-surgery, which may have affected recall ability. Furthermore, given the recruitment difficulties, it is possible that participants of a certain profile (e.g., 'assertive' or active agents in managing their own health) reached out and consented to partake in the study. This is, however, consistent with the IPA approach, wherein participants are deliberately selected based on their characteristics, unique experiences and perspectives (Smith et al., 2009). Paradoxically, this would suggest that the sample was more homogenous (i.e., all participants in this study are 'assertive' and active agents).

Additionally, the narratives from the participants were validated and corroborated by the expert-by-experience who remains an active member within a bariatric support group. Secondly, the sample size was fairly small, even for an IPA, although it is within the recommended limit for a professional doctorate (Smith et al., 2009). To address this, the study attempted to provide a rich and detailed narrative of the study participants' experiences, consistent with the idiographic principle of IPA. Thirdly, the demographic data was obtained through self-reports, and it was not possible to validate important contextual information (e.g., type of, and time since, surgery). However, the demographic characteristics in this study are broadly consistent with the characteristics reported in the bariatric literature. Finally, as in any recorded face-to-face interviews, participants may have felt unable to disclose certain views or feelings, although this was not felt to be the case in the present study given some of the content that was generated (Appendix 13).

## **Implications**

The present study warrants several implications for future research and clinical practice. Firstly, it presents an opportunity to expand the understanding of the bariatric surgery process and pathway, as it considered the perspectives of the BSCs. Future research needs to build on the current qualitative study using other methodologies, including mixed and quantitative (e.g., cross-sectional) to further elaborate the validity and reliability of the processes and constructs identified. Secondly, given the considerable emotional and physical (e.g., weight-gain) impact the PSE had on the participants of this study, BSCs' emotional and physical well-being may need further investigation. Future studies utilising both cross-sectional and longitudinal designs can investigate the prevalence or nature of the emotional distress and weight management

difficulties experienced in response to going through the difficult evaluation process. Thirdly, a number of coping mechanisms were utilised to navigate the PSE process, including *negative* IM. It would therefore be beneficial to investigate the prevalence of these strategies, as well as their context, utility and impact on patient-HP relationship, surgery recommendation and post-surgery adjustment. Finally, the current study, along with the aforementioned recommendations, may hopefully encourage academics and clinicians working in the bariatric field to consider ways to involve and collaborate with service users in influencing the service delivery in a way that is appropriate and beneficial. A starting point for services is perhaps to audit patients' perspective using the findings from this study as a rough guiding template. This can be used to identify patient needs and motivations regarding post-surgery behavioural change as well as clarify important and meaningful outcomes. It will also be equally important to consider ways of involving patients in planning and setting up service delivery. Such endeavours may counter the unhelpful 'paternalistic' approach, and instead facilitate empowerment, sense of control and patient-professional relationship (Ogden et al., 2006; Mitchie et al., 2003). It may also reveal or even break barriers to future SUPI whilst informing the choice of method of involvement and support that may be needed. Importantly, the analysis from this study suggests that the participants had motivation and capacity to engage service improvement, as they were already supporting other bariatric candidates in the support group. Overall, these recommendations can lead towards a more patient-centred service delivery wherein the aim is to identify psychosocial challenges and risk factors at the PSE, and then provide appropriate support throughout the pathway to improve surgery outcome (Ratcliffe et al., 2014).

## **Chapter 4 - Integration, impact and dissemination**

*'So many of our dreams at first seem impossible, then they seem improbable, and then, when we summon the will, they soon become inevitable'* - Christopher Reeve

## **INTEGRATION**

### **Bringing it all together**

The present thesis attempted to provide a more comprehensive understanding of the bariatric surgery (BS) pathway, involving both pre-surgery evaluation (PSE) and post-surgery management. The exploration of BS candidates' (BSCs) experiences and perspectives was a natural choice for the empirical study, given both the absence of service user perspectives and the challenges in the PSE process. Service user perspective is perhaps particularly important in the bariatric field, as patient motivations, efforts and behavioural change post-surgery is generally considered to be implicated in successful surgery outcome. Therefore, the subject of PSE typically involves identification of these factors (See Chapter 2 & 3 Introduction). However, as argued in the empirical study, the service model in some hospitals may obstruct this process, as the patient-professional relationship is constrained. Considering the poor quality of the patient-professional relationship noted in this study, and the value and meaning surgery holds for bariatric patients, it is not surprising that patients resort to impression management (IM) to obtain a highly desirable goal (e.g., Ambwani et al., 2013; Fabricatore et al., 2007; Heinberg, 2013; Rosik, 2005). Unfortunately, these patients' needs may consequently not be identified, and necessary or appropriate support offered (Heinberg et al., 2017).

The systematic review further contextualises the function of PSE. The introduction summarised the correlation between psychopathology, obesity, and the unique challenges and changes experienced post-surgery (e.g., diet changes, physical activity or relationships). It is the evaluation and understanding of these factors and how they may affect post-surgery adjustment for a specific individual that implicates the need for a tailored PSE and appropriate psychological interventions post-surgery.

Thus, the review highlighted the challenges in defining clinically important and meaningful demographic information and bariatric post-surgery outcome(s), which had implications for the quality of research on post-surgery psychological interventions. The review suggested that some selected patients with specific needs or profile (possibly identified during the PSE evaluation) may yet benefit from psychological interventions at different postoperative stages. These variables are likely to be further clarified by exploring service users' perspectives and involving them in research and service delivery as well as benefit the PSE, as it will become more patient-centred. Thus, there is a theme across both articles that advocates for a patient-centred, tailored approach to service delivery, whilst highlighting the need to actively involve and collaborate with service users in developing research and setting up services.

### **Reflecting on challenges in the research process**

The quote by the late Christopher Reeve on the cover page of this chapter reflects the dynamic process of this research project. My initial approved project, which aimed to investigate IM among BSCs, was suggested to me by an external psychologist working within a bariatric service, although it was unable to progress. However, through support and guidance from the course and my current supervisor, I was determined to persevere rather than abandon the overall theme of the project (i.e., bariatric surgery) — I had already established a broad sense of bariatric surgery literature and developed a curiosity in the experiences of obese individuals seeking treatment. Moreover, the focus of the current project on service user movement was better aligned with my longstanding values and interest within both research and practice.

The challenges around developing this ‘new’ project soon became a very stimulating learning experience. The initiation of the project adopted an inductive approach, involving extensive literature review on the topic of obesity, including psychological correlates of it (e.g., body image, self-perception) and aspects of surgical and non-surgical interventions (e.g., functioning, coping and adjustment processes, predictors and outcomes, national guidelines, and service delivery). Consequently, I developed a broad understanding of the field, which helped me identify gaps in the literature that were both clinically and personally meaningful. This process was exhilarating and stimulating as I could clearly see the consistency, and rigour, in my approach; the literature gaps that I had identified helped formulate the study aims and questions, which then determined my approach (critical-realist), methodology (qualitative) and technique (IPA; Bachiochi & Weiner, 2002; Burnham, 1992). Thenceforth, the development of the systematic review was a fairly straightforward endeavour; as I had a burgeoning understanding of the field, I was able to generate multiple ideas that would remain consistent with the empirical study (e.g., surgery contraindications or expectations and coping or adjustment processes) — although these ideas were abandoned as they were not novel. Eventually, a nuanced extension to existing reviews (i.e., psychosocial outcomes) which remained clinically meaningful (i.e., effectiveness of psychological interventions) was deemed appropriate — resulting in the current review. This also provided additional context to the empirical study and was consistent with the overall aim for the thesis — that is, a more comprehensive understanding of the bariatric surgery pathway. As highlighted in ‘Methodological integrity’, additional context and consistency with the aim also enhanced the quality of the empirical study. It was, however, very disappointing to discover that a review,

which had not been registered with PROSPERO, addressed a similar issue and had been published as I was writing up.

The following stages — recruitment and analysis using IPA — were more challenging. In hindsight, I underestimated the difficulty in accessing and recruiting participants, despite being aware of some of the psychosocial (e.g., stigma) and practical (e.g., gatekeepers, availability) barriers. Despite my persistent recruitment attempts, most points of contact for organisations limited research involvement, and potential participants were unable to commit to interviews. Moreover, I found the IPA process taxing and overwhelming at times — a reflection of my limited experience, the iterative approach of IPA, and the need to do justice to the participants' experience. Notably, the recruitment and analysis were made more stressful by the government's response to the COVID-19 pandemic outbreak in March 2020. By contrast, interviewing participants felt more natural and enjoyable, as I had developed and consolidated interviewing skills throughout my career, particularly during the professional doctorate in clinical psychology for the fulfilment of which this study was conducted. It was also a privilege to listen to the stories of the individuals who volunteered to take part in the study. Despite feeling overwhelmed at first, using IPA was a rewarding and inspirational experience, not only because it was rewarding to make sense of the participants' experiences, but also because I could reflect on my personal and professional background in relation to the research process (also see 'Reflexivity'). Indeed, my psychological background is evident throughout the study. For instance, my attitude towards service user involvement directly shaped the aims of the overall thesis; my interest in adjustment processes directly influenced a research question and interpretation of data; my knowledge of therapeutic models influenced the

terminology I used in the interpretations (e.g., ‘denial’ from psychoanalysis, ‘caught in vicious cycle’ from cognitive-behavioural therapy).

Here, I need to stress that the accessibility, guidance and advice from my supervisors, contribution from the expert-by-experience and intellectual reflections and emotional support from a peer in the cohort was not only invaluable in helping me to get through these stages, but perhaps more importantly, further enhanced the integrity of the research project.

## **IMPACT**

The systematic review and empirical study not only identify overlapping constructs with the existing literature but can also advance research and understanding of the bariatric surgery pathway. Particularly, the importance and need of a patient-centred approach to bariatric service model and delivery was highlighted. Although patients’ experiences and expectations of accessing services and post-surgery adjustment have been explored (e.g., Homer et al., 2016; Ogden et al., 2006; Owen-Smith et al., 2016), active involvement in service delivery appears to be still lacking, particularly in the PSE process. Importantly, there was a clear motivation and need amongst the participants of this study to be involved in improving the bariatric service. Thus, a long-term hope was that the study will inspire future opportunities for involving service users in both research development and service strategy within the NHS. This will help the field to be in line with the national agenda, whilst also improving overall patient experience, satisfaction and service delivery (Department of Health, 2008; NICE, 2012; Mitchie et al., 2003; World Health Organisation, 2013). The utility of service user perspective and involvement (SUP) at different levels in both research and clinical practice is widely recognised (e.g., Cegala et al., 2007; Coulter & Ellis, 2007;

Crawford et al., 2002). Specifically, exploring service user perspectives and actively involving and collaborating with them at different stages of the bariatric surgery pathway may facilitate empowerment, a sense of agency and patient-professional relationship (Ogden et al., 2006; Mitchie et al., 2003). This is likely to improve trust and reduce the need for impression management — instead it may encourage patients to share information that they may consider to be less than ideal. It may also provide a more holistic understanding of factors related to patient motivations regarding behavioural change post-surgery as well as clarifying what patients consider to be important and meaningful outcomes. This in turn can shape how studies are developed, interventions designed, and outcomes operationalised. Clinically, it may facilitate identification of needs and implementation of appropriate support which would improve overall quality of research as well as bariatric service delivery and outcome.

It is perhaps not surprising that SUPI has been overlooked, as there still are many barriers to it (McLaughlin, 2011; Bee et al., 2018; Chinman et al., 2006; Crawford et al., 2003; Hodges & Hardiman, 2006). However, there are different degrees of SUPI and different ways of supporting it. The ‘Ladder of engagement’ is a framework for understanding different forms and degrees of patient and public participation. It can be useful to consider when planning the types of engagement required for different programmes of work (NHS England, 2015; See Table 8).

**Table 8**

*The ‘Ladder of Engagement and Participation’*

Devolving	Placing decision-making in the hands of the community and individuals. For example, Personal Health Budgets or a community development research
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Collaborating	Working in partnership with communities and patients in each aspect of the decision, including the development of alternatives, and the identification of the preferred solution.
Involving	Working directly with communities and patients to ensure that concerns and aspirations are consistently understood and considered. For example, partnership boards, reference groups, and service users participating in policy groups
Consulting	Obtaining community and individual feedback on analysis, alternatives and / or decisions. For example, surveys, door knocking, citizens' panels and focus groups.
Informing	Providing communities and individuals with balanced and objective information to assist them in understanding problems, alternatives, opportunities, solutions. For example, websites, newsletters and press releases

Retrieved and adapted from NHS England (2020, February; <https://www.england.nhs.uk/participation/resources/ladder-of-engagement-2/>)

Simpson and House (2003) suggest six stages that need to be considered when involving users (and carers) in service planning:

- i. Deciding on the main goal
- ii. Choosing a mechanism of involvement to achieve that goal
- iii. Identifying potential barriers and solutions (Table 9)
- iv. Monitoring the process of involvement
- v. Evaluating outcomes of the project, measuring whether the goal has been met
- vi. Using data collected to inform running of this and future projects

**Table 9**

*Barriers and Solutions to Service User Involvement*

Barriers	Possible solutions
Questioning whether users or carers involved are representative	Accept unrepresentativeness if any relevant experience is needed; or accept partial representativeness by careful selection of only particular stakeholders (users and carers do not make good proxies for each other, as they may have different agendas); or appoint participants to be accountable to other stakeholders

Lack of interest from users and carers	Widen sources of recruitment, for instance by contacting voluntary organisations. Target difficult-to-reach groups by advertising in a range of languages or formats
Tokenism - few users and carers involved, or involvement in only trivial tasks	Alleviate providers' doubts about the usefulness of user and carer involvement, by having a clear, reachable aim, and monitoring the project. Set-up agreed procedures for incorporating user and carer views into decision-making processes of organisation
Concern about users' ability to make rational contributions	Some disorders may preclude participation, if they impair cognitive or communication skills, but the users' involvement could be achieved (for example) through advocacy
Stress of involvement may damage users' mental health	Provide clinical support
User and carer stakeholders' lack of experience	Provide training and information to enable participation
Communication barriers	Limit use of jargon. Long-term discussion groups can ease communication
Role strain (difficulty relinquishing patient or healer role)	User and professional training

Retrieved and adapted from Simpson, E. L., & House, A. O. (2004). User and carer involvement in mental health services: from rhetoric to science. *British Journal of Psychiatry*, 183, 89-91.

The authors suggest that considering these six stages and taking into account potential barriers prior to commencing a project can improve the success rate. More specifically, goal setting clarifies roles, duties and responsibilities for both service users/carers and professionals which will help evaluation of project effectiveness. Feedback to participants will also be necessary to improve future user and carer involvement. The barriers described in Table 9 may affect the choice of method of involvement and support that may be needed. In the bariatric field, the analysis from this study suggests that the participants had motivation and capacity to engage at least at the 'Involving' stage of the 'Ladder of Engagement and Participation' (Table 8), as they were already supporting other bariatric candidates in the support group.

It is important to stress that the impact of suggestions made in this study are likely to occur incrementally over time, within a context of continuing future research, and will depend on the endeavours in disseminating the results, conclusions and recommendations.

## DISSEMINATION

Note that the dissemination plan described below has already been, and is likely to be further, affected by the government's response to the COVID-19 pandemic.

The findings of the empirical paper were originally planned to be disseminated locally to the staff and doctorate trainees at Royal Holloway during the Research Presentations event held annually by the Doctorate in Clinical Psychology department. However, the format of the event had to be adapted, and therefore the study was only presented to selected staff.

In my endeavours to disseminate the outcomes of both the systematic review and empirical study, I intend to create a PowerPoint presentation and/or poster that is more accessible to a wider audience.

I have considered several settings to disseminate the results in. Firstly, the empirical study will be disseminated back to the participants who expressed interest in the outcomes of the study and requested the completed version to be sent to them via email. I will also offer to present the accessible presentation and/or poster via Zoom (or video-enabled communication similar platform) to facilitate participants' understanding of the study as well as their sense of contribution and value to research and clinical practice. This may hopefully contribute to future interest in other studies (Shalowitz & Miller, 2005). It is also consistent with my ethical duty and a way to express my gratitude towards the participants (Fernandez et al., 2003). Secondly, I have

agreed with the two NHS bariatric surgery support groups that aided recruitment that I will disseminate the findings of the empirical study to their members (service users and HPs). I will also contact other NHS support groups in London to offer presentation of the results. The delivery of this dissemination will need to be further discussed. Thirdly, I will approach bariatric surgery (e.g., WLSinfo), obesity (e.g., weight watchers) and health organisations (e.g., NHS) to share or upload a summary of the study with their communities. Finally, I intend to submit the manuscript of the empirical study to several journals, including BMC Obesity, Journal of Public Health, BMJ Open. All three are UK peer-reviewed journals that consider qualitative papers addressing research questions in clinical medicine, public health and epidemiology.

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## APPENDICES

### Appendix 1 – Justification for inclusion criteria

**Table 1**

*Inclusion criteria*

Criteria	Justification
Conducted between 1977 and 2019	Although bariatric surgery grew exponentially in the 1990s after the first laparoscopic gastric bypass in 1994, the first gastric bypass was developed and performed in the late 1970s, which was found to produce significant weight loss with much lower risks of complications, compared to earlier methods (Faria, 2017; Jaunoo & Southall, 2010).
Subjects have to have had bariatric surgery	The study is interest in whether psychological interventions are effective in reducing weight following bariatric surgery in adults
Inclusion & description of any psychological intervention or support groups with elements of active psychological support present post-surgery.	Several psychological factors have been identified to be related to poor outcome and weight regain post-surgery, including health-related behaviours, psychiatric and mental health issues, new or unexpected social and relational challenges and cognitive functioning (Bak et al., 2015; Kalachian & Marcus, 2003; Karmali et al., 2013, 2019; Rudolph & Hilbert, 2013). These factors are appropriate targets for psychological interventions (Kalachian & Marcus, 2003, 2019).
Weight data & at least one health/psychosocial outcome (e.g. eating, psychological, functional, physical) to be reported following psychological intervention. Weight can be defined as total weight loss (in kg) or body-mass index (BMI; defined as weight divided by height squared).	The study is interest in whether psychological interventions are effective in reducing weight following bariatric surgery in adults. Most studies use different operationalisation of weight (e.g. total weight loss in kg or BMI).
Published in the English Language	Due to limited resources, studies published in languages other than English are unable to be translated and included into the review.
Quantitative data	The review focuses on whether psychological interventions following bariatric surgery improves outcome terms of weight loss and psychosocial adjustment post-surgery. This can be appropriately answered through quantitative research, allowing objective measurements of the effects of the psychological interventions.

Prospective design

Prospective studies, including pilot studies, pre and post, controlled trials and RCTs will be included

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## Appendix 2 – Search strategies

**Table 2**

*Search terms*

<b>Population</b>	<b>Intervention</b>	<b>Comparison</b>	<b>Outcome</b>
Adult* (18-80), Obes*	Behavi?r* management Psychol* intervention	Control Waiting?list	Post-surg* outcome Weight?loss
Bariatric surger*	Psychol* therapy	Standard care	Weight
Gastric?bypass	Counselling	Care?as?usual	Weight?reduct*
Gastric?banding	Psychosocial intervention	No treatment	Weight?recidiv*
Sleeve?gastrectomy	Psychological support	No intervention	Weight?increase
biliopancreatic diversion	Cognitive?behavioural therap*	Minimal?care	Outcome
Intra?gastric balloon	CBT	Usual?Care	Psychological well?being
Weight?loss surg*	Behav?ral therap* Cognitive therap* Group therap*		Body?mass BMI QoL
	Behavi?r* psychol* therap*		Quality?of?life
	Psychotherap*		Health
	Meta?cognitive therap*		Physical
	acceptance and commitment therapy		Functional
	ACT		Eating?behaviour
	Mindfulness		Eating?disorder
	Compassion?focused therap*		Medical

	dialectical behavi?r* therap*	Psychiatric
	Behavi?r* modification	
	Support	

**Table 3**

MEDLINE Search 16/08/2019 1:27

Search number	Search results	Search terms and restrictions
4	1,279	(#3 AND #2 AND #1) AND LANGUAGE: (English) AND AGE <b>GROUP:</b> (("Adult" OR "Middle Aged" OR "Aged")) AND <b>SPECIES:</b> (Humans) <i>Indexes=MEDLINE Timespan=1950-2019</i>
3	1,362,660	((TS=( Post-surg* outcome or Weight?loss or Weight or Weight?reduct* or Weight?recidiv* or Weight?increase or Outcome or Psychological well?being or Body?mass or BMI or or QoL or Quality?of?life or Health or Physical or Functional or Eating?Behaviour or Eating?Disorder or Medical or Psychiatric ))) AND LANGUAGE: (English) AND AGE <b>GROUP:</b> (("Adult" OR "Middle Aged" OR "Aged")) AND <b>SPECIES:</b> (Humans) <i>Indexes=MEDLINE Timespan=1950-2019</i>
2	1,034,671	((TS=( Behavi?r* management or Psychol* intervention or Psychol* therapy or Counselling or Psychosocial intervention or Psychological support or Cognitive?behavioural therap* or CBT or Behav?ral therap* or Cognitive therap* or Group therap* or Behavi?r* psychol* therap* or Psychotherap* or Meta?cognitive therap* or acceptance and commitment therapy or ACT or Mindfulness or Compassion?focused therap* or dialectical behavi?r* therap* Behavi?r* modification or Support ))) AND LANGUAGE: (English) AND AGE <b>GROUP:</b> (("Adult" OR "Middle Aged" OR "Aged")) AND <b>SPECIES:</b> (Humans) <i>Indexes=MEDLINE Timespan=1950-2019</i>
1	8,740	((TS=(Bariatric surger* or Gastric?bypass or Gastric?banding or Sleeve?gastrectomy or biliopancreatic diversion or Intra?gastric balloon or Weight?loss surg*))) AND LANGUAGE: (English) AND AGE <b>GROUP:</b> (("Adult" OR "Middle Aged" OR "Aged")) AND <b>SPECIES:</b> (Humans) <i>Indexes=MEDLINE Timespan=1950-2019</i>

**Table 4**

Search number	Search results	Search terms and restrictions
1	218	<p>TX ( Bariatric surger* or Gastric?bypass or Gastric?banding or Sleeve?gastrectomy or biliopancreatic diversion or Intra?gastric balloon or Weight?loss surg* ) AND TX ( Behavi?r* management or Psychol* intervention or Psychol* therapy or Counselling or Psychosocial intervention or Psychological support or Cognitive?behavioural therap* or CBT or Behav?ral therap* or Cognitive therap* or Group therap* or Behavi?r* psychol* therap* or Psychotherap* or Meta?cognitive therap* or acceptance and commitment therapy or ACT or Mindfulness or Compassion?focused therap* or dialectical behavi?r* therap* Behavi?r* modification or Support ) AND TX ( Post-surg* outcome or Weight?loss or Weight or Weight?reduct* or Weight?recidiv* or Weight?increase or Outcome or Psychological well?being or Body?mass or BMI or QoL or Quality?of?life or Health or Physical or Functional or Eating?Behaviour or Eating?Disorder or Medical or Psychiatric )</p> <p><b>Limiters</b> - Published Date: 19770101-20190831; Publication Type: Peer Reviewed Journal; English; Language: English; Age Groups: Adulthood (18 yrs &amp; older); Population Group: Human. <b>Search modes</b> - Find all my search terms.</p>

### Appendix 3 – SPSS Kappa analysis and concordance calculations

CROSSTABS

```
/TABLES=Rater_1 BY Rater_2
/FORMAT=AVALUE TABLES
/STATISTICS=KAPPA
/CELLS=COUNT
/COUNT ROUND CELL.
```

#### Crosstabs

**Case Processing Summary**

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Rater_1 * Rater_2	126	100.0%	0	0.0%	126	100.0%

**Rater\_1 \* Rater\_2 Crosstabulation**

Count

	Rater_2						Total
	N/A	No info	Low	Moderate	Serious	Critical	
Rater_1	N/A	8	0	0	0	0	8
	No info	0	7	0	0	0	7
	Low	0	0	42	1	0	43
	Moderate	0	0	12	11	0	23
	Serious	0	0	0	2	32	1
	Critical	0	0	0	0	3	7
Total		8	7	54	14	35	126

**Symmetric Measures**

		Value	Asymp. Std. Error <sup>a</sup>	Approx. T <sup>b</sup>	Approx. Sig.
Measure of Agreement	Kappa	.797	.042	16.738	.000
N of Valid Cases		126			

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.

**Table 5**

<i>Concordance calculations</i>				
<b>Numerical value</b>	<b>Nominal value</b>	<b>Rater 1</b>	<b>Rater 2</b>	<b>Difference</b>
0	N/A	8	8	
1	No info	7	7	
2	Low	43	54	11
3	Moderate	23	14	9
4	Serious	35	35	
5	Critical	10	8	2
Total		126	126	22
				% difference      17.4603175
				% concordance      82.5396825

## Appendix 4 – Quality assessment

**Table 6**

*Bradley et al., 2016a*

Bias	Judgement	Support for judgement
Systematic baseline differences (confounding)	Serious	Baseline analysis was not carried out. Important demographic data not taken (weight, additional diagnosis).
Participant selection	Serious	Group allocation relied on participant choice, leading to motivation bias.
Allocation blinding	N/A	Not an RCT.
Intervention classification	Low	Not a controlled trial, and intervention was well defined.
Intervention deviation	Serious	Not a controlled trial but there were deviations from usual practice that were likely to impact on the outcome as participants received financial compensation to complete mid and post treatment assessment.
Incomplete or missing data	Serious	Missing data were addressed inappropriately in the analysis for effectiveness trial – i.e., intention to treat was not used; 7 drop-out/excluded due to unavailability at start (n=4) and drop-out after 1 <sup>st</sup> appt (n=3).
Measurement of outcomes	Moderate	Not an RCT, and the outcome measure is only minimally influenced by knowledge of the intervention received by study participant.
Selective reporting	Serious	Analysis not consistent with a-priory analysis plan (i.e. analysis of process variables using chi-square or effect size was not reported in Method section). Study does not highlight or discuss non-significant t-test results, although these were reported on.
Overall judgement	Serious	

**Table 7**

*Bradley et al., 2016b*

Bias	Judgement	Support for judgement
Systematic baseline differences (confounding)	Critical	No inferential analysis reported, and several demographic data not obtained, including pre-treatment weight, additional diagnosis and previous psychological treatment.
Participant selection	Serious	Participants received financial compensation to complete mid and post treatment assessment.
Allocation blinding	N/A	Not an RCT.
Intervention classification	Serious	Intervention is not well defined (e.g. intensity and duration unspecified).
Intervention deviation	Serious	Intervention duration varied between individuals. Completion rate only 60%.
Incomplete or missing data	Low	No concerns. Intention to treat used.
Measurement of outcomes	Serious	The outcome measure was self-reported (weight & surgery type). Pre-treatment weight data not reported for comparison.
Selective reporting	Serious	Analysis not consistent with a-priori plan (i.e. analysis of process variables using correlation was not reported in Method section).  Study does not highlight or discuss non-significant t-test results, although these were reported on.  All statistical data not presented in the table (e.g. EDE-Q analysis)
Overall	Critical	

**Table 8**

*Chacko et al., 2016*

Bias	Judgement	Support for judgement
Systematic baseline differences (confounding)	Moderate	Some demographic data not obtained (employment, previous psychological treatment & additional diagnosis).
Participant selection	Low	No concerns.
Allocation blinding	Low	Treatment assignments for randomization were generated in SAS by the study statistician using permuted blocks with randomly-varying block sizes.
Intervention classification	Low	Groups are well defined.
Intervention deviation	Low	No concerns.

Incomplete or missing data	Low	Data were complete.
Measurement of outcomes	Low	The outcome measure is only minimally influenced by knowledge of the intervention received by study participants.
Selective reporting	Low	No concerns.
Overall	Moderate	

**Table 9**

*Galle et al., 2017a*

Bias	Judgement	Support for judgement
Systematic baseline differences (confounding)	Moderate	Some demographic data not obtained (previous psychological treatment, ethnicity, marital status).
Participant selection	Serious	Group allocation relied on participant choice (risk of motivation bias). Unclear if all participants who would have been eligible for the target trial were included in the study as does not specify why only Caucasian patients were provided with the opportunity to be recruited.
Allocation blinding	N/A	Not RCT.
Intervention classification	Low	Groups well defined.
Intervention deviation	Low	No concerns.
Incomplete or missing data	Serious	Reasons for missing data differed across interventions. Missing data were addressed inappropriately in the analysis for effectiveness trial - i.e. did not use intention to treat; 3 dropouts from intervention groups, 6 loss to follow up from control group, and 2 were unaccounted.
Measurement of outcomes	Serious	The primary outcome measure was self-reported (weight and BMI).
Selective reporting	Serious	Outcome measure analysed in multiple ways (BMI difference with t-test and Mean BMI with ANOVA).
Overall	Serious	

**Table 10**

*Galle et al., 2017b*

Bias	Judgement	Support for judgement
------	-----------	-----------------------

Systematic baseline differences (confounding)	Critical	Important baseline data missing (weight, surgery type, previous psychological treatment, employment status, education, marital status) and inferential analysis not carried out/reported. Notably, factors such as OSAS & hypertension where passage to a lower grade or level could be impacted by proximity to that lower level at baseline.  The outcome analysis indicated that the control group experienced a significant weight loss over the course of the study, whereas the experimental group did not.
Participant selection	Serious	Group allocation relied on participant choice (motivation bias).  Only Caucasian participants had the opportunity to be recruited, unclear why.
Allocation blinding	N/A	Not an RCT.
Intervention classification	Low	Intervention status is well defined.
Intervention deviation	Low	No concerns.
Incomplete or missing data	Serious	Relatively low drop-out rate, however, proportion varied across groups.  Missing data were addressed inappropriately in the analysis for an effectiveness trial - i.e. did not use intention to treat.
Measurement of outcomes	Serious	Did not report how the weight was obtained.
Selective reporting	Moderate	Some data reported but not shown (quote, pg4, 'As for hypertension, complete remissions (n = 25) were measured only in LRYGB patients (data not shown)').
Overall	Critical	

**Table 11**

*Himes et al., 2015*

Bias	Judgement	Support for judgement
Systematic baseline differences (confounding)	Moderate	Some demographic data not obtained (weight, additional diagnosis, previous psychological treatment, and employment).
Participant selection	Low	No concerns.
Allocation blinding	N/A	Not RCT.
Intervention classification	Low	Intervention status is well defined. No concerns.
Intervention deviation	Low	No unusual deviation. No concerns.

Incomplete or missing data	Serious	Less than 80% data completeness (n=9/28). Intention to treat used, although they did not report it in the article. Moreover, there was a significant difference in depressive symptoms between completers and non-completers.
Measurement of outcomes	Serious	Did not report how the weight was obtained. It is unclear why some measures were used (e.g. EDDS).
Selective reporting	Critical	Several outcome measures (EDE-Q, EDDS, SCID-I/P) were either not reported or reported unclearly (e.g. not referencing the subscale used when reporting 'subjective binge') in the results section.  The baseline and post-treatment table (Table 1, pg 925) does not specify sample size, despite missing data of 9 individuals (non-completers).
		Authors report that outcome analyses were conducted both with treatment completers and separately with all participants (intent to treat), though both are not reported, and it is unclear which is presented and reported in the article.
		The authors do not discuss the potential impact of non-completers being more likely to lose less weight, and how that might have biased the overall outcome, and how intention to treat related to this.
Overall	Critical	

**Table 12**

*Jassil et al., 2015*

Bias	Judgement	Support for judgement
Systematic baseline differences (confounding)	Moderate	Some demographic data not obtained (previous psychological treatment, employment).
Participant selection	Moderate	Inclusion restricted to females only, though females generally represent the majority. Two case-matched historical control groups were identified from electronic database of bariatric surgical patients.
Allocation blinding	N/A	Non-randomized (used matched historical control).
Intervention classification	Low	Intervention status is well defined. No concerns.
Intervention deviation	Low	No unusual deviations. No concerns.
Incomplete or missing data	Serious	Intention to treat not used, and outcome tables do not include sample size.
Measurement of outcomes	Serious	Did not report how weight was obtained.

		Secondary data (e.g. physical activity, eating behaviour) not recorded in historical control patients.
		Some secondary outcomes measures were not standardised.
Selective reporting	Serious	Outcome measure analysed in multiple ways (total BM, BMI loss, total weight, % weight loss). Authors do not highlight or discuss the lack of statistical group effect (i.e. intervention group vs. historical control group) in the discussion section. Baseline data and analysis of completers vs non-completers not presented.
Overall	Serious	

**Table 13**

*Leahy et al., 2008*

Bias	Judgement	Support for judgement
Systematic baseline differences (confounding)	Moderate	Previous psychological treatment and marital status not obtained.
Participant selection	Low	No concern.
Allocation blinding	N/A	Not RCT.
Intervention classification	Low	Intervention well defined. No concerns.
Intervention deviation	Low	No unusual deviations. No concern.
Incomplete or missing data	Low	No dropouts, no control available.
Measurement of outcomes	Serious	Did not report how weight was obtained.
Selective reporting	Critical	Effect size for weight not reported. Did not use or report p-values.
Overall	Critical	

**Table 14**

*Lent et al., 2019*

Bias	Judgement	Support for judgement
Systematic baseline differences (confounders)	Moderate	Several demographic data not obtained (additional diagnosis, previous psychological treatment, employment status, education, marital status).
Participant selection	Low	No concerns.

Allocation blinding	Low	A random number generated computer program used.
Intervention classification	Low	Both groups clearly defined.
Intervention deviation	Moderate	Both groups compensated for travel expenses and time to complete study visits.
Incomplete or missing data	Low	No concerns. Intention to treat used, relatively low attrition, and drop out reason consistent across groups.
Measurement of outcomes	Low	No concerns.
Selective reporting	Low	No concerns.
Overall	Moderate	

**Table 15**

*Nijamkin et al., 2012, 2013*

Bias	Judgement	Support for judgement
Systematic baseline differences (confounders)	Moderate	Additional diagnosis, surgery type, previous psychological treatment not reported.
Participant selection	Low	No concern.
Allocation blinding	No info	Randomisation process not reported.
Intervention classification	Low	Groups clearly defined. No concerns.
Intervention deviation	Low	No unusual deviations. No concerns.
Incomplete or missing data	Low	Intention to treat used. Low data loss.
Measurement of outcomes	Low	No concerns.
Selective reporting	Low	No concerns.
Overall	Moderate	

**Table 16**

*Papalazarou et al., 2009*

Bias	Judgement	Support for judgement
Systematic baseline differences (confounders)	Serious	Weight, employment, ethnicity, previous psychological treatment, additional diagnosis not obtained/reported.
Participant selection	No info	Selection procedure not described.

Allocation blinding	No info	Randomisation process not described, and unclear how many participants assigned to each group.
Intervention classification	Low	No concerns.
Intervention deviation	Low	No concerns.
Incomplete or missing data	No info	Study does not mention missing data. No consort graph presented. Description of study flow not described.
Measurement of outcomes	Low	Weight was obtained through scale onsite.
Selective reporting	Moderate	Multiple analyses of outcome-intervention relationship, including total weight, % excess weight loss.
Overall	Serious	

**Table 17**

*Sockalingam et al., 2016*

Bias	Judgement	Support for judgement
Systematic baseline differences (confounders)	Serious	Non-completers had significantly less % total weight loss before psychological treatment ( $p=.01$ ). Pre-treatment weight, additional diagnosis, previous psychological treatment, employment and ethnicity not obtained.
Participant selection	No info	Selection procedure not described.
Allocation blinding	N/A	Not RCT.
Intervention classification	Low	Groups clearly defined. No concerns.
Intervention deviation	Low	No unusual deviations. No concerns.
Incomplete or missing data	Serious	Intention to treat analysis not used. High loss to follow up (<80%).
Measurement of outcomes	Serious	Did not report how weight was obtained.
Selective reporting	Low	No concerns.
Overall	Serious	

**Table 18**

*Tucker et al., 1991*

Bias	Judgement	Support for judgement
------	-----------	-----------------------

Systematic baseline differences (confounders)	Moderate	Additional diagnosis, employment and ethnicity not obtained.
Participant selection	Low	No concerns.
Allocation blinding	No info	Randomisation process not described.
Intervention classification	Serious	Not possible to define and measure how long each participant spent on a written material/lesson (out of 12 lessons) as these were sent out to be completed by the participants in their home every 2 weeks.
Intervention deviation	Critical	<p>Intervention integrity was not controlled and ensured as the written material/lessons were carried out by the participants in their own homes without formal/objective assessment, recording or supervision (risk of variability in the task completion (e.g. getting help from family or friends).</p> <p>No consistency in when the behavioural consultations occurred - quote pg 692 '<i>Usually on the same day as the medical visits the behavioral consultations for treatment subjects were conducted...</i>' – suggesting that some consultations occurred on a different day.</p>
Incomplete or missing data	Serious	Intention to treat not used and low completion rate on some intervention aspects (e.g., 54.9% of the 12 workbook quizzes of written lessons).
Measurement of outcomes	Serious	Post-intervention weight obtained through self-reports.
Selective reporting	Serious	<p>Multiple analyses of weight outcome (total weight, % overweight, BMI, % excess weight lost).</p> <p>No CONSORT flowchart</p>
Overall	Critical	

**Table 19**

*Wild et al., 2015, 2017*

Bias	Judgement	Support for judgement
Systematic baseline differences (confounders)	Moderate	<p>Significantly less female in experimental group compared to control group.</p> <p>Previous psychological treatment, additional diagnosis, employment, ethnicity, education and marital status not obtained. patients who participated in the 2017 follow-up study had higher baseline scores in quality of life and self-efficacy measures compared to those who did not participate, although intention to treat was used and further analyses were adjusted.</p>
Participant selection	Low	No concerns.

Allocation blinding	Low	Randomization was stratified by centre and conducted by using the randomization software “RANDI 2” and applied by an independent assistant at the University Hospital Heidelberg.
Intervention classification	Moderate	Profession of therapy provider not reported.
Intervention deviation	Low	No concerns.
Incomplete or missing data	Moderate	High attrition rate (>80%) in the 2017 follow-up study. Also, significant difference in quality of life & self-efficacy scores favouring patients who had agreed to participate in the 2017 follow up study. However, intention to treat analysis used, and data imputed with a mixed model for repeated measures (MMRM) algorithm in both studies.
Measurement of outcomes	Serious	Did not report how weight was obtained.
Selective reporting	No info	Unclear whether their analysis is comparing pre-surgery weight (T0) with post-treatment weight (T4) or pre-treatment weight (T2) with post treatment weight (T4).
Overall	Serious	

---

## Appendix 5 – ethical approval

20/05/2020

Email - Sahar, Karan (2008) - Outlook

↶ Reply ↘ Delete ⚡ Junk Block ⋮

### Result of your application to the Research Ethics Committee (application ID 1655)

ⓘ Flag for follow up. Start by 28/07/2019. Due by 28/07/2019.

ES Ethics Application System <ethics@rhul.ac.uk>

Sun 28/07/2019 20:21

To: Sahar, Karan (2008); afsane.riazi@richmond.ac.uk; ethics@rhul.ac.uk

👍 🔍 ↶ ↷ → ⋮

PI: Afsane Riazi

Project title: Experiences of bariatric surgery candidates

REC ProjectID: 1655

Your application has been approved by the Research Ethics Committee.

Please report any subsequent changes that affect the ethics of the project to the University Research Ethics Committee ethics@rhul.ac.uk

## **Appendix 6 – information sheet (participant and service user), consent and debrief**

Department of Psychology  
Royal Holloway, University of London  
Egham, Surrey TW20 0EX  
[www.royalholloway.ac.uk/psych](http://www.royalholloway.ac.uk/psych)



### **Participant Information Sheet** (version 3)

#### **Experiences of the bariatric pre-surgery evaluation process in the NHS among patients who have undergone bariatric surgery**

We would like to invite you to take part in our research study. Before you decide, it is important for you to understand the purpose of the research and what it will involve. Please ask us if there is anything that is not clear, or if you would like more information.

#### **What is the purpose of the study?**

Many patients seeking weight-loss surgery report various challenges with accessing and undergoing the selection process for surgery. However, little is known about weight-loss surgery candidates' experiences of the pre-surgery evaluation, although challenges in the process may influence perceptions and behaviours towards the evaluation process. Therefore, exploring these experiences may tell us about how weight-loss surgery patients understand the pre-surgery evaluation process, which may help professionals to think about the best way to support candidates for weight-loss surgery.

#### **What will I be asked to do?**

You are being invited to take part in a study because you have previously undergone weight-loss surgery in the NHS. If you agree to being involved in the study, the lead researcher will meet with you in person at one of the University sites to conduct an interview about your experiences of the pre-surgery evaluation process. It is estimated that this will take ca. 1 hour. The study will be recorded (audio only) and reviewed for in-depth analysis by the lead researcher (Karan Sahar). You will also be asked a few demographic questions to evaluate the demographic information of the participants of the study. Following the completion of the study, the recording will be destroyed in accordance with the UK Data Protection Act (2018) (See Confidentiality).

#### **Do I have to take part?**

Your participation in this study is entirely voluntary, and you may choose to withdraw at any time, without any reasons given.

## **Eligibility**

You are eligible to take part in the study if you meet the entry criteria: aged 18 or over, English-speaking, have undergone **any** bariatric surgery in the UK through the NHS, currently based in the Greater London area, and able to travel.

## **How long is the study?**

The study may take up to 1 hour. You may take a break at any time during the interview.

## **What are the possible disadvantages and risks of taking part?**

As the interview involves reflecting and sharing potentially unpleasant and challenging experiences, you may experience distress or discomfort during or after the interview. Should this happen during the interview, we would encourage you to take a break, refrain from answering or stopping the interview altogether. Should you experience distress in any form after the interview, we would recommend that you contact your local GP for further support. Should you need emergency support, we recommend that you contact the local crisis team (**0800 0234 650** for Central & West North London Mental Health Crisis team) or A&E (**020 3447 0011/ 020 3447 0012** for UCLH A&E).

## **How will I benefit from participating in this study?**

Your travel expenses will be covered (up to £10). Also, by participating, you will be improving our understanding of the experiences of weight-loss pre-surgery evaluation process that may hopefully lead to improvements in future service delivery.

## **If I need to speak to someone about the research, whom should I contact?**

If you have any questions or concerns about the study, please see contact details provided below.

## **Confidentiality**

All the information that you provide will be treated in confidence to comply with UK Data Protection Act (2018). You will not need to state your name in the recorded interview although you will be given a code identifier to separate the data should you wish to withdraw from the study at a later stage. Any data, written or auditory, collected during the course of the research will be kept in a password protected or locked (if non-electronic) folder, and only be accessible to the individuals involved in the research study, and they will not be identified in any report or publication at any future time.

## **How will we use the results of this research?**

The results of the study will contribute towards a doctoral degree in clinical psychology and will be offered to present to weight-loss services in London, and fellow students at Royal Holloway, University of London. It is expected that the results will also be published in scientific journals.

## **Who has reviewed the study?**

Important General Data Protection Information (GDPR). Royal Holloway, University of London is the sponsor for this study and is based in the UK. We will be using information from you in order to undertake this study and will act as the data controller for this study. This means that we are responsible for looking after your information and using it properly. Any data you provide during the completion of the study will be stored securely on local servers. Royal Holloway is designated as a public authority and in accordance with the Royal Holloway and Bedford New College Act 1985 and the Statutes which govern the College, we conduct research for the public benefit and in the public interest. Royal Holloway has put in place appropriate technical and organisational security measures to prevent your personal data from being accidentally lost, used or accessed in any unauthorised way or altered or disclosed.

Royal Holloway has also put in place procedures to deal with any suspected personal data security breach and will notify you and any applicable regulator of a suspected breach where legally required to do so. To safeguard your rights, we will use the minimum personally-identifiable information possible (i.e., the email address you provide us). The lead researcher will keep your contact details confidential and will use this information only as required (i.e., to provide a summary of the study results if requested and/or for the prize draw). The lead researcher will keep information about you and data gathered from the study for 5 years after the study has finished. Certain individuals from RHUL may look at your research records to check the accuracy of the research study. If the study is published in a relevant peer-reviewed journal, the anonymised data may be made available to third parties. The people who analyse the information will not be able to identify you. You can find out more about your rights under the GDPR and Data Protection Act 2018 by visiting <https://www.royalholloway.ac.uk/abouthttps://www.royalholloway.ac.uk/abouthttps://www.royalholloway.ac.uk/about-us/more/governance-and-strategy/datastrategy/dataprotection/> and if you wish to exercise your rights, please contact [dataprotection@royalholloway.ac.uk](mailto:dataprotection@royalholloway.ac.uk).

**Contact details:**

**Name:** Mr Karan Sahar

**Email:** [karan.sahar.2008@live.rhul.ac.uk](mailto:karan.sahar.2008@live.rhul.ac.uk)

**Supervisor:** Dr Afsane Riazi

**Address:** Dept. of Psychology, Royal Holloway, University of London, Egham, Surrey, TW20 0EX

**Website:** [www.royalholloway.ac.uk/psychology](http://www.royalholloway.ac.uk/psychology); **Tel:** +44 (0)1784 443851

## Consent Form

**Study Title:** Experiences of the bariatric pre-surgery evaluation process in the NHS among patients who have undergone bariatric surgery

Write your initials:

The nature and purpose and potential benefits or risks of the study have been explained to me. I have read and understood the Information for Participants and understand what this study involves. If I asked questions, they have been answered fully to my satisfaction.

I understand that my participation in the study is entirely voluntary and that I am free to withdraw at any time without giving a reason.

I agree that if I decide to withdraw from the study then the researchers can continue to use the data and information I have already given them unless I ask for this to be destroyed.

I agree to take part in the study

Participant name: \_\_\_\_\_

Participant signature: \_\_\_\_\_  
Date: \_\_\_\_\_

Researcher name: \_\_\_\_\_

Researcher signature: \_\_\_\_\_  
Date: \_\_\_\_\_

Department of Psychology  
Royal Holloway, University of  
London  
Egham, Surrey TW20 0EX  
[www.royalholloway.ac.uk/psych](http://www.royalholloway.ac.uk/psych)



## Debrief sheet

Thank you for participating in this study. Your time and effort are much appreciated.

Your well-being is important to us, and we hope that this study has not caused any distress or discomfort. However, as the interview involved reflecting and sharing potentially unpleasant and challenging experiences, you may have experienced distress or discomfort. Should you experience distress in any form after the interview, we would recommend that you seek professional consultation and contact your local GP or your therapist (if you are in contact with one), or in case of emergency contact the local crisis team (**0800 0234 650** for Central & West North London Mental Health Crisis team) or A&E (**020 3447 0011/ 020 3447 0012** for UCLH A&E).

If you have any further queries regarding the study or would like to discuss any aspects of the research, please feel free to contact the researcher, Karan Sahar ([karan.sahar.2008@live.rhul.ac.uk](mailto:karan.sahar.2008@live.rhul.ac.uk)). If you wish to know the results of this study, please contact the researcher, Karan Sahar, subsequent to the projects submission in October 2020.

**Thank you!**

## Service User Involvement Sheet

(version 1)

### Experiences of the bariatric pre-surgery evaluation process in the NHS among patients who have undergone bariatric surgery

We would like to invite you to be part of our research study. Before you decide, it is important for you to understand the purpose of the research and what it will involve for you. Please ask us if there is anything that is not clear, or if you would like more information.

#### What is the purpose of the study?

Weight-loss surgery access remains limited and does not meet current public demand in the UK, despite being recognised as an effective treatment for severely obese patients. Many patients seeking weight-loss surgery report various challenges with accessing and undergoing the selection process for surgery. However, little is known about weight-loss surgery candidates' perspectives and experiences of the pre-surgery evaluation, although challenges in access and selection process to surgery may influence perceptions and behaviours towards the evaluation process. Therefore, exploring these experiences may tell us about how weight-loss surgery patients understand the pre-surgery evaluation process, which may help professionals to think about the best way to support candidates for weight-loss surgery.

#### What will I be asked to do?

You are being invited to be part of the study because you have previously undergone weight-loss surgery in the NHS. If you agree to being involved in the study, the lead researcher will communicate with you, either in person, via email or telephone. You will be consulted about the recruitment process, study procedures and interview questions and asked to review suitability of information sheets given to potential participants, amongst other tasks.

#### Do I have to take part?

Your participation in this study is entirely voluntary, and you may choose to withdraw at any time, without any reasons given.

#### What are the possible disadvantages and risks of being part of the study?

Although you will not be asked to answer any of the questions, you will be asked to reflect on the questions for the interview, which may elicit potentially unpleasant and/or challenging memories, and you may experience distress or discomfort. Should you experience distress in any form during the interview, we would encourage you to take a break and stop from further reflection.

#### How will I benefit from being part of this study?

You will receive a £10 Amazon voucher as compensation for your time and effort, and your travel expenses (if you are asked to travel) will be covered (up to £10). Additionally, by participating you will be contributing to a more valid and reliable study that may improve our

understanding of surgery candidates' experiences of weight-loss pre-surgery evaluation process, which may in turn hopefully lead to improvements in future service delivery.

### **Confidentiality**

All the information that you provide will be treated in confidence to comply with UK Data Protection Act (2018). If you wish to have your contributions acknowledged in future dissemination or publication, you may leave your personal details. If you do not wish to be named, you will simply be acknowledged anonymously. Any data, written or auditory, collected during the course of the research will be kept in a password protected or locked (if non-electronic) folder, and only be accessible to the individuals involved in the research study, and they will not be identified in any report or publication at any future time.

### **Who has reviewed the study?**

Important General Data Protection Information (GDPR). Royal Holloway, University of London is the sponsor for this study and is based in the UK. We will be using information from you in order to undertake this study and will act as the data controller for this study. This means that we are responsible for looking after your information and using it properly. Any data you provide during the completion of the study will be stored securely on local servers. Royal Holloway is designated as a public authority and in accordance with the Royal Holloway and Bedford New College Act 1985 and the Statutes which govern the College, we conduct research for the public benefit and in the public interest. Royal Holloway has put in place appropriate technical and organisational security measures to prevent your personal data from being accidentally lost, used or accessed in any unauthorised way or altered or disclosed. Royal Holloway has also put in place procedures to deal with any suspected personal data security breach and will notify you and any applicable regulator of a suspected breach where legally required to do so. To safeguard your rights, we will use the minimum personally-identifiable information possible (i.e., the email address you provide us). The lead researcher will keep your contact details confidential and will use this information only as required (i.e., to provide a summary of the study results if requested and/or for the prize draw). The lead researcher will keep information about you and data gathered from the study for 5 years after the study has finished. Certain individuals from RHUL may look at your research records to check the accuracy of the research study. If the study is published in a relevant peer-reviewed journal, the anonymised data may be made available to third parties. The people who analyse the information will not be able to identify you. You can find out more about your rights under the GDPR and Data Protection Act 2018 by visiting <https://www.royalholloway.ac.uk/abouthttps://www.royalholloway.ac.uk/abouthttps://www.royalholloway.ac.uk/about-us/more/governance-and-strategy/datastrategy/dataprotection/> and if you wish to exercise your rights, please contact [dataprotection@royalholloway.ac.uk](mailto:dataprotection@royalholloway.ac.uk)

### **How will we use the results of this research?**

The results of the study will contribute towards a doctoral degree in clinical psychology and will be offered to present to weight-loss services in London, weight-loss service special interest groups and fellow students at Royal Holloway, University of London. It is expected that the results will also be published in scientific journals.

### **Contact details:**

**Name:** Mr Karan Sahar

**Email:** [karan.sahar.2008@live.rhul.ac.uk](mailto:karan.sahar.2008@live.rhul.ac.uk)

**Supervisor:** Dr Afsane Riazi

**Address:** Department of Psychology,  
Royal Holloway, University of London,

Egham, Surrey, TW20 0EX

**Website:** [www.royalholloway.ac.uk/psychology](http://www.royalholloway.ac.uk/psychology)

**Tel:** +44 (0)1784 443851

## Appendix 7 – Study promo for Service User Involvement

Department of Psychology  
Royal Holloway, University of  
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Egham, Surrey TW20 0EX  
[www.royalholloway.ac.uk/psych](http://www.royalholloway.ac.uk/psych)



# Experiences of the bariatric pre-surgery evaluation!

**H**ave you had bariatric/weight-loss surgery within the NHS, and currently live in London? If yes, you are invited to be part of a new study on the experiences of the bariatric pre-surgery evaluation process within the NHS. This study is approved and supported by Royal Holloway, University of London.

**S**hould you be involved in the project, you will be asked to support the research project through consultation (e.g. your perspective on the study, advice on recruitment, etc.). For your time and effort, you will be compensated with a £10 Amazon voucher, and your travel expenses (if asked to travel) will be covered (up to £10).

**F**or more information and to partake in the study, please contact Mr Karan Sahar, Lead Researcher on [karan.sahar.2008@live.rhul.ac.uk](mailto:karan.sahar.2008@live.rhul.ac.uk).

## **Appendix 8 - Recruitment efforts and email correspondence**

The following organisations were contacted for recruitment purposes

### **WLSInfo (<http://www.wlsinfo.org.uk/about-us/>)**

- Uploaded promotion poster on website

### **Obesity Empowerment Network (<https://oen.org.uk/about/contact/>)**

- Multiple attempts - no reply

### **WEIGHT CONCERNS - <http://www.weightconcern.com/node/15>**

- Unable to support

### **BOMS (<https://www.bomss.org.uk/news/>)**

- Unable to support

### **WEIGHT WATCHERS - <https://www.weightwatchers.com/uk/find-a-meeting/search?search=London,%20UK>**

- Unable to support

### **PATIENT.INFO - <https://patient.info/forums/index-O>**

- Unable to support

### **THE GASTRIC GURU - <https://thegastricguru.com/contact/request>**

- Multiple attempts - no reply

### **BARIATRIC COOKERY - <https://www.bariatriccookery.com/carol-bowen-ball/>**

- Multiple attempts – no reply

**Several NHS bariatric support groups (not named due to risk of identifying the NHS service and participants that were included in the study by process of elimination)**

- Replied and willing to discuss but by the time discussion started, recruitment had terminated.

### **Slimming world**

- Unable to support

### **ManVFat <https://manvfat.com/about-man-v-fat/>**

- No reply

### **Talk health partnership**

<https://www.talkhealthpartnership.com/forum/viewforum.php?f=152>

- No reply

### **Health Unlocked (<https://about.healthunlocked.com/contact->**

- Initially replied, but did not get back to me

**Lighter life** (<https://www.lighterlife.com/>)

- Unable to support

**Band Boozled** (<https://bandboozled.co.uk>)

- No reply

**Weight loss resources** (<https://www.weightlossresources.co.uk>)

- No reply

**Thinner times** (<https://www.thinnertimesforum.com/forum/58-united-kingdom/>)

- No reply

**Bariatric pal** (<https://www.bariatricpal.com/contact/>)

- No reply

## Email correspondence with potential participants who initially expressed interest

### Re: Have had weight loss Surgery

[?]

This message was sent with High importance.

SK

Sahar, Karan (2008)

Fri 07/02/2020 11:48

[?]  
[?]  
[?]  
[?]  
[?]  
[?]

To:

• XXX@hotmail.co.uk>

Hi XXX,

I am just following up on my previous email - have you been able to read through the information sheet, and are you still interested in taking part in the study?

I look forward hearing from you,

Kind regards,

Karan Sahar

Trainee Clinical Psychologist  
Department of Psychology  
Royal Holloway, University of London  
Egham Hill, Egham  
TW20 0EX  
01784 434455

---

**From:** Sahar, Karan (2008) <Karan.Sahar.2008@live.rhul.ac.uk>

**Sent:** 02 February 2020 13:16

**To:** XXX@hotmail.co.uk>

**Subject:** Re: Have had weight loss Surgery

Hi XX,

I'm very pleased of your interest in the study.

I have attached the information sheet for the study to this email. Please read through it carefully, and let me know if you have any further questions.

In essence, however, the study involves an interview in person for up to 1 hour. I will be asking you about your experiences and expectations of the **pre-surgery evaluation process** within the NHS. The interview will need to be recorded using an audio recorder. If you agree to participate, you will need to sign consent sheet; however, if you wish to withdraw from the study **at any point** in time, you can do so without giving a reason, and all your information, including the recording, will be deleted.

The interview can be held either in Central London, Bedford Square (nearest tube station is Euston Square St) or alternatively at Royal Holloway, University of London campus (Southwest towards Reading, Nearest train station is Egham). Travel compensation of up to £10 can be provided with receipt/evidence of purchase.

In the Central London location, I am quite flexible with date and time across the week. In the Royal Holloway campus location, I can only do Thursdays or Fridays. Let me know what works best for you.

I look forward hearing from you,

Kind regards,

[Karan Sahar](#)

Trainee Clinical Psychologist  
Department of Psychology  
Royal Holloway, University of London  
Egham Hill, Egham  
TW20 0EX  
01784 434455

---

**From:** XXX@hotmail.co.uk>  
**Sent:** 01 February 2020 19:00  
**To:** Sahar, Karan (2008) <Karan.Sahar.2008@live.rhul.ac.uk>  
**Subject:** Have had weight loss Surgery

I just saw your advert on WLS

Thanks

XX

Sent from [Mail](#) for Windows 10

**Re: Bariatric study**



You replied on Wed 27/11/2019 14:47

AD

xxx@hotmail.com>

Wed 27/11/2019 14:28



To:

- Sahar, Karan (2008)

Hi Karan,

Thank you for your email.

Unfortunately I'm very busy and I won't be able to go.

I'm sorry about that.

Thank you and regards,  
XXX

Sent from my iPhone

On 27 Nov 2019, at 11:51, Sahar, Karan (2008) <Karan.Sahar.2008@live.rhul.ac.uk> wrote:

Hi XXX,

It was lovely chatting with you yesterday evening at the bariatric support group, and thank you for agreeing to take part in the study. As we agreed, we will meet tomorrow **Thursday, 28th November 17:15 at 11 Bedford Square London WC1B 3RD** - the nearest tube station is Euston Square (metropolitan line).

I also have attached more information about the study to this email. If you have time, please complete the following questionnaire before we meet tomorrow:

<https://www.surveymonkey.co.uk/r/LXCBF5G>

Let me know if you have any questions.

Looking forward to seeing you tomorrow,

Kind regards,

Karan Sahar

Trainee Clinical Psychologist  
Department of Psychology  
Royal Holloway, University of London  
Egham Hill, Egham  
TW20 0EX  
01784 434455

<Karan Sahar, Experiences of bariatric pre-surgery evaluation, Information sheet & consent V3.pdf>

**Re: Bariatric study**



You replied on Thu 13/02/2020 12:47

S

XXX@sky.com  
Fri 01/11/2019 16:20



To:

- Sahar, Karan (2008)

Sorry just got to much on at the moment

On 1 Nov 2019 15:39, "Sahar, Karan (2008)" <Karan.Sahar.2008@live.rhul.ac.uk> wrote:

Hi XXX,

I hope this email finds you well. I am just following up to my previous email to see if you're still interest in partaking in this study on the '*Experiences of bariatric pre-surgery evaluation*'. I would be grateful if you could reply at your earliest convenience.

Kind regards,

Karan Sahar

Trainee Clinical Psychologist  
Department of Psychology  
Royal Holloway, University of London  
Egham Hill, Egham  
TW20 0EX  
01784 434455

---

**From:** Sahar, Karan (2008) <Karan.Sahar.2008@live.rhul.ac.uk>  
**Sent:** 23 October 2019 10:44  
**To:** XXX@sky.com <XXX@sky.com>  
**Subject:** Bariatric study

Hi XXX,

My name is Karan - we met XXX Bariatric support group last Thursday, and spoke briefly about a study on your experiences of the bariatric pre-surgery evaluation process.

At the time you expressed interest in being involved in this study and we agreed that I would email you to decide on a date to meet for an interview. I understand that you were unable to meet this month.

I am free to meet you throughout November on the following days

- Monday - Tuesday after 6pm
- Thursdays 14/11, 28/11
- Fridays anytime
- Sat-Sun anytime

I have also attached an information sheet about the study for you to review.

Looking forward hearing from you,

Many thanks,

[\*\*Karan Sahar\*\*](#)

Trainee Clinical Psychologist  
Department of Psychology  
Royal Holloway, University of London  
Egham Hill, Egham  
TW20 0EX  
01784 434455

## Re: Bariatric study



This message was sent with High importance.

SK

Sahar, Karan (2008)

Fri 01/11/2019 15:38



To:

● XXX@hotmail.co.uk

Hi XXX,

I hope this email finds you well. I am just following up to my previous email to see if you're still interest in partaking in this study on the '*Experiences of bariatric pre-surgery evaluation*'. I would be grateful if you could reply at your earliest convenience.

Kind regards,

Karan Sahar

Trainee Clinical Psychologist  
Department of Psychology  
Royal Holloway, University of London  
Egham Hill, Egham  
TW20 0EX  
01784 434455

---

**From:** Sahar, Karan (2008) <Karan.Sahar.2008@live.rhul.ac.uk>

**Sent:** 23 October 2019 10:45

**To:** XXX@hotmail.co.uk <XXX@hotmail.co.uk>

**Subject:** Bariatric study

Hi XXX,

My name is Karan - we met XXX Bariatric support group last Thursday, and spoke briefly about a study on your experiences of the bariatric pre-surgery evaluation process.

At the time you expressed interest in being involved in this study and we agreed that I would email you to decide on a date to meet for an interview. I understand that you were unable to meet this month.

I am free to meet you throughout November on the following days

- Monday - Tuesday after 6pm
- Thursdays 14/11, 28/11
- Fridays anytime
- Sat-Sun anytime

I have also attached an information sheet about the study for you to review.

Looking forward hearing from you,

Many thanks,

[\*\*Karan Sahar\*\*](#)

Trainee Clinical Psychologist  
Department of Psychology  
Royal Holloway, University of London  
Egham Hill, Egham  
TW20 0EX  
01784 434455

## Appendix 9 – demographic questionnaire

Department of Psychology  
Royal Holloway, University of London  
Egham, Surrey TW20 0EX  
[www.royalholloway.ac.uk/psychology](http://www.royalholloway.ac.uk/psychology)



### Demographics questionnaire

1. What gender do you identify as?  
 Male  
 Female  
 Other/Non-binary
2. What is your age? \_\_\_\_\_
3. What is your marital status?  
 Single  
 Serious Relationship/Partnership/Civil Partnership  
 Married  
 Other, please specify\_\_\_\_\_
4. How would you describe yourself in terms of ethnicity?  
 White/Caucasian  
 Black/African/Caribbean/Black British  
 Asian/Asian British  
 Mixed/Multiple ethnic groups  
 Other, please specify\_\_\_\_\_
5. What is your highest level of education?  
 Below A-levels  
 A-Levels  
 Bachelor's level  
 Master's level  
 Doctoral/PhD level  
 Other, please specify\_\_\_\_\_
6. Are you currently employed (full-time or part-time)?  
 Yes  
 No
7. What type of bariatric surgery did you have?  
 Gastric Bypass.  
 Sleeve Gastrectomy.  
 Gastric Banding.  
 Gastric Balloon.  
 Other, please specify\_\_\_\_\_

8. **Where** and **When** did you have your bariatric surgery?

---

9. From the time you were referred by your GP, how long did you wait before you had your surgery?

---

10. Did you complete 'Tier 3' Weight Management Programme before proceeding to bariatric surgery?

- Yes
- No
- Other circumstances \_\_\_\_\_

## **Appendix 10 – Interview schedule**

Introduction (warm-up): Could you give me a brief summary of different stages of your journey from the time you were referred to bariatric surgery assessment to having bariatric surgery?

A. Knowledge/understanding of pre-surgery evaluation (PSE)

1. What was your understanding of the PSE at the of referral?
  - *Prompts: After you were referred, before your very first meeting with... ?*
2. Where did you get your knowledge from?
  - *Prompts: family, friends, support groups, organisations, Internet, GP, service/team*
3. Prior to the evaluation, were you given any information by the bariatric specialist health professionals provide you with about the PSE?
  - *Prompts: Meetings, content explored, reason, rationale...*
4. Currently, what do you think of your understanding/knowledge of the PSE and the information provided by health professionals?
  - *Prompts: Now that you've gone through the process, do you feel you had 1) sufficient information, 2) accurate information, 3) relevant and meaningful information, 4) impactful?*

B. Expectations of the PSE

1. At the time of referral, what where your expectations of the **PSE process**?
  - *Prompts: Before your very first meeting, before each meeting... anxieties? Worries? Thoughts? Beliefs*
2. What were your expectations based on?
  - *Prompts: where did these come from?*
3. Did your expectations of the PSE process change over time? If so, how?
  - *Prompts: After meeting the GP, surgeon, dietitian, support group etc.*
4. Currently, do you have any thoughts about your role and the professionals' role in managing expectations of the PSE process?
  - *Prompts: Do you think you should have done something differently so that you were happy about your expectations? Do you think the service should have done something differently?*

C. Preparation for/Coping with the PSE?

1. How much did you think about the PSE process?
  - *Prompts: before and after the PSE; per day, per week, per month?*
2. How did you deal with the PSE process?
  - *Prompts: Help from professionals, Support group, family, friends, any other sources, dealing with different meetings?*
3. Currently, what do you think of your preparation for and coping with the PSE?

- *Did you prepare? Was it enough? Did you wish you had done something differently?*

D. Experience and impact of the PSE?

1. Could you describe what happens in the PSE (and tier 3)?
  - Prompts: pre-surgery weight management scheme
2. Could you describe how you experienced the PSE/tier 3 process, in your own words?
  - *Encouraging, supportive, learning experience, helpful/useful, difficult, tiring, anxiety, frustration, unnecessary, unfair*
3. How did you feel about the PSE process?
  - *Prompts: mentally, physically, emotionally*
4. What did you think about the PSE process?
  - *Prompts: Opinions, feelings, thoughts, feedback?*
5. Did the process affect your and if so how:
  - *Prompts: knowledge/understanding, expectations, preparation everyday life*

## **Appendix 11 – Extracts from reflective journal**

### **2019 – recruiting and interviewing**

Recruiting was difficult - most points of contact have not allowed advertising research studies. They have had many requests in the past which have not been received well by their members.

An expert-by-experience (EbE) – who had undergone pre-surgery evaluation and surgery in the NHS - has agreed to be involved in the project. We had a very long and productive discussion about the bariatric process and her experiences – this provided me with awareness of the lived experience and perspectives of obesity, PSE and life after bariatric surgery. I will need to adjust my interview schedule to reflect some of these experiences and perspectives. They were also helpful with directing me to an NHS support groups, and even recommended a participant.

My first interview has been confirmed. I have thought about my own clinical interviewing skills, as this is a crucial aspect in the IPA method. I was conscious that I am trained in interviewing for *clinical* purposes, and so I need to adapt my interviewing skills to reflect the research context. The interview was over skype because the participant was unable to meet in person. I was concerned about missing important non-verbal cues (e.g., body language or tone, which can be distorted or not visible over video?). However, the video and sound quality was relatively good, and I had a good view of the participants.

I noticed that I summarised and paraphrased regularly — this likely stem from my clinical training — which occasionally made my questions leading or closed ended. However, I was able to build a good rapport with the participant — I had a ‘warm-up’ discussion which may reduce potential tension and get the interviewee ready to discuss more sensitive or personal issues.

As this was my first participant, I may have missed some opportunities to explore interesting and specific word choices. I also noticed that some of my prompting questions had multiple questions within them. This could make it difficult for the interviewee to untangle and for me to subsequently work out from the transcript which question they were replying to. I noticed and improved this as interviewing went on – for instance, I managed to break the questions down and go through them one at a time.

My 2<sup>nd</sup> – 4<sup>th</sup> interviews were considerably better as I had reflected on and learned from my previous experience. As we met in person, I was able to better pay attention to non-verbal cues, and I dotted down key words, phrases or points to explore further when there was an opportunity. I was also able to convert them to open-ended questions, instead of summarising or rephrasing participants’ statement. For instance, ‘so could you tell me more about the anxiety you mentioned?’ instead of ‘so you felt anxious through that process? The latter question (‘so you felt...’) was not only closed-ended but also had hidden presumptions.

I was positively surprised about the openness all four participants showed. They shared sensitive details about their life, experiences, perspectives, and how they approached the PSE. It was a privileging experience.

## **2019 – 2020 – transcribing and analysis**

I began to transcribe immediately after each interview, rather than after completing all interviews. This was recommended by Smith et al. (2009) as it can help the researcher to reflect on topics that are brought up as well as interviewer characteristics and style, and so can improve the interview process (e.g., how to ask a question, what additional topics to pursue).

As I was reading the transcripts, several reflections and thoughts came to my mind that may influence the research process:

- I tried to read it from the participants' perspectives, and placed myself in their position; like the literature indicates, participants valued surgery very highly – so what would I do if I was evaluated in the way that they were for something that was so important for me and my life...!? I may have felt quite desperate and defensive to make sure I got it! I also read it from my own perspective – I would probably engage in impression management to get surgery if they're 'grilling' me like this and trying to find faults without offering support to overcome them... These thoughts are likely to have impacted the interpretations I've made in the analysis as well as the discussions and conclusions I reached.
- I wonder if my previous project on positive impression management that fell through had an impact on my questioning. I did notice that I asked prompting questions relating to this ('did you prepare for the different appt') in the first interview, although I changed the wording of this in the following interviews.
- During the exploratory stage - I was just reading and re-reading the transcript, without being sure what I was looking for and I was merely described what was said... This was quite difficult and tiring. Jonathan Smith suggested that starting descriptively and then going back and forth between raw data and your notes can help to gradually increase level of abstraction and conceptualisation.
- Following Jonathan Smith's recommendation, the analytical process became immensely more rewarding once my notes evolved and were elaborated — my previously fragmented thoughts and interpretations were gradually constructed into a coherent model of each interview, and I could see an overall story slowly emerging.

## **2020 - write up**

It was very difficult to translate the themes into a coherent, narrative format, but just like the analysis process itself, it was a gradual process of writing about each theme individually, and then joining them together.

It was also very helpful that a friend from my cohort, who was using IPA methodology in her research, as well as the EbE, provided extremely helpful reflections and feedback on my analysis and further enhanced the level of abstractions and conceptualisation of my themes.

It is notable that the themes continued to develop and change through the write up stage — in fact, the write-up really facilitated the process of seeing the 'bigger picture', in particular through a wider psychological perspective and relation to my introduction, as I was trying to establish a coherent narrative.

## Appendix 12 – Nvivo audit trail and analytic process

**Close reading and initial notes for Participant 3 ‘Sabina’**

Participant 3, Bariatric thesis, Transcript - thoughts 1

her like once a month, and for her to like ask me to keep food diary, uhm... and... uhm then I was thinking... I knew I'd meet the surgeon so when I was thinking I'd definitely would meet the surgeon... uhm... I think I was thinking, I think it's too much of a reach for the NHS [laughs], but I think I was thinking that I might see someone for my mental health because it's not just about the fact that I'm gonna lose weight, it's all about what's going on up there [pointing to head] in your head, so I think, I thought I would see someone, even if it was monthly just to check how my mental health is going, uhm... yeah.

I: So just to clarify myself so you did meet a psychologist or psychiatrist, usually they would be the one who are concerned with your mental health. Was that meeting not matching expectation you had about the meetings?

P3: She was just evaluating me to make sure that I was OK to go through surgery. And that I wouldn't... mess up the surgery. So, it was a one-off evaluation of maybe an hour, an hour and a half so I had to do something myself to make sure that I will be okay after surgery.

I: Okay, so again that, so I know things. So, it sounds like you some support sounds like you. Is that a correct...

Created: 31 Mar 2020 By: KS

Was hoping to get professional support for the surgery and its impact, but Psych eva was to make sure she does not 'mess up the surgery' - is she seeing the psych as a 'gatekeeper'...? correct  
can give  
but it  
surgery.

P3: Yes!

I: Okay, I see, alright. Just to ask a bit more about those expectations that you had. Were you at any point anxious or worried about the process or were you relaxed about it, excited about it, happy about it...or just didn't really have any specific emotions at all?

P3: At the beginning I was excited, uhm... and then I was thinking 'okay let's see who she is, it's not too bad...' but then as time was going on, then I was like, 'okay well I'm not getting through surgery, I know I'm not getting it, uhm, I'm going to these appointments, but I know I'm not getting the surgery'. Uhm I expected

SOURCES > Internals > Interviews > Participant 3, Bariatric thesis, Transcript - thoughts 1

**Developing emerging themes - coding for Participant 3 ‘Sabina’**

Loosing hope

Summary Reference

Internals\Interviews\Participant 3, Bariatric thesis, Transcript - thoughts 1  
4 references coded, 3.88% coverage

Reference 1: 1.06% coverage

At the beginning I was excited, uhm... and then I was thinking 'okay let's see who she is, it's not too bad...' but then as time was going on, then I was like, 'okay well I'm not getting through surgery, I know I'm not getting it, uhm, I'm going to these appointments, but I know I'm not getting the surgery'.

Reference 2: 1.20% coverage

I was really depressed because I just thought didn't know I was coming or going, I'd waited so long, I was just thinking, 'this whole process is pointless because I'm waiting like 3 or... 3 years at the time', and I'm thinking, 'I'm just wasted my 3 years, really going to these appointments, and I don't think I'll be having this surgery'.

Reference 3: 1.01% coverage

Uhm... [pause] hmm... it was a bit of like an inconvenience in the sense of me having to keep going down there and it being such a wide span of time, and so it was just thinking it was pointless, uhm thing for me. And especially at that time I was thinking, 'I know I'm not getting the surgery'.

Reference 4: 0.62% coverage

Uhm so, I was feeling a lot down, because again I was thinking I'm not going to get the surgery. And then, that spirals into putting on weight, so yeah it did affect my life a lot.

NODES > Nodes > Participant 3 > P3 - Emerging themes > Loosing hope

**Connecting the themes into superordinate themes for Participant 3 'Sabina'**

Proving weight management and exercise

**Summary Reference**

Internals\Interviews\Participant 3, Bariatric thesis. Transcript - thoughts 1  
7 references coded, 4.79% coverage

I would have to prove I can lose weight and keep off for a certain amount of time... uhm, and that I would most likely to see a dietitian... aaand work out... that was it.

Reference 1: 0.58% coverage

Uhm after...qu think that was weight and ev

Created: 31 Mar 2020 By: KS 0.68% coverage times... and I d check on my

Need to prove; Expecting to meeting dietitian and proving that she can lost weight and needing to work out (to lose weight??)

Uhm and you like comfort e appointment and the actual appointment

Reference 4: 0.54% coverage

Uhm... seeing the dietitian definitely. Umm I was thinking maybe I would see her like once a month, and for her to like ask me to keep food diary, uhm...

Reference 5: 1.11% coverage

I was very stressed because I didn't know how I was going to keep my weight off. Yes, I was going to Slimming World, Yes, they knew I was going to Slimming World, so everything that I saw the dietitian I would bring my book, Slimming World book, and she could see that how much weight I'd lost and so forth. But... uhm....

Reference 6: 0.57% coverage

Uhm so I was stressed a little bit every time before I went to the dietitian because I was thinking, 'Have I lost any weight' and then seeing the surgeon... uhm...

Reference 7: 0.57% coverage

Uhm, so like when I saw the dietitian, so I think the first time she did ask me to give food diary, and then the other 2 times I saw her, she weighed me, took my height.

NODES > Nodes > Participant 3 > P2 - Emerging superordinate themes > Challenging process > Proving weight management and exercise

**Identifying shared themes**

A case of going through the motions

**Summary Reference**

Internals\Interviews\Participant 3, Bariatric thesis. Transcript - thoughts 1  
2 references coded, 3.03% coverage

with his medical knowledge

Reference 1: 0.66% coverage

And, I think that if I were had went in there still saying that I was gonna get to a size 10, they would've refused me. Because they was like 'she's adamant that she's getting into a size 10.'

Reference 2: 2.37% coverage

I was really conflicted because when I saw the dietitian like I said to you, 'you only lose X amount of weight, you'll never lose more than that', and then like I said watching the US programme, I was like, 'but this person weighs waay more than me, they weigh 600 pounds, and they've lost twice my body weight', so I was really like confused, and then going to monthly group meetings, then that dietitian and the nurse that was there saying, 'well actually you can lose as much weight as you want to, as long as you're exercising within that first year', but then... I'm like, 'well that doesn't make any sense' cuz the other dietitian said something completely different.

Internals\Interviews\Participant 4, Bariatric thesis. Transcript - thoughts 1  
5 references coded, 2.99% coverage

Reference 1: 0.43% coverage

I felt like I'd been singled out to jump through these hoops, and not everybody else, if you know what I mean. So, I was quite cross at that time

Reference 2: 0.30% coverage

I toed the line because I knew if I stepped out of that line, I would end up being at back of the queue.

NODES > Nodes > Master DRAFT 4 > Coping processes to deal with the PSE > A case of going through the motions

**Table 20***Sabina's process of coding transcript*

Emerging themes	Sabina's transcript	Comments
<b>Insufficient information</b>	<b>I: Okay, so the recording has started.</b> P3: I am participant number 3. <b>I: Ok, great, thank you very much. So, I'm going to ask questions about your experiences from the bariatric pre-surgery evaluation process. To just start, could you please give me very, very brief summary of your journey from the time that you were referred to bariatric surgery assessment to actually having surgery itself?</b> P3: So, I went to my GP maybe about five years ago now and uhm and I explained my depression, my health conditions and everything like that, and I asked to be part of the programme. And then he refused me...uhm and a year later, I went to, the female GP and said the same situation, she put an application and then I didn't qualify and so she put the application in again, and so then I did qualify the second time. Ehm... and so... yeah, sooo... it was based on like eczema, my medical condition, and health problem ehm mental problems, ehmm...	Agency to make things happen
<b>Professional on your side</b>		Expectations vs reality of waiting
<b>Lengthy process</b>	<b>I: Right okay. That's the snapshot I really wanted to understand before I ask you about the specifics. So, the next, I'll just ask you more about your knowledge and understanding of the pre-surgery evaluation process. To just start off with, what was your understanding of that process before coming in, so I don't want you to think about it afterwards, but before when you were told you've been approved, and you will be soon evaluated? What did you understand of it?</b> P3: Ehm... so I understood that it should be about 2-year wait, which wasn't the case for me... ehm... <b>I: How long was the wait for you?</b> P3: I waited about 4 years since the second time she put in that application... ehm and... I didn't really understand much about the surgery itself... ehm because she didn't go into depth about it, but I knew that I wanted to surgery because I had done my own research before going to her, so I knew about surgery on my own. <b>I: Right, okay. And did you know what the purpose of that... evaluation process was? What was your understanding of that?</b> P3: In the sense of...uhm...? <b>I: What was it for? What they were doing?</b> P3: Uhm... no. <b>I: What was your understanding, if you didn't know what the purpose was? What was going through your mind?</b> P3: Ehmm that I would have to prove I can lose weight and keep off for a certain amount of time... uhm and that I would most likely to see a dietician... aaand work out... that was it. I didn't know there would be tiers or anything like that.	Less knowledge about surgery because GP didn't give info about it. But had done own surgery research prior to asking for referral
<b>Insufficient info</b>		Surgery was not on a whim – it was backed on being certain and previous research
<b>Lengthy process</b>		Had she not received info on what the PSE would be?
<b>I had done my own research</b>		
<b>Proving weight management and exercise</b>	<b>I: No, Okay. And that part of the information that you just shared with, where did you get that from, that knowledge?</b> P3: From my GP. <b>I: So, they were the only one that told you, 'you will see a dietitian, you might need to lose certain amount of weight, and then what else did he tell you?</b> P3: And that it would be a 2-year wait. <b>I: Ok, did you hear anything from your family, friends, support groups, organisations, the Internet?</b> P3: The Internet, a lot. So, like I said, I did a lot of research like years before... uhm so I knew about surgery and that's the reason why I went there to my GP because I knew I could access it through that way. Uhm but like friends and family no... I'm the one who introduced them to it.	Expecting to meet dietitian and proving that she can lost weight and needing to work out (to lose weight??)
<b>Insufficient info</b>		She thought he had to prove certain things, related to food and weight management, and in this context expected to see a dietitian
<b>Lengthy process</b>		Her main source of info was from the Internet?

## I had done my own research

**I: So, in terms of when you were researching on the Internet, did you come across a pre-surgery evaluation information, or was just specifically about bariatric surgery... does that makes sense?**

P3: Uhm... yes and no.

**I: So, I'm wondering if... currently its sounds like you did a lot of research what bariatric surgery was, the surgery itself, and knowing benefits and disadvantages etc. But did you also come across that there would be a pre-surgery evaluation process... on the Internet?**

P3: No, nothing like that.

**I: Okay, so was that, the GP was the first person, was it the first contact of that knowledge that came to you?**

P3: Yes.

**I: And when you were there then, either... so after the meeting with GP and you had to wait for four years before it actually started. Just before it started... who did you meet at that time, the first person to contact?**

P3: The first person I think was the dietitian, but it was like some month later, I saw the dietitian... ehm... and she kind of like... went through the surgeries... ehm and like the long-term fix and stuff like that... uhm and then told me how much weight she expected me to lose, and kind of told, like, if I said to her I want to lose this amount of weight or I want to be this dress size, she was saying, 'no you would never get there', ehm so I was just getting only information from her, but then Wallace's they have a thing, a monthly thing, where you can go there and see other people's experiences like a group, so I went there, so apart from seeing the dietitian, then I went there and that's how I got some more knowledge.

**I: And did you not get further information about the evaluation process from the dietitian or any other health professional? About what to expect, what to know etc?**

P3: Ehm, I think she briefly went through the tiers with me, uhm but that's, that was the first I kind of heard of it.

**I: And how was that knowledge delivered to you? What did you feel about it? Was it sufficient, was it wide enough? What were your thought when you were given the information?**

P3: Uhm I think it was okay, but I feel it was too general, and on the surface. Uhm I kind of feel they need to have something that is more in depth, like especially, there's a couple of tiers, it needs to be more something in depth. And what each tier is gonna entail.

**I: Right, okay. Thinking about that whole experience... so for me to just to summarise of what I've understood what happened. So, you waited for 4 years, the first person you met the dietitian. The dietician mentioned, well you discussed your goals with them, and it seemed like the dietician felt your goals were overambitious.**

P3: Mhm!

**I: Correct me if I'm wrong, I'm just using my own words... and then also she gave you a bit information about the different tiers, but you said it felt quite superficial, you needed more in-depth information about each one.**

P3: Yes!

**I: And did anyone else of the health professional, did you meet anyone else in that process?**

P3: No.

**I: So, in your pre-surgery evaluation, you only met with the dietitian?**

P3: Yeah, at that point dietician and then.... maybe the next year I saw the surgeon.

**I: Okay, so you didn't meet anyone else, like say psychiatrist or...**

P3: Uhm after...quite some time after... I saw the dietitian... maybe I saw her 3 times... and I think that was in the space of a year... I saw her about 3 times so she would check on my weight and everything. Uhm and then... I think it was the next year I saw the surgeon. So, I

Had not encountered PSE during her research; it was only about surgery. The GP was the first source of info about the PSE

## Long waiting

Initial PSE info related to what type of surgery available, and long-term consequences? + tiers

negotiating her expectations of weight loss following surgery – she interprets the dietitian comments as her goals being over-ambitious. But does not seem to agree with her as, as she counters it with info/experiences from a group up with who apparently is giving her more info, but she stops talking about it there  
*'Only info from her'*

Conflicting WL expectations vs goals from dietitian, support group and herself

## Knowledge form support group

Information was superficial, and wanting more in-depth; not sufficient  
- She wants more information and more details, but generally service is described as not bad

Long time between the first and second appt;  
Saw D 3 times over a year time

She got approved by diet and surgeon  
– and stated this quite simply, but stopped short at psychologist

## Long wait

<b>Proving weight management and exercise</b>	<p>hadn't met the surgeon once... and then so she [dietician] approved me, then I saw the surgeon, he approved me, then I saw the uhm... psychiatrist...? (makes a questioning expression on whether it was psychiatrist or psychologist).</p>	Proving self
	<p><b>I: Yeah sometimes it's a psychiatrist and sometimes it's a psychologist, do you know which one it was?</b></p>	
	<p>P3: Think she was a psychologist, actually. So, then I saw her.</p>	
	<p><b>I: So, going back, before you met with the dietitian, did you know that you would meet the surgeon and the psychologist?</b></p>	
	<p>P3: I knew I'd meet the surgeon because uhm I was told that I need either... uhm... 2 Yes's, 2 or 3 Yes's, so I knew I had a yes from her [dietician] because she told me. So, she approved me, so then I knew...</p>	
	<p><b>I: The surgeon?</b></p>	
	<p>P3: No, the dietitian, she had approved me. And then she told me I'd be seeing the surgeon next. And I knew he had approved me because he told me yes when I was there. And then... but she... when I saw the dietitian, she kept saying that I'm going to need to see the... psychologist or psychiatrist, I'm going to need to see them, because I scoring quiet high on the sheet that they give you. So, I knew I had to see them.</p>	
	<p><b>I: At what point did you realise you had to see the psychologist or the psychiatrist?</b></p>	
	<p>P3: Uhmmm... after when I saw the surgeon.</p>	
	<p><b>I: After, okay. So, prior to that you didn't really know. Did the dietitian or anyone else before going, and starting meeting different people, give you an outline of who you were potentially might see or not see for this evaluation?</b></p>	
	<p>P3: Yeah, the dietitian, because she... she kept saying that I was scoring high... uhmmm yeah, she kept saying I was scoring high on the... that depression kind of... chart that they have. So, yeah I knew I would have to see them.</p>	
	<p><b>I: Okay. At that time, she gave you an outline that you may see a psychiatrist or psychologist?</b></p>	
	<p>P3; Yeah</p>	
	<p><b>I: Right. Thinking about that experience, but being currently, do you think that your understanding, knowledge of that whole process, including who you're going to meet, what sort of question they going to ask, and what they're going to ask of you, and the information provided was enough? What do you think of it?</b></p>	
	<p>P3: Hmm....I feel they could do with a bit of more work... uhm.</p>	
	<p><b>I: What do you mean?</b></p>	
	<p>P3: Well... I kind of feel the dietitian, she wasn't sympathetic... and... and... like I said, she kept telling me, 'you're not going to meet this goal' and 'you'll never get there' and so there is something in my notes that says 'this patient thinks that she will get to a size, uhm UK dress size 10, but I've explained to her that this is unrealistic' and then, that went to the surgeon, and then when it got to the psychiatrist, also was like, with her. So, she had discussed it with me as well, saying 'do you still think that you're going to get to a size 10, this is unrealistic, that you think you're gonna get to size 10'. And, I think that if I were had went in there still saying that I was gonna get to a size 10, they would've refused me. Because they was like 'she's adamant that she's getting into a size 10.'</p>	
	<p><b>I: Yeah, so it's almost as... there's no in line with your goals, but you have to follow what they think is your goal for you?</b></p>	
	<p>P3: Yes!</p>	
	<p><b>I: What else do you think about that whole process? So, it sounds like 1- you weren't really happy with how you supported you and actually talked to you about your goals, what you wanted to achieve in terms of your size? Do you have any other thought about that whole process?</b></p>	
	<p>P3: I think that the... uhmm... appointment times from like fitting in the dietitians to when you see the surgeon, I feel they're too far apart,</p>	

	and they're months apart, and uhmm... also I had a bad experience with... I went to see this psychiatrist, and when I got there, they told me that I don't have an appointment... and uhm... that I've been taken off the whole system, and I was like, 'how can I be taken off the whole system, when I last saw the surgeon, I got an OK, and I'm sure if I was I would've gotten a letter saying you know 'you've been taken off'. So, it was waste of travel going down there, and then have to wait months to see her again. Uhm and you know during that process, it was like a stressful time for me, and also, I was like comfort eater, so I had put on a lot of weight during that time, the cancelling appointment and the actual appointment. So the, that psychiatrist, holding that against me, that you could tell in her notes, cuz I got the letter as well, uhm and saying that I had put on the weight and put on back some weight and everything, so I don't know I feel like, as a service they need to be more... sympathetic and they need to like have... someone to like support us.	Service improvement - Too long between the appt
<b>Going through the hoops</b>		Bad exp with service admin related – appt and case lost
<b>Lengthy process</b>		These bad experiences were stressful in combination with general life; and combined with personally of comfort eater make things worse
<b>Stressful process and comfort eater</b>		Felt that something out of her control, and in fact service fault - was held against her by the psychiatrist, as they comment on her weight increase
<b>Poor service delivery</b>		Service improvement – need to be more on their side and work along them
<b>Unsympathetic staff</b>		Someone who is on their side really, and they don't feel they need to prove to them all the time.
<b>Psych holding it against you</b>	<p>P3: No. [laughs].</p> <p><b>I: Could see you shaking your head on all three of those points...</b></p> <p>P3: When I met the dietitian, literally I felt like she didn't give me any information on what might eating would be like after surgery. The only way I kind of knew those things was going to those monthly meeting like I was speaking to other people that been there five years out, year out, two years out, of surgery. Uhm so... like when I actually had the surgery, I felt completely lost that I didn't know what to do, what to eat, at that point I hadn't seen the dietitian in four years... ehm so I was like, 'what am I to do that only the thing I know I have to do is this liquid diet... ehm before I had the surgery and I know in the first couple of weeks I would have to do the liquid diet, but they didn't, they don't give enough information, well in my case, they don't give enough information on what kind of foods you're going... they expect you to eat, what if there is anything you can never eat. And there is medication you can no longer take. I only learned there is medication I can no longer take through going to that meeting. If I had never gone to that meeting, I wouldn't have known.</p> <p><b>I: And that meeting doesn't seem to be something compulsory, it's just something you want to go to yourself?</b></p> <p>P3: Yeah.</p> <p><b>I: Okay, thank you. I'll now shift a bit from your understanding of things. Some of this might still overlap about your expectations about the pre-surgery evaluation. Just generally, what were your expectations of that process of going in and being evaluated in the pre-surgery....</b></p> <p>P3: Uhm... seeing the dietitian definitely. Umm I was thinking maybe I would see her like once a month, and for her to like ask me to keep food diary, uhm... and... uhm then I was thinking... I knew I'd meet the surgeon so uhm I was thinking I'd definitely would meet the surgeon... uhm... I think I was thinking, I think it's too much of a reach for the NHS [laughs], but I think I was thinking that I might see someone for my mental health because it's not just about the fact that I'm gonna lose weight, it's all about what's going on up there [pointing to head] in your head, so I think, I thought I would see someone, even if it was monthly just to check how my mental health is going, uhm... yeah.</p> <p><b>I: So just to clarify myself so you did meet a psychologist or psychiatrist, usually they would be the one who are concerned with your mental health. Was that meeting not matching expectation you had about the meetings?</b></p>	Insufficient information
<b>Support group information</b>		Completely lost after having surgery; Confused and don't know what to do
<b>Insufficient info</b>		Completely lost after having surgery; Confused and don't know what to do
<b>Support group information</b>		Not minimizing her MH difficulties – emphasising and highlighting its importance - acknowledged that weight per se is not the only important factor here impact on outcome – recognise hr MH in this. contradicting service or approach by the NHS – as on one hand they're pushing her for her 'unrealistic expectations', but then on the other hand is not providing her with the support for her MH despite she herself seem keen and values its importance.

	P3: She was just evaluating me to make sure that I was OK to go through surgery. And that I wouldn't... mess up the surgery. So, it was a one-off evaluation of maybe an hour, an hour and a half, so I had to do something myself to make sure that I will be okay after surgery.	
<b>Proving weight management and exercise</b>	<b>I: Okay, so again I'm going think in my own words, but I want you to correct that, so I know it's coming from you and not just my interpretation of things. So, it sounds like you were hoping to meet someone who can give you some support with your mental health in relation to the surgery, but it sounds like you got an assessment only of your preparation to the surgery. Is that a correct...?</b>	She expected (now recognising it being unrealistic) to have input or therapy/counselling but only got evaluation to 'not mess up', so she is seeing the psych as a 'gatekeeper' and is not keen on her doing well, but that she does not mess it up!
<b>Unsympathetic staff</b>	P3: Yes! <b>I: Okay, I see, alright. Just to ask a bit more about those expectations that you had. Were you at any point anxious or worried about the process or were you relaxed about it, excited about it, happy about it...or just didn't really have any specific emotions at all?</b>	
<b>Getting therapy</b>	P3: At the beginning I was excited, uhm... and then I was thinking 'okay let's see who she is, it's not too bad...' but then as time was going on, then I was like, 'okay well I'm not getting through surgery, I know I'm not getting it, uhm, I'm going to these appointments, but I know I'm not getting the surgery'. Uhm I expected not to get it because so many things has happened from the beginning... they said that they sent me letters for appointments, never turn up... uhm and I had to call them and chase them a lot for appointments, even to get my okay for surgery, I had to call them to see like what's going on. Because they do like a, kinda like a board meeting, uhm and everyone then gives their okay, and then that's from then it meant to count a year from there. Uhm so... Yeah I just felt like I had to chase them a lot.	Different emotions along the path and time excited but as difficult experiences (e.g. misinfo, chasing them, cancelling, lost appt, getting OK for surgery – did they not give her info at all) and potential rejections, lots of experiences – had to chase them a lot. Hopes and expect go down with time and more meetings – discouraged
<b>Getting therapy</b>	<b>I: Okay. And what do you think some of these expectations... what do you think they were based on?</b> P3: Uhm.... [pause]... I think, watching this... uhm... programme that... I don't know if I'm allowed to say the programme. <b>I: Yeah, as long as you don't identify yourself.</b>	Lots of bumps and walls in the journey that made her believe she isn't getting the surgery – stressful No info about time frame,
<b>Loosing hope</b>	P3: 'My 600 pounds life', so it's an American programme, and its people that have had the bariatric surgery, all forms of the bariatric surgery. So that's where I got my expectations from, but not how long that this final period will be. Because with that its only... uhm... a surgeon that's there. But he does work with psychiatrist, like physiotherapy, things... people like that, nurses... umm so that's only where I got my expectations from and knowing what's going to happen. And what type of foods to eat and things like that.	Could not find much info self on the PSE process and was unaware of bariatric communities
<b>Poor service delivery</b>	<b>I: Okay, so doesn't sound like... did you get any of your expectations from Internet or other health professionals?</b> P3: No, because even when you try and like Google it all, YouTube it, there is not a lot of English people that give their like experience on how long it took or anything like that. And at the time, I wasn't on Instagram so I didn't know there was a bariatric community for Instagram, so I didn't know what to expect, I just knew the American version.	
<b>Insufficient info</b>	<b>I: Right, right. And then health professionals, was there anything from them that might've influenced your expectations?</b> P3: No. <b>I: Did your expectations of the pre-surgery evaluation process changed over time as you were involved within the process?</b> P3: What do you mean? <b>I: So, as you were meeting people and being evaluated, so you're meeting the dietitian, the surgeon and then the psychologist or psychiatrist, did at some point your expectations start to change about what this evaluation is?</b> P3: Uhm... [long pause] I think no? <b>I: Did that make sense what I'm asking?</b> P3: No, not all the way [laugh].	

	<b>I: No, that's fine, it's a tricky question. So before starting the... before meeting anyone, it sounds like you had certain expectations of the evaluation process and the surgery from this TV show. But once you started being in it, I was wondering if those expectations were... challenged or like 'oh this is not what I expected and therefore... maybe I should change my expectations' and then for the next meeting 'id have different kind of expectations'. Does that make sense?</b>	
I had done my own research	P3: Yeah.	
Insufficient info	<b>I: So, if it changed over time up till the point of surgery?</b> P3: [pause]... No, I don't think so. <b>I: Okay. And then currently, do you have any thoughts about your role, and the role of the professionals in managing expectations about pre-surgery evaluation?</b>	Appear to have lots of knowledge now about diet but found out herself
	P3: [Pause] I think they need to give more information... uhm especially about the stages and what you can eat, and like for instance, I don't eat red meat, and uhm... I eat chicken and fish... and... so... because of the surgery you need to eat high amount of protein, so it's hard for me to get into that high amount of protein if I don't eat red meat, and I don't eat eggs, and I don't eat a lot of those things that are high protein, and they didn't know these things until after the surgery, then I went to that monthly meeting, and then they're like 'oh you don't eat that, oh you don't eat that', whereas you should know this as a dietitian before I've had the surgery and work out something that can help me.	So PSE not properly done
	<b>I: Yeah. And what about their role in giving you information about the evaluation itself, rather than the effects of the surgery... what do you think of their role in relation to that specifically?</b>	
Support group information	P3: I think that they need to have like a booklet or something, or even if they did like a video, and it's on their public page, even if its private or NHS and it's on their page to explain each tier and what they expect of the patient, so people aren't in the dark, and they don't know what the next steps are and what is going to happen after surgery... uhm like I didn't know that there would be an objection that I would be expected to take for 2 weeks straight, until I had surgery.	Service improvement with PSE process
Insufficient info	<b>I: Okay, and I can see that you mentioned... well I can see from here [demographic questionnaire] that you said you've completed tier 3. What was your understanding of that, and how did that come to be?</b> P3: I don't even remember what tier 3 is anymore to be honest... [laughs]. <b>I: It sounds like it's still a complicated... system that you still don't actually know what it is?</b>	She felt she was in the dark about post-surgery life
Insufficient info	P3: Yeah (continues laughing). ... Umm I don't. <b>I: What did they ask you to do in that? Did they ask you to do anything?</b> P3: Uhm... [pause]... I think, as far as I remember was to just maintain my weight or lose weight... uhm and there was no like... uhm so, the English people have had the surgery, when I've seen their videos on like YouTube, they talk about that their GP or surgeon, I don't know which one it is, sends to like uhm... not sends them, but for tier3, they're required to go to this exercise class... uhm and I think that would be good if they did something like that.	Insufficient info again as not know fully what it is about
Conflicting information	<b>I: Right. And did you feel any additional stress or anxiety, or you were just completely fine with that additional tier that was introduced.</b> P3: I was very stressed because I didn't know how I was going to keep my weight off. Yes, I was going to Slimming World, Yes, they knew I was going to Slimming World, so everything that I saw the dietitian I would bring my book, Slimming World book, and she could see that how much weight I'd lost and so forth. But... uhm.... <b>I: How do you think it impacted your overall well-being, whether physical or health...</b>	Very stressed because of lack of info to manage things

## regarding WL expectations

P3: I was really depressed because I just thought didn't know I was coming or going, I'd waited so long, I was just thinking, 'this whole process is pointless because I'm waiting like 3 or... 3 years at the time', and I'm thinking, 'I'm just wasted my 3 years, really going to these appointments, and I don't think I'll be having this surgery'.

**I: Yeah... okay. And just thinking now about preparation or coping with that evaluation process, and not the surgery itself, although it's part of it. But specifically, we're going through being evaluated, preparing for it. How much did you think about the evaluation process? So again, not the surgery itself, but the evaluation process?**

P3: So, like seeing the psychiatrist?

**I: Yeah, and seeing the dietitian, seeing the different professionals. So about... meeting them and being evaluated? How much time did you spend thinking about it, in the day per week?**

P3: Uhm so I was stressed a little bit every time before I went to the dietitian because I was thinking, 'Have I lost any weight' and then seeing the surgeon... uhm... wasn't that stressed seeing the surgeon cuz I thought, 'everything should be okay'. Seeing the psychiatrist, I was really stressed, and really down because I was thinking, 'what is she going to say, she must be a wall... uhm uhm... refuse me for surgery, and then that's that'.

**I: Okay, what did you think they might refuse you on? Or was it a generally, that they might refuse me, 'I don't know why?' Or 'they might refuse me because of this or that'**

P3: I think... I was thinking that she might say that I'm too depressed, and that my goals are unrealistic because she did have a word with me about the size 10 and you need to let this go, because you may never reach size 10, and what are you going to do if you don't reach size 10.

**I: Okay, and how did you deal with that? With those stresses, especially with the meeting with the psychiatrist? How did you cope with that? Did you prepare in anyway?**

P3: Uhm no, I didn't prepare.

**I: Did you get any support from the support group or the other professionals?**

P3: No.

**I: So how did you, what did you try to do?**

P3: Ehmm... [laughs].

**I: Did you try anything? [laughs]**

P3: Uhmm... No, I think just kind of went there knowing... what I was going say and what I wasn't going to say.

**I: Right. Were you rehearsing a bit on what you were going to say and not to say?**

P3: Yeah.

**I: Okay, what was that based on, that strategy?**

P3: Uhmm... fear of her saying no.

**I: Yeah, okay. Thank you. And currently now, what do you think of your preparation and coping pre-surgery evaluation?**

P3: I think that the way I did for myself was good because after when I saw that psychiatrist I said to her even in that meeting I'm going to see someone [*referring to mental health professional*] on a regular basis because I knew that was paramount for me even though I think that is paramount of everyone that has this surgery because it's not just... even though [inaudible] about what is going on in your mind, so I knew I had to do that for me... because I had lost weight before but I still was very depressed, so I knew that I had to do that. So I prepared in that way, and then I kind of prepared in the sense of people around me like telling them, people that I wanted to tell, tell them that, 'I'm just going to lose weight and you know I might look like this for a little while but don't get worried for me, I'm fine' [laughs].

**I: Okay, great. Just final set of questions. Thinking about the experience and impact of that process, could you briefly describe**

Not knowing and waiting long impact depression; feeling wasteful process is 'pointless' – stems from having to wait long time, and appt being cancelled, not contacted, needing to chase, so convinced that she will not get the surgery - significant impact on MH, in context of having existing MH issue – and not feeling supported but instead opposite - Despite being open about her MH difficulties, she is worried it will be used against her Stressed prior to meeting D – cz worried if she ahnd lost weight Being defensive

Most stressful is the psych – seen as a wall to overcome – to refuse her for surgery and then that's that 'really stressed' was emphasised. Worried that her depression and goal is gonna stop her SO despite knowing that dep and goals could be barriers she expressed her own. She was honest about depression scores and MH needs, but did change strategy on her goals and expectations.

Impression manage? Rehearsing what she was gonna say to the psych; omitting things – rejection fear?

MH paramount! Knows that weight loss surgery is not a magic fix to all her problems; hr problems are her problems

Pointless, inconvenience, discouraging (not getting surgery), depressed = vicious cycle into weight increase

She was honest about her need for MH support and motivated to seek

MH paramount! Expected that surgery won't solve all her prob and this did also happen

	<b>what happened in the pre-surgery evaluation stages, in the different meetings?</b>
<b>Self evaluation</b>	P3: Uhm, so like when I saw the dietitian, so I think the first time she did ask me to give food diary, and then the other 2 times I saw her, she weighed me, took my height, and we just spoke about the surgery, which one I want, and which ones she suggested for me, and that uhm to expect my body to, to like the skin to loosen up and know that they won't be paying for the skin removal surgery. So, I must be prepared for that. And then when I saw the surgeon, it was a case of going through my medical history, and him feeling my stomach to make sure they could do the keyhole surgery. Uhm and then sort of the psychiatrist, uhm, and... yeah she was just like asking me questions...well she started from childhood, up until that age that I was...uhm... yes so she wanted to know everything really.
<b>Telling people as a way of coping</b>	<b>I: Okay, thank you. And how did you feel about that whole process? Mentally, emotionally, or physically? How did you feel about the whole evaluation process?</b> P3: Mmmhh... It was okay but there is a lot of work that needs to be done. <b>I: Okay.</b> P3: And I think they need to make it a short span in time... I think even the 2 years is too long. Year and a half, I think is better.
<b>Proving weight management and exercise</b>	<b>I: Did the process affect your knowledge, understanding of the bariatric surgery or about the process itself?</b> P3: Uhm yeah because I was really conflicted because when I saw the dietitian like I said to you, 'you only lose X amount of weight, you'll never lose more than that', and then like I said watching the US programme, I was like, 'but this person weighs waay more than me, they weigh 600 pounds, and they've lost twice my body weight', so it was really like confused, and then going to monthly group meetings, then that dietitian and the nurse that was there saying, 'well actually you can lose as much weight as you want to, as long as you're exercising within that first year', but then... I'm like, 'well that doesn't make any sense' cuz the other dietitian said something completely different.
<b>Past personal experience influence current expectations</b>	<b>I: Did the other dietitian or the first one explain why they said what they said?</b> P3: She [first dietitian] said for my height and for my age, and also the type of surgery that I had. <b>I: And because of that you cannot lose that much weight.</b> P3: Yes. But she was wrong because I've lost more than that! So [laughs].
<b>WL expectation management</b>	<b>I: There you go, alright! [laughs]. Okay, how did the process affect your life, in terms of everyday life?</b> P3: After the surgery? <b>I: The process itself, so during the time.</b> P3: Uhm... [pause] hmm...it was a bit of like an inconvenience in the sense of me having to keep going down there and it being such a wide span of time, and so it was just thinking it was pointless, uhm thing for me. And especially at that time I was thinking, 'I know I'm not get the surgery'. Uhm yeah, I can't... ask the question again!
<b>Lengthy process</b>	<b>I: No, just the impact the process has had on your life, whether it's your mental well-being, physical or just general life as whole.</b> P3: Uhm so, I was feeling a lot down, because again I was thinking I'm not going to get the surgery. And then, that spirals into putting on weight, so yeah it did affect my life a lot. <b>I: Okay great. That was my last question, but is there anything about the pre surgery evaluation process that I've not asked you but that I should have, or may be aware of?</b> P3: Uhm... pause... I don't think so. <b>I: Okay in that case we can stop there.</b>
<b>Conflicting information regarding WL expectations</b>	Acknowledge need for MH support
<b>Loosing hope</b>	Pleased to prove them wrong – us vs them?  Pointless, inconvenience, discouraging (not getting surgery), depressed = vicious cycle into weight increase
<b>Loosing hope</b>	

## Appendix 13 – Table of themes and extracts

All participant and hospital names have been replaced with a pseudonym.

**Table 21**

Comprehensive table of extracts for final themes

Superordinate theme	Subordinate theme	Supporting extract
PSE was challenging but essential	A long but necessary PSE	<p>George (13 references)</p> <p><i>'I was originally due to have my surgery in 2017, December 2017 but due to some last minute health issue that was identified, it was then put on hold so I ended up having a sleeve gastrectomy in February 2019 this year. So, it's been quite the process ehmm but originally as I said we did have an op for the 2017 but it got put on hold.'</i></p> <p><i>'And then they mentioned that obviously it would be quite a process, it's not something that happens overnight. That I would need to ehmm obviously see dietitians and a psychologist or psychiatrist sorry...'</i></p> <p><i>'He made it very clear that it wasn't going to be a quick fix, it's not an overnight procedure. That there is a wait, and obviously they need to prepare you for surgery so that is why at Wallace you meet the dietitian, the psychiatrist, just to double check that you're kind of in the right frame of mind and kind of position for surgery'</i></p> <p><i>'So obviously as I said my op got cancelled. Originally my first op was due in December -17. Due to some other health issues that I was facing I went and saw an endocrinologist. Local to where I am, and he did some ehm tests relating to something else. And because those tests came back... uhm he then decided to cancel the op and he was a bit frustrated because he had said that really this test should have been done under the bariatric team... because that would have then picked it up which would have done re-looked at everything.'</i></p> <p><i>'he just mentioned that I would see the nurse coordinator, I would see the dietitians, I would see a psychiatrist'</i></p> <p><i>'To put it in perspective, a good friend of mine she's gone and have the surgery done privately... and the difference is hers was rushed, she made the decision within a week, within a week she'd had all her appointments and she was having surgery. I personally feel... how... although mine's been longer than normal because we've had hiccups along the way... I think that were it longer process it allows you to absorb what you going to embark on and what you're going to have done.'</i></p> <p><i>'Uhm... I do think though the time frames, although we're always... although when you're waiting you just want... you want it done! I think it allows you that time to process'</i></p> <p><i>'I think obviously once the referral had been made... from the GP... I think I was then very aware that I was going have a lot of appointments to attend, especially after meeting the consultant, where we kind of had that first initial chat that I'm considering weight loss surgery. I think from then on it was a case of 'right this is going to be a lot of appointments, meetings different people'... so I think there was time spent'</i></p> <p><i>'Yeah, I think it's been time consuming... because it's been all the different appointments, and also... I don't want to slate Wallace's because they are great, but I got lost in the system as well. So, whilst the whole evaluation process was taking place, for about 9 months to nearly a year they forgot about me. And it only because I phoned the dietitian up about what's happening, and they were like, 'oh you've got lost in the system' and I was like, 'what that is not good enough' so they then got me back on... not that I had to see the psychiatrist again but I then had to have kind of follow-ups with the dietitians, I had a follow up with the consultant, uhmm and again went over the surgery stuff, and I said I know all this because I spoke to the last</i></p>

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*guy...ehmm so I think now that has been time consuming again has affected the emotion you feel like you have to repeat yourself. But in reflection, looking back now, again although... I was [inaudible] that my original op got postponed, it's allowed me to kind of review, 'is this definitely what I want?'... and as I said to you where my friend that had it done privately, I don't she's had enough kind of prep work done.'*

*'I mean don't get me wrong I do feel it's been longer than then it should be... although it's been a long process, yeah it's been longer than it probably should have been but it has allowed me to actually really reflect, 'is this what I want', it's allowed me to do my own research on what I had been given, and it allowed me to go in and meet people in the support group where I could have those discussions, with kind of patients that have had it and those that are waiting to have it.'*

*'As I said, my friend that's had it privately, I just don't feel she's had, I think it was if a rushed, and when we reflected on kind of what I had done and what she's had done, I just don't think the supports there.'*

*'I do think that the process is definitely needed because it allows you to properly look at everything that you are just about to embark on... and I think that also cuz where he gave me the pre... the other thing where he gave me the pre-op diet sheets, I also... ehm whilst preparing during the evaluation process, I also kind of tested some of the options on the those diets. Again, which prepared me for when I had to do the liver shrinking diet, I knew what options I was more comfortable doing, and things like that. Things like that really helped, and now I mean I say to people start testing, trialling it cuz when you come to have surgery you got to do it, if you're really wanting this procedure you've got to stick to it ehm... So I think those bits helped'*

*'I think it's definitely needed, and I appreciate... I mean as I said it has been longer than I probably would've liked but it has allowed me to properly reflect whether this is something I wanted to kind of go down.'*

#### Holly (6 references)

*'Umm... and because they don't know you from Adam when you arrive, you just get letter from GP saying, 'can you see this woman, she is at this and the other', umm... I was there to believe it will be a full on, every single person'*

*'And then the nurse for whatever 'you know and don't know, what could happen and what could not happen'. And then the consultant.'*

*'umm a few things were highlighted to me that I hadn't actually thought of. So, I needed to...I can't remember exactly what they were, but I needed to go research those, so I could tick it off in my head that I got it understood'*

*'it can seem a very lengthy procedure... uhm... that the NHS just staggers through and tick boxes, and there really should be a fast track where suitable'*

*'the pre-op process to get me some more questions and that I then searched for, and I got answered and I was happy for it.'*

*'people are in for this quite long lengthy thing'*

#### Sabina (9 references)

*'Ehm... so I understood that it should be about 2-year wait, which wasn't the case for me... ehm...'*

*'I waited about 4 years since the second time she put in that application...'*

*'I think that the... uhmm... appointment times from like fitting in the dietitians to when you see the surgeon, I feel they're too far apart, and they're months apart'*

*'and uhmm... also I had a bad experience with... I went to see this psychiatrist, and when I got there, they told me that I don't have an appointment... and*

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*uhm... that I've been taken off the whole system, and I was like, 'how can I be taken off the whole system, when I last saw the surgeon, I got an OK, and I'm sure if I was I would've gotten a letter saying you know 'you've been taken off'. So, it was waste of travel going down there, and then have to wait months to see her again'*

*'Uhm and you know during that process, it was like a stressful time for me, and also, I was like comfort eater, so I had put on a lot of weight during that time, the cancelling appointment and the actual appointment'*

*'Uhm I expected not to get it because so many things has happened from the beginning... they said that they sent me letters for appointments, never turn up... uhm and I had to call them and chase them a lot for appointments, even to get my okay for surgery, I had to call them to see like what's going on'*

*'Uhm so... Yeah I just felt like I had to chase them a lot.'*

*'I was really depressed because I just thought didn't know I was coming or going, I'd waited so long, I was just thinking, 'this whole process is pointless because I'm waiting like 3 or... 3 years at the time', and I'm thinking, 'I'm just wasted my 3 years, really going to these appointments, and I don't think I'll be having this surgery'.'*

*'And I think they need to make it a short span in time... I think even the 2 years is too long. Year and a half, I think is better.'*

#### Rachel (11 references)

*'So, I got referred and then I had, I thought I'd get an appointment straight away but of course I didn't. I had to wait quite a few months to get my initial appointment, and I kind of thought once I got to that part... you know my operation will be forthcoming'*

*'It's only going through the whole process of around 15 months... I was really cross at the time because I thought, 'why aren't they giving me my operation' but as I was going through the process, I understood the reasons behind it and how it's so important to understand that you have to be a participant in this'*

*'I understood... as I said as the process was carrying on, I understood why I was going through it.'*

*'I thought that they would check me out, make sure, you know, I was fit for surgery. Then surgery was gonna occur.'*

*'But its only after months and months of different appointments that you tend to see a bigger picture.'*

*'Cuz I felt like I'd been singled out to jump through these hoops, and not everybody else, if you know what I mean. So, I was quite cross at that time. But as I was moving forward and I was getting near to the end of this process and I got my operation, I realised how important it was to understand all they were telling me before.'*

*'Uhm... I was looking forward to getting to the end of it so I could get my operation. There was the light at the end of the tunnel'*

*'It made me think that this was more serious... it was... even though I knew it was a decision, I thought, even if I was sorry it would be okay, but it made me realise that whatever I'm gonna do, this has lifelong consequences'*

*'I expected she was gonna tell me the wrong things I was doing at the moment.... the right things I should be doing, and then after the op, what you gonna be doing then. [...] It did happen like that, but many more appointments than the one.'*

*'I had to think about things more. Cuz not only did I see the psychologist then, for time wise and obviously they had so many people in the pipeline to see, she referred me to 'talking therapies' locally and I had a load of that stuff with the guy there. And I suppose that really did, it made me cross at the time as well but really it makes you just think about things a little bit more, why I'm so*

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*cross, why I needed to drink to calm me down, what made me so cross, how could I be less cross, and stuff like that, you know. But I think a lot of it also stems from me being so unhappy about the size I am. Because now, I'm so much happier person, I still get cross but that's just my personality. [...] But it doesn't take much to get me cross! I'm not a nice laid-back person, I'm you know quite autistic that way, its gotta wrapping and its gotta wrapping, how I want it to... and if it doesn't, then I will be cross. It's just the way I am, I've accepted I am that way. I understand myself a lot more going through this process as well. [...] Yes, cuz I thought they would gonna, they're doing it to delay my operation and take away the goal. I didn't realise I had to go through this process and get myself straightened out before.'*

*'It made me think about going... you know how you just sort of go through your life, I mean you're really young, so you haven't been very far but... I sort of, you do things as you get older, you got your kids to see to, your parents are getting older you gotta see to them you're building your life, your building your home, you don't think about yourself as an individual because you got so many other things you gotta do and you haven't got time for yourself in that sense. This process, obviously my kids are now grown up, I still got an elderly parent that I have to look after, but generally speaking life is so much easier. And so, it's given me time to think about myself, rather than blundering through not being aware of myself or... I've reached this stage at 60, I'm only starting to understanding me. I'm only just finding me and that's a hell of a long time to be on the Earth, going through your processes, meeting someone, building a home, having children, getting into school, dealing with all different things, working, juggling, everything... throughout that time from when you're kind of 25 till when your kids grow up and leave, and then...that's when I felt able to think about me and that process of going through this has helped with the psychology sides of things'*

Scrutiny & Suitability	<b>George (13 references)</b>
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*'I've heard over the years I've kind of been on this journey that there are these different tier groups and that some people who have had to lose weight... to show... I've dieted for years so I had records. I've got all my Slimming World Books and things like that, they could see that I've really tried'*

*'the reason I needed to see the psychiatrist was because uhm they wanted to assess my eating habits... Also the dieticians, so linking in with those professionals... it was to look into my eating habits, ehm kind of my mental health...'*

*'some of the people had mentioned that, as I said it was like they had to go weekly meetings, to show what the weight were like. I was doing that with Slimming World'*

*'but with the psychiatrist we then went into a lot more and she was picking bits out from the kind of applications.'*

*'It was very intense... very intense. I mean they proper... she proper grilled me... ehm to the point I mean she would... that meeting I think it was a two-hour appointment and we were talking about my sex life, ehm everything, what I'm like with money which to be honest I would never have thought would have impacted the surgery... and... what I'm like with drinking but I mean she explained why she asked that. Like for example relationships she said, 'that relationships can be break down because obviously when you lose weight people start to notice you more'. With asking... I mean she got quite personal with regards to sex life and she said, 'it's because some people can take they can get that attention they kind of end up being a bit more promiscuous' and things like that... Money, she said, 'because obviously you can then buy clothes from standard shops'. So she explained why but again I don't think I was as prepared... and also because she was looking at kind of emotional... ehm emotional kind of issues so it brought up things that I... so I lost my mom when I was young and it brought that back so I mean I came out of that meeting bursting into tears...'*

*'I mean obviously as I said things could have probably been done differently... And I maybe wasn't expecting kind of how... not brutal but yeah how deep they would go in.'*

*'I was expecting to go and be grilled on what you eating which is why I had my Slimming World book proof, 'this is what I'm eating, I keep food diaries' and they were like, 'have you been honest?' and I was like, 'yes because you can see on that day I ate like a horse'*

*'there was an idea that you couldn't put on weight... that if you were gaining weight then that could go against you so it was... there was that in my head as well that right, 'I really got to stick to this to try and continue losing weight' and that was a fear because during the pre... whilst I was waiting to find out whether I was going to be accepted, ehmm I had obviously gained...ehmm weight and I was like, 'this is going against me cuz I'm not showing them I'm losing weight', but now obviously I know why I was because there was that underlying condition. That was stressful in itself because obviously you're waiting to find out whether you can have a life-changing operation and then you're trying to work on maintaining or losing weight...'*

*'I mean the surgery itself I know when I first met the surgeon, he also mentioned that obviously there is a risk that you can... die... from surgery. That... I mean I know any surgery is risky, but I think that kind of hit home as well. Like, 'oh it's an operation on my stomach' [nervous laugh]. Umm so that was a bit... that kind of produced some fears.'*

*'I think it's being prejudged... I mean because it was not knowing what to expect... it was having those prejudgments already made.'*

*'because you have to be honest... but uhmm that's what I think I also worried about that I could say the wrong thing and that could go against me which as I said, she's then later on questioned me about me not ticking that box. I was just honest with her cuz I just thought there's no point in me lying'*

*'I think it has been challenging.'*

*'Ok, I think emotionally it's been a rollercoaster. You've had to address things that maybe you put aside... I think there's areas that you would never thought would have been in an issue with, in this kind of way with the surgery.'*

#### Holly (2 references)

*'I was quite worn down with the struggle'*

*'Uhm, I expected the dietitian to try and talk you out of having surgery. On the... 'you got this, you can do this, so if you can eat less afterwards, then you can just eat less before!'.'*

#### Sabina (10 references)

*'I would have to prove I can lose weight and keep off for a certain amount of time... uhm and that I would most likely to see a dietician... aaand work out...'*

*'I saw the dietitian... maybe I saw her 3 times... and I think that was in the space of a year... I saw her about 3 times so she would check on my weight and everything'*

*'So the, that psychiatrist, holding that against me, that you could tell in her notes, cuz I got the letter as well, uhm and saying that I had put on the weight and put on back some weight and everything'*

*'Uhm... seeing the dietitian definitely. Umm I was thinking maybe I would see her like once a month, and for her to like ask me to keep food diary, uhm...'*

*'She was just evaluating me to make sure that I was OK to go through surgery. And that I wouldn't... mess up the surgery.'*

*'At the beginning I was excited, uhm... and then I was thinking 'okay let's see who she is, it's not too bad...' but then as time was going on, then I was like,*

*'okay well I'm not getting through surgery, I know I'm not getting it, uhm, I'm going to these appointments, but I know I'm not getting the surgery'.'*

*'I was very stressed because I didn't know how I was going to keep my weight off. Yes, I was going to Slimming World, Yes, they knew I was going to Slimming World, so everything that I saw the dietitian I would bring my book, Slimming World book, and she could see that how much weight I'd lost and so forth.'*

*'Uhm so I was stressed a little bit every time before I went to the dietitian because I was thinking, 'Have I lost any weight' and then seeing the surgeon... uhm... wasn't that stressed seeing the surgeon cuz I thought, 'everything should be okay'.'*

*'I was thinking that she might say that I'm too depressed, and that my goals are unrealistic because she did have a word with me about the size 10 and you need to let this go, because you may never reach size 10, and what are you going to do if you don't reach size 10. '*

*'Uhm... [pause] hmm...it was a bit of like an inconvenience in the sense of me having to keep going down there and it being such a wide span of time, and so it was just thinking it was pointless, uhm thing for me. And especially at that time I was thinking, 'I know I'm not get the surgery'. Uhm yeah, I can't... ask the question again! I: No, just the impact the process has had on your life, whether it's your mental well-being, physical or just general life as whole. P3: Uhm so, I was feeling a lot down, because again I was thinking I'm not going to get the surgery. And then, that spirals into putting on weight, so yeah it did affect my life a lot.'*

### Rachel (15 references)

*'I was really cross at the time because I thought, 'why aren't they giving me my operation' but as I was going through the process, I understood the reasons behind it and how it's so important to understand that you have to be a participant in this. You have to control your food intake, even though you've got your little pouch and you have consequences if you eat the wrong thing. You can still do so, and everybody is different. You also learn along the way that... this operation has an effect on an individual person that is not known until you've had the operation. So, the consultant could never tell me, 'oh yeah its gonna work for you because it's worked for the last 50 people we've done'. Because it might not necessarily work. Some people wake up after putting themselves through that operation, and they're still eating like crazy. They still want food that it hasn't done anything for them. And that is a big thing to go through cuz its not reversible [laughs]. Once they've cut your stomach off and they've taken your intestines away, it's gone forever'*

*'I did see the psychiatrist quite a few times, uhm... they, when they gave me that pre-assessment and the physical assessment, and all the bloods and everything, it turned out that even though I was huge and 50% of me was fat, I actually was suffering from malnutrition. I had a problem where I'd basically stopped eating, and I still couldn't lose any weight. It was cuz my body was hanging on to everything. I was permanently starving. The food I did eat was not the right stuff to give me nutrition, and when all the bloods came back, they said you're seriously just got malnutrition. So, you've got this huge lady sitting there being told that she's got malnutrition. I couldn't get it straight to my head.'*

*'But its only after months and months of different appointments that you tend to see a bigger picture.'*

*'I used to drink quite a bit of alcohol, I wasn't an alcoholic or anything but I did regularly enjoy alcohol and they had to ensure that, that was knocked on the head as well before my operation'*

*'I didn't expect as much as I got to be honest. I ehm, I didn't expect to get so much information, like meetings about pre-op, and after the op, so I could be, once I got to that stage, I was mentally much more prepared and ready for my operation. I think a lot of people they go in quickly and blind and not given*

*this information, then as successful afterwards as somebody who's been given all of that to start with.'*

*'I was looking forward to getting to the end of it so I could get my operation. There was the light at the end of the tunnel, so I did toe the line, I'm not very good at being told what to do but I toed the line because I knew if I stepped out of that line, I would end up being at back of the queue. They made it made quite clear, 'we're happy to do this for you, but you have to prove to us that you're almost worthy of it'. So, when they said I had to lose two stones that was so hard. And all the eating plan and joining in... I was so lazy. If I couldn't drive to the doorstep, I went home. I wouldn't even walk anywhere; I was so lazy. I never went out for a walk for pleasure or anything like that. And now gyming almost every day, its completely changed my life. And I was so, uhm I didn't realise how ill I was at the time, but now I'm well, I understand how awful things were for me before. Uhm yeah so I had to start that process, they tested me, I had to run between two spaces, and he timed me doing it and then he said, 'you join the gym, come back in three months' time, I'll time you again'. So, I knew I had to gym, I knew I had to do it to show him that I could do it quicker the next time. So, they don't just say it, they check you. And when you say you haven't had a drink; they'll give you a blood test. I know they will check you up. And they made it quite clear if you won't toe the line, if you didn't make your appointments, if you, if you cancelled, obviously things happen, you might be able to make a case, if you did phone up to cancel, you went straight back because there were 100s of people waiting to take your place. [...] Because I don't think things would've worked so well for me now in my mindset... if they hadn't been so strict with me. There is no, I'm the kind of person you can't tell me you can have a little bit. I want all of it, or its better say, 'no you can't have that'. I could accept you can't have it. I can't cope with a little bit of it, which is how I was put in this state in the first place [laughs].'*

*'It made me think that this was more serious... it was... even though I knew it was a decision, I thought, even if I was sorry it would be okay, but it made me realise that whatever I'm gonna do, this has lifelong consequences'*

*'Yeah, I suppose then I was a bit of a mess, and I had to be straightened out. It's a simple way of putting it.'*

*'You know my life is just...I've got a positive attitude towards it because my life has changed massively. I'm not saying I haven't had to input cuz I really have, it's been hard [laughs] but the outcome from going into this operation, thinking it might not work for me, nothing else has ever worked... and I can't imagine being normal size for the first time in my life... I still went in for the operation cuz it was last chance to live. I toed the line, I did exactly what they said, and the weight was coming off, so life was good... and you know I had to force myself to go that gym, even after the operation, I hated it. I still had to see the psychiatrist locally, not in the hospital, they had to keep me on the straight and narrow.'*

*'I expected she was gonna tell me the wrong things I was doing at the moment.... the right things I should be doing'*

*'Well, I think she would, because a lot of people overeat because of things that have happened to them in the past. That's not my case... I had a great childhood, I wasn't abused or anything like that, you know. Everything was fine for me; I think eat a lot [laughs]. So I assumed I was seeing this psychologist or whatever I was seeing to go through that kind of thing... uhm... but yeah she, she wanted to look behind why I like to have a drink, why I enjoying... [...] Why I overeat, because it doesn't matter if you don't get to the crux of why you overeat, operation or not operation, that is still gonna be there. And you'll still gonna want it. And if you can't have it when you really want it that's gonna add you more problems than before, so that has to all be straightened out first. [...] Yeah, but a bit more in-depth than I was expecting really.'*

*'I: Yeah it was alright, I was a bit cross cuz they were taking something else away from me [laughs]. You know my food had gone, my cigarettes, well that has nothing to do with it, but the cigarettes had gone but she said if I had smoked, they would've had gone. All I had left was to have a drink, and they*

*were gonna take that a bit of enjoyment away from me. And I had to go through this whole thing about what's left. You know?'*

*'After... I knew what they wanted to talk to me about, yes, I would think about things... what we were gonna discussed so I was more into th appointment than I would've been previously.'*

*'I would have been a bit more prepared for that. I found all that a little bit shocking [laughing].'*

*'Well they told me that... you know, basically to prove that I was engaged with this whole process and to prove that I could control my input. I had to lose two stone before my weight loss surgery. They told me this quite early on because it took a whole year to lose it.'*

#### **'Psych' as a wall**

#### **George (2 references)**

*'Yeah... I was also told that the psychiatrist... that was quite an important meeting because they would kind of the ones that would also sign off to say 'yes he is in... he is in kind of position where he can or know he needs to go back and look at this'. So I was... and that was through... that wasn't so much through the professionals, that was through the support group that that was kind of... not a whisper but a hear that it's the psychiatrist that is the one that you have to kind of get the OK. I did struggle with the psychiatrist because uhmm... she picked up that on the application I hadn't ticked to say that I would come back to the NHS weight loss scheme correction. And she did question me on that, and she said, 'well that could go against you... for surgery'. which I was a bit... 'really?'. And she said 'yeah', and I said, 'well look, I explained...', and she said, 'can I ask why you have not signed it?' And I said, 'because I don't know how I will be a year to 2 years after surgery. At the moment I go swimming, I teach Zumba', so I said, 'my body, although I'm not happy with it I will go swimming'. I said, 'after surgery and I have got loose skin I said I may not be in that right state of mind to go swimming'. And I said, 'because I'm not there now I can't say how I will be'. So, I was really unhappy to sign that and her response kind of... got me... and I just said. 'well look if it goes against me it goes against me I'm not signing something because I don't know how I will be in that situation'.'*

*'as I said I think I was just worried that that was the appointment that could make or break it. I think maybe in the back of my mind I was always conscious about not saying the wrong thing, not that I did... because you have to be honest... but uhmm that's what I think I also worried about that I could say the wrong thing and that could go against me which as I said, she's then later on questioned me about me not ticking that box. I was just honest with her cuz I just thought there's no point in me lying'*

#### **Holly (3 references)**

*'I was expecting they would be trying to figure ways to trip you up to say that you weren't suitable.'*

*'No, initially, I actually refused to go and see this... psycho-woman or she was psycho actually... Uhm... just because I thought it was a waste of my time. I won't be let anything up.'*

*'I don't like some of these psychologists one, the questions they try to get me in for, for how I would feel if I could eat again.'*

#### **Sabina (2 references)**

*'Seeing the psychiatrist, I was really stressed, and really down because I was thinking, 'what is she going to say, she must be a wall... uhm uhm... refuse me for surgery, and then that's that'.'*

*'Uhmm... No, I think just kind of went there knowing... what I was going say and what I wasn't going to say.'*

Coping processes to deal with the PSE	Psychological coping strategies	<p>Rachel (2 references)</p> <p><i>'Well, cuz she went on to about the drinking, did I smoke and all of this. She wanted to suss me out I suppose.'</i></p> <p><i>'I knew what they wanted to talk to me about, yes, I would think about things... what we were gonna discussed so I was more into the appointment than I would've been previously.'</i></p> <p>Holly (17 references)</p> <p><i>'Uhm and... once I've chosen that team it was a case of going through the motions on... going through admin on that team'</i></p> <p><i>'... was very much biased, I think. If I had to go through the psychologist there, it would been a lip-service/me getting very angry with what the experience I've had with other professionals in the in the... in the past, so I deemed that a total waste of time.'</i></p> <p><i>'So, the whole morals of why you comfort eat and all the rest of it, I did not think applied to me. So, when I was faced with going through the whole load of those in Stanford Location 1, I was just intending to dismiss the psychologist'</i></p> <p><i>'the departmental nurses, I have felt, and even the pre-op nurses I've been to... they're trying to then reassure me, and 'this was gonna happen and this can happen', I'm much more of cut to the chase. I need to tell you what's going to happen, and you need to write it down to make sure it happens'</i></p> <p><i>'And I felt that she knew that I knew as much or more, and she was...uhm 'straight to the consultant'... I didn't need to be told the procedures or what is going to happen afterwards or... I didn't need to have the information.'</i></p> <p><i>'Yes, the meek and mild approach when I went into various appointments, I've never been... the meek and mild approach.'</i></p> <p><i>'Uhm she almost sat back in a chair and said 'right, this is, we will cut through the flannel of I'm going to tell you this and this and this, and it's going to be lovely and fine'.'</i></p> <p><i>'Yes, practical! It went from... ego fluffing potential to practical'</i></p> <p><i>'I was quite relieved to know that I wouldn't be going through all the different departments and I was quite relieved that it would just be a common-sense approach...'</i></p> <p><i>'I had a lot of confidence that I would be taken seriously.'</i></p> <p><i>'it was a bit of a bombshell in the first meeting. I didn't think I'd be suitable for... getting my head looked at. At all'</i></p> <p><i>'You need practical help from all the departmental nurses, to find out what is actually going to happen...'</i></p> <p><i>'Logically, I... will have everything ticked in the box and I just need the information and the answer.'</i></p> <p><i>'I like everything logically ticked off in lines... lined up, correctly, neatly and ticked.'</i></p> <p><i>'It was just a necessity that had to be done to tick the box...'</i></p> <p><i>'when he saw that I'm not an 'ego fluffing' person, he was very much more down to earth and explained to me what was going on and the complications I have and... it was very much more targeted at me'</i></p> <p><i>'He wouldn't say that, you know, that I'm the greatest surgeon, I'm going to do this, and to do this, and you're just a...made me a thing on the table that and just going to do wonderful things with, he is kind of like, 'yeah, I think you know that you've got this problem' and I will say 'Yeah I need this bit cut out, this bit done, this bit done' so, I'm on a level pegging with his medical knowledge'</i></p>
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### Sabina (2 references)

*'And, I think that if I were had went in there still saying that I was gonna get to a size 10, they would've refused me. Because they was like 'she's adamant that she's getting into a size 10.'*

*'I was really conflicted because when I saw the dietitian like I said to you, 'you only lose X amount of weight, you'll never lose more than that', and then like I said watching the US programme, I was like, 'but this person weighs waay more than me, they weigh 600 pounds, and they've lost twice my body weight', so it was really like confused, and then going to monthly group meetings, then that dietitian and the nurse that was there saying, 'well actually you can lose as much weight as you want to, as long as you're exercising within that first year', but then... I'm like, 'well that doesn't make any sense' cuz the other dietitian said something completely different.'*

### Rachel (5 references)

*'I felt like I'd been singled out to jump through these hoops, and not everybody else, if you know what I mean. So, I was quite cross at that time'*

*'I toed the line because I knew if I stepped out of that line, I would end up being at back of the queue.'*

*'Yes, cuz I thought they would gonna, they're doing it to delay my operation and take away the goal. I didn't realise I had to go through this process and get myself straightened out before.'*

*'A bit of both I would say, a bit of both. [...] Cuz like I said when you come out of the hospital its really overwhelming, you got to remember everything you've been thought previous.'*

*'And didn't want to go to the pace class either because I didn't want to meet people that, they were obviously doing their pace class in prep for their op, cuz they had their date, cuz normally you get your date months in advance so I didn't want to engage with any of that, until I knew I was having my op. And I passed all the hoops that I had to jump through'*

### Doing your own research

### George (13 references)

*'It's probably since joining the support group, that I think, because obviously you meet patients who have had it or...like at the time, like me were waiting to have it, they had said that they oh they had to be on certain things so like there are these tier groups.'*

*'that wasn't so much through the professionals, that was through the support group that that was kind of...'*

*'Yeah from the support group'*

*'I think with me... that...well in general there is onus that if you're going to embark on something like this you also need to do your research. It's all very well relying on the health professionals but as we all know our health colleagues are extremely under pressure, so there maybe not always in the best... train... I don't know if that's the word but to give out the stuff. So I researched myself as well, and I think by going to the support group... that also helped me to... to speak to others.'*

*'the support group that I'm on we have a Facebook group... and even now when people are going there's still people asking now, 'what should I expect at the psychiatrist appointment'.'*

*'as I said that are questioning what to expect and those of us that had it done we then go on and put, 'this is our experience, what they asked, what they're likely to cover', so I think they're still information that's probably needed'*

*'and I think again we all have an onus that we have to ask questions, there's no point going into an appointment and not kind of leading that to some degree, cuz you you're in charge on your own kind of destiny, so I made it*

*very clear that I wanted to know exactly what was happening... that I know maybe not everyone is like that.'*

*'it was a lot more about doing my research, liaising with the group and like that.'*

*'but yeah it was definitely the support group, it was like, 'I've got this appointment coming up, what should I expect? what question do they going to ask? how long is the appointment going to last?' things like that.'*

*'it's allowed me to do my own research on what I had been given, and it allowed me to go in and meet people in the support group where I could have those discussions'*

*'I also kind of tested some of the options on the those diets. Again, which prepared me for when I had to do the liver shrinking diet, I knew what options I was more comfortable doing, and things like that.'*

*'And the day of surgery, sorry the day after surgery, I knew more about what I could eat and what I couldn't eat than the nurse that came to see me. All she did was give me to diet sheets, and now I said I've got all that and I know all that.'*

*'but I said I did a lot of my own research so... '*

### Holly (17 references)

*'And the way I had to do that was to go onto Google to find where they were and then I went on to patient groups in each of the hospitals just to get the vibe on what was going on and I researched the amount of disasters that each surgeon had had, and chose my bariatric department based on that.'*

*'So, she was happy to be guided on the research I've done.'*

*'The consultant, but I went to see the nurse first and she was like, 'ah you know as much about bariatric surgery as me, we'll put you straight on to the consultant'.'*

*'So I'm...well in the appointment at Location 1, I very much took the lead, with the nurse...'*

*'And I felt that she knew that I knew as much or more, and she was...uhm straight to the consultant'... I didn't need to be told the procedures or what is going to happen afterwards or... I didn't need to have the information.'*

*'I will do my research, I will do a lot of research [intonation emphasis], then I'll do more research, and then I'll go in with a list of questions written down. And if they're not answered, I will go back until I get the answer... one way or the other. [...] Lists. I bought a very good book to start with. [...] Yes, and blogs actually, and we have chat rooms types. There was one very... good at... haven't been on in years now... uhm Weight-less one that had mostly British but quite a few around the world and... a lot of questions that people asked on there was something I would never have thought of... so in combined with the book, and people's blogs were, I tried to think how... it would fit into my life.'*

*'And some books and there is a very good book I had; it was specific on gastric banding, but it... opened questions to the whole spectrum of things that could happen. And there is another good book that was written by one of the psychiatrist people at Wallace's, I can't remember her name... that was quite a good book... but a little bit too technical in parts. [...] I looked at the scientific papers that my consultant had written.'*

*'I'm glad I did so much research before mine because I don't think the information that I hear from other people is adequate to make a decision and there is always lots of people asking, saying, 'I think I want to a bypass but been put for a sleeve', 'I think I want a sleeve, but I'm going to get a bypass, I don't know why I've got this' so I don't think the... level of choice... would... if I went into this blind, the level of information would not be satisfactory for me to make a choice... it's only because it's in my nature to do so much research.'*

*'I'm cynical enough to have looked at my surgeons that list that they do to see which one they prefer. So when I made my initial decisions, uhm that list hadn't come into being. Its only since I subsequently looked that that seems to be my surgeons favourite approach and I felt that I would have been pushed through his favourite operation, as opposed to one that was more suited for me.'*

*'But I also think each person needs to get it sorted within enough research, what to do. I think we need to take control of our destiny and not be led by doctors who think they're very clever.'*

*'I'm more happier to manage myself. For some people that just let the hospital do things and all the doctor said, 'this will...', my question would be why! So, I'm happy to... lead the professionals, I think.'*

*'I... probably researched many hours a day for about a month. [...] Probably be several hours a day for about a month, I was looking into.'*

*'I absorbed people's information as opposed to put my own... '*

*'You are responsible for what you've done to yourself, although I'm not responsible for diabetes, but I'm responsible for what I'm doing to my body. I don't think the NHS should be there to pick everyone up and soothe their egos. Everyone has access to Google. If you got no money, go to your local library, free! [...] Everyone has access to the information, it's not up to the NHS to spoon feed you.'*

*'I don't think they're going to have as much success as the people that do the research, their own research for their own questions, and go into it with their eyes wide open...'*

*'my one has treated me now, I'm on a level pegging with him...because I, I've had to research so much.'*

*'he is kind of like, 'yeah, I think you know that you've got this problem' and I will say 'Yeah I need this bit cut out, this bit done, this bit done' so, I'm on a level pegging with his medical knowledge.'*

#### Sabina (7 references)

*'but I knew that I wanted to surgery because I had done my own research before going to her, so I knew about surgery on my own.'*

*'The Internet, a lot. So, like I said, I did a lot of research like years before... uhm so I knew about surgery and that's the reason why I went there to my GP because I knew I could access it through that way. Uhm but like friends and family no... I'm the one who introduced them to it.'*

*'Wallace's they have a thing, a monthly thing, where you can go there and see other people's experiences like a group, so I went there, so apart from seeing the dietitian, then I went there and that's how I got some more knowledge.'*

*'The only way I kind of knew those things was going to those monthly meeting like I was speaking to other people that been there five years out, year out, two years out, of surgery'*

*'If I had never gone to that meeting, I wouldn't have known.'*

*"My 600 pounds life", so it's an American programme, and its people that have had the bariatric surgery, all forms of the bariatric surgery. So that's where I got my expectations from, but not how long that this final period will be. Because with that its only... uhm... a surgeon that's there. But he does work with psychiatrist, like physiotherapy, things... people like that, nurses... umm so that's only where I got my expectations from and knowing what's going to happen. And what type of foods to eat and things like that.'*

*'then I went to that monthly meeting, and then they're like 'oh you don't eat that, oh you don't eat that', whereas you should know this as a dietitian before I've had the surgery and work out something that can help me.'*

Rachel (4 references)

*'I went to my GP, and I thought, 'well if I just get referred, find out more about it', a friend had really taken me to her hospital, and I found out a little bit about it then. So, it was a big decision taken over a long time.'*

*'I didn't expect as much as I got to be honest. I ehm, I didn't expect to get so much information, like meetings about pre-op, and after the op, so I could be, once I got to that stage, I was mentally much more prepared and ready for my operation. I think a lot of people they go in quickly and blind and not given this information, then as successful afterwards as somebody who's been given all of that to start with.'*

*'No, appointments came through the post and I just went along'*

*'As I said, I didn't go to the support group, I wish I had now, but I didn't at the time cuz I thought I'd be really upset that everyone there would've been given a date for their operation and everything else. I didn't realise that when you got your date it was only gonna be 2 weeks before you actually get done, you know. I thought you'd get told months in advance [laughs]. So yeah, if I had... I act upon the knowledge that I've got, and so had I got that knowledge I may have gone to the support and got something from it.'*

Support systems

George (8 references)

*'I think my GP put in a really good argument that 'he's also quite active'.'*

*'think because my GP had put in a really good case where she could... because the application for the weight loss I mean that was a 15-page document my GP had to fill out.'*

*'I think it was more case of just speaking to friends and family... particularly after the psychiatrist appointment, because obviously that had upset me and brought up things...ehmm that was the case of speaking to, yeah I think friends and family, and obviously the few people at the time that did I met and I'd made connections to at the support group...'*

*'It's all very well to speak to friends and family but if they haven't gone through it... they don't appreciate or understand what you're going through. Whereas people at group, the support group do. And obviously they've, those that have gone through it, know exactly what's been asked and they can relate more. So, I do think, I mean even now post-surgery that support group is a mechanism'*

*'at the time it was through my GP, and it was looking at uhmm... it was looking at relationship, but as that counselling kind of went on, it then was linked into kind of how I perceived myself, weight loss and then as that counselling was coming to an end, that's when... during that process I was confirmed on the list. So, then counselling looked at some of the issues around surgery and stuff like that. I do think again, that is something that should be offered...'*

*'I mean thankfully I've got a support network but if you haven't got that and you've not, I mean some people even now at group they're not comfortable talking to others at the group. So, if you don't have a support network at home... you're kind of on your own, and I do you think...'*

*'And maybe had the counselling been offered after the psychiatry appointment that would've kind of made that a bit easier'*

*'I think preparing for it was literally case of speaking to the support group...'*

Holly (1 reference)

*'The consultants... I got what I eventually expected, which was a knowledgeable person would listen to my individual concerns and... uhh... fight my corner for me as opposed to... whatever the NHS says'*

Sabina (4 references)

*'So, I went to my GP maybe about five years ago now and uhm and I explained my depression, my health conditions and everything like that, and I asked to be part of the programme. And then he refused me...uhm and a year later, I went to, the female GP and said the same situation, she put an application and then I didn't qualify and so she put the application in again, and so then I did qualify the second time.'*

*'so I don't know I feel like, as a service they need to be more... sympathetic and they need to like have... someone to like support us.'*

*'I think it's too much of a reach for the NHS [laughs], but I think I was thinking that I might see someone for my mental health because it's not just about the fact that I'm gonna lose weight, it's all about what's going on up there [pointing to head] in your head, so I think, I thought I would see someone, even if it was monthly just to check how my mental health is going, uhm... yeah.'*

*'She was just evaluating me to make sure that I was OK to go through surgery. And that I wouldn't... mess up the surgery. So, it was a one-off evaluation of maybe an hour, an hour and a half, so I had to do something myself to make sure that I will be okay after surgery.'*

#### Rachel (8 references)

*'Well I think my role, is why I go to the support group, is to help others.'*

*'I still had to see the psychiatrist locally, not in the hospital, they had to keep me on the straight and narrow. And yeah, I just stuck with it and eventually after about 18 months, it becomes a way of life. Now I don't think about it, I just put my gym stuff on, and I go. And I go early to get out the way, and then I can live my day. It was all such a big deal with the beginning cuz it was something so new. And it is the same with the food'*

*'Why I overeat, because it doesn't matter if you don't get to the crux of why you overeat, operation or not operation, that is still gonna be there. And you'll still gonna want it. And if you can't have it when you really want it that's gonna add you more problems than before, so that has to all be straightened out first.'*

*'she referred me to 'talking therapies' locally and I had a load of that stuff with the guy there'*

*'As I said, I didn't go to the support group, I wish I had now, but I didn't at the time'*

*'So yeah, if I had... I act upon the knowledge that I've got, and so had I got that knowledge I may have gone to the support and got something from it.'*

*'No, I thought the support was pretty good actually, in my particular case. I didn't feel that I have been left or had to cope with anything on my own. The staff were all very lovely, they always said, 'if you have a problem, give us a call', you know...'*

*'Overall... I felt that I'd got a lot of input and attention. I felt that... the staff listened to me... they were sometimes had to be patient with me. If I wanted to talk for a long time about something, they never made me feel that your time is up, and we have to leave. Seeing the surgeon, my daughter came with me cuz they didn't, my family didn't want me to have this operation. I said my next surgeon appointment... and you come with, see what's involved. My daughter had a lot of questions, we must've been there 2 hours. Not one time did she say or not answer our questions. I felt that I'd got really excellent input from the Hillsdale, and from the staff that I met when I was there.'*

#### Past experiences influencing current perspectives

#### George (4 references)

*'I think, I think that's because if not maybe the medical team at Wallace's but medical professionals throughout the whole of my life. I think it's very... some professionals again not Wallace's but medical professionals that I've seen*

*over the years have been very quick to judge that I am the size I am because I'm lazy, I eat too much, and things like that'*

*'So I think because of that I was expecting to go and be grilled on what you eating which is why I had my Slimming World book proof*

*because I've got my other health issue I know kind of advocate for that to say, 'look yeah you could be a bigger person but don't just assume someone is eating too much and not exercising' cz there could be other things going on'.*

*'I think it's being prejudged... I mean because it was not knowing what to expect... it was having those prejudgments already made.'*

#### Holly (4 references)

*'it would have been a lip-service/me getting very angry with what the experience I've had with other professionals in the in the... in the past, so I deemed that a total waste of time. And the lady that I had to see, to start with, I started all this privately, she was a complete shyster and I deemed the whole... section of why you should get bariatric surgery a waste of time'*

*'So... again, with them I would take lead because on my very first's uhm... bariatric surgery, I did tell the doctor what could happen and what will resolve it and they were like, 'yeah it will be fine', until they had to stop surgery and get me alive. And then, since then I've made sure I've made every single surgery I've had very aware'*

*'I think it's just through a life of some particular hard knocks that... I've tended to be a strong person I think, and... some incidents happened when I was at work not long before I had the surgery...uhm... may be into a 'don't mess with me' type of the person.'*

*'Yeah but its character forming.'*

#### Sabina (1 reference)

*'because I had lost weight before but I still was very depressed, so I knew that I had to do that. So I prepared in that way'*

#### Rachel (5 references)

*'Okay, so it took me a long time to decide on it. I thought about it for quite a long time, I knew some other people that had had it done and they had marvellous results.'*

*'All my life I couldn't lose weight, I've got no control when it came to food. I felt like this was the last chance to look some that little a bit older. I thought if I don't do it now, I'm going to have terrible problems as I move on in life'*

*'I like most people did think that you have this operation and magically all your weights gonna go and it's gonna be wonderful and you're gonna be a normal person for the first time in your life.'*

*'I think for me, the friend that I was saying about before who had had the operation, had gone privately and paid for her operation. Obviously, they don't care whether you are successful or not, they take their 10 grand, they whip at your stomach, byedibye, end of. And that was the experience I saw from her, so I didn't think I was gonna get so much individual attention from the national health. When she'd paid out all that money, and got it...'*

*'Well, I think she would, because a lot of people overeat because of things that have happened to them in the past. That's not my case... I had a great childhood, I wasn't abused or anything like that, you know. Everything was fine for me; I think eat a lot [laughs]. So I assumed I was seeing this psychologist or whatever I was seeing to go through that kind of thing... uhm... but yeah she, she wanted to look behind why I like to have a drink, why I enjoy...'*

## Self-perception

### George (2 references)

*'I am a very active person... who just struggled to lose weight. But as I said, since then we have now highlighted that I have an underlying health issue which is contributing to my weight gain or my weight issue.'*

*'And I said, 'because I don't know how I will be a year to 2 years after surgery. At the moment I go swimming, I teach Zumba', so I said, 'my body, although I'm not happy with it I will go swimming'. I said, 'after surgery and I have got loose skin I said I may not be in that right state of mind to go swimming'. And I said, 'because I'm not there now I can't say how I will be'. So, I was really unhappy to sign that and her response kind of... got me... and I just said. 'well look if it goes against me it goes against me I'm not signing something because I don't know how I will be in that situation'.'*

### Holly (4 references)

*'Umm... I... am of the opinion I'm fairly well enough to stand on my own two feet, and don't need my head examined. So while some people are...uhm... blubbery and use food as a tool, I did, started bariatric surgery to try and buy myself time for my diabetes'*

*'So, the whole morals of why you comfort eat and all the rest of it, I did not think applied to me'*

*'I've not had a problem with what I mean, it was just a little bit of a quantity issue, because I've always liked uhm home cooked food, which is why I'm slightly cursed now.'*

*'So for the people that, unfortunately, stuff themselves because they were abused as a three-year-old, and now they're 50, I logically would need to see a tie cut in that, so they are... weak... weaker people and I think they would need a lot of hand holding. There needs to be a fast track for people like me and that are very strong emotionally and is clear and logical'*

### Sabina (1 reference)

*'I think that the way I did for myself was good because after when I saw that psychiatrist I said to her even in that meeting I'm going to see someone [referring to mental health professional] on a regular basis because I knew that was paramount for me even though I think that is paramount of everyone that has this surgery because it's not just... even though [inaudible] about what is going on in your mind, so I knew I had to do that for me...'*

### Rachel (6 references)

*'There is no, I'm the kind of person you can't tell me you can have a little bit. I want all of it, or its better say, 'no you can't have that'. I could accept you can't have it. I can't cope with a little bit of it, which is how I was put in this state in the first place [laughs].'*

*'Yeah, I suppose then I was a bit of a mess, and I had to be straightened out. It's a simple way of putting it.'*

*'Well, I think she would, because a lot of people overeat because of things that have happened to them in the past. That's not my case... I had a great childhood, I wasn't abused or anything like that, you know. Everything was fine for me; I think eat a lot [laughs].'*

*'Why I overeat, because it doesn't matter if you don't get to the crux of why you overeat, operation or not operation, that is still gonna be there. And you'll still gonna want it. And if you can't have it when you really want it that's gonna add you more problems than before, so that has to all be straightened out first.'*

		<p><i>'But I think a lot of it also stems from me being so unhappy about the size I am. Because now, I'm so much happier person, I still get cross but that's just my personality.'</i></p> <p><i>'But it doesn't take much to get me cross! I'm not a nice laid-back person, I'm you know quite autistic that way, its gotta wrapping and its gotta wrapping, how I want it to... and if it doesn't, then I will be cross. It's just the way I am, I've accepted I am that way. I understand myself a lot more going through this process as well.'</i></p>
<b>Staff and service evaluation</b>	A tailored PSE	<p>George (2 references)</p> <p><i>'I think professionals outside of Wallace's, I think they're understanding that if you are bigger person there could be more going on that you're not just finding eating too much or not exercising enough... because again we're all individuals, we're all different.'</i></p> <p><i>'Also, like lifestyle... because I think that comes... I mean why I'm linking that in is because particularly what the psychiatrist brought up like drinking, I think depending on what age you have this, I mean I am in my thirties... ehmm so I'm quite a younger patient so I've still got kind of... I'm single, I go out and things like that, so obviously for me I had to think of that aspects. Like you can't drink for the first year and things like that, whereas I think if you're an older patient you're not going to have the same... I don't know what the word is but the same kind of lifestyle. And again I think that need to be looked at an early stage because it is a lifestyle change but I think if you're someone that is kind of keen on going out and things like that...'</i></p>
		<p>Holly (5 references)</p> <p><i>'Yes. I think it's... umm it's an individual whose having surgery to their body, it's not the NHS's to try and soothe everyone's... passage through.'</i></p> <p><i>'I don't think it was suitable for me... and it could have been very much streamlined. I am fairly sure that no... not as many people going into the surgery are quite as logical and intelligent about it as I've been.'</i></p> <p><i>'I think it needs to be targeted for different levels of people.'</i></p> <p><i>'So for the people that, unfortunately, stuff themselves because they were abused as a three-year-old, and now they're 50, I logically would need to see a tie cut in that, so they are... weak... weaker people and I think they would need a lot of hand holding. There needs to be a fast track for people like me and that are very strong emotionally and is clear and logical'</i></p> <p><i>'there really should be a fast track where suitable'</i></p>
		<p>Rachel (2 references)</p> <p><i>'everybody is different. You also learn along the way that... this operation has an effect on an individual person that is not known until you've had the operation. So, the consultant could never tell me, 'oh yeah its gonna work for you because it's worked for the last 50 people we've done'. Because it might not necessarily work.'</i></p> <p><i>'as I was an older person, I fell that that wasn't such a big decision as a person saying in the 30s your age, because that's a hell of a lot longer, you have to have these life changing things for than I do'</i></p>
	Level of information	<p>George (10 references)</p> <p><i>'Ehm... you know it was very mixed because there's been mentioned of these tiers... so like Tier 1, Tier 2 and Tier 3. I was never explained anything about that. I don't know if that's because of the size I was at the time, I don't know.'</i></p> <p><i>'And that's when I was like 'oh what's that because I haven't been told anything about that?' Ehm... as I said I don't know if that was because I was oversized and they were like 'well you need the op'.'</i></p>

*'I don't think I was as prepared... and also because she was looking at kind of emotional... ehm emotional kind of issues so it brought up things that I... so I lost my mom when I was young and it brought that back so I mean I came out of that meeting bursting into tears...'*

*'and maybe it could have been, that could have been prewarned that you will have a psychiatrist appointment and it will look at these issues.'*

*'He didn't give me a sheet, he just mentioned that I would see the nurse coordinator'*

*'I do think some of the information could have been better... like by the psychiatrist. Some information sheet of what type of things they going to discuss... maybe a bit better understanding of the different tiers because as I said I didn't know anything about that, and no one never mention to me that I needed to do anything like that or that I was in a particular tier. Ehm so maybe that would be better. As I said I was just told you'd see these people and then you'd go to their list if you're kind of accepted for surgery after they've discussed it in the team. So I think that process could be better.'*

*'I think some of the information that they were maybe going to looking at, particularly the psychiatrist appointment... I think they could do better information on that particular appointment, on what they were going to go over'*

*'Ehmm...yeah on the Facebook group there's people now as I said that are questioning what to expect and those of us that had it done we then go on and put, 'this is our experience, what they asked, what they're likely to cover', so I think they're still information that's probably needed... and you still get pre-op patients saying, 'I've met this person what is the next step', so I think it's maybe... like a timeline of 'you'll meet this person to begin with and then what kind of should happen'. Now that would be very helpful and that would also... I mean that would have probably reduced my anxieties.'*

*'I do think there's ways they can maybe do things differently. Uhm and maybe some of the information they hand out could be... more informative.'*

#### Holly (2 references)

*'I... don't understand why... I would have been put forward for one surgery to start with, rather than the others... other than I'm cynical enough to have looked at my surgeons that list that they do to see which one they prefer. So when I made my initial decisions, uhm that list hadn't come into being. Its only since I subsequently looked that that seems to be my surgeons favourite approach and I felt that I would have been pushed through his favourite operation, as opposed to one that was more suited for me.'*

*'I still don't know why the other one would've be better... and cuz lost I've faith in that surgeon. I wouldn't know but I... I felt the consultants was like 'yes, we're going to do this, and it will be great' as opposed to, 'actually, no I don't think it's going to be great and I want to know why'.'*

#### Sabina (7 references)

*'I didn't really understand much about the surgery itself... ehm because she didn't go into depth about it'*

*'I didn't know there would be tiers or anything like that.'*

*'Uhm I think it was okay, but I feel it was too general, and on the surface. Uhm I kind of feel they need to have something that is more in depth, like especially, there's a couple of tiers, it needs to be more something in depth. And what each tier is gonna entail.'*

*'When I met the dietitian, literally I felt like she didn't give me any information on what might eating would be like after surgery. The only way I kind of knew those things was going to those monthly meeting like I was speaking to other people that been there five years out, year out, two years out, of surgery. Uhm so... like when I actually had the surgery, I felt*

*completely lost that I didn't know what to do, what to eat, at that point I hadn't seen the dietitian in four years... ehm so I was like, 'what am I to do that only the thing I know I have to do is this liquid diet... ehm before I had the surgery and I know in the first couple of weeks I would have to do the liquid diet, but they didn't, they don't give enough information, well in my case, they don't give enough information on what kind of foods you're going... they expect you to eat, what if there is anything you can never eat. And there is medication you can no longer take. I only learned there is medication I can no longer take through going to that meeting. If I had never gone to that meeting, I wouldn't have known.'*

*'No, because even when you try and like Google it all, YouTube it, there is not a lot of English people that give their like experience on how long it took or anything like that. And at the time, I wasn't on Instagram so I didn't know there was a bariatric community for Instagram, so I didn't know what to expect, I just knew the American version.'*

*[Pause] I think they need to give more information... uhm especially about the stages and what you can eat, and like for instance, I don't eat red meat, and uhm... I eat chicken and fish... and... so... because of the surgery you need to eat high amount of protein, so it's hard for me to get into that high amount of protein if I don't eat red meat, and I don't eat eggs, and I don't eat a lot of those things that are high protein, and they didn't know these things until after the surgery, then I went to that monthly meeting, and then they're like 'oh you don't eat that, oh you don't eat that', whereas you should know this as a dietitian before I've had the surgery and work out something that can help me. I: Yeah. And what about their role in giving you information about the evaluation itself, rather than the effects of the surgery... what do you think of their role in relation to that specifically? P3: I think that they need to have like a booklet or something, or even if they did like a video, and it's on their public page, even if its private or NHS and it's on their page to explain each tier and what they expect of the patient, so people aren't in the dark, and they don't know what the next steps are and what is going to happen after surgery... uhm like I didn't know that there would be an objection that I would be expected to take for 2 weeks straight, until I had surgery.'*

*'I was really conflicted because when I saw the dietitian like I said to you, 'you only lose X amount of weight, you'll never lose more than that', and then like I said watching the US programme, I was like, 'but this person weighs waay more than me, they weigh 600 pounds, and they've lost twice my body weight', so it was really like confused, and then going to monthly group meetings, then that dietitian and the nurse that was there saying, 'well actually you can lose as much weight as you want to, as long as you're exercising within that first year', but then... I'm like, 'well that doesn't make any sense' cuz the other dietitian said something completely different.'*

#### Rachel (11 references)

*'Had they, they should... I think they should've said to me a little bit, 'you're not gotta get your operation straight away, you qualify, but you have to go through this process because we need to see that you're committed, how you are psychologically'.'*

*'It was just in my head cuz they didn't tell me. I think initially had they explained a little bit more the actual process... a lot of people that I met were cross, the same as me.'*

*'I didn't get much from the GP, but I felt that the Hillsdale gave a lot of information. They did. But you see so many different people... I think if you did seen like the one person initially and they would've said, 'look this is a process that you're gonna go through, its gonna take at least a year, you've got to prove to us that you could lose weight, must lose your 2 stones first, its gonna take this length of time and you've got to start going to the gym', if that would've told me initially...'*

*'I didn't understand... it was only as I was going through the process that I understood the reasoning behind it all. Initially, I didn't understand why they were delaying me.'*

*'I didn't expect as much as I got to be honest. I ehm, I didn't expect to get so much information, like meetings about pre-op, and after the op, so I could be, once I got to that stage, I was mentally much more prepared and ready for my operation'*

*'I think if they would've been a bit more specific in the beginning, uhm it would be better for me personally. If they would have just said, 'you're not gonna get your operation for at least a year, you're gonna have to do this, this and this first... that would have been better for me. Maybe some people might've react differently to that information, and it is better to feed them in little class, but for me, I think I would've got less cross with the whole thing had I'd been told in the beginning that this is what's going to happened and why.'*

*'Well, as I said, I was cross about it umm I think if I'd been explained to a little more in the beginning... what it was gonna entail, it would been better for me personally'*

*'I didn't mind. There was more to it than I was expecting. And for me, personally, I would have liked to have known... what was... [pause]'*

*'Better as I've gone through further. I think I would've coped further in the beginning, as I keep saying, if I'd have been given, almost been given a schedule. That's how I like to, you know, 'this is whats gonna happen in the next year' and I could be ticking my boxes off and I've got this far now, and I'm gonna get this further. Uhmm I was working blind I didn't know any of that. If I would've know that... you know you're gonna be given your date, and you're gonna just be on your liquid diet for two weeks, and then you're gonna go in... for your op, uhm...I would have been a bit more prepared for that. I found all that a little bit shocking [laughing].'*

*'Just this... advanced knowledge would've helped me personally.'*

*'I would've liked to... in my first appointment, when they do that initial assessment and take the bloods and everything, if they could've given me some sort of schedule or timeline as to what the process entailed, or what I would be going through beforehand... it would have made it better for me.'*

#### Praise & criticism of service

#### George (9 references)

*'She was fantastic, she has sadly since retired but she, she was fantastic she...'*

*'She also kind of reassured me that I would meet dietitians, the psychiatrist.'  
'the nurse coordinator was always at the end of the phone.'*

*'I think that the professionals at Wallace's, I can't fault them.'*

*'I was just going to say that's now, I mean I feel like I owe lot to Wallace because obviously what they've given me'*

*'so by giving something back, I make an effort to go to the support groups... and cuz I also teach Zumba so I do that at the support groups as well... to kind of show them and to say thank you to Wallace's cuz I appreciate what they've done for me'*

*'I've met the professionals, particular at Wallace's, once you met them you do then feel very relaxed...'*

*'I don't want to slate Wallace's because they are great'*

*'I also think having a nurse coordinator because she was at the end of the phone. I do think now that they've not got that position there, things have slipped slightly. For example, post-surgery she used to come and see you on the ward... and if you kind of... all the information you needed... ehm well she left just before I had my surgery.'*

### Holly (16 references)

*'Yeah, the team at Wallace's were... uhm unhelpful, uncooperative, difficult and... frankly shouldn't be mostly in their jobs.'*

*'their departmental secretary is actually quite unhelpful.'*

*'Umm from the Wallace' team, they would just say, 'oh we need uhm to do a reversal, make a change, but we don't know why' and I kept saying, 'What's wrong with me? Why can I not eat or drink after this? I could before'...umm and they were just umm dismissive and hoping I'd either get better or go away.'*

*'Yeah, my GP, as many GPs, knew absolutely nothing about bariatric surgery. So, she was happy to be guided on the research I've done.'*

*'Yes, the psycho thing umm... I have less than no...umm opinion of them. Sorry about you being... [laughs].'*

*'And the lady that I had to see, to start with, I started all this privately, she was a complete shyster'*

*'the dietitian, I have an excellent one at Wallace's and he is very... skilled in basing his... opinions at every single price level. I am Waitrose...ehm under the market, so he will give me Waitrose recommendations, and he has never [emphasised] given me the last word, whatever is I said I can't do, he's always come up with another suggestion for you to try, which I have done. Uhm I'm very happy to listen to lots of different dietitians' uhm opinions so if I had been sent to the one in Location 1, I would have taken them quite seriously and listened, because without... it's a... defined area of nutrition, its actually lots of different bits, and I'm happy to listen to other opinions.'*

*'Yes, I would listen to every dietitian's opinion.'*

*'I have a high opinion of the dieticians and it's a such a huge area of different types of food, textures and suggestions from all over the world that I would always, if I had gone to seeing the dietician in Location 1, I would have given them a very serious listening to.'*

*'I... didn't agree. I didn't agree with good reasons...and I still don't know why the other one would've be better... and cuz lost I've faith in that surgeon.'*

*'the psychiatrist, I just have a general opinion which I've probably had of them forever that I... don't think they're there for you, and I... uhm am hard with them then.'*

*'No, initially, I actually refused to go and see this... psycho-woman or she was psycho actually... Uhm... just because I thought it was a waste of my time. I won't be let anything up.'*

*'Uhm the... surgeon, the first surgeon that I have, he was a useless doctor'*

*'You need practical help from all the departmental nurses, to find out what is actually going to happen... because...uhm, in many instances I've heard they've met the surgeon just before... and they've never seen them again, they're just ward doctors after that, they never see the surgeon again. And the surgeon is just a facilitator for getting the keyhole surgery done. The departmental nurses, and in Wallace's case, one of the dietitians, they are actually leading the information process.'*

*'I don't like some of these psychologists one, the questions they try to get me in for, for how I would feel if I could eat again.'*

*'I also have an underlying medical condition which unfortunately the head of department at Wallace's was too incompetent to work out...'*

### Sabina (4 references)

*'uhm and then told me how much weight she expected me to lose, and kind of told, like, if I said to her I want to lose this amount of weight or I want to be this dress size, she was saying, 'no you would never get there'.'*

*'Well... I kind of feel the dietitian, she wasn't sympathetic... and... and... like I said, she kept telling me, 'you're not going to meet this goal' and 'you'll never get there' and so there is something in my notes that says 'this patient thinks that she will get to a size, uhm UK dress size 10, but I've explained to her that this is unrealistic' and then, that went to the surgeon, and then when it got to the psychiatrist, also was like, with her. So, she had discussed it with me as well, saying 'do you still think that you're going to get to a size 10, this is unrealistic, that you think you're gonna get to size 10'.'*

*'so I don't know I feel like, as a service they need to be more... sympathetic and they need to like have... someone to like support us.'*

*'Yes. But she was wrong because I've lost more than that! So [laughs].'*

### Rachel (3 references)

*'Well I think my role, is why I go to the support group, is to help others.'*

*'No, I thought the support was pretty good actually, in my particular case. I didn't feel that I have been left or had to cope with anything on my own. The staff were all very lovely, they always said, 'if you have a problem, give us a call', you know...'*

*'Overall... I felt that I'd got a lot of input and attention. I felt that... the staff listened to me... they were sometimes had to be patient with me. If I wanted to talk for a long time about something, they never made me feel that your time is up, and we have to leave. Seeing the surgeon, my daughter came with me cuz they didn't, my family didn't want me to have this operation. I said my next surgeon appointment... and you come with, see what's involved. My daughter had a lot of questions, we must've been there 2 hours. Not one time did she say or not answer our questions. I felt that I'd got really excellent input from the Hillsdale, and from the staff that I met when I was there.'*

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