

DOCTORAL PORTFOLIO IN COUNSELLING PSYCHOLOGY

by

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DECLARATION

The research dossier or any part thereof has not previously been presented in any form to the University or to any other body whether for the purposes of assessment, publication or for any other purpose (unless otherwise indicated). With the exception of any express acknowledgments, references and/or bibliographies cited in the work, I confirm that the intellectual content of the work is the result of my own efforts and of no other person.

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All work throughout this portfolio has been appropriately anonymised and all identifiable information removed, so no participant can be identified.

Preface

Introduction to the Portfolio

Preface: An Introduction to the Portfolio

This portfolio encompasses a selection of work which has been completed for Wolverhampton University's Practitioner Doctorate in Counselling Psychology. Three dossiers, the Academic Dossier, a Therapeutic Dossier and a Research Dossier are included in the portfolio. The Academic Dossier consists of two essays, the first being submitted for the Psychodynamic module and the latter for the Working with Couples module. Within the Therapeutic Dossier I have included two additional essays. The professional issues essay is reflective of my continuing professional development and the supervised practice essay provides details of my placements over the last three years. The Research Dossier contains the literature review, research report and critical appraisal.

A confidential attachment has been submitted separately to preclude it from possible public dissemination. Therein lie personal journal summaries, a client study, process report and feedback sheets from the assignments contained within the portfolio. In addition to the aforementioned I have appended all the annual research reports and raw data from the study, including interview transcripts.

Throughout all the work contained in the portfolio and confidential attachment, pseudonyms have been adopted or the data coded to protect participant anonymity. This in accordance with the British Psychological Society (BPS) and the Health and Care Professions Council (HCPC) code and regulations regarding client and research participants' confidentiality.

Over the last five years I have change both personally and professionally as I have progressed though the course but also in the two years since finishing the training element as I purely focused on completing my research. I had two periods of leave whilst completing the course as I became a mother, twice. Therefore, with this in mind, I have referred to the cyclical nature of ones life as a metaphor to demonstrate my development, which I shall refer to at various points throughout.

Upon leaving university I felt lost for some time. My university experience was extremely positive, one which had extended into completing my masters. My masters not only ignited a passion for academic research but afforded me the opportunity to reflect on the next steps in my career. Upon leaving university I floundered for 18 months, picking up part time roles, volunteering for organisations, completing additional courses and applying for graduate schemes.

Eventually I was successful when applying for a role working with overweight children, developing and delivering evidenced based programmes. I enjoyed my work, quickly acknowledging that I was most passionate when working directly with the children, one to one, however I soon recognised that I could only take them so far with dietary and physical activity advice. Many of the children had complex emotional relationships with their food and self esteem issues which were a result of their increasing weight. They required more specialised input for their long term health and well being. I felt out of my depth and realised that to work on more than a superficial level with these children I needed to retrain as a psychologist.

My first clinical role began approximately 18 months prior to starting the course. I was working part time as an assistant psychologist in a weight management service for adults. As a baby depends on its mother I was in need of nurturing and support as being dependent upon my supervisor he advised me and directed my learning. Up to this point I had no clinical experience and it was only after having spent time working in mental health services did I understand why I found working in this specialised service such a daunting experience. The service operates with different boundaries and methods of working to main stream mental health services which required a great deal of acclimatisation.

Over 12 months I observed my supervisor, completing my certificate in counselling and an introductory course to Cognitive Behavioural Therapy (CBT). My supervisor came from a CBT background (Beck, 1979); therefore my initial and only method of working was CBT, with counselling skills. Six months prior to starting the course I secured a second clinical placement. This was in a primary care team working as a mental health worker. In this role my remit was much smaller, due to the size of the team and differing makeup of the professionals around me I secured supervision from a counselling psychologist. I immediately felt more confident and settled into my role. I also had nearly a year's clinical experience to draw upon.

After my first year completing the Doctorate course I developed into a 'toddler', steadily building the foundations for my future. My confidence was growing, I felt continually supported through skills practices and lectures. I was constantly receiving feedback from my fellow trainees along with the support of two clinical supervisors from my work placements. In the first year I particularly enjoyed the focus on Gestalt therapy (Perls, 1969) as part of the humanistic module. This therapy was completely new to me and I found some useful tools to use in the sessions with my clients. I regularly use the 'empty chair' technique with my patients in the weight management service as they regularly refer to parts of themselves during our sessions.

Included in the Academic Dossier are two essays, one completed during the second year as part of the Psychodynamic module. This module was one I found to be most difficult in terms of the reflective work undertaken. There were ample opportunities during the lectures for self reflection with opportunity to talk about difficult or strong feeling which arose out of sessions with our clients. I found many of the lectures thought provoking and the main essay of the module extremely enlightening as following this module I found myself more aware of the transference and counter transference. I reflected, acknowledging any feelings which arose within me during therapy. It was my awareness of how important this process was which led me to acquire another external supervisor who enabled me to reflect on these feelings to a greater extent than the supervisor within my work environment.

The second essay is from the module I enjoyed most, the working with couple's module. Often in the weight management setting I am working with more than an individual person, and clients will frequently bring partners or other family members into the first session with them. This area was completely new to me and I enjoyed the assessment which was a simulated couple's session. The feedback and learning from the module has been applied when I am working with more than one person in the room.

During my course I worked in mental health settings within primary care or secondary services, although my passion has always been working in weight management services. Early on into my second year I felt conflicted, contemplating if I should be increasing my range of clinical experiences or continue to specialise in weight management. After discussion with my supervisor who asked me about my intentions after the course I was confident in my decision to specialise. I continued to build on my hours in the weight management setting; spending more time observing my supervisor when conducting bariatric surgery assessments and securing an additional contract in this area during the final semester of my third year.

My experience of supervision has been varied. Early on into my training my relationship with my counselling psychologist supervisor felt very safe. I was able to open up and many thoughts and feelings which arose in the session with my clients were reflected upon, not just models of working and tools. Frequently after supervision I would reflect and work through anything which arose from supervision in my personal therapy sessions. I feel I have outgrown my supervision sessions with one of my supervisors. I have developed and changed throughout my training moving away from CBT as my main working model. My needs are not met in these supervision sessions, wishing to reflect deeper on my intra-psychic process. Unfortunately due to the structure of the service I am unable to access another supervisor

at present. Through my experience of different supervisors and my understanding of models of working within supervision I feel I have an understanding of what I need from supervision and how I would conduct my session if I were given the opportunity.

During my time training and since leaving the formal educational element of the course I have only worked with the National Health Service (NHS). I have been fortunate that the time I began working in the weight management service coincided with the service developing and expanding, rather than me joining an already established service our patient numbers have increased year upon year. Whilst starting in the service and completing my training I felt 'protected', my supervisor and I making sure I never had an excessive caseload. However I have always felt in a different position to my fellow trainees as when reflecting on difficulties acquiring the number of clinical hours for the year I would have obtained the annual requirement within months, often hitting two or three times the requirement over the year but never feeling pressure or that my caseload was unmanageable.

The impact of the austerity measures had significant impact on our service and other mental health services which had a profound effect on patients and members of staff alike. I felt the impact of these changes immediately upon returning from my second period of maternity, with the impact continuing to resonate throughout the

service. Upon my return my caseload was high, due to financial constraints during my maternity leave my replacement was only employed to work half my contractual hours. There was also a rising number of referrals with patients presenting with more complex needs. The success of the service has meant an increasing number of referrals however we remain constrained by our diminishing budget, a situation commonplace within many public sector organisations.

I am currently involved in developing a group based intervention for our service. I have many other ideas which will enable the service to meet its targets whilst not having a detrimental impact on patient experience. I am excited about the opportunities ahead working in my current service.

18 months ago I joined a network of psychologists who work in weight management settings. It has been a positive experience, enabling me to develop professionally, bringing back knowledge of different working practices back into my service. As a result of attending the meetings I feel my confidence in my own ability has grown. This feeling has grown as I have completed my research and examined in detail the consequences of my findings and applications to my clinical work. In particular when I gathered the journals for the literature review I read extensively with papers focusing on various pre operative variables and their relationship to weight loss as an outcome. I feel this knowledge has enabled me to more proficient

when assessing patients for surgery. I am more confident in the decisions I make. When conducting the qualitative aspect of my research I worked closely with a bariatric support group. I felt privileged being accepted into their group, attending their annual general meeting and various support groups. I feel having worked in this area for so long, understanding their terminology, meant I was more easily accepted and enabled me to gather quality interviews. Completing the research in this area has significantly impacted my working in this area.

Upon finishing the formal training of the course I am now a 'young adult'. This metaphor would be more appropriate if I had been qualified at this time, however I felt I had completed my training believing I would soon have the title Dr. Therefore I felt at this time some nervousness that I would soon no longer have the title 'in training' near my name, lacking confidence in myself. Two years later since completing the formal training of the course, this lack of confidence has disappeared and I now feel like an 'adult'. I feel frustrated at myself for the length of time it has taken for me to complete the research element of the course, (perhaps underestimating the exhaustion, difficulty and impact that two young children have had on the completion). I have felt more confidence in my clinical work for some time. I am excited about my future work and research in weight management and bariatric surgery. I am currently involved in numerous research projects and feel I have a

bright future in this area ahead of me. I have no regrets in specialising so early into my career.

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What is a psychologist's role within bariatric services?

Research Dossier

Abstract

The role of a psychologist within bariatric services is predominately focussed on the completion of preoperative psychological assessments (NICE, 2006; Ratcliffe et al, 2014). This role requires the psychologist to determine the suitability of the patient for surgery (Bauchowitz et al., 2005; Fabricatore et al., 2006; Sogg & Mori, 2004; UK Faculty of clinical health psychology; Psychologists in weight management network meeting, 2013), however no research to date has been able to reliably determine which variables could be associated with sub optimal weight loss (Sarwer, Wadden, & Fabricatore, 2005; Van Hout, Verschure, and van Heck, 2005; Wadden, Sarwer, Fabricatore, 2007).

The first part of this study examines the empirical evidence for a range of variables considered by professionals to be clear contraindications to surgery. The variables were collated from surveys conducted in America (Bauchowitz et al., 2005; Fabricatore et al., 2006). Due to conflicting evidence and various problems with the studies it is difficult for a clinician to draw any firm conclusions from the review. Therefore, an ideographic approach is suggested, which leads onto the second part of the researcher dossier.

The empirical chapter presents an interpretative phenomenological analysis (IPA) of interviews with 14 bariatric participants who were 12 months to three years post-operative to explore their experience of

surgery. This time frame was chosen to capture the participants after the 'honeymoon phase' when the participants have hit their weight plateau (Yale & Weiler, 1991; Brolin, 1992). The themes from the study were 'pre op' 'phases' weight maintenance' 'impact of the operation' and an overall psychological theme of 'locus of control'.

Support was a key area for the participants, they described the lack of support they felt from professionals and means of seeking support elsewhere. The themes also highlighted the psychological struggle the participants go through post operatively with eating, however, this is balanced with the positive changes in identity and their ability to engage with life, no longer impeded by their weight.

Recommendations from the study suggest the importance of psychologists being available to bariatric patients, in accordance with NICE guidance, and that all bariatric patients start their journey to surgery in a level three service (which is a weight management service with consists of a multi-disciplinary team) before being referred to the tier four surgical team. Finally weight loss prior to surgery is recommended, with an alternative method of achieving this than that presented in the recent British Obesity and Metabolic Surgery Society (2014) publication.

Chapter 1:

Literature Review

The path to bariatric surgery; when should it be delayed?

Introduction

Obesity defined as BMI > 30 Kg/m² (World Health Organisation, 2014) represents the most widespread threat to health and wellbeing in Europe (e.g. Department of Health, 2011). Obesity levels are such that amongst the adult population a person of healthy weight is now in the minority. England ranks amongst the most obese countries in Europe. In England 24% of men, 26% of women and around 16% of children aged between 2-15 years were obese. Additionally, 41% of men, 33% of women and 14% of children between 2-15 years were overweight (Statistics on obesity, physical activity and diet: England 2013).

Simply explained, obesity is caused by an imbalance between food consumed and energy expended. However, Foresight (2007) demonstrated the complexity of how this condition can arise through an obesity system map which highlights the multi factored web of biological and societal factors that expose human beings to risks for weight gain. Individual psychology was an integral component and was explained as a person's individual psychological drive for particular foods and consumption patterns (Foresight, 2007).

Obesity is associated with serious health problems including heart disease, hypercholesterolemia and type 2 diabetes, amongst others

(Allison, Fontaine, Manson, Stevens, & Van Itallie, 1999; Freedman, Ballard-Barbash, Doody & Linet 2006; National Audit Office, 2001; NHS Information Centre, 2011; Stevens, Cai, Pamuk, Williamson, Thun, & Wood, 1998). The far reaching effects of obesity include quality of life issues, such as the ability of an individual to maintain employment, consequences of social stigma, and psychological effects such as low self esteem and depression (Canadian Obesity Network, 2011; Department of Health, 2011; Puhl & Heuer, 2009). The direct cost to the NHS is estimated at £3.2 billion (Allander & Rayner, 2009), with a projected rise to £9.7 billion per annum by 2050 (Department of Health, 2011).

Treatment of Obesity

Treatment for this condition falls under a number of approaches. These include dietary changes such as meal replacement and very low calorie diets (VLCD), behavioural therapy, pharmacotherapy and surgery (Nammi, Koka, Chinnala, Boini, 2004). Of the many different approaches available, nutrition and physical activity advice is normally considered first line options; gold standard is a delivery through a multi disciplinary team which include some form of behavioural modification. Currently there is only one long term anti obesity drug recommended (NICE, 2006) which can produce weight loss between 5-10% as shown in clinical trials (Fujioka, 2002). However these lines of treatment are not considered effective in the long term in comparison to more invasive forms of treatment as

surgery. Karlsson, Taft, Rydén, Sjöström and Sullivan (2007) compared the conventional forms of treatment (physical activity and nutritional advice plus behavioural intervention) with surgery at various times points. At 6 months average total body weight loss in the convention group was 1.2% and the weight loss was regained after two years with total body weight increases of 1.6% recorded at four years. In comparison, those in the surgical group showed a total body weight loss of 25.3% after one year, regains were observed, but at 6 years there was a weight reduction of 16.9% total body weight.

There are different types of surgical procedure, malabsorptive, restrictive or a combination of both. Restrictive procedures reduce food intake by creating a narrow passage, from the upper part of the stomach to the lower part. Whereas malabsorptive procedures reduce the small intestine so fewer calories and nutrients are absorbed (Cobbold & Lord, 2012). Surgery is a popular choice as it is superior to achieving sustained weight loss in comparison to other approaches. Hartmann-Boyce, Johns, Jebb and Aveyard (2014) completed a systematic review of the effectiveness of behavioural weight management interventions. The pooled mean difference in weight loss at 12 months was -2.8kg (95% confidence interval [CI] -3.6 to -2.1, $P < 0.001$). In comparison, two years' post operatively, bariatric surgery patients lose around 60% of their excess weight (Bauchwald et al., 2004). Bariatric surgery is considered to produce superior weight loss in comparison to any other forms of treatment

for obesity and for individuals with a BMI over 50kg/m² bariatric surgery is considered to be the first line option (instead of drug treatments and lifestyle interventions: NICE, 2006).

Surgery is gaining recognition for the morbidly obese patients and professionals in the field, as a person could lose between 40-70% of excess weight, depending upon the surgical procedure. There is a failure to reach consensus on what constitutes a successful outcome from bariatric surgery; success is predominately metered on weight loss targets rather than quality of life outcomes (Brolin, Kenler, Gorman et al., 1989). On average, bariatric surgery patients lose approximately 25% of their excess body weight after one year (Bond, Phelan, Leahey, Hill, & Wing, 2008). A reduction in excess body weight by 50% or more is frequently used as a marker of success in the literature (Chesler, 2012; Livhits et al., 2010). Outcome data shows between 20-30% of patients do not lose as much weight as expected or regain weight within two years of surgery (Herpertz et al., 2004; Hsu et al., 1998; Kalarchian et al., 2008; Kinzl et al., 2006).

Is it possible to predict a successful outcome?

The relationship between preoperative psychological, psychiatric and behavioural variables and post-operative outcomes has been frequently explored in bariatric surgery research (Sarwer, Wadden, & Fabricatore, 2005; Van Hout, Verschure, and van Heck, 2005;

Wadden, Sarwer, Fabricatore, 2007). These papers have broadly concluded that neither researchers nor clinicians are able to reliably predict which patients will have suboptimal weight loss or post operative regain. A systematic review was conducted in 2004 (Herpertz, Kielmann, Wolf, Hebebrand, & Senf, 2004) with the objective to review psychological and psychosocial predictors of weight loss and mental health after surgery. In accordance with the other systematic studies, the data presented an inconsistent picture. However they argued that obesity associated psychological distress (i.e. low self esteem, depression and anxiety, and social phobia resulting in social isolation) probably better predicts more post surgical weight loss, and the severity of the emotional problems not their presence or absence might be a better predictor of weight loss.

A more recent systematic review has tried to explain the relationship between preoperative factors and post operative weight loss. Livhits et al. (2012) reviewed 115 papers examining factors including binge eating, mandatory preoperative weight loss, depression and sexual abuse. Livhits classified the predictors as either offering 'suggestive evidence' (if 7 or more, or over 50% of papers reported a consistent association in the same direction between the predictor and outcome) or unclear/ no evidence.

Mandatory preoperative weight loss was positively associated with post surgery weight loss and was classified as 'suggestive evidence'

by Livhits et al. (2012). Factors which had a negative association were preoperative BMI, super obesity and personality disorders. In accordance with the earlier reviews Livhits et al. (2012) concluded that further studies are necessary to investigate the likelihood of preoperative factors predicting a clinically meaningful difference in weight loss after bariatric surgery.

Psychological Assessment

In the UK, specialist weight management services are tiered with non-surgical interventions being delivered in tier three, and surgical interventions being delivered in tier four. Mental health professionals are frequently asked to complete preoperative psychological evaluations to assess the candidate for surgery, to determine if the candidate will be successful post-operatively. The assessment for surgery predominately takes place in tier four services in the form of a one hour assessment, after which the psychologists recommends to the bariatric team whether the patient progresses to bariatric surgery, or is deferred (this could be to tier three services or community mental health teams). However, psychological assessments are considered unstructured and unsystematic in the UK and internationally (Bauchowitz et al., 2005; Fabricatore et al., 2006; Sogg & Mori, 2004; UK Faculty of clinical health psychology; Psychologists in weight management network meeting, 2013). Until recently, there were no policies to direct who may or may not be an appropriate candidate for surgery. In the last 6 months guidance has

been published which suggests that bariatric surgery might be inappropriate for patients who have a severe learning disability, active uncontrolled psychosis, severe personality disorder (British Obesity and Metabolic Surgery Society: BOMSS, 2014).

Purpose of the review:

There has been an abundance of research searching for an association between a pre surgical factor(s) and post operative success/failure with little success. Despite a lack of evidence, psychologists are still being employed to carry out the pre surgical assessment for bariatric surgery patients and decide which patients can be referred for surgery as they are considered to be 'good candidates', whereas other patients are referred on to receive additional treatment prior to surgery.

Two surveys (Bauchowitz et al., 2005; Fabricatore et al., 2006) completed in the United States (US) collated information about which professional practitioner conducts the psychological assessment, and the method and assessments tools used. Professionals were also asked what they consider to be a clear contraindication to surgery (Fabricatore et al., 2006) or a definite, possible or no contraindication for surgery (Bauchowitz et al., 2005). In both papers a table was provided which ranked the percentage of practitioners endorsing each of the factors, variables or characteristics, considered to be a contraindication. Fabricatore et al. (2006) further inquired about the

percentage of patients who had their surgery postponed (until specific issues were address or resolved) which occurred for nearly a quarter of surgery candidates. Younger mental health professionals with fewer years of experience were more likely to recommend surgery be postponed than the older practitioners with more years of experience. As a result of these surveys the researchers asked 'is it ethical to recommend against surgery in the absence of data based contraindications?' (Fabricatore et al., 2006. p. 573).

There were over 30 different factors across both surveys; the psychological factors (and associated factors) which scored highly across both papers have been reproduced in Table 1.

Table 1. Psychological/Mental health factors common across both papers (percentage in brackets refers to the number of professionals in each study who believed this factor/variable was a contraindication to surgery).

Fabricatore et al. (2006)		Bauchowitz et al. (2005)			
Clear contraindication (%)		Definite Contraindication (%)		Possible Contraindication (%)	
Substance use/abuse/dependence	44.3	Current illicit drug use	88.9	History of chronic illicit drug use within the past 5 years	65.4
Addictive behaviour (e.g. smoking, 'food addiction')	3.1	Current heavy drinking	77.8	Frequent social drinking	61.7
Eating disorders	41.8	Active binge eating disorder mainly considered a possible contraindication	48.1	History of binge eating disorder	72.8
Depression	25.8	Current symptoms of depression	53.1	History of depressive disorder	54.3
History of trauma/abuse	5.2			History of severe sexual abuse	67.9

Research Question:

Is there empirical evidence to support professional's views of there being clear contraindications for bariatric surgery?

Aim of present review

This paper will evaluate the empirical evidence of common factors that mental health professionals and psychologists in weight management services in the US (Bauchowitz et al., 2005; Fabricatore et al., 2006) describe as clear contraindications for surgery. These factors are listed in table 1.

For the remainder of the paper, each factor (as presented in the table) will be reviewed in turn with the aim of evaluating the empirical evidence to understand the relationship between the presence of this factor in the pre surgery psychological assessment and its impact on post surgery weight loss. An additional factor, pre surgery weight loss, has also been included in this review as many bariatric services in the UK stipulate that prior to surgery, patients lose a given amount of weight before being referred (UK Faculty of clinical health psychology; Psychologists in weight management network meeting, 2013).

Search strategy and inclusion criteria

It has been outside the scope of this paper to complete a systematic search for each of the contraindications proposed to impact on success of bariatric surgery, however best practices for systematic searches have been used to the greatest extent possible (Higgins &

Green, 2011; Petticrew & Roberts, 2006). The inclusion criterion for the search was any study conducted in the last twenty years (1992-2012) which completed a pre surgical assessment of the chosen variables (binge eating disorder, current and historical depression, weight loss prior to surgery, substance abuse, sexual abuse) and reported on post operative weight loss (preferably percentage excess weight loss, but also change in BMI).

A systematic search of electronic databases was conducted, including MEDLINE, PsycINFO and EMBASE. The following search terms were applied relating to surgery: "obesity surgery" or "weight loss surgery" or "bariatric surgery" or "gastric band" or "gastric bypass" or "sleeve gastrectomy" or "gastric sleeve" or "laparoscopic band" or "lap band". These were search in conjunction with terms relating to specific contraindications. For example the search terms for depression were: "depression" or "depressive disorder" or "depressive disorder major" or "depression, chemical" or "bipolar disorder" or "seasonal affective disorders". A search was carried out for each for the factors i.e. binge eating disorder, preoperative weight loss, sexual abuse and substance abuse. Several obesity related journals were hand searched for articles which fitted the inclusion criteria.

The number of papers published in each section varies considerably, but all available data have been included rather than exclude any studies. However, the papers which have reported data after the

'honeymoon period' have received greater attention. The 'honeymoon period' is an industry term which describes the six to twelve months post surgery; a time when weight loss is the most dramatic (Bocchieri-Ricciardi et al., 2006) up to eighteen to twenty-four months post surgery when weight loss has significantly slowed down or reached a plateau, when problems might emerge (Hsu et al., 1997; Powers et al., 1999).

Substance use

Clinical implications of theories

The label 'food addict' is gaining increasing attention in the literature (e.g., Volkow et al., 2013). The application of the addiction model to obesity has been applied in a number of ways, namely the fact that certain foods, such as engineered foods (those containing high sugar, fat and salt) are hyperpalatable and the impact on the brain is similar to other addictive substances. Volkow et al. (2013) explored the neurobiological parallels between obesity and addiction. They propose a 'position that recognises the fact that these two diseases share neurobiological processes that when disrupted, can result in compulsive consumption and loss of control' (pp. 14). However, there is disagreement in the literature about how well the addiction model links to obesity as argued while there is much evidence in animal studies, there is a lack of convincing evidence from human neuroscientific research (Ziauddeen et al., 2012)

With reference to table 1, the presence of substance abuse and current illicit drug use in pre-surgery assessment were the factors evaluated as the highest in terms of presenting a clear and definite contraindication to surgery across both surveys (Bauchowitz et al., 2005; Fabricatore et al., 2006). Over 65% of professionals stated that a history of chronic illicit drug use within the past five years was a definite contraindication, current heavy alcohol use was also considered a definite contraindication in over 77% of professionals whereas frequent social drinking was high as a possible contraindication (61.7%) (Bauchowitz et al., 2005). Addictive behaviours were considered a low risk, only 3.1% of professionals stated it as being a clear contraindication (Fabricatore et al., 2006). However, a greater percentage were concerned with a prior history or current use of drugs and alcohol; this links research on addiction transfer in post bariatric patients.

Post bariatric surgery patients are over represented in substance abuse treatment programmes (Saules, Wiedermann, Ivezaj et al., 2010). Two recent studies have both shown two years after surgery there have been significant increases in frequency of substance use (Conason et al., 2013; King et al., 2012). Interestingly, both studies found that patients who underwent a gastric bypass were at increased risk for alcohol use post surgery. These studies suggest that a significant number of bariatric surgery patients start drinking alcohol or taking drugs post surgery which can be damaging in a

number of ways. Alcohol consumption for bariatric surgery patients is generally not recommended after the operation as there is reported increased sensitivity to alcohol and potentially dangerous consequences to the liver and ulcers. Also it is counterproductive due to the 'empty calories' in alcohol (Klockhoff, Naslund & Jones, 2002).

Empirical Studies

When reviewing the literature there are only a small number of empirical studies that have examined the effects of pre-surgery substance abuse on surgery outcomes, in particular weight loss. Clark et al. (2003) reviewed patient charts two years after gastric bypass operations and found a significant difference between percentage excess weight loss of those patients who had a documented history of substance abuse and those who did not (79 ± 16 vs 67 ± 16 ; $p < 0.05$ respectively). However attrition rate in this study was high; fifty-seven percent of patients' data were available at two years, this represented 10 patients with a history for substance abuse compared with 67 of patients who reported no history (3 were reported unknown). Additionally, weight was self reported, which introduces the possibility of error or bias (Polivy, Herman, Trottier & Sidhu, 2014).

Heinburg and Ashton (2010) assessed 413 bariatric patients at baseline, one, three, six, nine and twelve months post surgery. Nearly 11% had either a self reported diagnosis and/or a medical

record of alcohol or substance abuse and/or dependence, using DSM-IV (APA, 1994) criteria for diagnosis at baseline. All patients who had a pre surgical identified risk factor, which included a history of substance/alcohol addiction and other factors such as difficulty quitting smoking, frequent social alcohol use and family history of addiction had to attend a pre-surgery group session. The intention for them attending the group session was to inform them of the risks of substance abuse and to increase relapse prevention. At 12 months post surgery a significant difference was found between the substance abuse patients and non substance abuse patients for percentage excess weight loss ($F, 1, 92) = 5.91; p < 0.02$). Once again, the patients with a history of substance abuse had a greater percentage excess weight loss than those patients without a history of substance abuse, results in accordance with the study above which does not support the professionals' opinion of viewing a history of substance abuse as a contraindication (Bauchowitz et al., 2005; Fabricatore et al., 2006). However, similar to the above study, the attrition level was again high: 29% attended 12 month follow up. Additionally the data from patients had different operations, however the data was collapsed (n=285 gastric bypass; n=74 gastric banding; n=54 sleeve gastrectomy) which has implications when comparing the findings to other studies, as percentage weight loss differs substantially depending upon the type of operation, especially during the first year post operatively (Tice et al., 2008).

Summary

There have only been two studies that have looked at a pre surgical history of substance abuse and post-surgery weight loss. Both had a number of methodological problems making it difficult to form any conclusions from the data.

One clinical implication of these findings, which could inform assessments is the disproportionate number of post bariatric surgery patients seeking treatment for other addictions, particularly alcohol. Ivezaj et al. (2012) interviewed 24 post bariatric surgery patients. Two themes of particular interest which emerged were addiction substitution and faster onset or stronger effects from substances. 83% of the sample discussed addiction substitution, which was referred to as replacing intake of certain foods or overeating behaviour with intake of substances more traditionally regarded as being "addictive" (pg 1312). The second theme, faster onset or stronger effects from substances was referred to by 58% of the sample as being a contributor to the development of their substance use disorder. From the quotes provided, which were all related to alcohol, it is evident that the participants now experience a greater 'high' from alcohol. Indeed there are a number of studies which have demonstrated there is a different physiological effect in pre to post bariatric surgery patients with regards to alcohol consumption

(Woodard et al., 2011; Klockhoff, Naslund, Jones, 2002; Hagedorn, Encarnacion, Brat, Morton, 2007).

An important factor to note for clinicians when assessing patients for surgery who do have a history of substance abuse is the relationship reported between alcohol abuse and gastric bypass procedure; a factor to be considered when selecting a procedure. One thing abundantly clear is that our understanding of 'food addiction' and how it might transfer to other addictions after surgery is really in its infancy and needs more attention.

Binge Eating Disorder

Clinical implications of theories

Binge eating disorder (BED) is common within obese patients and within those individuals requesting bariatric surgery prevalence is reported ranging from as low as 2% to nearly 50% of patients, although criteria for diagnosis and the instrument used to diagnose will cause this figure to differ significantly (Dymek-Valentine et al., 2004; Niego et al., 2007; Saunders, 1999). BED obese individuals tend to have higher body mass (Kolotkin et al., 2004; Pike et al., 2001) and higher rates of Axis I and Axis II mental disorders (Telch & Stice, 1998; Wilfley et al., 2000), poorer health outcomes and compare less favourably in terms of psychological outcomes, including quality of life (Perez & Warren, 2012) and distress (Kolotkin et al., 2004). Research indicates that obese individuals with BED

respond to treatment with varying patterns of success (Wonderlich et al., 2009).

With reference to table 1, over 40% professionals from the surveys viewed an eating disorder as a clear contraindication to surgery; over 70% viewed a history of binge eating as a possible contraindication. These high percentages suggest that the professionals are concerned a bariatric patient will continue to binge eat post surgery, which can cause significant complications. Depending upon the type of bariatric procedure, if they still try to consume large amount of food post surgery they could cause significant damage to their new pouch. Difficulties include the individual vomiting frequently, the pouch could stretch and specifically for gastric band patients overeating could cause band slippage. Ultimately this behaviour will lead to poor weight loss and psychological distress (Busetto et al., 2005; Poole et al., 2004).

Empirical Evidence

There were no studies found which reported on a historical diagnosis of binge eating pre surgery and post operative weight loss. Due to the high number of studies which have looked at the relationship between active binge eating status pre surgery and post-operative weight loss, the papers have been organised into three subsections; those studies which show a positive association (a diagnosis of binge eating pre surgery results in greater weight loss post surgery when

compared to those without a diagnosis of binge eating pre surgery), a negative association and no association. Due to the number of papers in this section, a small summary has been provided at the end of each subsection.

Positive association

There were three papers which found a diagnosis of binge eating before surgery was related to increased weight loss in comparison to the non binge eating group. Using the Binge Eating Scale (BES), Boan et al. (2004) found that gastric bypass patients with a score of ≤ 15 pre surgery achieved a mean weight loss of 24.9% at six months whereas a score greater than 15 (indicating moderate or severe binge eating prior to surgery) resulted in a greater mean weight loss of 28.1% ($p=0.03$; SD scores were not reported).

The two other studies which found a positive relationship between prior binge eating, and weight loss post surgery were conducted over longer follow up times. Latner et al. (2004) assessed 65 gastric bypass patients via a semi structured interview for pre surgery binge eating. At an average of 16.4 months follow up, a diagnosis of binge eating significantly predicted BMI loss ($\beta =0.26, p<0.01$) together with *baseline BMI* ($\beta=0.71,p<0.01$), *time since surgery* ($\beta =0.33, p<0.01$), *post surgery exercise* ($\beta=0.29,p<0.01$), and *pre-surgical binge eating* ($\beta=0.26, p<0.01$) ($\{R^2 =0.57,F(4,49)=14.77,p<0.001\}$

Unfortunately weight loss was expressed in BMI lost and excess BMI rather than percentage excess weight loss, which makes it difficult to compare to other studies. Kinzl and colleagues (2006) assessed 140 gastric band patients before surgery for binge eating disorder via a clinical interview and a questionnaire was sent out at follow up (average of 30 months post surgery, mean follow up 50 months; range 30-84 months). The participants were grouped into several different eating disorder categories, binge eating disorder (n=39), overeaters (n=29), atypical eating disorders (n=10) and no eating disorder (n=26). There was a statistically significant difference (p=0.030) in BMI lost in the eating disorder groups to the no eating disorder group with the atypical eating disorder group having the highest BMI loss (20.0kg.m²) and least in the no eating disorder group (13.4kg/m²).

The three studies reporting a positive association all have small sample sizes and the follow up time is either extremely short (Boan et al., 2004) or unclear as the range is high, if reported at all (Kinzl et al., 2006; Latner et al., 2004). Whilst it is encouraging that two of the studies determined binge eating diagnosis via clinical interview rather than questionnaire there are some discrepancies over how binge eating status is classified.

Negative Association

There are four prospective studies which have showed a preoperative diagnosis of binge eating as having a negative impact on post operative weight loss. Green et al. (2004) compared 33 binge eaters and 32 non binge eaters pre surgery and five to seven months post surgery (bypass). A two way ANOVA found a statistical difference [$F(1, 62) = 40, p < 0.05$] between percent excess weight loss between the two groups, the binge eating group lost a lower percentage of their excess weight loss than the non binge eating group. Although it is important to note that the participants in the binge eating group still lost over 40% excess weight. At six months post surgery Dymex et al. (2001) found a significant difference between binge eaters and non binge eaters [$t(2,19) = 2.9, p < .012$]. Pre surgery binge eaters lost 38.5% of their excess weight compared to pre surgery non binge eaters losing 53.9% excess weight (gastric bypass operation). However there were only 32 participants who enrolled in the study and the attrition rate was high; 37% participants were lost to follow up.

At a 5 year follow up Wölnerhanssen et al. (2008) found a negative relationship between a pre operative diagnosis of binge eating disorder and post operative weight loss. 380 gastric band patients were assessed via clinical interview pre operatively and were reassessed an average of 5 years (1.5-9.4 years) post operatively. In accordance with complications cited in the literature (DeMaria et al., 2001; Gustavsson, 2002; Martikainen et al., 2004; Suter, 2001) 128

of the patients had their bands removed. Forty one percent of the 380 patients were classified with binge eating pre surgery. At follow up 252 participants were reassessed. In order to define predictors of outcome, a survival modelling approach was applied and a multivariable Cox proportional hazard model was used to calculate the hazards ratios for the influencing factors (i.e. age, sex initial BMI, eating disorders and co-morbidities). The results showed that a pre surgery diagnosis of binge eating was found to predict poor weight loss ($p < 0.0001$).

It would have been useful if the authors had reported what percentage of those patients who had a conversion to another procedure had a pre diagnosis of binge eating to further our understanding of the relationship between a pre surgery diagnosis of binge eating on post operative weight loss. However, as a result of their findings, a gastric band was no longer the primary operation offered to all patients. A band is only offered to patients who are under the age of forty, have a BMI lower than 45Kg/m^2 , no diagnosis of BED or report a regular intake of sweets.

The final study (Sallet et al., 2007) reported post operative weight loss results for gastric bypass patients at two time frames. Binge eating was diagnosed at baseline by clinical judgement through a semi structured psychiatric interview, classifying them into three subgroups. No binge eating, subclinical binge eating (fewer than 2

binge episodes per week) and binge eating disorder. At one year post operatively sub-threshold binge eaters (n=112) had a significantly lower percent excess BMI loss than non binge eaters (n=41), although there was no significant difference between non binge eaters and binge eating disorder group (n=44) at this time frame. At two years this trend continued, sub-threshold binge eaters (n=64) had a significantly lower percent excess BMI loss than non binge eaters (n=33) (p=0.003). This was also a significant difference between non binge eaters (n=33) and binge eating disorder group (n=34 (p=0.000), with non binge eaters having a lower percent excess BMI than the binge eating disorder group.

Four papers showed a pre surgery diagnosis of binge eating had a negative association on post operative weight loss. However, two had an extremely short follow up period (Dymex et al., 2001; Green et al., 2004). One of the studies had a longer time frame but low numbers at the 2 year period due to the attrition rate (Sallet et al., 2007). At an average of five years, the Wölnerhanssen et al. (2008) paper presented such convincing data the professionals changed their inclusion criteria for gastric banding. There was a low attrition rate; however the follow up times ranged from 1.5 years to 9.4 years. It might have been more fruitful had the participants been grouped into different follow up periods, unfortunately the authors do not provide a breakdown of this information but when comparing weight as an outcome the follow up period should be more concise. This study

does highlight the ongoing difficulties reported with gastric band operations in the literature in terms of high complication rates and conversions (DeMaria et al., 2001; Gustavsson, 2002; Martikainen et al., 2004; Suter, 2001).

No Association

Many studies reported no effect of pre operative binge eating status on post operative weight loss. The majority of studies published data 12 months post operatively or less. Kalarchian et al., 1999 at four months in gastric bypass patients; White et al., 2006 and Malone & Alger-Mayer, 2004 in gastric bypass patients around 12 months. Burgmer et al. (2005) also around 12 months but the procedure was a gastric band.

Two studies with considerable follow up period and/or high participant numbers are important to mention. Alger-Mayer et al. (2009) reported data on gastric bypass patients up to six years post operatively. 157 participants were enrolled on the study, of whom 37 were classified as having severe binge eating prior to surgery using the BES. There was no difference in weight loss, in any way reported, between those classified as severe binge eaters and the rest of the participants.

Busetto et al. (2005) followed 379 gastric band patients between 1996 and 1998 for at least 5 years follow up post surgery. Pre operatively, a diagnosis of binge eating disorder was determined

through a clinical interview, 130 were classified with binge eating and 249 without a diagnosis of binge eating disorder. At five year follow-up, percentage excess weight loss (%EWL) was not significantly different between the groups at any time. The percentage of patients who regained weight was also similar between the groups.

However, unlike the Wölnerhanssen et al. (2008) study, Busetto et al. (2005) published postoperative complication rates. The results showed that the frequency of gastric pouch and oesophageal dilation was significantly higher in binge eaters than in non binge eaters which suggest there might be an association between pre operative binge eating and post operative complications. However, this data is not comparable to other studies, as the participants concerned received an intervention prior to surgery, which may have had an effect on the measured outcomes.

The majority of papers which examined pre-operative diagnosis of Binge Eating disorder on post operative weight loss had a follow up period of 12 months or less. One of paper with long follow up; (Alger-Mayer et al., 2009) reported outcome data in various ways, making a comparison across studies easier, but is limited by the high attrition rate. Busetto et al. (2005) reported long term data again showing no difference between binge eaters and non binge eaters in those who lost more than fifty percent of their excess weight or between those who were defined as the weight gainers. However,

there did seem to be a difference in problems post surgery with a significantly higher percentage of patients with a pre diagnosis of binge eating having greater frequency of gastric pouch and oesophageal dilation post surgery.

Summary

All the empirical studies on binge eating presented here examined a pre surgical diagnosis of binge eating on post operative weight loss. No studies examined a historic diagnosis of binge eating disorder in relation to post operative weight loss (one study looked at lifetime prevalence however the participant numbers were small, therefore the authors decided to focus on current diagnosis; Burgmer et al., 2005). Due to the conflicting results, at present there is not sufficient evidence to support the exclusion of patients from bariatric surgery who have a pre surgical binge eating diagnosis. The main procedure reported in the studies was a gastric bypass in 9 out of the 13 studies. Of the four studies which reported outcomes for gastric band, one reported a positive association (Kinzl et al., 2006), two no association (Burgmer et al., 2005; Busetto et al., 2005) and one negative association (Wölnerhanssen et al., 2008). The data from the Wölnerhanssen et al. (2008) showing a pre surgical diagnosis of binge eating disorder having a negative impact on post operative weight loss meant the surgeons no longer offered a gastric band operation to those patients with a diagnosis of binge eating pre surgery.

Busetto et al. (2005) reported no significant difference in weight loss outcome between those patients with a pre surgical diagnosis of binge eating and those weight out on post operative weight loss. This was the only study which included a intervention pre surgery, which, could have had significant bearing on the outcome. Other studies (Ashton, Drerup, Windover & Heinburg, 2009) have shown a pre surgical four session Cognitive Behavioural Therapy (CBT) intervention programme for binge eating is effective in reducing the number of binges; however it would be useful to follow the patients post surgery to see if the intervention has an impact on post surgical outcomes, which this study did not do.

There were several problems with the studies, the most significant being lack of studies with follow up of over 12 months post –surgery, when publishing research in this area the ideal time should be at least two years, and methods to combat attrition rates should be encouraged. Secondly, many of the studies grouped the participants into various different categories based on their diagnosis of eating behaviour, (e.g. infrequent binge eaters, subclinical binge eaters, moderate binge eaters, severe binge eaters.) When the participants are separated out into different groups the numbers are vastly reduced, and this dilutes the evidence to evaluate the impact of this variable on post operative success, it also limits the comparison of findings between studies. The majority of the studies used the Binge

Eating Scale (BES) or clinical interviews; clinical interviews would be the gold standard for future research. Many of the studies (Boan et al., 2004, Burgmer et al., 2005; Dymek et al., 2001; Kalarchian et al 2008; Wölnerhanssen et al., 2008) looked at the impact of binge eating alongside other variables, which made it difficult to draw any firm conclusions. The studies which only examined binge eating provided an excellent level of detail in their results (Alger-Mayer et al., 2009; Busetto et al., 2005).

There are several factors to note. A number of papers reported no participants with a diagnosis of binge eating disorder post-surgery (Adimi et al., 1998, Boan et al., 2004; Latner et al., 2004, Powers et al., 1999). Conversely, several studies found that patients, who did not have a diagnosis of binge eating before surgery, had a diagnosis after surgery (Adami et al., 1998, Hsu et al., 1997; Lang et al., 2002). Saunders (2004) asked gastric bypass patients to complete questionnaires and attend clinical interviews before surgery, with the focus on assessing eating behaviours. The results found that 80% reported a loss of control over eating at an average of 6 month post surgery. They reported a regular pattern of 'grazing' (defined as small, subjective episodes of overeating) on average 3-5 times per week. Wood and Ogden (2012) assessed binge eating behaviour in patient's pre surgery and at three and six months post surgery. They found that a decrease in binge eating behaviour post surgery was a significant predictor of increased post surgery weight loss. Having

regard to this and with consideration to the aforementioned discrepancies in the literature, as they suggest, rather than assessing for binge eating status pre or post surgery, perhaps a change in binge eating behaviour is more pertinent. With reference to the Saunders (2004) study, the way eating behaviour is assessed post surgery should not only focus on binge eating disorder as 'grazing' behaviour is common in post surgery patients. However, longer time frames should be considered for future research.

It has been suggested that the diagnosis of binge eating is more complex in bariatric patients. Kalarchian et al. (2002) followed 52 non binge eating participants and 44 binge eating patients for at least two years but no more than 7 years after having a gastric bypass. Binge eating criteria was altered to cater for patients restricted capacity post surgery (removal of the 'large amount of food' in the definition of binge eating; Spitzer, 1993) to give a classification of binge eating. ANOVA results showed there was no significant difference in their decrease in BMI after the operation however when reporting weight change over the last 3 months, the binge eating group reported a gain of 4.6 pounds whereas the non binge eating group reported a weight loss of 7.5 pounds ($F, (1, 91)=18.1; p=0.0001$). This study might suggest binge eating patients report difficulties with weight fluctuation and difficulty controlling it.

Vomiting behaviour also featured heavily in the literature when examining binge eating behaviour, although the research so far does not provide any further understanding. Many of the studies showed an increase in vomiting behaviour post-surgery (Latner et al., 2004; Powers et al., 1999; Sabbioni et al., 2002). Sabbioni et al. (2002) found 66.7% of patients were vomiting two years after surgery, Powers et al. (1999) found that 33% of the patients were vomiting at least weekly and Latner et al. (2004) reported 60% of patients were involuntary vomiting post surgery. Vomiting post surgery will not be uncommon as patients adapt to their operation, as de Zwann et al. (2002) found that nearly 68% of the participants in their post op sample reported involuntary vomiting, and they found no association between the presence of BED and the presence of vomiting in the postoperative patients; 67.6% in the binge eating patients compared with 77.8% in the non binge eating patients reported problems with involuntary vomiting.

The above factors suggest binge eating status in bariatric surgery patients is a complex phenomenon. In order to increase our understanding of the relationship between a pre operative diagnosis of binge eating and post operative weight loss rather than incorporating this diagnosis with other factors, such as depression, anxiety etc; the studies should be examine this behaviour in greater depth, measuring binge eating status in conjunction with other factors listed above; change in binge eating status, vomiting

behaviour, and changes in weight fluctuate from lowest recorded weight. It would also be worth understanding why the individual is engaging in binge eating behaviour so interventions can be targeted appropriately. Of course, in order to do this and not to labour the point, ultimately studies need to be conducted over longer time frames.

Depression

Clinical implications of theories

The prevalence rates of depression in obese patients vary significantly across the studies reviewed; however depression is a consistently reported psychological problem in these patients (Stunkard & Wadden, 1992; van Hout, Oudheusden & van Heck, 2004). Specifically within bariatric surgery patients, a recent study found the prevalence of depression was 36%, depression is associated with a greater prevalence in female patients. Depressed patients had more co morbidities per patient and a greater likelihood of severe or complicated co-morbidities than patients without depression (Ali, Rasmussen, Monash and Fuller, 2009).

The use of food as a method of mood regulation is common, eating may be used to regulate emotions in place of more adaptive coping strategies (Geliebter & Aversa, 2003). Affect regulation theories describe this phenomenon as people eating more when they feel depressed as a way of attempting to alleviate or block the negative

emotions they feel (Hallings-Port, Waller, Watson & Scragg, 2006). Neuroscience has contributed significantly to understanding this phenomenon and has shown that hypofunctioning of dopamine-related reward systems in the brain is related to emotional eating (Volkow et al., 2003). However, stress-related eating is not effective as a coping strategy; as distress is not reported to be lowered during (Polivy et al., 1994) or after the eating episode (Polivy & Herman 1999), leaving the individual vulnerable to a chronic overeating cycle.

With reference to table 1, fifty three percent of professionals perceived current symptoms of depression as a definite, and 42% as a possible contraindication for surgery. 54% stated that a *history of a depressive disorder* was a possible contraindication to bariatric surgery (Bauchowitz et al., 2005).

Empirical Studies

Similar to the binge eating section, the results have been organised into those studies which show a positive association, negative association and neutral. Current diagnosis at pre surgery assessment is examined firstly followed by historic depression. One paper at the end of the section collapsed data from current and historic depression and it was not possible to separate the data. There is some overlap between the papers as some studies examined both factors in their study, however for clarity of summarising the findings, historic and current depression are presented under separate sections.

Current Diagnosis

Positive Association

One retrospective study found a positive association between current diagnosis at pre surgery assessment and post surgery weight loss. Averbukh et al. (2003) reviewed the charts of 47 gastric bypass patients who had complete data sets; they had completed the Beck Depression Inventory (BDI) (Beck, Ward, & Mendelson, 1961) during pre surgical evaluation and had attended follow up at one year. There was a positive association between excess weight lost with BDI score at baseline prior to surgery ($p=0.036$)

Negative Association

Three studies found a negative association between pre surgery depression and post surgery weight loss at 12 months using the BDI to assess depression symptoms. Brunault et al. (2012) found a negative relationship in 34 sleeve gastrectomy patients between percentage excess weight loss and depression (patients with higher depression scores pre operatively had lower percentage excess weight loss at 12 months post operatively). These results held when depression was assessed by the BDI, but not when assessed by the Symptom Checklist-90-Revised (Derogatis, 1977). Colles et al. (2008) also reported a negative relationship between BDI score at

baseline and percentage weight loss after 12 months ($r=-0.22$, $p=0.016$) however no means or standard deviation scores were presented which makes it difficult to interpret their findings. In this study 129 gastric band patients were asked to complete a number of different questionnaires pre surgery and 12 months post operatively which might have accounted for the lack of data presented for depression.

Legenbauer et al. (2011) took a baseline assessment for depression pre operatively in 154 patients. Follow up data were collected for 97 patients at four years. Reported pre-operative depression was significantly associated with poorer outcomes in terms of long term weight loss at four years. However, the number of patients who would have been included in the analysis was very small (7; 4.6%).

No Association

The majority of the studies found no relationship between current depression pre operatively and weight loss post operatively or no difference between post operative weight loss between the depression and non depression group. Black et al. (2003) assessed current depression through interview and found using a linear regression model there was no relationship between depression and change in BMI from baseline to 6 month follow up. Although caution is definitely needed in the interpretation of these data as there were

only 44 participants in the study and only 1 (2%) participant had a diagnosis of current depression.

There were several papers which looked at data 12 months post surgery data. Ma et al. (2006) used two questionnaires to assess for pre operative depression in 494 gastric bypass patients, 90% of patients were followed up for 12 months. A multivariate linear regression found no relationship between baseline depression and percentage excess weight loss ($p=0.562$) at one year.

de Zwaan et al. (2011) assessed diagnosis of depression through the German version of the Structured Clinical Interview for DSM-IV (First, Spitzer, Gibbon, & Williams, 2012). A mixed model analyses found preoperative current depressive disorders were not related to post operative weight loss. However there are two problems with this study when using weight loss as an outcome. First they combined the results for both band and gastric bypass patients when weight loss has shown to differ across the two operations (Tice et al., 2008) and also the follow up periods were large, between 6 to 12 months.

Dixon et al. (2003) in a prospective study assessed current depression through BDI in 487 gastric band patients. They found no relationship between preoperative score and percentage of excess weight loss at 1 or 2 years following surgery, the attrition rate was

high at two years follow up losing almost 50% of the starting numbers (1 year follow up on 373; two years follow up on 249).

An additional paper with longer follow up times was Alger-Mayer et al. (2009). In a prospective study 157 gastric bypass patients were assessed using the BDI. At follow up 12 months, two, three, four, five and six years' post operatively there was no significant difference ($P > 0.05$) between the depressed group (scoring more than 13 on the BDI at baseline) and non depressed group (those patients scoring less than 13 on the BDI). Unfortunately attrition rates increased significantly over the years.

Historical Depression

Positive relationship

No studies found a positive relationship of a historic diagnosis of depression and post operative weight loss.

Negative relationship

Legenbauer et al. (2011) was a prospective study which used an international diagnostic interview to assess for depression. Historic depression was identified pre operatively in 154 patients. At 4 years, data for 97 patients was acquired and a multiple imputation method was used to account for the missing data. The results showed a significant negative relationship between lifetime depression and long term weight loss after four years, those patients with a diagnosis of

historical depression at pre surgery assessment lost less weight than those without a diagnosis of historical depression. However, the number of patients included in the analysis was small; the number of patients diagnosed with a lifetime depressive disorder at baseline was 35 (23.2%).

No Association

Black et al. (2003) assessed historic depression through interviews and found using a linear regression model there was no relationship between depression and change in BMI from baseline to 6 month follow up. There were only 44 participants in the study of which 9 (20%) had a lifetime depression diagnosis.

de Zwaan et al. (2011) assessed for historic diagnosis of depression through the German version of the Structured Clinical Interview for DSM-IV. A mixed model analysis found preoperative lifetime depressive disorders were not related to post operative weight loss. Problems with this study are stated above.

Dixon et al. (2001) assessed 730 gastric band patients for historic depression, 430 patients were followed up at 12 months. At 12 months there was no significant difference in percentage excess weight loss between the groups classed as having a history of mental health (n=83) to the rest of the participants. There were several methodological problems; information was missing with regard to

how the data was gathered and questionnaires used. Attrition rate was high and a classification of depression was merged into the mental health group (76 out of 83 participants had a history of depression).

Current and Historic Depression

No association

Busetto et al. (2002) assessed historic and current depression via clinical multidisciplinary examination performed by psychologist on 260 gastric band patients. Three years after surgery the analysis was quantified according to different parameters; success was defined as excess weight loss at third year to be greater than 50% of initial excess weight. Failure was defined as excess weight loss <20% of the initial excess weight. A simple logistic regression was performed and relative risk ratios were calculated. Stepwise multiple logistic regression analysis was used to test predictive power of each characteristic. The only statistically significant predictors of success were preoperative age and BMI. Age less than 40 years and BMI less than 50 were significant successful predictors, depression along with other factors had no statistically significant predictive power on the success rate. However there were problems with this study, historic and current depression were not separated, also patients with severe psychiatric disease were excluded but patients with a history of past or current mild depression were included. However the authors did not state which type of psychometric questionnaire was used to

assess depression. Also, they did not state the number of patients excluded with severe psychiatric disease. Also patients with a history of depression were treated prior to their operation with brief strategic therapy, again making it difficult to compare these results to the other studies as the intervention may have had an impact on the outcome.

Summary

After reviewing the studies there has been no empirical evidence found for the exclusion of a patient from weight loss surgery due to a current or historic diagnosis of depression found in pre surgery assessment.

Depression, unlike some of the other factors considered to be a contraindication in this chapter does not feature in many studies as the central variable of importance. Only a small number of papers were investigating depression in its own right (Alverbuk et al., 2003; Dixon et al., 2003). As such a couple of the papers which reported the impact of either a current or historic diagnosis of depression on weight loss had small participant numbers (Black et al., 2003; Legenbauer et al., 2011). Additionally, many of the papers did not report on basic statistical information.

Dixon et al. (2003) highlighted the positive impact bariatric surgery can have on depression. In this study, 54% of the patients had

scores on the BDI over 16 or greater indicating severe symptoms of depression in the majority of patients. BDI scores reduced dramatically following surgery, (7.8 ± 6.5 year 1; 8.0 ± 8 year 2) supporting the notion that a reduction in obesity can have significant impact on mood (Markowitz et al., 2008).

History of Sexual Abuse

Clinical implications of theories

There has been a documented relationship between a history of sexual abuse and obesity as it has been postulated that individuals who have experienced some form of sexual abuse might use their physical appearance as a form of self protection (Gustafson et al., 2004; Hemmingsson, Johansson & Reynisdorttir, 2014; Wiederman, Sansone & Sansone, 1999). It is hypothesised that as a result of the operation the protective barriers will be reduced and the individual may feel they no longer have a reason to avoid intimate relationships or might experience more sexual advances, which they may find uncomfortable and could lead to psychological distress. This could cause the individual to sabotage the effects of the operation.

With reference to table 1, few professionals valued history of trauma/abuse as a clear contraindication (5.2%; Fabricatore et al., 2006) however, and perhaps due to a change in the wording, a history of severe sexual abuse was considered more frequently as a possible contraindication (67.9%; Bauchowitz et al., 2005).

Negative Association

Three papers found statistically significant results. Ray, Nickels, Sayeed and Sax (2003) asked 181 participants either via a questionnaire or during a psychiatric evaluation if they had a history of sexual abuse. At 12 months post-surgery there was a statistically significant difference in weight loss between those participants who reported a history of sexual abuse compared to the no history of sexual abuse group ($p < .05$), those patients with a history of sexual abuse had poorer weight loss compared to those who did not. Fujioka, Yan, Wang and Zhaoping (2008) compared excess weight loss with reported binge eating and sexual abuse in a retrospective study. 121 participants' records were evaluated and assessed for their response to a questionnaire which detailed one question about a history of sexual abuse. Out of the participants, seventeen percent of participants reported a history of sexual abuse. At twelve months post op, there was a significant difference between excess weight loss ($p = .04$), with those who did not report sexual abuse having lost more weight than the other groups. However when repeated at 24 months the difference was no longer significant ($p = .31$). Finally, Buser, Lam and Poplawski (2009) assessed differences in BMI between sexual abuse patients and non sexual abuse patients at two time frames after gastric bypass surgery. At 6-18 months BMI was significantly higher in the sexual abuse group ($p = .01$). However similar to Fujioka

et al. (2008) this significant difference disappeared at the second time frame, 19-40 months ($p=.06$) after surgery.

No Association

Conversely Oppong, Nickels and Sax (2006) found no difference in outcome for patients who underwent a gastric bypass, when comparing those who reported a history of sexual abuse compared with those who did not. The method of data collection was via a questionnaire. The participant's percentage excess body weight was compared at 12 and 24 months. At both times frames there was no significant difference reported between these groups. However the attrition rate was high and there were no data presented at 12 or 24 months of the number of participants in either category.

Buser, Dymek-Valentine, Hilburger and Alverdy (2004) matched a small number of participants; 21 females who did not report a history of sexual abuse with 21 females who reported abuse at baseline psychological interview. The females were matched according to time since the surgery at two points, 5-9 months and 10-14 months post surgery. The groups were further divided into the two different times frames and their post surgery BMI were compared. The BMI were not significantly different over time or between groups.

Clark et al. (2007) reviewed previous medical records and obtained 152 eligible patients data. History of sexual abuse was assessed via a semi structured interview as part of their psychological evaluation.

Thirty seven patients reported a history, 102 denied a history of sexual abuse. Excess weight loss was compared between the groups and was not significant ($P>0.10$). No data were provided to compare the differences between demographic information between the groups.

One paper examined treatment effects. Larsen and Greenen, (2005) had questionnaire responses from 157 bypass patients. Child sexual abuse was assessed via questionnaire, participants had to respond yes or no to a specific question. 22.9% of participants reported a history of child sexual abuse. Weight was self reported at follow up and the follow up period varied for each participant. The time frame ranged between 8-68 months but averaged the same across groups 32.3 months (CSA group) to 34.4 months (without CSA). The child sexual abuse group were further separated into those who had received treatment (N=27; psychological treatment for sexual abuse) and those who had not (N=9). There was no significant difference between the groups' BMI or BMI loss ($p>0.05$).

Summary

Three studies demonstrated a correlation between a history of sexual abuse and poor weight outcome at early time frames after the operation, around 12 months post operatively. However, when two studies which examined this relationship at longer time points, this difference disappeared (Ray et al., 2003; Buser et al., 2009). One

study tried to assess the impact treatment might have on weight loss and also found no significant difference (Larsen & Greenen, 2005), however the numbers in this study were extremely small. Therefore at present there is insufficient evidence to support a history of sexual abuse as a contraindication for surgery.

Weight loss prior to surgery

Clinical implications of theories

It is common practice for bariatric services to stipulate that an individual must demonstrate weight loss before they can progress to surgery. The target amount to lose can differ between the services, however it is frequently suggested the patients should lose between 5-10% of their excess body weight before proceeding to have surgery (UK Faculty of clinical health psychology; Psychologists in weight management network meeting, 2013).

Pre surgery weight loss is advised for a number of reasons: to gauge an understanding of patient motivation, to prepare the patient for post operative eating habits and behaviours and to help the patient understand the relationship between their cognitive and affective response to foods. In the present review, emphasis has been placed on studies that have not intervened by way of a meal replacement programme or specific diet. This is because when following a restricted plan, the emphasis is taken away from the patient's motivation to lose weight through their own decision making; weight

loss over a longer period would be clinically preferable to short term 'crash dieting' as this demonstrates that the individual has made sustainable lifestyle changes prior to surgery (personal communication, from the BPS Network of Psychologists in Obesity to BOMMS, 2013).

Empirical Evidence

Two recent systematic reviews have focused on the effectiveness of preoperative weight loss in bariatric surgery patients. Cassie et al. (2011) completed a systematic review to examine the effect of preoperative weight loss on a number of factors, which included postoperative weight loss, operative time and length of hospital stay. Twenty four studies were included which reported on the effect of preoperative weight loss on postoperative success. Nine found a significant improvement; preoperative weight loss positively correlated with postoperative weight loss, but the remaining fifteen did not. The time frames the data were reported on varied from 3 months to less than 7 years; however the majority reported results at 12 months post operative. At two years, the patients in the preoperative weight loss group achieved 66.7% \pm 2.7% excess weight loss whereas the non-preoperative weight loss patients had lost more of their excess weight 72.0% \pm 6.3% excess weight loss ($P < .001$) however, only three studies could be combined to obtain this data. However at no point in the paper were starting BMI recorded or mentioned as previous research has shown those patients with higher

starting BMI will lose more weight therefore when comparing groups it is important to make sure starting BMI are similar (Averbukh et al., 2008).

Ochner et al. (2012) carried out a systematic review to assess the preoperative weight loss requirements across services. Due to the heterogeneity within the available literature the authors were unable to conduct a formal quantitative synthesis of the search results. The authors presented a table with details of preoperative requirements and recommendations. When reviewing the table over half of the studies used a liquid diet of between approximately 400-1300 kcals per day, the time frame varying from 14 days to 6 months. Some of the data could be reporting on a VLCD the patients are instructed to go on for approximately two weeks prior to surgery, the data presented was unclear. The VLCD is used to shrink the liver and so reduces the risk of it being damaged during the procedure (Fris, 2004; Liu, 2005).

When reviewing those studies which did not instruct the patients to follow a VLCD there were many which found a positive relationship between preoperative weight loss on post operative weight loss. For example, Alvarado et al. (2005) followed 90 participants who underwent a gastric bypass between July 2002 and August 2003. The patients were instructed to lose 10% of their excess weight and were allowed to use any means to lose weight, they were offered

nutritional counselling if they desired. Pre operatively weight loss ranged from 0-23.8%. At one year follow up they had data on 79 participants (87.8%) and found that excess weight loss ranged from 40.4%-110.9%. Pre operative weight loss positively correlated significantly with post operative weight loss, an increase of 1% preoperative weight loss correlated with an increase of 1.8% of postoperative weight loss at one year ($P < 0.05$). An additional factor was that a preoperative weight loss of $\geq 5\%$ correlated with a decrease in operative time of 36.2 minutes.

Alger-Mayer, Polimeni & Malone (2008) had longer follow up data of three and four years post op. All patients undergoing gastric bypass at their institution were instructed to lose 10% excess body weight prior to surgery and were supported with exercise and dietary advice. At three years' post operative, data on 150 patients showed a significant positive correlation ($r = 0.225$, $p = 0.0006$) between pre operative excess body weight loss ($16.1 \pm 11.3\%$; range -7.63 (gain) to 53.7%) and three year excess body weight loss (55.1 ± 20.2 ; range -7.8 (gain) to 103.6%). At four years, data on 95 patients showed again a significant positive correlation ($r = 0.205$, $p = 0.046$) between excess body weight pre surgery and at four year follow up.

Summary

When reviewing the papers collectively regardless of method used to obtain pre surgery weight loss there does not seem to be sufficient

evidence to support pre surgery weight loss as it does not have a greater impact on post surgery weight loss. However, when only reviewing those studies which instructed patients to lose weight by not following a VLCD the results are more suggestive that there could be a benefit not only to the patient in terms of greater weight loss, but could have additional benefits as one study showed a reduction in operating time (Alvardo et al., 2005).

Future studies need to be more transparent and detailed regarding the instructions given to the patients and method and length of time of the preoperative phase. In the reviewed papers weight loss was reported differently (or inconsistently) which makes comparisons difficult. Ideally percentage excess weight loss needs to be used, as this is not influenced in the same way as body weight and BMI can be when patients with high pre-surgical BMI are enrolled in the research (Tice et al., 2008). Alternatively, greater transparency with starting BMI as those with a higher starting BMI will lose more weight and this will have an effect when comparing a preoperative weight loss group against a non preoperative weight loss group (Averbukh et al., 2008). Finally, post surgery follow up should be longer; at least 18-24 months post operatively (Powers et al., 1999; Hsu et al., 1997).

The recent guidance published suggests that patients should not be made to achieve a set weight loss target prior to surgery but should expect to lose weight during a short, supervised diet in order to make

surgical feasible (i.e. to shrink their liver) and to demonstrate engagement with the process; 'patients' should not be made to achieve a set weight loss target before referral to the bariatric surgery service as a means of 'qualifying' for surgery (BOMSS, 2014 p 7).

However as stated above following a meal replacement or supervised diet does not seem to be as effective in terms of post operative weight loss in comparison to those individuals who follow a more comprehensive programme. A short supervised diet will be effective in terms of preparation for surgery, but does not demonstrate that the individual has learnt how to make sustainable changes to their eating behaviour. In light of this recent guidance and the lack of studies which have examined the impact of weight loss prior to surgery through non dieting means, it seems there is a pressing need for these studies to be conducted.

Discussion

At present many bariatric services are asking psychologists to complete assessments to determine a patient's suitability for the procedure. Data from surveys conducted in bariatric services across America suggests that a patient's suitability for surgery is assessed via a mixture of interviews and questionnaires, with professionals listing particular social, behavioural and psychopathological factors as definite and possible contraindications to surgery (Bauchowitz et al.,

2005; Fabricatore et al., 2006). Those psychological factors which were ranked high as contraindications to surgery have been reviewed individually. Upon further inspection of the studies, due to the conflicting evidence and various problems with the studies (which are discussed further below) it is difficult for a clinician who works in this field to draw any firm conclusions from this review. What this review does highlight is the fact that practitioners in US, where the surveys were conducted, believe there are factors which are clear contraindications for surgery and are referring possible surgical candidates on for further treatment prior to surgery despite the lack of evidence supporting this approach.

Methodological Problems

It is apparent based on the sheer number of studies available that a great deal of excellent research has been conducted in this area. However there are several methodological weaknesses that limit the generalisability of the findings. Specifically many of the studies had small sample sizes and high attrition rates. Furthermore, some authors have only reported summary statistics choosing to omit, for example, standard deviation making it impossible to assess the size of the effects.

Time frames

The majority of the papers reported outcomes 12 months or less. The surgery should last for the duration of a person's life; therefore it is

disappointing that the time frames for follow up are still relatively short. Ideally they should be at least 18 months to two years post operatively (Powers et al., 1999; Hsu et al., 1997) especially when weight loss is the measured outcome. Strategies to encourage a reduction in attrition rates should also be explored.

Problems comparing weight loss across different types of operations

The main procedures used in the studies were either a gastric band or a gastric bypass. When comparing weight loss as an outcome measure at short time periods (up to 12 months) a recent review has shown how superior the gastric bypass is at achieving greater percentage excess weight loss (median difference 26%, range 19-34%; $p < 0.001$) (Tice et al., 2008). Mechanically these two operations differ greatly; the gastric bypass is considered to be a more complex procedure and has a impact on other body systems thus accounting for it superior weight loss in comparison to the gastric band (Liou, Paziuk, Luevano, Machineni & Turnbaugh, 2013). There is also increasing difficulties with gastric band operations reported in the literature (DeMaria et al., 2001; Gustavsson, 2002; Martikainen et al., 2004; Suter, 2001). Essentially they are different procedures and due to the above factors we should not be combining or comparing the procedures when using weight loss as the outcome measure.

A Psychologist's Role

Current practice in the UK would suggest that psychologists working in the field are being asked to 'screen' patients for surgery. To consider in one assessment if they are suitable candidates for surgery or be referred on for other treatment prior to surgery (UK Faculty of clinical health psychology: Psychologist in weight management network meeting 2013; West Midlands meeting 2015).

A thorough assessment of risk is a complex process. A psychological formulation based on the initial assessment and on-going assessments, use of psychometric questionnaires and communication with other professionals involved with the patient's treatment would enable the psychologist to develop the formulation to understand their individual likelihood of success but also enable the psychologist to complete an intervention to reduce risk if necessary, rather than refer them on to another service (UK Faculty of clinical health psychology: Psychologist in weight management network meeting 2013). Additionally, formulating and assessing in this manner also takes into account how the different factors interplay, rather than assess each factor individually and understanding its impact on post-operative weight loss. A point which none of the research to date seems to take into account as the research so far has examined a wide range of psychological, social and individual variables in isolation. Many systematic reviews have been conducted, examining

the relationship between one preoperative psychological, psychiatric and behavioural variables on post-operative outcome however these has not led to clinically utilisable guidelines: neither researchers nor clinicians are able to reliably predict which patients will have suboptimal weight loss or post-operative regain (Herpertz, Kielmann, Wolf, Hebebrand, & Senf, 2004; Sarwer, Wadden, & Fabricatore, 2005; Van Hout, Verschure, and van Heck, 2005; Wadden, Sarwer, Fabricatore, 2007). The variables considered are predominately medical or demographic and it may be useful to considerer psycho-social variables.

A move away from quantitative research, and towards examining the experiences of the patients could provide much needed perspective on the interplay between the contraindications that have been considered to date. Consideration of idiographic accounts of individuals who have had bariatric surgery may provide a rich understanding of a bariatric patient's journey. However to date, there are few studies using a qualitative approach, below is a brief summary of the research published to date.

Odgen, Clementi and Aylwin (2006) applied Interpretative Phenomenological Analysis to explore the experiences of 15 participants who had bariatric surgery. Both the type of surgery and time frame post surgery varied. Zijlstra, Boeije, Larsen, van Ramshort and Greenen (2009) interviewed 11 bariatric patients who

were labelled unsuccessful surgical candidates (defined as a BMI of greater than 40 or they lost less than 10 BMI points since their operation). Lepage (2010) interviewed 12 gastric bypass bariatric patients who were between two and ten years post surgery. The qualitative research carried out thus far has lack homogeneity with regards to the type of operation and the time frames. A crucial period post surgery is after the 'honeymoon period' which is thought to be the first 6-12 months post surgery (MacKechnie, 2005) a time described in the literature when rapid weight loss has generally ceased (Yale and Weiler, 1991; Brolin, 1992). Exploration of psychological variables when an individual is at a point when they need to learn how to balance their energy intake in order to maintain the weight lost could be significant to our understanding how a person adapts to the surgery in order to sustain their weight loss.

To summarise, the present study will provide a patient perspective, to understand the interplay between antecedents of surgery and explore how the patients experience of surgery is matched to theory and research currently published in this area. This research will also address the research gap of the 'honeymoon period' by interviewing those participants at a particular time from post-surgery.

Chapter 2:

Research Report

After the honeymoon period; an interpretative phenomenological analysis of the experiences of bariatric surgery patients 12 months to three years post operatively.

ABSTRACT

Bariatric surgery is a widely used procedure in the treatment of obesity. However, data show that between 20-30% of patients do not lose as much weight as expected or regain weight within two years. Hundreds of quantitative studies have tried to understand predictors of success but have produced conflicting or no results. Few studies have focused on the experience of surgery from the patients' perspective.

The aim of this study was to explore the experiences of bariatric surgery patients specifically between the period 12 months but no later than three years post operatively. This time frame is after the period of rapid weight loss when their weight would become more stable. Interpretative Phenomenological Analysis (IPA) was conducted on interviews of 14 gastric bypass participants. Key themes which emerged were 'pre -op', 'phases', 'weight maintenance' and 'impact of the operation' and 'control'.

INTRODUCTION

Nearly a quarter of the adult population in England are obese (BMI > 30 Kg/m²) and over 62% are overweight (BMI 25-30 Kg/m²) (Health Survey for England, 2012). These figures highlight the gravity of this growing health problem. Obesity affects individuals with a range of serious health problems including type two diabetes, heart disease and impacts on psychological conditions which includes depression and low self esteem (Department of Health, 2011).

For individuals with a body mass index (BMI) greater than 50, bariatric surgery is recommended as the first line treatment (NICE, 2006) as weight loss surgery enables individuals to lose large amounts of weight (see literature review for a detailed description of mechanics and different types of bariatric procedures). Bauchwald, et al., (2004) reported 60% of excess weight is lost at two years' post operatively. However, 20-30% of patients have inadequate weight loss or weight regain within two years of surgery (Herpertz et al., 2004; Hsu et al., 1998).

Many systematic reviews and studies have tried to understand what factors or variables could explain or link the poor outcomes (see literature review). However, currently, neither researchers nor clinicians are able to predict with any certainty those patients who have suboptimal weight loss (Sarwer, Wadden, & Fabricatore,

2005; Van Hout, Verschure, and van Heck, 2005; Wadden, Sarwer, Fabricatore, 2007)

Patient Experience

To gain a greater insight into the true experience of what could constitute a successful patient, qualitative research would enable access to experiences of the bariatric patient and how they, as patients, would define success. However, at present little research has been conducted utilising a qualitative perspective, and little from the perspective of the patient. In particular, many of the studies exploring contraindications are limited by researcher biases where only those variables thought to be contraindications are included in the battery of assessments that are measured at baseline and follow up. Taking a patients perspective offers insight into variables that may contribute to perceived success, which have not been identified thus far in the literature.

Qualitative studies

Ogden, Clementi and Aylwin (2006) aimed to explore the experience of obesity surgery in 15 participants utilising Interpretative Phenomenological Analysis. The time length since the surgery ranged from four months to thirty three months after the operation, but the vast majority had the operation less than fifteen months since the time of the interview. The interview schedule included open

questions such as 'why did you decide to have the operation' how have you felt since the operation'. There were four broad themes identified. The first was personal weight histories. The participants described the length of time they were overweight, how they had gained the weight and the different ways they had tried to lose weight. They described the many different diets they had tried and how it had lead to weight cycling. The second theme was 'decision making process'. Many described the negative impact their weight had on their psychological health, for some the physical limitations. For others there was a 'trigger' which was a diagnosis of a health condition. The impact the surgery had on eating behaviour and their relationship with food was the third theme. The patients described a sense of shock, wondering if they had made the correct choice but also the adjustments they had to make to their new stomach. The final theme was the, 'impact of weight loss on health status, self esteem and relationships with others'. Many described their change in confidence and the shift from how they felt before the operation to now. Many referred to it as a 'rebirth'.

A central theme of control infused all aspects of the interviews; the importance of self control and the imposed control the surgery placed upon some individuals was highlighted. This was paradoxical; some patients welcomed this externally imposed control, as it actually allowed them to feel a release from responsibility. However, others felt an internal sense of control that resulted in a new psychological

state. This new sense of control affected other areas of their life, as they reported changes in control over not just their eating behaviours but also their lives in general.

Zijlstra, Boeije, Larsen, van Ramshorst and Greenen (2009) interviewed 11 participants who were deemed to be unsuccessful surgical candidates (defined as body mass index (BMI) of greater than forty or they lost less than ten BMI points since the time of the operation until the time of the interview). The main themes from the transcripts was 'being overweight as a youngster', some disclosing dieting from a young age, or attributing weight gain from pregnancy or oral contraceptives. The second theme was their 'explanations for gaining weight'. Weight gain was attributed to emotional life events such as bereavement or divorce causing psychological distress and using food as a coping mechanism. The third theme was a 'history of unsuccessful dieting'. Their role in the operation was diminished, believing the bariatric surgery would 'curb their eating and do the dieting for them' (p 110). 'Testing the limits of the gastric band' was the fourth theme. Many reported feeling hungry after eating or would substitute meat, vegetables, and fruit for sweets and other snack foods which passed more easily through the band. Again the participants reported that they expected the gastric band would prevent them from overeating. The final theme was, 'adjusting to the gastric band'. Eight of the 11 participants believed they had control over their weight, whereas three did not. The researcher's analysis of

the interviews enabled them to match the participant's descriptions to the transtheoretical stages of change model (Prochaska, DiClemente & Norcross, 1992). For example, three of the participants who had a pattern of adjustment defined as 'it didn't work out', believed they had no control over their weight and therefore believed medical intervention was the only progression for their weight through further bariatric surgery; this was assessed as the pre-contemplation stage of change. Whereas one participant labelled 'I don't care anymore' had a neutral awareness of control, there was a sense this participant had accepted they might remain being overweight; again was in the pre-contemplation stage of change. The four participants labelled 'I know I have to do it' believed they had control over their weight, their prospects were uncertain and again were in the pre-contemplation stage of change whereas the last 3 participants also believed they had control over their weight. They were labelled 'I know I can do it' pattern of adjustment and were considered to be in the action stage of change however, frequent relapse in the preparation stage of change.

The studies have in common that the participants refer to an external locus of control when describing their expectation that the surgery would stop them eating, there is a sense the participants have never learned to control their weight prior to surgery.

Lepage (2010) interviewed 12 participants between two and nine years after they had the surgery. All had lost weight which ranged from 110-340 lbs. Four different themes emerged in comparison to the Ogden's et al. (2006) study. The themes were; 'surgery as renewed hope', surgery meant they were looking to their future with optimism, their life would be different, the surgery viewed as their ultimate chance to conquer their obesity. 'Finding balance', was the second theme. This theme described the participant's realisation that there was a give and take to their operation in a sense of risk and benefits, ups and downs associated with the surgery and that to find balance was a continuous and evolving process. The third theme, 'Filling the void' described the emotional change the participants felt with regards to food. They were aware how much they had relied on food to alter their emotions and now post surgery eating meant they were not hungry after eating but due to the small amounts of food consumed they were not satisfied. The final theme was 'transformation of self image'. The surgery was credited for their transformation, however the participants described a sense that others saw their transformation distinctly different from their personal view of self.

The researcher found an overarching theme of paradox emerge from this group of participants in how they described the life changing experience of surgery in that it was a source of pain but also pain relief. Weight loss was seen as positive but the process was also

physically and emotionally draining. Some participants were surprised as they expected the feeling of shame to disappear with their weight loss; however it remained through the consequence of having the operation.

Table 2. Main themes across three qualitative bariatric studies

Study	Theme	Theme	Theme	Theme
Odgen et al. (2006)	Personal weight histories	Decision to have the operation	Impact of the surgery on eating behaviour and relationship with food	Impact of surgery on health status, self-esteem and others
	Control- imposed control can paradoxically result in renewed sense of control			
Lepage (2010)	Surgery as renewed hope	Finding balance	Filling the void	Transformation of self-image
Zijlstra et al. (2009).	Being overweight as a youngster	Explanations for gaining weight	Testing the band	Adjusting to the band

Previous qualitative research has looked at the experience of surgery in a range of patients; some focusing on more successful operations and some focusing on unsuccessful. The research shows that bariatric patients experience rapid weight loss during the first year; as such any behaviour change is reinforced quickly and consistently over this time frame. However it becomes more difficult to maintain weight loss once stabilised (Yale and Weiler, 1991; Brodin, 1992) as the individual needs to have learnt to adapt their lifestyle to enable them to sustain their weight loss.

Present Study

Previous quantitative research has failed to predict reliably which patients will be unsuccessful at this expensive, high risk, lifelong weight loss intervention (Sarwer et al., 2005; Van Hout et al., 2005; Wadden et al., 2007). Despite the inability to predict which variables are associated with success, psychologist and other mental health professionals in the UK are asked to complete psychological assessments pre surgery to 'screen' patients for surgery (UK Faculty of clinical health psychology: Psychologist in weight management network meeting 2013). In the literature review, the top variables which professionals ranked as clear or definite contraindications for surgery (findings taken from two surveys in the US; Bauchowitz et al., 2005; Fabricatore et al., 2006) were examined. The results were inconclusive due to the conflicting evidence. There was also

difficulties with methodology, in particular the time frames in which the majority of the studies were conducted; up to 12 months post-surgery but not beyond this time frame.

Weight loss is typically rapid the first 6-12 months post operatively (MacKechnie, 2005) but starts to plateau around 18-24 months post operatively (Yale & Weiler, 1991; Brodin, 1992). Therefore the time frame in which the studies take place is paramount. Thus far there has been a limited number of studies (Odgen et al., 2006; Zijlstra et al., 2009, Lepage, 2010) which have explored the experience of surgery.

The aim of the present study is to understand the experience of bariatric surgery after the honeymoon period, typically after the first 6-12 months, (MacKechnie, 2005) when rapid weight loss has generally ceased (Yale & Weiler, 1991; Brodin, 1992), and it becomes necessary for the person to understand how to balance their energy intake and expenditure, thereby enabling them to successfully maintain their weight. Therefore all participants recruited to the study were between 12 months and three years' post-operative. This is when an exploration of psychological variables could be paramount in understanding how a person might adapt to the surgery. A detailed exploration of this crucial period is likely to uncover important findings, contribute to existing knowledge and generate hypotheses

for future research. Also, taking a patient perspective may offer new insight into variables which may not have been identified in the literature thus far. The research question was 'what is the lived experience of the individual following bariatric surgery after the honeymoon period (at least 12 month post-operative)?'

The study will also contribute to enabling a psychologist to do a thorough pre surgical assessment, covering aspects which previous patients have deemed significant milestones in the process. The proposed study will contribute to the small number of qualitative studies already carried out, adding to the body of literature in understanding the experience of weight loss surgery, concentrating specifically on the transitional period following surgery into the weight maintenance phase. It is hoped that an exploration of this time frame will reveal details of patients' support needs to aid them along their journey. By exploring their experience of the journey, significant variables may be uncovered to be more useful as predictors of success and so warrant further exploration. This is an inductive study, to generate hypotheses for future testing that might provide more questions for later inquiry.

Methodological Considerations

Interpretative Phenomenological Analysis (IPA) was considered to be the most appropriate method of analysis for this research as it aims to explore and examine the participant's view of their world (Smith, Flowers and Osborn, 1999) facilitating a deeper understanding in comparison with other psychological methodologies (Reid et al, 2005). IPA attempts to utilise the participant's natural inclination for self-reflection as the central component of this approach is to 'allow the participant to tell their own story, in their own words, about the topic under investigation' (Smith et al, 1999; p68). IPA aims to engage with these reflections, IPA recognises that individual's may experience a similar event however, how they make sense of this will differ based on their thoughts and beliefs, expectations and judgements that the individual brings to it (Willig, 2008).

Taking a phenomenological attitude (representing the participant's view of the world) is considered to be the most significant aspect of phenomenological research (Finlay, 2008). This involves the researcher 'bracketing off' preconceptions and assumptions.

Philosophers have different views with regards to this process.

Husserl (1913/1962, 1936/1970) first used the term 'reduction', in this sense we suspend and bracket our prejudices and pre-understanding freeing ourselves so we are open to whatever emerges. However, other philosophers such as Heidegger, saw there

was value in our previous experiences and understanding, taking a position of reflexivity (Finlay and Gough, 2003).

Finlay (2008) describes this process as a dance. 'The challenge is for the researcher to simultaneously embody contradictory stances of being "scientifically removed from," "open to" and "aware of" while also interacting with research participants in the midst of their own experiencing. An additional challenge is for the researcher is to stay vigilant, both to avoid charges of self-indulgence and solipsism, and to ensure that the focus of the research does not shift away from the phenomenon, and/ or participants' lived worlds, to the researcher.'

(p. 4)

Narrative analysis (NA) is interested in stories, and NA is based on the premise that people use stories in order to make sense of themselves, their world and how they present themselves to others (Sarbin, 1986) so is interpretative similarly to IPA. However IPA is described as having 'double hermeneutics' because the researcher is trying to make sense of the participant trying to make sense of their experience (Smith et al., 2009). During the analysis process the researcher takes a dual stance as an insider, experiencing the participant's journey through empathy. But also brings an outsider perspective, questioning and interpreting the participant's experience. This dual process allows a deep engagement with the phenomenon in question and can result in rich data that can tell us something

meaningful. This is why IPA was chosen for this research rather than NA.

There is little qualitative research carried out which has sought to understand the experience of post bariatric surgery patients, the research is in its infancy. IPA is highly suitable for this area as it enables the researchers to explore an area, to generate hypotheses for later enquiry. It is an idiographic approach, focusing on how each individual makes sense of their experience, recognising that a single case study can contribute to our understanding. However, IPA suggests a small number of participants and a homogenous sample as possible. Homogeneity within the sample was recognised through participants having had the same type of operation and a similar length of time since surgery. This means the study can look at difference in psychological variability. Similar to grounded theory, saturation of themes can occur, however, IPA is interested in convergence and divergence, (another reason why IPA was chosen for this research over other types of analysis). As Smith states in his analysis of a good IPA paper 'there should be skillful demonstration of both patterns of similarity among participants as well as the uniqueness of the individual experience....this is the hallmark of good IPA work' (2011, p. 24).

A nomothetic approach is where findings can be applied to large populations, however IPA is underpinned by an idiographic

epistemology which so is more cautious in making general claims. Conducting research using IPA, studies can contribute and develop our understanding about a phenomenon, in a select group of participants, as they describe their own experience. As more research is conducted into a specific area it will build on our understanding, therefore over time more general findings can be offered. IPA provides a rich understanding to an area that can lead to further areas of inquiry (Smith et al., 2009).

METHOD

Design

Semi structured interviews were conducted with the participants. For each interview the participants were asked a series of questions (see Appendix five) and prompted for greater detail when relevant. This allowed for a rich source of data about the participants experiences of bariatric surgery.

Participants

A homogenous sample is important for IPA research (Smith et al., 2009); therefore in this study the participants all had the same type of bariatric procedure (gastric bypass) and the timing of which was one to three years ago at the time of recruitment. A total of fourteen participants were recruited to participate in the study, which is in accordance with IPA research as this allows for confidence in

providing a sufficient number of participants in order to develop a full and interesting interpretation of the research question but also allows for an in-depth analysis (Brocki and Wearden, 2006).

Inclusion Criteria were:

- i) That participants had a gastric bypass operation within one to three years prior to the start of the recruitment process. This time frame was chosen as it is deemed after the 'honeymoon period' when weight regain is likely to occur (Hsu et al., 1998).
- ii) They were over the age of 18 years
- iii) They had not previously undergone a second procedure: the recent surgery was the only one they had undergone.

There were ten females and four males. The mean age was 49 (± 10). Thirteen participants identified themselves as white British, one as Asian. Their mean starting weight prior to the operation was 150.7 kg (± 20.4 kg), lowest recorded weight 82.3kg (± 14.6 kg), their current mean weight was 85.9kg (± 14.7 kg). 21% of the participants were not within 10% of their lowest recorded weight. Participant information is provided in Table 2.

Table 2: Participant information

Participant	M/F	Age	Ethnicity	Length Of inter-View (Mins)	Starting weight (Kg)	Lowest weight (Kg)	Current weight (Kg)	Starting BMI	Lowest BMI	Current BMI
1	M	52	WB	33	189.6	90.7	90.7	58.5	28.0	28.0
2	F	57	WB	65	143.2	93.6	93.6	53.9	35.2	35.2
3	F	53	WB	93	159.1	70	95.5	62.1	27.3	37.3
4	F	42	WB	45	146.4	101.8	101.8	54.4	37.8	37.8
5	F	64	WB	70	147.3	88.6	88.6	59.8	35.9	35.9
6	F	66	WB	45	140	64.5	67.3	56.1	25.8	27.0
7	F	59	WB	32	165.5	80.9	80.9	61.5	30.1	30.1
8	F	38	WB	48	157.3	89.1	89.1	54.4	30.8	30.8
9	F	41	WB	71	107.3	59.5	61.4	44.7	24.8	25.6
10	M	54	WB	30	150	107	108	49.0	34.9	35.3
11	F	44	WB	48	130	65.7	65.7	52.7	26.7	26.7
12	M	42	WB	39	136	92	105	48.8	33.0	37.6
13	F	41	WB	57	160	70.7	77.1	58.8	26.0	28.3
14	M	30	A	26	178	78	78	61.6	27.0	27.0
AVERAGE		49		50	150.7	82.3	85.9	55.5	30.2	31.6

Key

Ethnicity WB= White British: A= Asian

Procedure

IPA suggest purposive sampling (Smith et al., 2009), therefore to recruit participants for this study an established bariatric support group was contacted. The researcher sent out letters (see Appendix 1) to support group leaders identified on the British Obesity Surgery Patient Association (BOSPA) website which provided details of the study. The support groups that responded were in locations across the England, they have not been specified to protect participant confidentiality. Four support groups responded to the email and the group leader was contacted to explain the nature of the study in more detail. At the request of the group leaders, it was suggested attendance by the researcher at the support group would increase participation. This is because the group are constantly inundated with requests for research, it was suggested that attending the group session would increase participant participation. These visits occurred at various times between May-October 2010, in each location a standard short presentation was provided detailing the nature of the study and information sheets (see Appendix two) were distributed. Participants who expressed an interest were asked to contact the researcher by email and telephone calls were returned to discuss if they met the inclusion criteria and to again reiterate the nature of the study. For those participants who were suitable candidates, interview times were arranged. The interviews took place at participant's place of work, library buildings, doctor surgeries and other quiet public venues that the participant designated.

Data Analysis Process

Each transcript was analysed in accordance with published guidelines (e.g. Smith et al., 2009). Following this process, the analysis stages consisted of: reading and re-reading each transcript, re-reading and making initial notes, re-reading and noting descriptive comments and then re-reading and documenting linguistic comments. The final stage is re-reading and recording conceptual and psychological comments. The researcher found difficulty following this prescribed method of analysis, feeling impatient and wanting to move onto other transcripts but also felt restricted in completing the analysis this way. Therefore, at the beginning of the analysis stage for the first few transcripts this method was strictly adhered too, as the researcher's confidence and understanding of the analysis process increased, she moved between the transcripts earlier. When completing the analysis the researcher was aware of the dual process, empathising with the participant, and using the research diary as a place to record these reflections and thoughts. But then also reflecting on these entries, trying to take an outsider perspective, critiquing and questioning the data.

Text extracts of tentative themes were identified in each transcript and cut out into strips of paper which were then organised to produce sub themes. Within the sub themes some of the codes are more interpretative, whereas others are descriptive. As the analysis progressed, many themes were collapsed and further developed and

changed eventually at a point where the write up could occur. At this point the researcher tried to keep a balance so the sub themes both described and interpreted the participants' experience. Eventually a point was reached where the sub themes were organised into tentative super-ordinate themes.

During write up, again further changes were made until a final table of super-ordinate themes and sub themes was produced. Both supervisors acted as verifiers for the analysis and emerging themes as they were consulted at various times during this process. In the beginning they completed analysis of parts of transcripts and sent copies of the researcher's analysis for feedback. This process was paramount in building the researcher's confidence in using this type of analysis, having never completed IPA before.

Quality and Validity

A detailed audit trail of the research process has been kept. Prior to the start of the interview phases the researcher's thoughts and beliefs about surgery were documented in a research diary, which was frequently updated with the researchers thoughts and feelings, which aided in the bracketing process (Smith et al., 2009). (The bracketing process is discussed in the critical review). The researcher has extensive knowledge and experience working with bariatric patients and in her current role assesses patients for bariatric surgery. Establishing trust and being empathetic is important in the

assessment for surgery, which are qualities also important in gaining good quality data from the interviews (Yardley, 2000).

Face to face meeting and communication via Skype and email occurred frequently with two supervisors. Both have extensive experience of using IPA as a method of analysis and at various points throughout the analysis they were consulted and provided feedback and verification of the analysis procedure. Full details of the audit-trail have been kept, however only the main points and details of the analysis is provided in the research report due to space limitations. (See Appendix six and seven to see examples from the analysis).

FINDINGS

This section provides a description and analysis of the themes that emerged from the transcripts. IPA was applied to the interviews. The five super-ordinate themes were; 'pre-op', 'phases', 'weight maintenance', 'impact of the operation' and 'control'.

Table 3: Super-ordinate and sub-themes of the participants experience of bariatric surgery; after the honeymoon phase.

Super-ordinate themes	Sub-themes
Pre-op	Trigger Preparation Quick-fix
Phases	Denial Shock Honeymoon period Adjusting Grieving Acceptance
Weight Maintenance	Control Fear of failure Ongoing battle Support Needs
Impact of the operation	Identity Living life Cognitive Changes

Pre-op

This super-ordinate theme describes how the participants experienced the process of deciding to have surgery and the steps

they went through. The three sub themes identified were 'trigger', 'preparation' and 'quick fix'.

Trigger

This theme emerged as the majority of the participants described a situation which was a trigger to deciding to have the operation as they could no longer sustain their current life due to their weight. Some described a situation in which their weight inhibited their movement and they were unable move normally (Pts 1, 2, 5). For one (Pt 6) she describes herself as helpless as she is dependent on her husband to do everything for her:

'til it got to the point where I couldn't, I couldn't do anything and me husband did absolutely everything for me, personal...things, everything. He did everything for me. The shopping, the cooking, I couldn't do anything...and I had it done because of that' (P6: L29-30)

'I couldn't walk, walk up a hill, I couldn't run, I couldn't get up the stairs, never mind run up a hill' (P2: L102-103)

Three participants (Pts 2, 4, 12) described their current ill health through diseases or health conditions caused by their weight, or were predicting future ill health with conditions synonymous with obesity (Pt 9) or regarding thoughts their future (Pt 1):

'It made me realise what I was doing to myself. Putting all the weight on and I realised that it was not just a case of getting fatter and getting uglier and people looking at you. It's actually starting to seriously damage my health.' (P4: L26-L27)

Nearly half of the participants (Pts 1, 2, 3, 5, 7, 10, 13) described a specific memory or event which prompted them to take action. For one (Pt 7) it was an event which should have been relaxing and enjoyable, however she describes a humiliating and painful experience of a holiday as a trigger to addressing her weight as she explains:

'I remember getting on that plane and being squashed right in the corner next to the window and when I got off the plane my knees were bruised erm, and we got off the plane we got into a taxi to the apartment and I never went out when we got there'
(Pt 7: L27-29)

Preparation

Preparation was an emerging theme in ten of the participants transcripts (Pts 1, 2, 7, 9, 11, 12, 13). Over a quarter described an in depth research process (Pts 2, 7, 9, 13), gaining an understanding of how the operation worked and hearing about other people's experiences. The process sounded extensive, an obsession, for one

individual it sounded as a way of controlling her anxieties (Pt. 7) for another for justifying her decision (Pt 9).

'I really watched and studied, I read everybody's post so I knew all the pitfalls and everything.' (Pt 7: L306)

'I researched it to within an inch of its life. I knew exactly what I was doing' (Pt 9: L214-215)

However two participants (Pts 1, 11) described carrying out no research at all. For one participant (Pt 1) anything offered was accepted, adding to this sense of desperation, as he explains:

'well we can go for a gastric band" and I said "yeh, yeh, I've I've heard about them don't know anything about them, but yeh let's do it' (Pt 1: L16-17)

Issues of choice emerged from over half of the participant's transcripts. Some (Pts 4, 9, 14) described no hesitation in choosing the bypass because of complications or difficulties reported with the band. For one participant (Pt 9), the thought is having a foreign body inside her was extremely offensive. She described an inability to *'trust'* the band, alluding to the complications and difficulties associated with this type of operation as she describes:

'I had it in my head the whole time I wanted a bypass. I did not want a band. I was absolutely adamant I didn't want a band. Erm I didn't like them, I still don't like them. I think they're dangerous [...]no no I don't trust bands. [...]I didn't want the idea of a foreign body inside me [...] and the idea of having to inject saline into [...] eurgh, no thanks. Just do it, sew me up and (laughs) get on with it' (Pt 9: L156-173)

Although for some participants (Pts 4, 7, 11, 13), the band was the preferred option, viewed as a simpler operation and/or because it is not considered a permanent operation by non health professionals. This suggests these participants are not completely confident in their decision, by choosing a band they perceive they can go back to normal eating if they are struggling with the consequences of the operation.

'I'll probably have the band because it sounds less major....than the bypass' (Pt 11: L52)

'all I wanted was the band and I was quite adamant that that's what I wanted, [...] Cos [...] the bands not permanent, the bypass is' (Pt 4: L62-63)

In contrast, for some (Pts 10, 12, 14) the fact that the bypass is a more complex operation was its appeal, as if the person had

committed to having the operation therefore they did not want to have an operation which could potentially be reversible or fluid be removed.

'I wanted it permanent because I already geared myself up in my head that yeh I'm going to do this. I wanted it permanent'
(Pt 14: L309)

'I just thought if I'm going to have the op I might as well have the full on one [...]I'm going to have it I might just well have the proper one and.... its done' (Pt 10: L72;78)

Quick -Fix

The final sub-theme, 'quick fix' is a theme, which emerged when the participants reflected on their pathway to surgery. In order to progress they needed to move through perceived barriers and '*hooping jumping*' (Pt 9: L93) as they were desperate to move with speed to the next stage as the focus was on the outcome of the operation, being thin, and surgery was the quick fix.

Three of the participants (Pts 5, 7, 10) described barriers to being referred for surgery, not believing it was available to them or their GP not believing in it as a method for weight loss.

'my GP erm refused to refer me for the op . Erm, she just believed in... just will power and diet she wouldn't have it'
(P10: L238-239)

Four participants described their pathway to surgery, for two participants (Pts 6, 11) a quick and relatively easy journey, reflecting surprise at the ease in which it occurred. However two (Pts 9, 12) described a difficult process, for one (Pt 12) it reflected his lack of confidence in the system, believing the operation might never occur;

'until you get in that theatre... you ain't you know what I mean it ain't happening sort of thing' (Pt 12: L46)

For half the participants (Pts 3, 7, 8, 9, 12, 13, 14) a theme of desperation emerged, desperate to have the operation (Pts 3, 7, 9, 13), taking any option offered (Pts 1, 13), participants *'nagged'* (Pt 9: L152) the professionals, perceiving their life stagnating whilst waiting for the operation (Pt 7).

it felt like me life was on hold....erm and all I could think about was getting this, getting this surgery. So yeah it just felt like me life was on hold till it happened.' (Pt 7: L63-64)

There was a focus on the outcome, losing weight and being thin which seemed to fuel the difficulty with waiting. This operation

provided 'a quick fix' (Pt 8; L45) and it was difficult to wait (Pts 3, 6, 8, 12).

'at the time when you're, when you are desperate to get this done, you'll do anything to get it done regardless and you you put it to the back of your mind what you're going to feel like afterwards, you want it done so therefore you'll cope with whatever comes [...] I'll get it done, I'll be thin that's what's on people's minds, I'll get it done, I'll be thin' (Pt 6: L246-251)

Phases

This super-ordinate theme describes the transition that occurred, the phases the participants seem to describe. The first phase is denial moving to shock, honeymoon period, adapting, grieving and acceptance.

Denial

Over a third of the participants described denial. Three (Pts 2, 7, 14) described denial in relation their size prior to the operation but only through losing weight from the operation were they now aware how big they were pre operatively.

'I saw myself as being big. I knew I had a weight problem and I knew it was affecting my health and the rest of it. But I never knew how big I was' (Pt 14: L258-259)

Two participants (Pts 8, 9) were in denial about their comfort eating prior to the operation, a contradiction in their transcripts:

'I can't think of anything emotionally anything happened or psychologically. I think I just discovered food, [...] became a secret eater so you know I would have my dinner and I would go and eat something secretly you know.' (Pt 8: L17-20)

'and I think I just got comfortable and contented and just ate. You know no matter what mood you're in you eat food anyway you know you can be happy or sad you know any mood you're in because food's your friend, you know, your best friend, despite, you know your real life friends, food is your friend because it is always there so I think I just ate you know' (Pt 8: L27-29)

Shock

Half of the participants (Pts 1, 2, 3, 4, 8, 9, 10) described a sense of shock, specifically asking *'what have I done'*. This thought was triggered immediately after the operation or in a social situation when they tried to eat normally.

'I was completely lost for weeks you know because you can't eat what you want you know [...] I came down with a big thud, I had a big shock after the operation.' (Pt 8: L332-335)

This sense of shock suggests a lack of being mentally unprepared, not understanding exactly what the operation entails. Two participants described the gravity of their decision, specifically trying to comprehend how they would adapt and work with their operation (Pts 2, 9).

'I remember at one point at home thinking "oh my god what have I done...[...] this is for the rest of my life" and being quite panicked about that and thinking, ahhh there's no way back, there's no way back! Like oh god I wish I'd thought about it more.' (Pt 9: L209-212)

Honeymoon period

There were direct references to 'the honeymoon period'. Nearly a quarter (Pts 6, 7, 11, 13) described an awareness of being able to consume larger portions of food in comparison to when they had just had the operation and how potentially dangerous this could be to their future success.

'see after after the two year period has passed, [...] there's also a danger period when if you're not careful, because you, your

more...you can eat, you can eat easily more of the other stuff'

(Pt 6: L259-262)

Two participants (Pts 7, 12) described during the early post operative phase of having no desire to eat, a difficulty being around food and describing eating as a struggle. However this changed over time;

'for 5 months. Because I couldn't look at food.[...] Just totally gone off it and even shopping, I hated shopping I used to wonder around the supermarket like a lost soul [...]. I remember opening the fridge and looking at the fridge and crying and thinking I have got to eat and I don't really want to. Erm, but at five months I don't know what happened it all changed, me appetite came back' (Pt 7: LL97-103)

Specifically one participant (Pt 12) described the opportunity this phase presented to achieve a significant weight loss, recognising this becomes harder, making reference to the weight plateau patients reach at approximately 12 months (Dixon et al.,2001).

'that's the window you know you've got six months to do it, your very very best to lose weight because after then it gets harder' (Pt 12: L227-228)

Adapting

This sub-ordinate theme describes how the participants adjusted and learnt to deal with their operation on a daily basis, adapting and dealing with the consequences of the operation. Over half of the participants (Pts 1, 2, 5, 6, 8, 10, 12, 13) described a difficulty eating different types of food; meat was the food reported as problematic most frequently but also bread and eggs.

'There are some things that I can't eat any more. erm I've gone right off of red meat and fishand erm... bread unless its really... baked well or toasted... the erm things like bagels I just... can't tolerate any more and I don't know why but....'

(Pt 10: L129-130)

In contrast, only participant 14 described not having a difficulty with any foods;

'my diet is very good because it has to be because I'm training but I can eat anything I want' (Pt 14: L36-37)

Five of the participants (Pts 2, 4, 6, 7, 9) described the unpredictability of eating, some days they could tolerate a specific type of food, whereas another day they would have difficulty.

'some days you'll get up and you can eat something and it doesn't bother you and you get up the next day and you can't eat it at all' (Pt 2: L323-324)

Two participants (Pts 6 & 9) described how their level of restriction differed, some days they were able to graze (Saunders, 2004) whereas other days they felt 'full' after a few mouthfuls of food.

'And every day can be different, that's the funny thing. I mean yesterday, no word of a lie I didn't stop eating.... all day. Every sort of half an hour I was just eating something.. and.. it was stupid. It just went on and on. Not bad things, I wasn't eating bad things but I just kept eating pretty much all day yesterday and I didn't feel particularly... uncomfortable or or anything like that. And yet ...another day, like last Sunday for example I had a, you know, lovely plate a small plate of er roast dinner in front of me. I had about two mouthfuls and just full just didn't...didn't want anything else' (Pt 9: L313-318)

Three of the participants (Pts 6, 8, 11) described a process of eating *'the same things, the safe foods'* (Pt 11: L210). This could be a coping mechanism in how they dealt with the unpredictability of eating certain foods and, how this next participant describes, the *'chore'* of deciding what to buy.

'as you go around Morrison's or whatever and thinking right can I, shall I have that yeah it will be fine. Shall I have that, it's a chore. Err, it is a chore, I find it a chore so I tend to buy the same things every week,' (Pt 8: L140-142)

In order to deal with these consequences, over two thirds of the participants (Pts 2, 4, 5, 6, 7, 8, 9, 10, 12, 13) describe a process of taking each day at a time, not focusing on the long term in order to learn how to physically and psychologically deal with the consequences of their decision in order to work with their bypass

'but you just have to take each day at a time and you think well, I'll just get through today and I'll eat what I can and do what I can and tomorrow is another day. [...] just take it one day at a time' (Pt 4: L376-379)

Nearly half the participants (Pts 5, 8, 9, 11, 12, 14) described reverting to the information or the rules which were provided by the professionals as a way of dealing with the unknown, as this next extract describes.

'I had a couple of wobbles and sort of like "oh my god what am I going to do?" [...] when I first started sort of ...working out what you can and can't eat post-surgery. It's a little bit

daunting erm but I followed the rules absolutely rigidly' (Pt 9: L253-256)

Grieving

Three participants (Pts 8, 9, 10) described a sense of mourning for food after the operation, their emotional crutch had been removed and some participants experienced a sense of anger and grief in response. Food no longer provided the comfort, as their ability to eat normal portions of food was not possible due to the restriction from the operation as the following extracts illustrate:

'I grieved for my relationship with food erm and it was suddenly that what has been my best friend and comfort for such a long time, I wasn't able to get that comfort out of it any more. You know two bites of my meal and that was it. 'ohh well that wasn't any comfort at all'. Erm and I think grieving is probably...probably quite a good description for it. And actually feeling, it was kind of like losing a good friend erm because food has been with me through some really tough times. Erm...you know lots of tough times, lots of good times as well but some really really tough times' (Pt 9: L476-481)

In contrast, one participant (Pt 7) described the opposite, now she had no relationship with food.

'I know people react different, some people mourn food and...I didn't I couldn't care less about it.' (Pt 7: L108)

Acceptance

The need for accepting permeated from a third the transcripts (Pts 2, 6, 8, 9, 12). In order to live with their decision, the participants needed to accept both the consequences of the operation and that they decided to do this; they were not coerced.

'I said this is my life now and this is the decision I have made and this is the way I have to live now' (Pt 2: L479-480)

Impact of the Operation

The third super-ordinate theme 'impact of the operation' reflects the consequences of the operation and how it affected the individual. The sub-themes are 'identity', 'living life' and 'cognitive changes'.

Identity

This sub ordinate theme emerged from over two thirds of the transcripts. Nearly half (Pts 4, 7, 9, 10, 11) described a change, in their personality, confidence levels and self esteem. In turn there was a perception that now they were now engaging in life, not just existing, the psychological burden of their weight no longer a constraint.

'Yeah total opposite it's just I feel I've got confidence to do anything to go anywhere and just go out somewhere to talk to somebody you know before I used to think why would anybody want to talk to me I'm fat and ugly erm but I don't think about that I don't think about it now, I just get on with my life' (Pt 4: L265-267)

'socially I'm a complete butterfly. I've just come out of my shell completely and I want to be out and about.[...] 'so life's completely different and I don't ever want to go back to being that person who I was before. Erm, I'm more confident, I'm more outgoing. Erm..just...I think my husband feels he's got a new wife. My son feels like he's got a new mother.' (Pt 9: L552; L564-566)

Two participants (Pts 3, 7) described the shock and inability to recognise themselves due to their weight loss. However for one participant (Pt 13) in contrast to the positive impact other participants felt, described losing a part of her.

'I was always actually a very bubbly person and yes some of that was always a face and some that was a front to say but actually I was actually happy as in I laughed a lot and I got a really dirty infectious laugh and actually I feel like I've lost that now. I feel that over the last couple of years I haven't done a

lot of laughing you know and you do wonder if I've lost...you know that I've lost some part of me' (Pt 13: L115-117)

One participant (Pt 14) described a lack of awareness or difficulty accepting the impact of the operation as in one sentence he described being the *'same person but just my lifestyle, certain aspects have changed'* (L66-67) however moments earlier in the interview he describes a whole lifestyle change.

'My whole lifestyle has changed I'm not pursuing a career in law; my main thing is personal training and mixed martial arts and competing in wrestling and MMA this year. Doing half marathons in March on the 12th and you know.' (L63-65)

Five of the participants (Pts 2, 4, 7, 8, 14) touched on normality. As a result of their weight loss, they described how now they could physically blend into society, and do 'normal things', buy clothes from normal shops. By becoming 'normal', this seemed to bring an immense sense of satisfaction and joy; this seemed to be a major achievement on their journey. However, one participant seems to express anger, she had to lose weight in order to feel accepted in society.

'cos its something that I have craved and wanted for such a long time to be accepted and now I am, why didn't they accept me before.' (Pt 8: L251-252)

Living Life

All but one of the participants described a concept of 'living life.' Many of the participants (Pts 2, 5, 7, 8, 9) describe an isolated existence; and reported depressive symptoms before their operation *'you think, is life worth living beforehand? Now it is* (Pt 5: 118-119). Participant eight described herself as *'hiding away from everybody'* (L24) and *'agoraphobic'* (L356). However, the weight loss achieved from the operation now enabled them to start living their lives.

Over half the participants (Pts 1, 2, 4, 5, 8, 9, 10) described a *'whole new open world.'*(Pt 9: L539), several reported *'a new lease of life'* (Pt 5: L142). A quarter (Pts 2, 3, 4, 7) described a desire for new experiences, as if they had been storing a mental list of every regret and missed event during their life which they could now undertake.

'you're in your second childhood. [...] I want to go on a horse when its belly doesn't drop you know things like... I want to go on a....in a swimming pool and go down one of them slides without being stuck on it' (Pt 3: L430-431)

Half the participants (Pts 3, 5, 7, 9, 11, 12, 13) described enhanced family relationships, they were engaging in family events, engaging more in life and feeling less isolated.

'We go clothes shopping together and try stuff on and that has absolutely enhanced my relationship really because I hated clothes shopping before and never went clothes shopping [...]but it's like drawn our relationships even closer now. It's lovely for that' (Pt 13: L261-263)

'it's.... given me the ability to be able to interact with family life more, erm do things as a family and.... just to start doing things I enjoy.' (Pt 11: L318-319)

Five of the participants (Pts 3, 5, 7, 12, 13) described instances of regular social activities with members of the support group, describing the positive effect of attending the group or describing a deep friendship and sense of belonging as the level of intimate detail shared amongst group members bringing a closeness.

'I've actually made new friends [...] They understand where we've been and what we've done. It brings a deep friendship really' (Pt 13: L273-274)

Cognitive changes

One participant (Pt 4) described food as no longer being an obsession. One participant (Pt 11) reported a relationship change, now viewing food as fuel rather than an emotional crutch.

'How I relate to food now erm is different to how I used to. I think I probably did comfort eat [...]erm and just eat for the sake of it at times really erm and food was quite a big part erm....but actually I think I focused more on food as in just like fu, its fuel for me now' (Pt 13: L223-224)

However one participant (Pt 11) described an awareness that they still used food as a comfort, but they had substituted previous foods to *'a healthier option'* (Pt 11: L276) therefore not sabotaging the effect of the operation.

Nearly half reported a change in their thinking, two described (Pts 8, 10) themselves as being less impulsive as they were now thinking before eating, or even before shopping Two (Pts 5, 13) reported they had *'programmed'* (Pt 13: L236) their brain to now work with the constraints of the operation.

Weight Maintenance

This theme describes the final leg of their journey as they have reached a point of weight stability. The sub themes include 'fear of failure', 'ongoing struggle' and 'support needs'

Fear of failure

Over half of the participants (Pts 1, 2, 3, 6, 9, 11, 12, 14), described a fear that the operation would be unsuccessful and they would regain their weight. Thoughts were around what weight gain would mean in terms of returning to their old way of life (Pt 1), specifically for one participant it would mean losing her independence (Pt 6).

Over a third (Pts 2, 9, 11, 12, 14) had very generalised fears of not wanting to put on weight, there was a sense of panic they could not return to a life where they were big. Perhaps they were reflecting on the difference there life is now and perhaps recognising while there are thinner they can cope with the consequences of the operation, it is worth it. However, to return to being overweight and living with the consequences would be extreme difficult.

'I couldn't possibly allow myself to ever get to that stage again.

I like being slim too much.' (Pt 9: 293-295)

Ongoing struggle

This subtheme reflects the difficulties many of the participants described (Pts 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12). Three participants (Pts 5, 6, 9) identified issues around a desire to still want to eat food, large portions of food, describing what is commonly called 'head hunger':

'I don't want to eat massive massive amounts. Well no that's not true, that's not true at all. My head wants to, I personally don't want to. But my head will still look at a plate full of food and think "oh my god I wish" but erm I know I can't so I don't I wouldn't do it...but er,..head hunger is a very strange thing'

(Pt 9: L435-455)

Three participants (Pts 2, 10, 11) reported trying to eat more than the operation would allow as the following extract illustrates:

'you are always think that you can eat more..... and I know now I can't, but I still try.' (Pt 2: L172-173)

Pushing or testing the boundaries was also described in other ways, as participant four described drinking alcohol at the weekends and occasionally into the week and she believed this behaviour was responsible for her weight loss slowing down. However early into her post operative journey, she described moving through the stages

sooner than advised, trying to get back onto normal foods quicker. She seems to have replaced alcohol with food and describes this as her only 'vice' .

' from like end of July till Christmas I'd lost 5 stone and now since Christmas in the last 7 months I have only lost 2 stone, but, I know a lot of that is my own fault because now I do like to drink, so I drink Friday night and Saturday night and it tends to drag out and sometimes I have a bit in the week as well and I know I shouldn't but erm I still enjoy wine, that's my only vice now is my red wine' (Pt 4: L154-156)

'well I have really really struggled with the liquidised stage and you are supposed to be on that for three weeks and I did it for ten days [...]so I went onto the mush stage [...] so I went onto that stage sooner than I should have done and I probably only did that for about 2 weeks.... [...]so I was eating things like crackers with like low fat philli cheese on them, and things like that sooner than I should have done really (Pt 4: L173-177; L184-185)

Binge eating prior to the surgery was present for two participants (Pts 3, 12) and they both reported maladaptive coping mechanisms post operatively. Both these individuals were currently regaining weight post operatively and described trying to eat working with the

constraints of their bypass, switching from binge eating to grazing behaviour (Saunders, 2004).

'I can eat a packet of biscuits. I say to people, yes I can eat a pack of biscuits [...] but it takes me a day to eat them, but before, it would take me half an hour' (Pt 3: L563-567)

'it does help that you can't eat big meals [...]but even now you've got this thing called grazing and that's what I tend to do. [...]I tend to eat..... four, five not largest but like snacking..... you know which is not what you're supposed to be doing[...].I'm doing like..... sloppies, lot of sloppy food where you should be eating more....erm...not sloppy more like meat' (Pt 12: L71-73; L91)

Nearly a quarter (Pts 8, 9, 10, 11) reported not being perfect with their eating, eating some foods which were high in sugar and/or fat. Two participants (Pts 7, 8) reported persistent thoughts which are often linked with dieting behaviour. Participant seven was still having constant thoughts about weight loss; participant eight, now found that due to the restriction from her bypass she was plagued by thoughts about food:

'I think about food every single minute of the day all the time I think about it, it's only because I can't, well I can have it if I

wanted to but its contradicting the whole operation isn't it really [...] 'I don't remember thinking about food all the time before I think that's because I ate what I wanted [...]. But now, I can't really eat a lot of food' (Pt 8: L285-287; L297-298)

Participant one reported feeling fat, thinking about calories and dieting behaviour. He was constantly pushing himself to do high levels of exercise and described being addicted to exercise. He described a 'battle' still with his weight and one in which he was losing but he had to keep going, he explains:

'but I still feel as though... I'm fat' (L93)

"I'm generally taking in about 6-800 calories..... and I still need to burn more.' (L244)

'Well, I would cycle to work most days which is like 15 miles er..there and back. I would go on walks on the same day as well. So plenty of exercise being done' (L108-109)

'I just I just need to lose more weight. I'm, I'm desperate to lose it' (L101)

'... I just feel as though it's very hard and very difficult at times erm...to keep pushing yourself.' (191-192)

'Putting yourself through all this hell at times. Because it is, it's not easy and it can be hard work, hard going' (L171)

Nearly half of the participants (Pts 1, 2, 5, 9, 13) described a sense of no regrets; they were glad they had the operation, despite complications or difficulties which occurred. As the extracts illustrate:

'I wouldn't change it for anything, I don't regret it one bit. It is the best thing I had ever done I would go through it again if I had to without a shadow of a doubt' (Pt 4: L138-139)

In contrast, nearly a third of the participants (Pts 1, 6, 8, 12) describe some ambivalence about their decision or describe a sense of regret. As the following extracts demonstrate:

'would I do it again?...don't' know. Hindsight's a wonderful thing isn' t. Would I? I don't know. I don't know, I say mine was not a pleasant experience (Pt 6: L107-108)

'I probably regret what I've had done because of the problems' (Pt 12: L29)

Interestingly in participant one's transcript at one point he described the fact without hesitation he would have the operation again;

'it's been great. I love it. Love it, absolutely love it. I'd do it in a heartbeat again' (Pt 1: L84-85)

However at other times there is some hesitation. At one point he was describing the negative impact the operation has had on his ability to eat normally, the monotonous food choices and pain he feels when he tries to eat something different.

'I wish I could eat something better but I don't want to push it. I don't want to get things stuck. I've had things stuck in the past and it's very painful erm, and I just don't want to...I think to myself why do it? I've got loads and loads of energy. Not as though I'm lethargic. I'm getting enough.... food inside me. Erm...I'm happy.... I think...really' (Pt 1: L79-82)

Later, he describes his poor appetite, and some difficulties he's experienced eating more normally and questioning his decision to have the operation.

'This is me, other people are different. Some people I know can virtually eat full meals. Erm...my appetites a bit rubbish. So I...by Christmas time I was able to eat 2 sprouts erm...and you think ...'oh, what have I done? You know.... It's its positive really. It's a positive thing' (Pt 1: L175-177)

It seems he is grateful for the consequences; he recognises that without having the operation he would not have achieved this weight loss. However, he wants to eat more normally, desires more choice. He seems to be trying to convince himself it was the right decision.

Support Needs

Nearly half (Pts 1, 3, 4, 5, 7) reported a lack of professional support. They required knowledge and advice when dealing with different stages after their operation, or were missed out on routine follow up or there was a sense of being abandoned and they had to find answers themselves:

'when I was being sick all the time I was sort of allocated a dietician and I sent her e-mails and I never got answers. And I think I was 7 months out before I saw a dietician and I thought that was really bad' (Pt 7: L284-285)

For one participant, she did not find external support until she was one year post operative, and she described many times during the interview the impact this had had on her journey and said *'doing it on my own has been daunting'* (Pt 6: 159; L169).

In response to the lack of support, nearly half (Pts 1, 2, 4, 9, 10, 12) described the importance of being in a support group. They gained

clarity with problems, reassurance as they understood their experience on their journey was 'normal' and comforted having an extensive network around them in which they could access in various forms, face to face, phone or social media.

'being with a group of people that understand...it's so reassuring you've got people out there that are going through the same thing...you can just lift up the phone and say I'm having this problem, that problem' (Pt 12: L253-254)

However, two participants (Pts 3, 13) reported not sharing all the details of their journey as they did not want to scare future bariatric patients believing that their journey was abnormal.

'I don't share all my complications and stuff with everybody because I'd frighten them to death. I could easily put somebody off if I even began. I briefly told you. It goes so deep. It's just crazy, absolutely crazy but I only tell people what I feel what they need to know or what they'd cope with knowing so because it's not reality for everybody' (Pt 13: L284-286)

Two participants (Pts 2, 10) described the impact of psychological input to their journey and how illuminating they found this input in recognising the triggers and patterns of their eating. For one (Pt 2) having the method of input delivered in a group setting was

comforting, recognising she is not alone in how she functions around food:

'It made you realise that that was what was happening, it made you realise, to see a diagram, to draw a diagram and to talk to other people and know exactly that they are doing exactly the same as you and it's not just you' (Pt 2: L352-353)

Control

Over half the participants (Pts 1, 2, 3, 4, 5, 7, 10, 11, 13) described a process of having tried or exhausted all other options to lose weight. There was a sense they were describing a detachment of ownership, suggesting they had no part in the outcome, no control when describing these other methods, stating *'it just didn't work' (Pt 13; L13-14)*.

'I've tried every kind of weight loss thing going, the Weight Watchers and Slimming World and various private ones that [...]the ones that give out the erm amphetamines and..none of it worked' (Pt 10; L5-9)

Three participants (Pts 3, 7, 13) described a fear to diet, with each diet came extreme weight fluctuations, describing never being able to keep the weight off they lost and always regaining, never having control over their weight.

'when I hit twenty five stone I got to the point where I was frightened to even begin to have, erm you know to start another diet cos I know I'd fail and end up bigger' (Pt 13: L10-11)

One participant (Pt 9) described her fear over her lack of control, and how this would continue in the future, reflecting on the health consequences associated with this disease.

'I'm approaching forty and I can't control it and it's just ridiculous and I'm getting higher, higher and higher and soon there's going to be a position where I'm going to end up with diabetes or I'm going to end up with erm...heart disease or various cancers and all the nasty things that are associated with obesity' (P9; L79-82)

However, after the operation, there seemed to be a shift in their perception of how the operation worked. Most of the participants described (Pts 1, 2, 3, 4, 6, 7, 8, 9, 11, 12, 13) a sense of anger and irritation around society's perception of the operation, suggesting the individual has very little to do with the success. This suggests a shift in their locus of control, recognising how they value their input in the process and outcome.

'people really annoy me when they say it's an easy option because it's not, that's one thing that bariatric surgery isn't' (Pt 2: L232-233)

'it is a tool you have to work with, it doesn't do it on its own. You've got to work hard with it' (Pt 7: L300-301)

Participant Three reflects on her perception of the operation before she had it, believing it would give her control. There is a sense of regret, she did not understand how the operation works, had she had a better understanding of her involvement in the process it might have reduced or prevented the struggle she experienced post operatively.

'not a quick fix and you've got to realise, it's like erm you've got to think. I didn't at the time' (Pt 3: L666)

The restriction the participants felt from the operation and the inability to eat certain foods or to eat large portions gave them the perception of control. As participant nine explains, her head still wants food, but due to the physical limitations the surgery enables her to say no.

'But my head will still look at a plate full of food and think 'oh my god I wish' but erm I know I can't so I don't, I wouldn't do it' (Pt 9: L454-455)

The physical consequences described sounded physically debilitating and unpleasant. The most frequently reported were vomiting, pain or generally feeling unwell. The operation provides a sense of control, through the negative consequences.

'I'm happy now to stop at that and put it down because I knew that I'll probably feel ill if I don't. It knocks me out for a few hours and so.... It's a good incentive not to eat it because I know how it's going to make me feel. I don't ever think..."oh well it will be right" anymore because I don't want to feel like that. [...] when you're pre op and you break the rules [...] the only, It's the guilt is the only factor that's there but now there's a physical symptom as well as.... the psychological and erm the physical symptoms are quite nasty' (Pt 11: 184-196)

One participant describes this relationship, aware that the operation was responsible for providing this control

'I wouldn't want to be in a situation where...I could I could eat what I wanted to do because I'm sure I'd go back to what I liked [...] so so I'm not bothered about that. At the end of the

day, not being able to eat certain stuff is keeping me on the straight and narrow' (Pt 6: L266-269)

However, participant 8 also seemed to have difficulty accepting the credit or her involvement in her success. This could be due to the way she has thought about her operation, giving it an identity, handing control over to her bypass, suggesting an external locus of control.

'like I have lost all this weight [...] I'm quite humble about it and when people compliment me about it I'm still quite shy I just say thank you I just accept it and say ahh thanks and carry on.'
(Pt 8: L182-184)

'but I treat my bypass as a third person [...] Yeah she's in charge I suppose of what I eat. [...] it helps me, it helps me giving it an identity and that she's in control. She's like my little discipline' (Pt 8:L369; 376; 384-385)

Discussion

This research study aimed to understand the post operative experiences of bariatric surgery patients after the first 12 months following surgery following the 'honeymoon period'; a time when dramatic weight loss occurs (Mackechnie 2005). After this period, weight loss generally slows down and plateaus, therefore the emphasis is on the patient to identify how to balance energy intake and expenditure so they can successfully maintain their weight loss. Interpretative Phenomenological Analysis (IPA) was used to investigate fourteen gastric bypass patients experience of bariatric surgery that were between 12 months to three years post surgery, expanding on previous quantitative studies. The research question was what is the lived experience of the individual following bariatric surgery after the honeymoon period (at least 12 month post-operative)? What has materialised out of this study is the phases the individuals go through on their weight loss journey before and after surgery and how psychology could help support the patient along this journey.

Locus of control

Control is not explained simply when the participants described their weight loss journey. There are many stages at which control is pertinent to participants. But the most obvious is the switch participants describe occurring in control from pre to post operation. Participants describe an external locus of control (Rotter, 1990) prior

to their operation: they had no control over the outcome of each weight loss endeavour. Many diets were frequently mentioned by the participants and for some, the weight cycling which occurred through dieting contributed to the sense of no internal locus of control; the participants described fear to try another diet. However, the participants reported developing an internal locus of control through the consequences of the operation (Rotter, 1990). The surgery was described as a 'tool', a mechanism which enabled them to gain control. For many this was through the negative consequences they experienced when they overate which deterred this behaviour in the future or vomiting when they did overeat which was affective two fold, as it reduced the calories they were ingesting but also meant they were less inclined to do this behaviour in the future (a form of aversion therapy; Wolpe, 1973). However for one participant, she still perceived no internal locus of control, she perceived her bypass was responsible for her weight loss and inability to eat as she would like, it seemed her way of making sense of the situation was by giving her bypass an identity (Pt 8), and in giving it the power to control her eating, an ability that she denied to be within her own power.

These findings corroborate with research conducted by Ogden et al. (2006); fifteen post bariatric patients were interviewed around 13 months post operatively (range 4-11 months), most had gastric band. Ogden et al, reported a change in their sense of control; prior to the operation the patients were out of control of their weight and

wanted to hand control over to an external force. After having bariatric surgery and adjusting to the limitations to the surgery the participants developed a new sense of control over their weight and eating. These findings are similar to the findings of the present study that has investigated this pattern further.

The participants in the present study, as a result of the bypass, describe an enforced behavioural restraint rather than a permanent cognitive change. There is still a desire to eat; the operation has not eradicated their psychological or emotional dependency on food so it no longer exists. However it has changed or diminished in some way. Many of the participants described a sense of 'testing the boundaries'. They wanted to eat 'normally'; eating the foods they could pre operatively, or describe 'head hunger' a cognitive desire to eat, they wanted food.

However, half the participants in the present study also described a type of cognitive change as they described their behaviour as less impulsive or a 'reprogramming' had taken place. However, these cognitive changes do not refer to a change in psychological desire to eat, referring more to an enforced change. As Saunders (2004) describes, binge eaters prior to surgery become grazers as due to the limitations of the surgery they are no longer able to eat large quantities of food. However, several pertinent influencing factors could also counteract the psychological desire to eat which include

the individual's fear of their weight returning and the impact weight loss has had on their life and their identity.

The participants seem to be describing a balance between wanting to eat but also not wanting to negate the positive aspects of the weight loss. They are determined to not gain the weight again and that fear of regaining stops them from eating, suggesting internal control as participant nine describes:

' I look in the mirror and think yeh, I like it and that to me is enough of a satisfaction to quieten down my head demons so on the occasions when I have er... you know an eat for England day, er...that's a point which when I need to look back in the mirror and think no you need to stop it, you really need to stop it because otherwise you're going to end up back where you were before erm....and I can't let that happen.' (P9: L483-489)

The fear of weight gain reported in this study is in accordance with a previous study of post surgical bypass patients. Rand and McGregor (1991) found that post surgery gastric bypass patients reported they would rather have heart disease, acne, diabetes, dyslexic or be deaf than return to their former weight.

Two thirds of the participants touch on changes in identity. Nearly half of the participants reported a change in their identity, increases

in confidence and self esteem. Nearly half spoke about feeling 'normal'. Almost recognising that the operation had worked once they were now able to do the things others could do, go on fairground rides and buy clothes from 'normal' shops. There is a sense that once they had achieved 'normality' there was less desire to keep losing weight. Prior to the operation they had to 'hide away' and considered no one would talk to them as they were 'fat and ugly'. The participants described how societal stigma had a devastating impact on them prior to the operation. Weight stigmatisation is considered by some justifiable as it motivates individuals to adopt healthier behaviours (Stuber, Meyer, & Link (2008). However it has also been argued to perpetuate obesity as it impacts on the individual psychologically and physically and impedes any efforts to prevent obesity (Puhl & Heuer, 2010). The participants in this study describe the impact of their weight on their inability to engage in life, believing they need to shut themselves away, and how only through losing weight they are now considered 'normal'. However, many of the participants in the study as are still classified as overweight and obese according to their BMI. But due to the obesity epidemic, they are within a 'normal' weigh range so no longer subject to prejudice and discrimination because of their weight (Puhl & Heuer, 2008).

The theme 'identity' is closely linked with the theme 'living life', in which the participants describe the change in their life post operatively. All but one participant touched on the impact the weight

loss had had on their new life, some participants reflecting on the comparison of their life before surgery, describing a depression (in accordance with the research; Dixon et al., 2003) and what their life is like now. They were describing a new ability to engage in life and do very basic things, but also it meant completing things they had only dreamed about. There was also the impact it had on the quality of their relationship with friends and family, bringing them closer together. These findings corroborate with research which report on the positive impact bariatric surgery has on romantic relationships (Applegate, Friedman & Grant, 2006; Cooper & Wells, 2006; Herpertz et al., 2003; Sarwer et al., 2005) and their ability to engage in shared activities with the family (Rand, Kowalske & Kuldau, 1984). However, weight loss can challenge relationships as friends or family members become envious or jealous of their weight loss (Bocchieri et al., 2002; Burgmer et al., 2007). Intimate relationships can be affected as partners become jealous and anxious, they believe their loved one will terminate the relationship as they lose weight and become more attractive to others (Andrews, 1997; Bocchieri et al., 2002; Burgmer et al., 2007).

Considering the above research and findings from this present study, and further developing the idea of being 'normal' this becomes a more complex phenomenon. For example, research has shown that adolescent women are likely to be a similar weight to their friends (Renna, Grafova & Thakun, 2008) and have similar eating behaviours

(Hutchinson & Rapee, 2006). In adults participating in a weight gain prevention intervention, friend and co-worker support for healthy eating and family support for physical activity are significantly associated with weight reduction at 24 months (P-values <0.05). However, family social undermining for healthy eating (e.g. 'brought me foods I'm trying not to eat') was associated with weight gain at 24 months (Wang, Pbert & Lemon, 2014).

Together these suggest that our peers and friends may normalise our eating behaviour and perception of ideal weight. Having friends who are slimmer and encouraging of weight loss goals is adjunctive to weight loss efforts in helping achieve goals. Having friends who are not helpful has the reverse effect. However, specifically within bariatric populations, research has found the impact of weight loss to have a positive effect on relationships, although jealousy and anxiety can impact negatively. A saboteur in the form of a friend or family member could intentionally or unintentionally pose as a challenge and affect the bariatric patients' weight loss efforts. Or the bariatric patient might self sabotage if they are aware their weight loss is negatively impacting on their close relationships. Being 'normal' and the impact of weight loss on close relationships is an area for further inquiry.

Phases

The themes which came out of the transcripts describe the journey the participants go on which for some starts prior to their operation and includes various stages post surgery, these stages represent a change in the way they are thinking and behaving post surgery.

Denial, the first stage, was described by nearly half the participants in one of two forms pre-operatively. Three described denial with regards to their size and two participants described being in denial and unaware of their comfort eating. The second stage was shock. There was a sense of shock which seemed to be triggered when they realised the consequences of the operation, they were no longer able to eat or even drink normally. They are struggling to accept the consequences of the operation, but also there is a sense of shock related to the fact they feel the consequences of the operation will continue for the rest of their life and they are contemplating how they can live life like this and how can they live with the decision they made.

The honeymoon period is a distinct phase in the bariatric literature, categorised as the phase in which rapid weight loss occurs, normally 6-12 months after the operation (MacKechnie, 2005; Yale and Weiler, 1991; Brolin, 1992). However, in this study, two participants described other factors pertinent to this time frame and provide more information relating to the dramatic weight loss that occurs. In particular, no desire to eat food for approximately six months after

the operation, which is in accordance with studies focused on hormonal changes, in particular appetite suppression post surgery (Pedersen, Lefevre, Peters, Patterson & Ghatei, 2013). Similar findings occurred with participants in the Saunders (2004) study.

In order to maximise their weight loss and take care of their new smaller stomach, it is important that bariatric patients adhere to their post operative instructions. As discussed later, some of the participants rushed through this period which potentially could have impacted on their weight loss.

A period of adjustment followed, the participants detailed how they tried to work with the operation on a daily basis, dealing with the unpredictable nature with regards to what they could consume and the difficulties they might encounter with certain foods (Mathes & Spector, 2012; Miras & le Roux, 2010; Berthoud & Zheng, 2012; Tichansky, Boughter, & Madan, 2006). A mechanism which seemed to get some of the participants through was reverting to the 'rules' of the operation. This phase could be important when considering patients high risk for failure. If a patient has difficulty returning to 'normal eating' and develops a fear of eating 'normally' due to the difficulty of adapting to the constant uncertainty with eating then they might be more inclined to eat the foods that they have confidence they can eat, i.e. sloppy foods which means they have limited restriction. However, eating these types of food, or liquidising

food so they become sloppy negates the purpose of the operation as they will not feel any restriction and will ultimately consume more calories. This will impact of the rate they lose weight and could mean they plateau at a higher weight post operatively and they might be in danger of regaining weight.

The fourth phase was grieving. Three participants went through a period of grieving for food; their emotional connection to food had changed as a result of the operation, the limited amount of food they could eat meant they were no longer gaining any comfort from eating. However, one participant seemed to be describing a relief that she had no relationship with food, grateful that she no longer had a connection.

Nearly everyone eats emotionally (Thayer, 2001). However, it has been argued that obese individuals are more responsive not only to external cues of eating (i.e. sight of food, taste of food, time of day etc) but also eat more in response to emotions such as boredom, low mood, fear and anxiety (Schachter and Rodin, 1974). Obese women, when matched to control subjects, used emotional eating as an emotional regulation strategy more often than controls (van Strien, Herman and Verheijden, 2009). In non clinical population's, research has shown a link between emotional eating and disturbances in emotional processing such as higher levels of alexithymia (van Strien, 2006). Combining the high presence of emotional eating in obese

populations and the link between emotional eating and higher levels of alexithymia, these findings are in accordance with Rommel et al, (2012) who found that obese women had deficits in emotional awareness. Therefore in relation to the present study, perhaps only three of the participants had this awareness of their emotional connection with food. Due to the findings from this study and the research in this area, these findings reinforce the important of understanding if an individual has an emotional relationship with food and to explore this prior to surgery. As detailed in the introduction, perhaps it is not the quantity and frequency of food consumed which is of importance its why.

If individuals are unaware of their emotional connection with food and are not trained in emotional regulation they may turn to other maladaptive regulation strategies. This could account for the over representation of bariatric patients in substance abuse treatment programmes as detailed in the introduction (Saules et al., 2010). Ivezaj et al. (2012) found that over 80% of the 24 post bariatric surgery patients interviewed in an inpatient substance abuse treatment programme described an addiction transfer/substitution (defined as replacing intake of certain foods or overeating behaviour with intake of substances more traditionally regarded as being 'addictive'). This area does warrant further research and particularly research carried out in more clinical settings conducted with obese individuals.

Acceptance was the final phase, a sense that they needed to be at peace with the decision they had made, regardless of the situation they now found themselves in. By accepting the experiences that come with the operation, both positive and negative, no longer trying to control the experiences reduces the struggle (Hayes, Strosahl & Wilson, 1999).

Ongoing struggle

Twelve participants described some levels of disordered eating and thinking post surgery. Many participants described head hunger, wanting to still eat a massive amount. However, could some of this thinking be considered normal as they are now only able to consume extremely small amounts of food? A few described a sense of pushing the boundaries, trying to eat more food. Again how much is the individual describing normal behaviour post surgery? Zijlstra et al. (2009) described a similar theme when interviewing 11 unsuccessful post bariatric patients. 'Testing the limits of the gastric band' was a theme which described the participants in their study when the participants indulged in periods of overeating or the participants changing their food choices so the food passed more easily past the band.

However, two participants in this current study described eating disorders post surgery, specifically binge eating and grazing

behaviour. They describe behaviours which mean they can work around the physical restraints of the operation to still eat; this suggests they might benefit from more post-surgery psychological support as the operation has not changed their psychological dependency on food. Some participants are describing thinking patterns synonymous with dieters. Thinking about food all the time or thinking about weight loss. Will this trigger future binges and grazing episodes (Saunders, 2004)?

One participant in particular was describing a struggle and conflict with his decision to have surgery; a dissonance (Festinger's, 1957). He felt fat, he was exercising excessively, and he reported his weight not changing and desperation to lose more weight. At one point he described without hesitation he would have the surgery again '*do it in a heartbeat*' (Pt 1: L85) however earlier he describes his difficulties with eating and there seems to be some ambivalence when he describe his situation; *erm...I'm happy...I think....really* (Pt 1; L81-82) and later questions his decision to have surgery '*oh what have I done?*' (Pt 1: L177). He seems to be describing the conflict over his decision, more accepting of his decision when eating, unhappy that he is unable to eat as he would like but also aware due to the restriction he is now substantially lighter than he was pre operatively but it seems he is constantly considering was it worth it? He wishes to feel confident that he made the right decision, but there is conflict and this creates tension. This is similar to the theme described in

LePage (2010) study. One of the themes was 'finding balance' which described the participant's realisation that there was a give and take to their operation, ups and downs associated with the surgery and that to find balance was a continuous and evolving process.

Support Needs

Nearly half reported a lack of professional support, in particular needing dietetic support and advice with particular situations. The NICE guidance suggests that individuals receive regular, individualised post operative dietetic monitoring to achieve long term weight loss and weight maintenance and are provided information on patient support groups (NICE, 2006). However, many participants described a lack of support. However, many others described the positive impact of being in a support group or described the importance of having support available. Many felt it was important to understand that what they were experiencing was 'normal' and found the support group was invaluable. The overwhelming conclusion from the interviews was that the professional support or lack thereof was of central importance yet support was not a top variable in the two surveys of practitioners (Bauchowitz et al., 2005; Fabricatore et al., 2006). This could be viewed as an example of where researcher bias has limited our understanding of outcomes for this population, and demonstrates how understanding the meaning the patients make of their experience offers us new insight into what the participants

view as important and how changes in to the system can improve their care and adjustment.

Only two participants described some form of psychological input prior to surgery. Both describing a positive impact in that the psychological support had provided some insight into their thinking and behaviour around food, recognising triggers to overeating. A recent study has found that the provision of psychology within bariatric services is highly variable across the services (Ratcliffe et al., 2014). A recent review of all patients who had bariatric surgery in the UK during a two month period found that only 91 out of 309 patients received any psychological input in their care (Martin, Smith, Mason, Butt, 2012). Therefore, from the findings of this study, it suggests that the majority of the participants either did not have access to input, it was limited input, or it was not useful.

Application of Psychology on the Bariatric Surgery Journey

The application of psychology could have a positive impact on a bariatric patient's journey at various stages. Currently, the role of psychology is predominately involved with completing preoperative psychological assessments (NICE, 2006; Ratcliffe et al., 2014). However, with reference to the theme 'quick fix', there is a sense of desperation and impatience to having surgery which would suggest that the participants were jumping through the hoops and not viewing the preoperative phase as the start of their of their weight loss journey. They felt everything was on hold until they had the

operation. With reference to locus of control, many of the participants reported no control over their weight having tried all options to lose weight. This feeling of being out of control is furthered by their perceived lack of control over whether they are deemed suitable for the surgery and if so, when it will take place. This is in accordance findings from a recent survey conducted which found that many psychologists working in bariatric services believe they are the 'gatekeepers' for surgery (68% of the psychologists reported that they "sometimes" or "often" felt they were perceived as the gatekeeper to bariatric surgery; Ratcliffe et al., 2014). The patient, as well as the psychologists (Ratcliffe et al., 2014), are aware of the 'power' the professionals hold in allowing them to progress to the next stage of surgery. Therefore during the assessment a patient could distort their answers, providing information they believe the psychologist wishes to hear rather than it being an opportunity for the patient to express their fears and difficulties allowing the psychologist to work with the patient to enable them to become a good candidate for surgery.

Psychological input pre operatively could help the individual gain insight to their psychological relationship with food, understanding their patterns of behaviours and triggers to eating. In order to foster a sense of control, by asking them to maintain or lose a small percentage of their weight (up to 5% of their body weight), the individual could gain some confidence in their ability to being able to

lose weight and maintain it. However, the method in which they do this is vitally important. Following a specific diet or set of rules, in a sense is handing someone control however there is little to no learning taking place. As an alternative, working with the individual for a period of time pre operatively so they start to learn how to lose weight by gaining valuable insight to their psychological relationship with food and cultivating an inner wisdom (Kristeller, Wolever, & Sheets, 2013) developing an internal locus of control. This period could also be the start of developing good post operative behaviours, for example eating three meals a day, no snacks in-between meals, eating slowly, with awareness away from distractions.

There are many options in the delivery of a psychological pre-surgical intervention which are already developed and could be delivered with minimal cost and time. Many group based programmes delivered using Acceptance and Commitment therapy (ACT) (Hayes, Strosahl & Wilson, 1999) is showing promising results with weight loss but also psychological variables such as emotional distress and eating (Forman, Butryn, Hoffman, Herbert, 2009; Dalen, 2010; Lillis, Dahl & Weineland, 2014; Lillis, Hayes, Bunting & Masuda, 2009) and when applied in bariatric surgery populations (Weineland, Arvidsson, Kakoulidis & Dahl, 2012). With the high number of participants referred to surgery with binge eating disorders, there are 'off the shelf' groups designed with could be run pre surgery (see Kristeller & Hallett, 1999; Kristeller & Wolever, 2011). If participants need

additional support then they could be referred for one to one input with a psychologist prior to their operation.

A large part of the journey should be normalising the patient's experience, and support groups seems to be a good avenue to disseminate this information. Psychologists could be asked to provide a stronger link to established support groups adding structure and evidence based direction. Attendance at bariatric support groups should be encouraged, two studies have shown regular attendance lose more weight post surgery (Hildebrandt, 1998; Orth, Madan, Taddeucci, Coday & Tischansky, 2008).

Those participants who have identified pre surgical eating disorders (i.e. binge eating disorder) should be offered routine psychological follow up. The honeymoon period represents a small window in which weight loss is dramatic in bariatric patients, therefore those patients who still might be considered high risk for failure, following on from the clinical assessment and psychological work conducted pre surgery by the psychologist, should be given support early on in to their journey post surgery to maximise their weight loss during this time.

When working as a multidisciplinary team, dietitians could refer to psychology if patients are reporting to eat a large percentage of sloppy food as this behaviour will be having an impact on their weight loss. A psychologist could design eating experiments to help the patients become more used to eating different types of food. For

example, many participants in this study reported difficulties eating meat therefore different exposure experiments including some psych-education around anxiety could be a standard part of the post operative journey for a bariatric patient.

Finally, bariatric patients should have access to specialist weight management psychologist at any point during their weight loss journey whether a few months or a few years post surgery. The role of psychology can vary within this field. The above options are areas a psychologist could offer, however this should not be seen as a 'must', but as an option to support bariatric patients post operatively.

Strengths, Limitations and Future Areas of Research

A key strength of this study is that the participants were homogenous in terms of the type of operation they had and the time frame post-surgery. Due to the process of recruitment, the individuals were recruited from a pool of individuals attending a support group. Therefore, it is possible that these individuals are struggling more so post surgery than the average bariatric surgery patient giving a skewed representation. However, it could also be argued that those attending a support group might have a more positive outcome as they are benefiting from being in a supportive and safe environment in which they can receive the support from the others, impacting positively on their adherence to post-operative rules (Hildebrandt, 1998; Orth, et al., 2008).

A strength of this study is that it contributes to the small number of qualitative studies in this area vs the vast number of quantitative studies which have focused on key variables and predictors of success. There were many themes from this study which are similar to previous qualitative studies conducted in this area, as stated in the discussion. However, the phases the bariatric patients go through post surgery has provided more understanding of their unique journey. A clinician could share the phases to a pre bariatric patient as part of their assessment for surgery as a way of preparing them so they might be aware of the adjustment required post operatively. Additionally the importance of support, the lack of professional support but the importance of seeking support elsewhere.

The findings of this study suggest future areas of inquiry. For example, in the study, with theme 'quick fix' described the participants desperation to have surgery. There was a sense of no control, around their ability to control their weight or if they would have the operation. A hypothesis for future research could be to understand the relationship between locus of control, whether this changes pre and post operatively and how does it correlates to weight loss and quality of life. Studies which explore those participants who have lost weight through non-dieting prior to surgery vs dieting might provide further information about the role of control. Weight loss through prescribed plans are essentially handing

someone control. When asked to follow a plan strictly, patients tend to lose weight as the calories have been calculated for them. However, by their nature, prescribed diets do not encourage the patient to develop their understanding of controlling their weight through decision making. Therefore if individuals learn how to control their weight through guidance rather than a set plan it would suggest they are developing an internal locus of control over their weight, which if done before surgery might suggest they will have a greater internal locus of control post-surgery. Whether bariatric patients who report a higher internal locus of control over their weight pre surgery and post-surgery have greater weight loss and/or report greater quality of life than those with a higher external locus of control pre surgery is therefore one possible avenue of future enquiry.

With reference to the findings regarding support needs, this is another area for future inquiry. Many of the participants described a lack of professional support therefore seeking support from external sources. Is there any relationship between professional support and 'sticking to the rules'? Would professional feedback positively impact on their adherence to the rules? Also, attendance at post-operative appointments would mean those who are struggling would access support quicker (if the support was available).

An additional area of research is understanding the impact of being 'normal'. The participants described a desire to be 'normal' and due

to the obesity epidemic our perception of normal is skewed as the majority of the population are either overweight or obese (Department of Health 2011). From this study, it would suggest that once a person has become 'normal' they are less motivated to lose weight, and might have more of a flexible attitude in sticking to the rules of the operation. This area of research could link into other research conducted which has found a change in relationship status post surgery (Bocchieri et al., 2002; Burgmer et al., 2007), are bariatric patients viewed more attractive post surgery by society or their partners; and what impact does this have on their relationships? This area warrants further inquiry.

Other areas of research could evaluate the impact of psychological intervention at varying time points within bariatric settings, using different psychological models which have shown positive results in health settings (e.g. ACT and mindfulness based approaches).

Recommendations:

The following recommendations are taking into account the empirical study and the literature review.

- a. With reference to the theme 'support needs', bariatric patients should be able to access a psychologist pre and post-surgery should they feel it necessary. This is in line with the NICE guidelines (2006).
- b. With reference to the theme 'quick fix' it is suggested that bariatric patients enter specialist weight management service in a tier three service. This means should a patient be deemed high risk, there is an appropriate team available to work with the patient before referring the patient on to a tier four bariatric service. Therefore, this means a psychologist's role goes beyond screening patients for surgery. As part of their role, the psychologists can identify any psychological issues/difficulties as part of the formulation which increases the patients risk for failure. Individualised therapeutic work could be completed with the psychologist, in conjunction with preparatory work being completed by the other professionals in the MDT in order to prepare the individual for surgery. This recommendation is also recognising the 'desperation' and lack of control the patients describe on their pathway to surgery, not

knowing if they will be offered surgery. Being in a tier three service means they will be on a clear pathway for surgery and be told immediately if they meet the criteria for surgery or not and time frames for surgery can be communicated.

- c. The majority of patients should be expected to lose weight prior to referral for bariatric services; this ties into the overarching theme of 'locus of control', however there are cases for exception. As the BOMSS (2014) commissioning guide states 'patients should not be made to achieve a set weight loss target before referral to the bariatric surgery service as a mean of 'qualifying' for surgery' (pg 7). However, in disagreement with the BOMSS (2014) guide this should not be achieved through a short supervised diet.

Conclusion

This research was conducted to understand the post operative experience of bariatric surgery patients after the 'honeymoon period'. This period's emphasis is on the individual to balance energy intake and expenditure in order to successfully maintain their weight loss. A key aim was to understand how the participants make sense of their journey, identify significant factors that enabled some patients to be more successful coming from a patient perspective rather than a researcher. However, this study has found a number of phases that participants pass through on their journey and emphasises the role psychology can play to amplify their success. A psychologist's role goes beyond screening participants for surgery.

Critical Appraisal

The research element of this course had always filled me with excitement. I previously enjoyed completing the research element of my undergraduate and Masters Course; however for this study I felt pressure from the start to select a topic area which would deliver a meaningful application for the field of counselling psychology. I knew I wanted to explore the impact of psychology in bariatric surgery; however it took many months to shape my idea into a working question. My supervisors had to remind me on several occasions that the purpose for the research was not to be ground breaking, I needed to be more focused.

Initially I wanted the first part of my study to look at predictive factors. This meant I needed to have access to large numbers of patients requesting surgery; however the austerity measures impacted on my research. As the criteria for bariatric surgery was tightened it meant fewer patients qualified for surgery and therefore the number of referrals reduced. This had a 'knock on' effect to my research and required that my literature review be re-drafted. I felt extremely frustrated with the process of trying to generate a new idea for the literature review; however with support and guidance from my supervisors this was eventually achieved.

I have never completed qualitative research using IPA before and I struggled with the concept of the bracketing process. After reading Finlay (2008) paper, I acknowledged this was more of a position that felt comfortable to me i.e. in that rather than try to bracket off and separate out my understanding (as suggested by other philosophers), I could use my knowledge and understanding of this area. Finlay (2008) describes this process is a 'dance' in which a researcher uses their understanding but is aware of not becoming self-indulgent. I wasn't entirely sure how this translated into practice and had trepidations in taking this approach. I spoke to my supervisors about what this meant, and felt reassured that that could support me through this process, in making sure some of my interpretations weren't too far removed from the data, theory or research. Having completed one piece of IPA research, I now have a greater understanding of the process and I recognise the fact I would feel more confident to be more interpretative when conducting future research.

As I stated in my diary prior to commencing this research, I didn't endorse then (and still don't now) the view that every bariatric patient needs psychological intervention prior to surgery; however the reason I wanted to conduct some research in this area was due to the fact that psychological provision within bariatric services were being threatened and I wanted to conduct a study which might provide an insight into the place of psychology in the experience of

patients. I was very aware that I needed to 'bracket off' this contention. Despite this awareness, I imagine there would have been some influence of my part with the participants, especially when I have reviewed earlier drafts of this research.

Once I had my research question, I started to contact participants. This process much easier than I thought it would be. I contacted support groups through the Bariatric Obesity Surgery Patients Association (BOSPA) website and soon realised that many of the support groups were under an umbrella organisation. I spoke with the chairman of the group and eventually travelled to Liverpool to meet with him and the support group he led. The members of the group were extremely welcoming and I met one participant there who felt extremely passionate about being part of the research, welcoming the opportunity to talk about her journey and experience. There was a period of six months in which I travelled to different parts of the country to conduct the interviews. I summarised any learning in my research diary after each interview, one interview in particular required four hours of travel each way, giving ample time to reflect on the interview.

Other thoughts and beliefs about surgery were noted in my research diary. My thoughts about surgery were also very clear prior to starting the research. I believed then it was a fantastic tool we could offer our patients although I also believed that the patients over

estimated what impact it would have on their lives. However, now having completed this research my opinion in relation to surgery has altered. When first working in this field (two years prior to starting this research) I felt the operation was being offered too readily to patients. Surgery was their only chance of weight loss; I felt they should have received more input from a specialist service like ours. Over time, as my clinical hours increased I had a greater understanding of the complexity and severity of the individuals situations. I recognised a shift in my attitude; surgery was an effective tool as long as individuals went through a stringent process to prepare them for surgery. They needed to have a good psychological understanding of their relationship with food and would be assessed as low risk for failure (or as low as possible based on their individual circumstance). With the aforementioned measures met we should be able to refer the individual for surgery, with no cap on the number of operations performed. The change in my attitude became more evident as I felt my frustration with the austerity measures, raising the criteria and threshold for surgery, reducing the number of patients eligible.

A strong factor in changing my attitude to surgery is the findings from this study. From reading through my research diary, a theme which emerges is my shock at the experience these individuals have post surgery. I am disturbed at the level of struggle they describe, but also surprised in their acceptance of their situations. The

'struggle' they experience, cognitively and physically, to eat food seems draining. Nevertheless, as their lives are so drastically different from the perceived 'norm' they seem to be able to deal with the consequences. They are happy they have lost weight, their health is better, they have better relationships with families and friends and can do more, yet many of them still report some form of disturbed eating and thinking. When asked what I do for a living in social situations a state that I help people stop struggling with food, or help them gain control over food and their weight, I feel that bariatric surgery is effective with weight loss, however the patients are still struggling and there is some form of struggle each day. This does not sit comfortably with me.

Other findings which surprised me included the fact that only three participants talked about 'grieving for food'. I expected many more (as noted in my research diary. I believed that this was something a psychologist could help them with post surgery); however after returning to the literature I become aware of the term alexithymia and how this could be an important factor. Considering my clinical experience, patients often report hunger after being asked why they are eating at certain points i.e. outside of breakfast, lunch and dinner. I had assumed that this was because they really believed they were hungry, not understanding the difference between 'head hunger' and actual hunger. That they held a belief that it was acceptable to eat if they reported feeling hungry and would experience less guilt if

they convinced themselves they were eating due to hunger. Research suggests there is some evidence that emotional eating is an ineffective coping mechanism as distress is not lowered during or after eating (Polivy, Herman & McFarlane, 1994; Polivy & Herman, 1999). However in my clinical work, the majority of my patients reported that when feeling distressed, eating does lower their stress levels. In light of my findings from this study and the conflicting information in the literature to my clinical experience, this is an area which warrants further research.

Another finding which surprised me was the impact of the operation, I noted in my diary prior to starting that I didn't believe surgery would have a significant impact on their day to day lives. The patients needed to remember that they were going to have to go to work, look after loved ones, doing the shopping. Life goes on. During pre surgical assessments I felt it was important for the individual to understand that weight loss did not equate to resolution of all their current difficulties. However, it seems I underestimated the impact of the little things; weight loss meant they were now more 'normal' and fitted into society so when they went out they no longer worried if the chair they sat on would support their weight. They could now move with greater ease and were more independent, bending down and tying their shoe laces without expending massive energy struggling or requiring help. Life was easier, and there was more enjoyment and much less struggle. I wonder if the little things would still be as

meaningful if I had interviewed participants five years post operatively and if they would believe the benefits of the surgery outweighed the struggle with eating as I imagine as time passes they become used to being 'normal'.

I believe that the reason my opinion of surgery has also changed is in part due to how effective I am as a clinician. I have been working in this field for 7 years now, and completing this research both the literature review and the IPA of patients interviews has had a significantly positive impact on my clinical work, I believe I have a greater understanding of the area and I'm more effective.

More recently I have changed my main working model, using Acceptance and Commitment therapy (ACT) and mindfulness in my therapeutic work which seems to be more effective. We have fewer patients discharging themselves from the service and greater weight loss outcomes; this is at a time when we are being referred patients who are more complex than those referrals in previous years.

Very recently I completed a MB-EAT workshop ran by Jean Kristeller (Kristeller, Wolever & Sheets, 2013) which was an enlightening experience, both professionally and personally (I'm now aware that I really don't like Cadbury's chocolate as much as I thought I did!). I have now incorporated some of this training in my clinical work, building on the other mindful eating practices I was delivering in my

sessions. Jean spoke about her experiences of delivering this training to post bariatric patients. They reported that they had wished they had completed it pre operatively as by eating more mindfully they were able to tune in to hunger and satiety and thereby reduce their binge eating episodes.

I do feel that bariatric surgery is being presented, in particular in the media, as the answer to our problems when regards to obesity. I don't believe we are providing a sufficient package of care pre operatively and it gives those people who want to lose weight the impression that surgery is the only option. Recent surveys (Ratcliffe et al., 2014) and guidance produced (Martin et al., 2012) has shown a lack of psychological provision across the country, which needs to be addressed. I feel even more concerned in light of the recent guidance released from National Institute of Clinical Excellence (NICE update 2014) with regards to lowering the BMI for those with diabetes, ultimately making surgery available for more individuals. Treating diabetes accounts for 10% of the overall NHS budget so I understand the rationale behind this decision. However, as a member of a charity organisation supporting people post surgery I read many members posts on social media. There are many individuals, post bariatric surgery patients, who are still struggling with food. Therefore, lowering the criteria in order that more individuals can have bariatric surgery seems to me a poor decision considering our

poor long term data and not knowing how effective surgery is long term.

Completing this research has been a long process, balancing being a mother and working part time with other personal difficulties my family have gone through over the last five years. By focusing on this area and interviewing recipients of bariatric surgery I feel I have vastly increased my knowledge and understanding of this area, which has a positive impact on my clinical work. I feel extremely grateful to the participants who let me interview them and share their personal journeys with me. This experience has been extremely challenging at times, but I look forward to becoming involved in more projects in the future.

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LETTER TO ORGANISATION

University of Wolverhampton
Wulfruna Street
Wolverhampton
WV1 1LY

20th November 2010

Dear

I acquired your contact details from the BOSPA website. I am currently training as a Counselling Psychologist at Wolverhampton University, as part of this course I am undertaking a large research project. My research area is focusing on the lived experience of someone who has undergone Bariatric surgery.

I would be deeply grateful if you could assist me in finding participants who would help my research in this area by allowing me to interview them about their experience of surgery. I anticipate it would take no longer than one hour of their time. I would meet with them at a suitable time, date and location which would be enable them to talk openly about their experience. I hope by engaging with the research, the participants would view this is a positive experience, feeling they have contributed significantly to an area which has previously received little research.

To summarise my background, I have been working in the area of bariatric psychology for a number of years. I have worked as a trainee psychologist in conjunction with a doctor and dietican as part of a weight management service for Birmingham East and North Primary Care Trust. This service was set up in 2004 to help people who have a BMI of over 35 wishing to be supported in either losing weight on their own accord or working with our team in order to prepare them for bariatric surgery. I am supervised by a psychologist who has worked in this area for over 14 years.

I would be grateful if you could briefly mention my study at a convenient time during your next support group meeting and also pass on a copy of the information sheet enclosed to all who attend.

If you have any questions please do not hesitate to contact me by either email or phone. I have also enclosed a self addressed envelope and a support group consent form. I will contact you by telephone in the next few days to give you a chance to ask me any questions about the study before you decide whether your support group might be able to help me run this study.

Many thanks in anticipation of your help.

Claire

Claire Barnes

Counselling Psychologist in training

Claire.Barnes@wlv.ac.uk

Information Sheet

[To be on headed paper]

Dear Sir/Madam

I am conducting a study as part of my practitioner doctorate in Counselling Psychology at the University of Wolverhampton. The aim of the study is to understand the individuals' experience of weight loss/obesity/bariatric/surgery. I am looking for participants who had the operation approximately 12 months to 30 months ago.

I would like to invite you to take part in this study. I hope the participants who engage with this research will view it as a positive experience, feeling they have contributed significantly to an area which has previously received little exploratory research.

This will take approximately 60 minutes of your time. We will meet at a time, date and location which is convenient to you where I can interview you about your experience of the operation in a place you feel comfortable to talk openly. The interview will be semi-structured, which means that I'll have prepared a few questions, but that mostly I'll want to hear your opinions on what bariatric surgery has meant for you.

This study has been approved by the ethics committee at the University of Wolverhampton. All information will be kept confidential and secured throughout the study and once the study is complete it shall be kept for a further five years. After this point all the data shall be destroyed. A pseudonym will be used when reporting the results, so at no point can an individual be identified. If you agree to take part, you can withdraw from the study at any point. The research is supported by local bariatric support groups, but is being conducted independently. Whether or not you take part, this will have no bearing on any support you might be receiving from support groups, statutory services, etc.

If you wish to receive information about the outcome of the research, please contact me via email or telephone and I can send you a copy of the study once completed.

Some further details about the study follow.

Purpose

The purpose of the study is to understand an participants' own experience of weight loss surgery (bariatric surgery), once the immediate effects of the surgery have passed. You are invited to take part in this study because you have undergone bariatric surgery more than a year ago but less than three years ago.

Procedure

This study requires participants to be interviewed for up to an hour. If you are willing to take part in the study, you will be contacted to arrange a suitable time, date and location to meet. It will be in an environment where you feel comfortable and are able to talk freely and confidentiality about your experience. The interview will be recorded using a standard audio recorder.

Confidentiality

All contact information will remain confidential. The tape of the interview will be transcribed word for word and shall be coded to protect participant anonymity. The data

will only be available to me and my supervisors at the University of Wolverhampton. When reporting the results for the study, pseudonyms will be used. At no point will personal references be made to you which could link your participation in the study.

The transcripts of the interview will be held on a university computer which is password protected. The digital recordings will be transferred to CD's and kept in a securely locked cabinet. The data will be kept for 5 years and destroyed thereafter.

Rights to withdraw

Your participation in this study is voluntary. If you choose to take part, you are still completely free to withdraw from the study at any point, and do not need to give a reason.

Risks

There is no predicted physical or psychological harm associate with you taking part in this study. However, if you feel that you may become upset in talking about your experience of bariatric surgery, please keep this in mind when you decide about taking part.

I hope that you will be interested in taking part, should you wish to ask further questions about any of the above information, please contact me via email or phone using the contact details below.

Thank you for your time in reading this.

Yours Sincerely

Claire Barnes

Claire.Barnes@wlv.ac.uk

TELEPHONE NUMBER TO BE INCLUDED IF AN INSTITUTIONAL ONE CAN BE ARRANGED.

University of Wolverhampton
Wulfruna Street
Wolverhampton
WV1 1LY

Informed Consent Form

Title of Project: Understanding an individual's phenomenological experience of bariatric surgery after the two year 'honeymoon period'

You are invited to take part in a research study being conducted by the University of Wolverhampton.

Researcher: Claire Barnes, doctorate student in Counselling Psychology at the University of Wolverhampton
Claire.Barnes@wlv.ac.uk.

Supervision Team
Dr Wendy Nicholls and Dr Lee Hulbert-Williams, at the University of Wolverhampton

Your signature below indicates:

- I have read the information sheet
- I understand that my taking part is entirely voluntary
- I understand that I have the right to withdraw at any time and without giving reason
- I have had an opportunity to ask questions of the researcher and have had them answered
- I agree to take part

Printed Name of Participant:_____

Signature of Participant _____ Date: _____

Support Groups

BANDITS (BAND Information Talk and Support about weight loss surgery) *Telford*
Meeting location: Various locations around Telford

□

Cheshire and North Staffordshire Support Group *Congleton*
Meeting location: St Mary's RC Church Parish Centre, West Road, Congleton

Second Chance Support Group *Shrewsbury* □ Meeting location: Hamar Centre, in the grounds of the Royal Shrewsbury Hospital

East Midlands Support Group *Leicester*
Meeting location: BUPA Hospital Leicester

Mid Trent Support Group *Derby*
Meeting location: Room 2, Education Centre, Royal Derby Hospital, Uttoxeter Road, Derby

□

WLSInfo South Yorkshire & Derbyshire Support Group *Sheffield*
Meeting location: Victoria Hall, Norfolk Street, Sheffield, S1 2JB (opposite the Crucible)

Interview Questions

Please could you describe your weight history a bit for me?

Looking back, how did feel straight after you had the operation?

How did you feel a few months after the operation?

How do you feel now?

Tell me a bit about how it's affected your health, if it has.

[PROMPTS]

How do you think it has effected your:

Eating behaviours

Physical activity behaviours

Social

Psychological aspects

Overall what do you consider being the most positive aspects from having the surgery?

And what do you consider being the most negative aspects?

What would be the most important thing you would tell someone who was just about to have the operation?

Shock

“what the hell have I done?” and that was my one down.... half hour er...and that was it’

(P1: L83-84)

‘and I was sat on the toilet and I cried and I cried, for goodness sake what have you done to yourself. Is this ever gonna be, is this the way i’m gonna live the rest of my life’

(P2: L205-206)

*‘do you want something to eat J*****, “yes I’m starving”, here’s your yoghurt, here’s a spoon , I said you’re telling me all I could eat was three tablespoons of yoghurt’ (P3: L106-107)*

‘ I’m crying “what have I done to myself, why did he have to do this, what I’ve done (P3: L119-120)

‘ oh yes please, oh a lovely drink” you know and I thought she said here’s a spoon and I said “what do I need a spoon for?” You can only have two spoons of water..... you know great! (P3: L103-104)

‘I’d think, oh my god is it going to be like forever, what have I done to myself’ (P4: L376)

‘ as soon as I had the operation I was, I fell down to earth, like a ton, like a ton of bricks. I had the biggest shock of my life’ (P8: L38)

‘I was completely lost for weeks you know because you can't eat what you want you know [...] I came down with a big thud, I had a big shock after the operation.’ (P8: L332-335)

‘I remember at one point at home thinking “oh my god what have I done...[...] this is for the rest of my life” and being quite panicked about that and thinking, ahhh there’s no way back, there’s no way back! Like oh god I wish I’d thought about it more.’ (P9: L209-212)

‘I thought, what the hell have I done’ (P10: L36)

‘and erm it was a big shock’ (P10: L59-60)

*‘what the f**king hell have I done (laughs)’ (P12: L48)*

‘I thought to myself I didn't think I wasn’t going to be in that much pain. I thought you know I’ll come out of surgery and I’ll be alright and the next day I’ll go home’ (P14: L32-33)

Participant 1 PM
 Struggle - battle throughout transcript. Decision re have operation - times relived - constant uncertainty.

①

<p>reflect to the now hesitation</p>	<p>Un. tactics</p>	<p>CB</p>	<p>There we go. So do you mind if you kind of describe your weight history starting at the point where you felt like your weight was becoming a problem for you leading up to the point where you chose to have the operation</p>	
<p>weight was happy num. routine</p>	<p>regret</p>	<p>PM</p>	<p>Erm...Yeh, the lifestyle was pretty, well we thought was pretty good didn't we? Erm.. We enjoyed going out for meals stuff like that. It was just, just a lifestyle thing erm...and the lifestyle became more sedentary over the years. Erm, it ...became more and more difficult to do any kind of physical exercise....erm.... and then you just get into a cycle where you'd come home from work, eat your dinner and you fall asleep. You go to work. Err. you eat your meal, fall asleep and go to work</p>	<p>Lifestyle Weight was restricting Routine, lifestyle</p>
		<p>CB</p>	<p>Yup</p>	<p>trapped in his life -</p>
		<p>PB</p>	<p>Er...and that's how it became for years. How many years would you say I was big?erm...my memory is terrible.....I would say I've been big for about..... 20 years. Yeh 20 years.</p>	<p>trapped by his weight?</p>
		<p>CB</p>	<p>Thank you if you don't mind it's alright....(indicating to PB)...its ok if you're vague on details. So it's been a long journey?</p>	
<p>responsibility medical treatment.</p>	<p>WAGNER FALLS</p>	<p>PM</p>	<p>It's been a long long journey yeh.erm... Maybe even a bit longer than 20 years. Erm...well it got to a point where my children were growing up and I'm thinkingam I going to be able to see my grandkids and er...I said to the doctor is there anything we can do after being through all all the diets under the sun and went to see er...I** C***** who's one of the head people from...</p>	<p>Risks to health Exhausted all other options/last chance</p>

		CB	Yeah	
		PM	...you know erm and he <u>couldn't do a lot for me either...</u> so I said to the doctor "what can we do?" and he said "well we can go for a gastric band" and I said "yeh, yeh, I've I've heard about them don't know anything about them, but yeh let's do it" erm so he recommended me for a band and ...also lost my paperwork a couple of times. Er...It went on for a year or so but went to see Dr H*****. Lovely guy A*** H*****.	Impulsive/lack of knowledge delay - frustration... no urgency
		CB	Yup	
		PM	You've met him?	
		CB	Er yeh I know the team at walsall...	
		PM	Oh do you?	
		CB	Yeah	
		PM	Lovely guy! Erm...met him he, he said the "bands no good for you, you need a bypass". Great... so that's what we did erm...and that was 2008 and...Sorry?	No involved in decision- his lack of knowledge?
		GM	And then you had to wait for the operation	
		PM	It was probably about a year, a bit less maybe erm...and just saying finally got just under 30 stone erm...which wasn't good. Er...I've got photographs if you want them (laughs). Erm...had the operation and I've never looked back since. It's been fantastic.	laughing @ himself? joke re weight-stigma Second lease of

not his responsibility
lack of control

desperate?

he looks like
control of weight
responsibility over!

in their hands
lack of control -
looking over
control

			Best thing I've ever done in my life. Second lease of life. It's like er...born again (smiles). Honestly it's..... so much energy...its....	life/born again Delay - historian Campaign	is he certain
		CB	Massive impact, completely changed?		
		PM	Completely changed. Completely changed!		
		CB	Don't know if you could go into a bit more detail into how its affected your life		re living experience
	then now	PM	Erm...I do loads of exercise, cycle all the time, walking all the time. 20 mile walks not a problem. Erm...I did a 50 mile bike ride no so long ago. Erm...I haven't been on a bike in 30 years	Excessive exercise addiction to exercise	new experiences
		GM	He was just saying by the way that he really feels it that because he hasn't been on a bike this week		
		PM	I haven't been on a bike for a week.	Need to exercise	
		GM	Bearing in mind we're only Thursday. He hasn't been on his bike this week so he's really feeling the difference		enjoyment all about long/maint his week
	for	PM	And I need to get back on it. I need the exercise. It's like a, It's like a drug. The more you do, the more you need to do... but the last thing I want to do is get into that lifestyle again where I come from work, I sit down I have my tea, I don't want to do that, I don't want to get back to that routine	Addiction to exercise Fear of returning to old lifestyle- to the old him?	scored pushes himself
	consequence when gets back to this routine	CB	So you're very conscious of not going back...?		

Definition of terms

Obesity: Is defined as having abnormal or excess fat accumulation that may impair health. The World Health Organisation defines obesity when body mass index (BMI) is greater than or equal to 30 (World Health Organisation, 2014).

Bariatric Surgery: Is a surgical procedure which changes your digestive system as an aid to weight loss. The procedure will either be malabsorptive, restrictive or a combination of both. Restrictive procedures reduce food intake by creating a narrow passage, from the upper part of the stomach to the lower part. Whereas malabsorptive procedures reduce the small intestine so fewer calories and nutrients are absorbed (Cobbold & Lord, 2012).

'Normal': This term is used in the study to describe how the individuals feel in relation to others in society. This term 'normal' is not used to describe a healthy weight, as due to the obesity epidemic (Department of Health, 2011) there are more people overweight and obese than of a healthy weight, therefore an individual could be considered 'normal' when they are still overweight.