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Abstract

This study examined experiences of weight, physical activity, diet, and quality of life of individuals prior to and following bariatric surgery. Twenty-seven people participated who represented three periods related to bariatric surgery: pre-surgery; short-term post-surgery (i.e., 1-2 years) and long-term post-surgery (i.e., 3-7 years). A qualitative descriptive design was adopted, with data collected through interviews and analysed using Braun and Clark's (2006) approach to thematic analysis. Themes in the pre-surgery period were identified as follows: a) Growing up: Variation by family and ability, b) Weight gain: Transitions, traumas, and triggers; c) Perceptions of self: Hate, loathing, and worthlessness; d) Spiralling weight: Lack of control over vicious cycles of dieting and weight gain, and; e) Surgery: A final and essential lifeline. Short-term post-surgery themes were: a) Physical changes: Rapid weight loss and enhanced health versus hesitation and disappointment; b) Physical activity: Changes in engagement and perceptions despite ongoing barriers; c) Finding oneself: Increased emotional wellbeing, self-concept and confidence, and; d) Quality of life: Renewed physical capabilities and capacity but some continuing challenges. In the long-term following surgery, themes of: a) Weight plateau/regain: Disappointment and feelings of failure, and; b) Excess fat: Frustration and feelings of vulnerability emerged from the data. It is evident that participants go on an extended journey in the years before and after bariatric surgery and experience a range of both positive and negative outcomes. Overall, the findings highlight the importance of practitioners understanding individual's overall journeys when seeking to help them lose weight and improve psychological health.

Keywords: **Bariatric surgery, weight loss, physical activity, diet, quality of life**

59

Introduction

60 In 2016, the worldwide prevalence of obesity was nearly three times greater than in
61 1975, with approximately 13% of the world’s adult population being classified as obese
62 (BMI > 30 kg/m²; World Health Organisation 2018). Psychological disorders such as
63 depression and anxiety, and reduced quality of life are more apparent among individuals who
64 are classified as obese (Simon et al. 2007). In individuals who experience frequent weight
65 regain following conservative treatment options, bariatric surgery is becoming a popular
66 weight loss option (O’ Brien et al. 2006; Colquitt et al. 2014). Individuals undergoing
67 bariatric surgery often regard it as the “only” option to avoid future illnesses, weight cycling
68 (Hoffman 2010), and acceptance by society (Groven and Engelsrud 2016a).

69 Research shows that bariatric surgery can result in substantial short-term weight loss
70 as well as improvements in obesity-related comorbidities (Colquitt et al. 2014), and quality of
71 life (Karlsson et al. 2007; Sarwer et al. 2010). Further, people who have undergone bariatric
72 surgery often highlight positive consequences of surgery (e.g., Ogden, Clementi, & Aylwin,
73 2006), with the process sometimes being associated with a feeling of being reborn and a
74 recovery of identity (Bocchieri, Meana, and Fisher; 2002a; Magdaleno, Chaim, and Turato;
75 2010). Collectively, these studies appear to indicate that surgery can improve patients’ lives
76 and, compared to pre-surgery, can substantially improve physical and mental health.
77 However, a review conducted by Colquitt et al. (2014) concluded that the majority of studies
78 assess the effects of surgery up to 2 years post-surgery and therefore the long-term effects of
79 surgery are unclear.

80 Moreover, post-surgery psychological outcomes are not as encouraging as they may
81 first appear. An increased risk of suicide or non-fatal self-harm has been identified in post-
82 bariatric surgery individuals compared to a control population (Neovius et al. 2018). Post-
83 surgery, individuals have also described how their lives are dramatically restricted due to

84 chronic pain and loss of energy (Groven 2010). Feelings of emotional distress when
85 attempting to adjust to physical changes and a ‘non-obese’ identity are evident in the first
86 postoperative year (Warholm, Øien and Råheim 2014). Weight loss, maintenance, and weight
87 regain coupled with the resulting body image dissatisfaction is also still apparent in some
88 people after surgery (Groven 2010). The likelihood of post-surgical negative psychological
89 health appears to be related to pre-surgical psychopath as well as unrealistic expectations of
90 post-surgical life, thus an understanding of both pre- and post-operative experiences is
91 needed (cf. Kubik et al., 2013).

92 Due to the mixed and in some cases conflicting results following bariatric surgery,
93 there are still areas that require further attention. For instance, an understanding of how and
94 why changes in psychological wellbeing occur following surgery remains unknown. (Jumbe,
95 Bartlett, Jumbe and Meyrick 2016). It appears that greater post-surgery quality of life is
96 associated with weight loss maintenance (Ryder et al. 2018), thus understanding how to
97 optimise such weight loss for individuals is crucial, which will require an understanding of
98 their pre-surgery experiences. In considering pre- and post-bariatric surgery experiences and
99 outcomes, considerations of both physical activity and diet (i.e., behaviours often associated
100 with weight loss/gain) are important because these two factors are most commonly associated
101 with weight loss (Swift et al. 2014; Mozaffarian et al. 2011).

102 To date, researchers who have assessed physical activity among weight-loss surgery
103 candidates have demonstrated that many people are insufficiently active to experience related
104 health benefits (Bond et al. 2010a). Following surgery, self-report studies have indicated an
105 increase in activity levels (Jacobi, Ciangura, Couet and Oppert 2010). However, the validity
106 of such findings remains questionable (King et al., 2012) and when physical activity has been
107 assessed pre- to post-surgery through qualitative interviews, results have been less
108 encouraging with large variation between participants being identified (e.g., Homer 2016).

109 Data from five year post- surgery follow ups have indicated that while participants may hope
110 to increase their physical activity, additional support is needed and a range of barriers are
111 encountered (e.g., Stenmark Tullberg, 2017; Zabatiero et al., 2018). It is clear from such
112 findings that there are a number of challenges associated with physical activity engagement
113 for individuals pre and post bariatric surgery, but what is unknown is how such challenges
114 emerge throughout the journey or how pre-surgery experiences may be subsequently
115 impacting on post-surgery outcomes.

116 Explorations into the dietary experiences of bariatric surgery candidates have revealed
117 similar findings, such that individuals continue to encounter a range of barriers to healthy
118 eating following surgery. For example, dietary complications including intolerances to
119 various foods and dumping syndrome (often characterised by vomiting, diarrhoea and
120 nausea) have previously been highlighted as issues after surgery (Geraci, Brunt and Marihart
121 2014). Long-term data has revealed that participants who were on average 6 years post-
122 surgery and had reached weight stabilisation or were experiencing weight regain, had
123 developed unhealthy food habits whereby they were less aware and mindful of their food
124 choices (Benson-Davies, Davies and Kattelmann 2013). Specifically, convenience foods,
125 high fat foods, and high caloric beverages were more prevalent in these individuals' diet. It is
126 evident that participants face extensive barriers to healthy eating and experience substantial
127 changes in eating behaviours post-bariatric surgery, but a further understanding of exactly
128 when in the journey these barriers arise and if pre-surgery experiences influence post-surgery
129 findings is essential.

130 Although there is growing evidence regarding experiences of diet, physical activity,
131 and wellbeing before and after bariatric surgery, there is still a lack of a research considering
132 these aspects collectively. Specifically, little to no attention has been given to considering
133 these three aspects together across the course of the bariatric surgery journey (i.e., pre,

134 immediately post, and post surgery). It is well known that a healthy lifestyle combines both
135 physical activity and a balanced diet, and a sustained caloric deficit will lead to weight loss
136 which ultimately, is the overall goal of bariatric surgery. Data has also shown positive links
137 between psychological wellbeing and bariatric surgery outcomes (Herpertz et al. 2004).
138 Given that obesity costs the NHS upwards of £5.1 billion each year (Scarborough 2011) and
139 more than 60% of individuals experience substantial weight regain by 5 years post-bariatric
140 surgery (Magro et al. 2008), further work is essential to understand these individuals' overall
141 experiences. Understanding pre- or post-surgery experiences is useful; however,
142 understanding stories as individuals transition through the bariatric surgery phases will enable
143 the development of more effective strategies to help individuals negotiate the challenges
144 faced at different points in the journey and enhance long-term success. Thus, the purpose of
145 this study is to examine the experiences of individuals prior to and following bariatric
146 surgery. Specifically, it explores individuals' experiences of physical activity, diet, and
147 quality of life leading up to and following bariatric surgery.

148 **Method**

149 ***Methodology***

150 This study was part of a larger multi-method project conducted with individuals prior
151 to and following bariatric surgery. The overall aim of the multi-method project was to
152 examine changes in physiological and psychological parameters, physical activity
153 engagement, and dietary patterns immediately before, after, and in the years following
154 bariatric surgery. The larger study was completed in three parts whereby part one involved
155 the collation of blood test results from 127 pre bariatric-surgery patients (not included in the
156 current study) into a database to compare to established healthy threshold levels. Part two
157 comprised interviews to explore individuals' experiences of weight, physical activity, diet,
158 and quality of life leading up to and following bariatric surgery (the focus of this paper). In

159 part three, participants (the same participants as in part two) were required to complete a
160 General Practice Physical Activity Questionnaire (GPPAQ), provided with a Fitbit Flex
161 which was used to track daily physical activity levels over a 7-day period and based on recent
162 blood results the 10 year cardiovascular risk was calculated for each participant.

163 The qualitative component of this study sought to gain an in-depth understanding of
164 participants' experiences before and after bariatric surgery, through rich descriptions.
165 Moreover, the production of results that would be accessible to practitioners and could
166 underpin practical changes or application were sought. As such a Qualitative Descriptive
167 approach (Sandelowski, 2000) was adopted, underpinned by an interpretivist perspective. The
168 research team sought to gain insights into individual's unique experiences leading up to and
169 following bariatric surgery, recognising that each experience is socially constructed and
170 based on their individual interpretation.

171 *Participants*

172 Twenty-seven participants were recruited from a hospital in Wales, UK to take part in
173 the study. Potential participants were purposefully sampled to ensure information-rich
174 accounts and thus sufficient information to address the research questions (Patton 2002).
175 Participants were invited to take part if they were a candidate for or had undergone surgery
176 between either one to two years (short-term) or three to seven years (long-term) previously.
177 Pre-surgery patients that fulfilled rationing criteria based on modified Swansea-DUBASCO
178 scores were included. This metabolic scoring system is an analysis of the number and
179 severity of various major comorbidities associated with bariatric surgery patients as it has
180 been recognised that body mass index alone may not be the most accurate predictor of
181 patients that would benefit most from the surgery (Labib et al. 2011). In total, 26 people took
182 part in the study: 15 women and 11 men, with a mean age of 42 years. Of the 26 participants,

183 10 were awaiting bariatric surgery, six were between one and two years post-surgery, and 10
184 were between three and seven years post- surgery.

185 ***Procedure***

186 Following service based evaluation approval by the Joint Scientific Research
187 Committee & Department of Research and Development within ABMU Health board (May
188 2014), the clinical nurse specialist at a local hospital identified potential participants fulfilling
189 the sampling criteria. These participants were then approached in person when attending the
190 bariatric surgery clinic and provided all the necessary information regarding the study.
191 Additionally, consultants at the hospital also advertised the study to individuals when they
192 attended appointments and a few participants suggested other potential participants in their
193 interviews. Potential participants then contacted the research team directly to indicate their
194 interest. This direct communication with the research team was important to ensure that
195 participants did not feel that they had to participate or felt compelled to answer in a specific
196 manner.

197 ***Data Collection***

198 Once participants had indicated their interest in the study, the lead researcher arranged
199 a suitable time to meet each participant. On meeting the participant, the researcher explained
200 all aspects of the study and obtained informed consent. Time was then spent talking with the
201 participant and developing rapport before initiating the semi-structured interviews, which
202 were broadly based around a life-history interview structure. That is, the participants were
203 encouraged to share stories from throughout their life and, where possible, located these
204 stories within specific historical times (e.g., childhood, particular transition times) (Smith &
205 Sparkes, 2017). Such an approach was deemed appropriate to allow participants to take
206 control of the interviews and to situate their experiences as they felt appropriate within their
207 lifetime. However, rather than sticking rigidly to a life-history approach and explicitly

208 identifying historical context in their stories, many participants instead spoke about their
209 experiences as a journey, broken up by key aspects of their life (i.e., childhood, leaving
210 home, traumatic events, weight gain, approaching surgery, following surgery etc).
211 Consequently, throughout this paper the process of undergoing bariatric surgery is likened to
212 a journey. Within the metaphor of a journey, certain theoretical elements are debated and
213 contribute to an interpretive framework for developing an understanding of the process in
214 question (Mackenzie and Ling 2009). The journey in this instance is that experienced by the
215 individuals as they progressed through the stages of bariatric surgery from pre-surgery to
216 short-term post-surgery and finally long-term post-surgery.

217 Prior to conducting interviews with study participants, we piloted the interview guide
218 with one individual who had not undergone bariatric surgery to allow the interviewer to
219 become familiar with the questions being asked.. A bariatric surgery candidate also
220 completed a complete pilot trial, which included a pilot interview, completion of the GPPAQ
221 questionnaire, and wearing a fitbit for 7 days. The pilot trial was conducted to assess the
222 delivery of instructions regarding the use of the Fitbit and completion of the questionnaire
223 while the pilot interview was conducted to practice interview techniques and review the
224 structure of the interview guide. The interview guide was revised such that introductory
225 questions were expanded on and more time was spent building rapport with individuals prior
226 to commencing the interview. The layout of the interview guide was also slightly altered to
227 reflect the journey (aligned with a life history interview approach) that individuals had been
228 through up to the present day. The data obtained from the interview with the bariatric surgery
229 candidate was used in the final analysis as the individual revealed interesting information that
230 helped in addressing the research questions.

231 The lead researcher then conducted the participant interviews under the supervision of
232 clinicians providing routine clinical care. There were no clinicians present in the room when

233 the interview was taking place, they were simply aware that interviews were taking place in
234 case any issues (i.e., participant distress) arose. Data collection for the entire study (both
235 qualitative and quantitative aspects) was completed over a 6 month period. The interview
236 guide included questions about perceptions, experiences and expectations for bariatric
237 surgery, views and experiences of physical activity and diet, and quality of life. Interviews
238 ranged in length from 18 to 109 minutes (M= 39 mins 20 secs; SD= 18 mins 53 secs)
239 excluding the considerable time spent building rapport before starting the formal interviews
240 and were transcribed verbatim. The research team are aware that an 18-minute interview is
241 short, however, based on the quality of information provided in the interview, it was deemed
242 appropriate to include it within the study.

243 ***Data analysis***

244 Thematic analysis, based on Braun and Clarke's approach (Braun and Clarke 2006;
245 Braun, Clark, & Weate, 2017) was carried out. The lead researcher familiarised herself with
246 the data (i.e. transcripts) through a process of immersion, which involved repeated readings
247 of the data. She then read the interviews specifically searching for meanings and patterns.
248 Next, she undertook a detailed reading of each transcribed interview, highlighting interesting
249 or meaningful ideas and allocating them to different headings (termed codes; e.g. 'bad
250 physical activity memories', 'surgery as a lifesaver', 'lack of long- term success on diets',
251 'overweight as a child'). Themes, which were developed next, were interpretative and
252 focused upon elements of the participants' experiences, for instance of physical activity or
253 diet. Coded data were grouped under identified themes and relationships between the codes,
254 themes, and varying levels of themes (e.g. main overarching themes and sub-themes) were
255 also considered. During and following this process, the themes were then refined so as to
256 comprehensively capture all appropriate codes. Such refinement occurred individually and
257 then with the broader research team. Through discussion with the research team the final

258 labels, definitions, and presentation of the participants' experiences through the themes were
259 proposed.

260 ***Methodological Rigour***

261 It has been suggested that a relativist rather than criterion approach to judging the
262 quality of qualitative research is appropriate (Sparkes & Smith, 2009). Aligned with this
263 approach, we have drawn upon the nine suggestions of Smith and Caddick (2012) that we
264 deemed appropriate for the current study. However, we recognize that these criteria are open-
265 ended and subject to reinterpretation and encourage the reader to make their own judgments.

266 Specifically, we sought to produce a paper that provided a *substantive contribution* to
267 the understanding of experiences leading up to and following bariatric surgery; the
268 justification for which is provided through the manuscript introduction. We perceive that
269 through the engagement with individuals at different stages in the bariatric journey this study
270 will have *impact* by stimulating new research questions and also encouraging practitioners to
271 consider the support they provide to individuals before and after surgery. Through the use of
272 extensive quotes and explanations of the data we hope to have provided *comprehensiveness*
273 *of evidence*. Further, we have attempted to demonstrate *coherence* by ensuring continuity
274 between the philosophical underpinnings of the study, the research question, the data
275 collection and analysis methods, and the presentation of the results.

276 This study has already garnered of attention from practitioners at the hospital where the
277 participants were from, which we believe indicates *catalytic and tactical authenticity*. By
278 locating the findings as a journey and situating them in previous literature we hope the results
279 *resonate* with readers. Finally, we sought *credibility and transparency* by completing a pilot
280 interview, engaging with multiple individuals at each stage, and completing a larger study to
281 provide additional insights.

282 **Results**

283 Through their interviews, all participants were asked to reflect on their experiences;
284 pre-surgery, immediately after surgery and in the years following surgery as appropriate.
285 Thus, all participants commented on their pre-surgery experiences, 1-2 year post and 3-7 year
286 post surgery participants commented on immediate post-surgery experiences and 3-7 year
287 post participants commented on the long-term post surgery experiences. In the results
288 individuals prospectively and retrospectively create meaning and understanding of the
289 journeys they took to arrive at their current destination. Themes are structured and presented
290 in line with the journey approach whereby early experiences of physical activity, diet and
291 wellbeing are presented first, followed by the factors that led to the arrival at the decision to
292 undergo bariatric surgery and finally the short- and long-term effects of the surgery in line
293 with the research questions.

294 ***Pre-surgery***

295 *Growing Up: Variation by family and ability*

296 When recalling their early experiences of physical activity and diet, there was a great
297 variation between the participants; some participants described having healthy diets and
298 being active during their childhoods, while others indicated more limited engagement in
299 physical activity or unhealthy diets.

300 In those participants who described unhealthy childhood lifestyles, a number of
301 factors were identified as contributing to this. For example, for some it was negative PE
302 experiences, as one participant (woman, 1 year post, P1) mentioned how she “never
303 particularly liked PE at school” and she was “never good at it”. She then went onto say that
304 her experiences of physical education in school “had a detrimental effect rather than a
305 positive one” and “I think that being in school it was enough putting me off maybe going to
306 the gym and things like that later on”. For others it was the home environment, for instance a
307 participant (14; man, 1 year post) described the unhealthy environment at home when he was

308 growing up by saying, “I was just eating constant junk then, takeaways and stuff” and that
309 “Both [his] parents were obese”. Another attributed it to her parents splitting up, explaining,
310 “I think because my parents split up when I was a young age I think my mother always tried
311 to make up for that and you know we’d go out for meals or we’d go out for coffee and cake”.

312 *Weight Gain: Transitions, traumas, and triggers*

313 Whatever their preceding diet and activity behaviours, a change in circumstances
314 appeared to shift participants’ diet or physical activity levels, which resulted in or further
315 stimulated weight gain. For instance, when participants left home, went into employment, or
316 started families, they often experienced a change in time for, or value placed upon, physical
317 activity or healthy food. These lifestyle changes were clearly apparent in one participant who
318 growing up described himself as “very healthy and very fit” but when he met his now wife,
319 physical activity “wasn’t as important to me as other things in my life” and so he “left the
320 RAF, concentrated more on the relationship and got a job” (man, pre-surgery, P6). Similarly,
321 another participant (woman, pre-surgery, P22) discussed the influence her relationship had on
322 her weight, explaining:

323 When I first got married, which would have been about 25 years ago, perhaps emm
324 my ex-husband then had a particularly bad eating habit and I possibly, rather than me
325 transforming him into my eating habits, he possibly took me to his eating habits and I
326 think that’s when my weight issue started.

327 Another participant described how a change in his job influenced his weight gain, saying, “At
328 18 I was doing a sports programme, playing rugby 2 or 3 times a week, so I had an active
329 lifestyle... After 18 I went into retail management and it just went completely the opposite
330 way then” (man, 5 years post, P14).

331 Although some participants voluntarily reduced their physical activity levels, others
332 were forced to terminate or limit their engagement and subsequently experienced weight

333 gain. One woman (5 years post, P10) told the story of how a man came into her work
334 “demanding drugs and I was attacked and I had stitches, kicked in the knee, so that started
335 my weight, that was actually the start of my weight problem.” She then mentioned that she
336 “had 3 knee operations and I was sort of stuck in wheelchairs and then I was just eating for
337 the sake of eating and boredom and my weight piled on”. As a result of injuries/experiences,
338 many participants reported subsequently engaging in “emotional eating”.

339 Traumatic events such as the one outlined above that triggered weight gain as a result
340 of “emotional eating” were shared by many participants. For example, one participant shared
341 that she “brought him (her baby) home from the hospital and he was thirteen days old when I
342 found his father dead in bed. So I physically, I was eating on that” (woman, pre-surgery,
343 P18). Two other participants associated family deaths with emotional eating and weight gain.
344 One (woman, pre-surgery, P13) said, “My mother passed away 4 years ago and I did go
345 through a bit more of an emotional eating”. Likewise, another man described comfort eating
346 following his divorce and the death of his mother:

347 Yeah, got divorced in 2004, emotional time, my mother died the same time as the
348 divorce so I think a lot of comfort eating then, I was living in a flat on my own and I
349 think then I was having takeaways and just felt useless basically (5 years post, P23).

350 *Perceptions of Self: Hate, loathing, and worthlessness*

351 The cycle of emotional eating and subsequent weight gain appeared to lead to or
352 reinforced extremely negative perceptions of self and self-worth. Negative self-perception
353 was highly evident in some participants, with one going as far to say that “prior to surgery I
354 absolutely hated myself” and “I would very often punish myself” (woman, 1 year post, P1).
355 Another spent considerable time describing the depths of her perceived worthlessness,
356 explaining that at her lowest point she felt as though she was “breathing in air that someone
357 with a purpose could be breathing in” (woman, pre-surgery, P22). She continued:

358 My husband decided that he didn't particularly love me last year, and emm I think my
359 whole world fell to pieces. My daughter didn't particularly, she was with, she was in a
360 different relationship. My son moved out because I was the worst mother in the whole
361 world. My husband didn't love me and wanted to leave as well, but couldn't leave
362 because we weren't in a financial situation for him to leave. Umm my mum passed
363 away in the year 2000, my dad passed away in 2006, and I just suddenly felt that
364 actually there's no one who particularly wants me or needs me and I didn't love
365 myself, I really didn't think there was any point in my being around at all.

366 Sharing similar feelings, a man (pre-surgery, P23) explained that prior to surgery he "just felt
367 useless basically" and another (woman, pre-surgery, P18) described how she, "didn't like me,
368 I didn't love me".

369 Depression was an issue for many participants. One woman believed that she suffered
370 with "lifestyle depression where I was physically anxious, upset, and absolutely distraught
371 with the way that I was" (1 year post, P1). The cycle of depression around weight gain was
372 pointed out by one man (5 years post, P26) who shared, "Then I ended up putting more
373 weight on so then you get depressed and then you start eating more". One participant
374 highlighted how she faked her happiness before surgery:

375 I was big and I didn't really see any harm that I was doing to myself, even though
376 deep down you know you're doing it and people used to say to me do you think you
377 should lose weight, "why? I'm happy", you're never really happy but you do
378 convince yourself that you're happy (woman, 5 years post, P27).

379 Consistently throughout their stories, the participants indicated that they had negative
380 perceptions of their self-worth and that they were desperate to find a "cure" to their
381 uncontrollable weight issue and associated side-effects.

382 *Spiralling Weight: Lack of Control over Vicious Cycles of Dieting and Weight Gain*

383 Once participants had started to gain weight and experience an associated decrease in
384 self-worth, many described feeling they were trapped in vicious cycles and were unable to
385 control their weight. A woman (pre-surgery, P22) explained, “[my weight] is a bit of a
386 vicious circle because I’m so fat, because I’m so out of condition I don’t do the exercise,
387 because I don’t do the exercise I’m fat and out of condition”. Another participant said, “you
388 don’t consider what you are eating until it gets too late” and if he had not had the surgery he
389 thinks “[I] would have continued spiralling gaining weight” (man, 5 years post, P14).
390 Participant 1 believed that her lack of control resulted from her shorter term struggles with
391 her weight by saying, “Because I have never suffered with my weight as a child maybe it was
392 more difficult for me to control as I got older.” (women, 1 year post).

393 As participants experienced a spiralling weight gain, they continued to describe a lack
394 of control over what they were eating. For example, before surgery, one participant “used to
395 scoff choccy bars back then though. I always made sure there was a stock of things in case
396 people come around but they didn’t have a chance because I usually necked it” (man, 1 year
397 post, P7) and another women shared:

398 I remember the first day that I bought my own flat. My brother bought me a bar of
399 chocolate as a moving in present, and I sat on the steps in the flat and just ate the bar
400 of chocolate....Even now when I buy myself a treat, this is going back to when I was
401 a teenger, even now I buy myself a treat, I eat the whole treat all at once, so that no-
402 one else can touch it (pre-surgery, P12).

403 To counter their lack of control over their eating habits, participants often started engaging in
404 dieting programmes. However, these were invariably unsuccessful, which reinforced their
405 negative perceptions of self-worth. For example, one participant said, “I could always lose
406 like a stone, maybe half a stone, a stone. I could never go past that, I just couldn’t do it”
407 (man, 1 year post, P4). With such a lack of success with “dieting” participants ultimately

408 engaged in a seemingly “never ending cycle” of dieting and weight gain. As one woman
409 explained, she had, “been on and off diets all my life,” (pre-surgery, P8), whilst another
410 spoke about how he would, “lose weight and it went back on within 6 months” (man, 5 years
411 post, P14).

412 *Surgery: A Final and Essential Lifeline*

413 As a result of many unsuccessful attempts at diets, almost all participants identified
414 surgery as the last resort to achieve long-term weight loss. One man (pre-surgery, P21)
415 mentioned, “I really don’t know where else I could turn to try and lose the weight” whilst
416 another explained, “I had tried other solutions and clearly I had struggled to get a long-term
417 solution” (man, 5 years post, P11). Such a “need” for surgery appeared to be driven by
418 participants’ decreased quality of life. For example, one man (pre-surgery, P21) described his
419 quality of life as “pretty miserable really, I’d say probably about a four or something.”
420 Another participant (woman, 1 year post, P24) explained her unhappiness before surgery,
421 “Minus 10, I was really down before, I was so overweight and so unhappy”.

422 For many, surgery was the final option to keep them alive. For instance, a man
423 explained, “If I don’t have it in 10 years time I’m going to be dead anyway I reckon” (pre-
424 surgery, P21) and another shared, “my whole attitude to life was when’s it going to happen,
425 when are you going to die, that’s how bad it felt” (woman, 5 years post, P25). Another
426 individual described how the surgery was a lifesaver as medical professionals had said, “I had
427 about two years left you know that’s what they reckoned if I didn’t have the surgery” (man, 5
428 years post, P23). One woman detailed the frightening series of events that led to her surgery;
429 “ended up with a blood clot in my arm in my subclavian artery, turned my hands navy,
430 rushed myself into casualty and they found that I was diabetic... I was looking for my
431 funeral, now I am looking up” (1 year post, P15), whilst another pre-surgery man described;

432 “Like now I am looking forward to it [the surgery] because I think it’s, it’s a new start of life
433 for me you know, because it’s been hell the last couple of years” (P2).

434 *Short-term Post-surgery Experiences*

435 *Physical Changes: Rapid Weight Loss and Enhanced Health Versus Hesitation and* 436 *Disappointment*

437 When participants were asked to comment on post-surgery weight loss they described
438 substantial reductions in their body size over the first 12-months. However, participants’
439 views of this rapid weight loss were mixed. Many were overjoyed at the “massive weight
440 loss” in the few weeks and months immediately following surgery, with one participant
441 saying, “I was throwing a stone a week off” (woman, 5 years post, P9), and another
442 explaining, “It was incredible the amount that came off me the first 6 months, I mean I think I
443 lost about 8 stone in the first 6 months” (woman, 5 years post, P25). In contrast, some
444 participants found the rapid weight loss challenging. For example, a man explained:

445 It frightened me at the start, I was in, I was losing half stones every week, stone every
446 week, first month or two and it really worried me, I could feel my skin, it was all
447 starting to go loose and it really, it really concerned me so I ate chocolate bars and I
448 slowed it down (1 year post, P20).

449 Some participants initially went in for surgery to improve weight-related
450 comorbidities and the majority saw improvements. However, there were a few participants
451 who did not experience improvements in their weight-associated comorbidities. For example,
452 a woman explained that, “PCOS [Polycystic Ovary Syndrome] was the driving factor to
453 doing it (having surgery)” but as a result of the surgery, “unfortunately that’s the one thing it
454 hasn’t helped” (1 year post, P4).

455 Vomiting and being unable to stomach certain foods were substantial issues for
456 participants. A few people highlighted specific foods that they could no longer digest after

457 surgery, for example, “I can’t handle red meat... it just makes me feel sick” (woman, 5 years
458 post, P10), and, “I throw up every day” (woman, 1 year post, P4). Another explained how she
459 was, “still learning what my body will accept and what it don’t, some food upset, especially
460 fruit and stuff, does upset my body, my guts, which I have learnt. Some days are good, some
461 days are bad” (woman, 1 year post, P15). A few participants explained how they found
462 unhealthy food was easier to digest, and explained, “I tend to eat a lot of junk food because
463 it’s the only thing that seems to stay down” (woman, 1 year post, P4).

464 *Physical Activity: Changes in Engagement and Perceptions Despite Ongoing Barriers*

465 After surgery most participants reported improved perceptions of and increased
466 engagement in physical activity. This increased engagement in physical activity seemed to
467 result from the participants’ weight loss and increased self-confidence. As a woman
468 explained, “[I] lost about 5 stone and I started going back in the swimming pool,” (5 years
469 post, P10) and another stated that, “I have got the confidence and I have started using the
470 gym as well” (woman, 1 year post, P15).

471 Although participants generally reported higher levels of physical activity
472 engagement after surgery, there were still barriers to exercise. For some there were physical
473 barriers, for instance, one participant explained how she was “struggling with exercise due to
474 me having a prolapse” and “due to “embarrassment because my skin is so loose when I’m
475 exercising” (woman, 1 year post, P1). One participant explained, “behind my knee I’ve
476 actually got moderate to advanced arthritis” and “it’s been very restricting” (woman, 1 year
477 post, P24). For others, the barrier was time as a woman (1 year post, P24) explained,
478 “Because I’m in work quite early in the mornings and sometimes I’m here quite late, it’s
479 having the time to do it and feeling as if I’ve got the energy to do it”.

480 Another perceived barrier was a lack motivation to exercise. One participant (woman,
481 5 years post, P9) described, “I just don’t do it, I just never think about doing it” and “I’m not

482 disciplined enough to go every day and do the certain things every day.” Finally, a lack of
483 self-confidence was cited as another barrier to exercise in the postpartum period. For
484 example, a participant felt:

485 Self-conscious about people looking at me and you know because it’s down the gym
486 there’s a lot of fit fellows down there. You know, body builders and there’s a lot of fit
487 women there like you know young women and you know I think well you know I’m
488 down here with my big belly (man, 1 year post, P5).

489 *Finding Oneself: Increased Emotional Wellbeing, Self-Concept and Confidence.*

490 Participants reported improved emotional wellbeing and increased self-concept in the
491 months after surgery. As one participant shared, “Prior to my surgery my emotional
492 wellbeing was probably a 1 or a 2, bordering on depression because of my lifestyle and the
493 way I was, the way I looked... I put myself at an 8 or 9 now” (woman, 1 year post, P1). One
494 woman (5 years post, P10) believed the surgery “gives you self-esteem as well, it makes you
495 more confident” whilst another described the increased self-confidence that the surgery had
496 given her:

497 Put my make up on, that’s something I hadn’t worn for years, at least 5 days out of
498 the week I have got make up on and stuff like that and that makes me feel different
499 and put perfume on, starting to feel like a woman again, which I hadn’t before”
500 (woman, 1 year post, P15).

501 Such enhanced self-confidence also appeared to be associated with a perceived social
502 acceptance and being a “normal” weight. A woman (1 year post, P15) explained, “I can walk
503 around the supermarket without, I am not worrying about being in a supermarket if people
504 see me now”. For some participants their emotional wellbeing was enhanced by the ability to
505 shop in high street shops. For example, a woman (5 years post, P27) mentioned, “All I was
506 actually focused on is being able to get into small clothes and actually go and buy from

507 Tesco² rather than going to Evans³ or something and I focused on that a lot” and another
508 expressed, “One of the seminal moments in my life was when I walked into Next⁴ in [name
509 of place] and I could put something on that fitted me... that gave me such a buzz” (man, 5
510 years post, P11). Engaging in such activities helped participants to feel socially acceptable, as
511 a participant shared:

512 It’s being able to look around and think I am actually, I don’t want to be beautiful, I
513 don’t want to be anything like that, just want to be socially acceptable. And for the
514 first time in years and years and years I actually feel socially acceptable (woman, 1
515 year post, P1).

516 Such feelings of social acceptance and confidence, was associated with profound outcomes
517 for some, such as one woman who shared:

518 Now I have actually gained enough confidence to think that I am actually a human
519 being too and I deserve the same as everybody else deserved in life, I deserve to be
520 happy and I deserve to be able to move forward and progress in my life the way I
521 want it to be (1 year post, P1).

522 *Quality of Life: Renewed Physical Capabilities and Capacity but Some Continuing*
523 *Challenges*

524 As indicated, quality of life was often greatly improved after surgery. Improvements in
525 perceived quality of life seemed to be related to participants being able to do more as one
526 man (1 year post, P5) mentioned how he can “get out and about more often. I haven’t used
527 my wheelchair in well over a year”. Improved family time was also noted by two participants
528 as a contributor to increased quality of life. One woman said, “I have got a 9-year-old

² UK supermarket chain

³ UK plus size clothing brand

⁴ UK clothing brand

529 nephew I can now keep up with him... it's nice to be able to enjoy doing things like that with
530 him" (1 year post, P15) and another described the joy at being able to play with her grandson:

531 Those two older ones [grandchildren] I've lost so much pleasure with like playing you
532 know taking them out because I couldn't but with this youngest one, [name] my son's
533 boy, we have him over in the day time. I take him out. I take him walking now like I
534 interact more with him now because I can (woman, 1 year post, P5).

535 One man shared his happiness at being able to, "go on holidays now with my wife again, I
536 never used to do that before because I'd just feel like a whale" due to being "much happier
537 and "more confident" (5 years post, P26).

538 However, some participants reported that in some respects surgery had reduced their
539 quality of life. One described how, "Quality of life health wise its improved 100% but on the
540 other hand relationships, if you call that quality of life, it's not so you know there's pluses
541 and minuses" (man, 5 years post, P23). He went on to describe how before surgery "my
542 confidence was much more and personality was better, now I get into mood swings and
543 things like that, sometimes I'm not a nice person to be around". Additionally, a woman (1
544 year post, P4) had a number of problems post-surgery and explained, "People say 'well
545 you've extended your life' well what's the point in extending your life if this is your life...If
546 you told me I could have my old life back and reduce it by twenty years that would be quite
547 appealing right now". One other woman identified the inability to eat the same foods as
548 before surgery as a cause for unhappiness:

549 I do feel down sometimes mainly as I said I can't eat what I used to eat before and I don't
550 drink, I don't smoke, I don't have sex so I used to like my food that was all and even the
551 food I like to have I can't have (1 year post, P5).

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554 *Long-term Responses to Surgery*

555 In the first few years after surgery, the majority of participants described substantial
556 improvements in weight, weight-related comorbidities, emotional wellbeing, and quality of
557 life. However, the longer-term responses to surgery were described as more challenging.

558 *Weight Plateau/Regain: Disappointment and Feelings of Failure.*

559 All participants in the 3-7 years post-surgery category described how their weight had
560 either plateaued or they had experienced some weight regain. As a result of this weight
561 regain, one woman (5 years post, P25) mentioned how she still feels “disappointed with
562 myself because I lost 6 stone more or less after the surgery and then I’ve put 3 stone back on”
563 and consequently she feels “as if I’m a failure because of it”.

564 A number of participants offered extensive insights into their feelings surrounding
565 weight regain. For instance, Participant 11 (man, 5 years post) described great
566 disappointment when he started to gain weight after the second postoperative year. He
567 explained, “I am disappointed with myself that I haven’t been able to control those external
568 factors” and then went onto detail the changes in his life that had led to his weight gain:

569 In the last couple of years my life has been a lot more complex. My wife and I have
570 adopted a boy, I have got a busy job and I am running around a lot and these are often
571 excuses and I will use them as excuses but they are things that intervene in your
572 ability to focus on keeping your diet very strict, keeping your exercise levels up and
573 in the last 2 years my weight has increased because I haven’t been as strict as I was
574 with my diet when I was following the Paleo diet.

575 Participants also detailed the consequences of weight regain. For example, participant 3
576 (man, 5 years post) explained that he “won’t have an ice cream, I don’t want anyone to see
577 me eating ice cream” in public. He explained his reasons for this by saying, “possibly
578 judging, possibly thinking “he’s too fat to eat ice cream.”

579 A few participants described how following weight regain they had recognised the need for
580 better control over their food intake, as one man explained:

581 I think the benefit from the surgery has gone, I don't think that I can rely on the
582 volume of my stomach as a means to support me in my weight loss, I have to do
583 everything myself so I, psychologically I believe I have to do everything (5 years
584 post, P11)

585 This same individual (man, 5 years post, P11) went onto describe how he believed that
586 "everybody with a weight issue has psychological issues with food" and learning "to deal
587 with the way that the surgery changes your physical ability to consume food has to be linked
588 in with the mental change in how you view food" if long-term success is going to be possible.
589 He also described the steps he had taken to change his mentality around food, explaining,;

590 I don't view food as anything more than a fuel for my body now, because that gives
591 me a little more ability to just view it as something that helps me keep going. And
592 where I am trying to go with that is I don't view it as comfort.

593 One other man (5 years post, P3) mentioned that he "wasn't very happy" and that "people I
594 was talking to on Facebook who had the operation said, 'oh yeah, we've hit a plateau as
595 well', just that mine lasted longer". He described going on the Atkins diet but with similar
596 results by saying, "I'm not losing anything, but I'm not gaining, I'm just on the plateau."

597 Unfortunately, a number of participants highlighted that the psychological reasons
598 surrounding their excessive eating (and lack of control over consumption) had not been
599 addressed and appropriate support had not been offered before surgery, which ultimately led
600 to long-term weight regain following surgery. As one women simply said, "the psychological
601 issues of why I was eating in the first place haven't been addressed" (5 years post, P25).

602 Further, a lack of support and guidance from medical professionals was also highlighted. For
603 instance, one participant shared her thoughts on the after surgery care:

604 I honestly believe they need someone there that's been through it to educate them
605 better, it's alright giving them a piece of paper and say read it, how many skip
606 through it, you don't read it all, it's like giving you a book innit, you go to the best
607 parts and that's the truth that is (woman, 5 years post, P27).

608 *Excess Fat: Frustration and Feelings of Vulnerability*

609 Participants shared that the psychological and physical side effects they were
610 suffering from were a result of continuing excess fat issues. One woman expressed disliking
611 her body and said, "I'm happy with the weight but I'm not happy with the shape it makes me,
612 you know, all these layers on me, that's a hernia there" (5 years post, P9). Another participant
613 highlighted the physical barriers that she now faces as a result of the excess fat:

614 The only thing I'm disappointed with was that none of the excess fat was removed,
615 because of my condition with the rest of my health I can't walk far so the exercise to
616 get it off is impossible for me so I'm stuck with it like, it's like having a weight and it
617 is just pulling down on my back which is causing me more problems (woman, 5 years
618 post, P25).

619 One man told a story which had arisen due to his excess skin and overweightness. He said,
620 "obviously I'm overweight, I've got a belly and what I call an overhang" and he,
621 was in a shop in [*place name*] and a little boy with his mother and the little boy must
622 have of only been two, something like that, three. He said look at that fat man there
623 like you know and his mother didn't half rip into him... You know I cringe sometimes
624 when kids do say things like you know. But then I sort of laugh it off with them then,
625 but it is hurtful (man, 5 years post, P5)

626 Another participant (man, 5 years post, P23) commented on the physical barriers and
627 emotional effects his excess fat and said that he "thinks it's wrong, I've been left with you
628 know excess fat and it's affecting me emotionally" and explained that he is on anti-

629 depressants now because “I just don’t like my body anymore”. He further described how,
630 “Even before when I was at my heaviest I would go swimming but now I’ve got all this
631 excess fat I just won’t go, it’s really ugly.” Finally, one participant detailed that he had lost
632 fourteen stone however his health could be further improved if body contouring surgery was
633 available by saying:

634 I’m down to about twenty four stone something like that now if I had the operation
635 done there could be three or four stone come off there which would take me down to
636 twenty stone which would be healthier for me (man, 1 year post, P5).

637 **Discussion**

638 This study sought to understand individuals’ experiences of weight, physical activity,
639 diet, and general wellbeing pre-surgery, short-term (≤ 2 years), and long-term (≥ 3 years post-
640 surgery). Bariatric surgery has previously been described as the beginning of a new and
641 challenging path, and not the end of a journey with obesity (Coulman 2017). With this in
642 mind, throughout this study the process of undergoing bariatric surgery is likened to a
643 journey whereby individuals are prospectively and retrospectively creating meaning and
644 understanding of the journeys they took to arrive at the present day. Pre-surgery individuals
645 were asked to describe their expectations of surgery and post-surgery aspirations, while short-
646 and long-term post-surgery individuals described the decisions and experiences that shaped
647 their current situation.

648 The start of many individuals’ journey was a critical trigger point, which was
649 followed by spiralling of weight. The triggers for weight gain ranged from life transitions
650 (e.g. moving away from home, starting/ending relationships) to traumatic experiences such as
651 death and abuse, which is consistent with previous literature. For example, one individual
652 described using food as a means to cope in two situations; when she found her baby’s father
653 dead thirteen days after giving birth and as a way to attempt to deal with the abuse she was

654 subjected to from a child up until the age of 41 years old. Ogden and colleagues (2006) also
655 described the pre-surgery weight gain histories, failed attempts at sustained weight loss and
656 yo-yo dieting in patients who had undergone surgery in the previous four years. One case
657 study, assessing the psychosomatic aetiology of a 37 year-old post-surgery woman following
658 hospital admission revealed that the patient had been a victim of rape as a teenager, which
659 resulted in spiralling weight gain and obesity (Faden et al. 2013). This however had not been
660 discovered prior to her surgery. With these findings and those of the current study in mind, it
661 would appear that at the preoperative stage in the bariatric surgery journey, taking time to
662 identify the initial trigger and ensuring patients have received appropriate support and help to
663 address or manage this situation is critical. It is only by understanding the varying triggers
664 associated with weight gain that strategies can be put in place to help people anticipate
665 critical moments/transitions, provide individuals with skills to cope with change, and ensure
666 support is available for individuals during and following challenging times in the bariatric
667 surgery journey.

668 In the weeks and months immediately after surgery, the majority of participants
669 indicated that they were overjoyed with their “massive weight loss”. Individuals described
670 losing up to eight stone in the first six months after surgery. In previous investigations
671 participants also voiced their excitement at initial weight loss describing it as “easy” because
672 “surgery does the work” (Lynch 2016) and likening it to a “honeymoon period” (Groven and
673 Glenn 2016b). However, not all participants were as delighted with the substantial weight
674 loss in the early post-surgery period and took steps to slow down the rate of weight loss.
675 Participants described engaging in unhealthy eating practices, such as eating chocolate bars,
676 which indicates that individuals were likely not provided with any, or sufficient, dietary
677 education in the months leading up to and following surgery. Based on participants’ stories,
678 Bocchieri, Meana, and Fisher (2002a) referred to bariatric surgery as a positive rebirth and

679 transformation, however not without pressures related to massive changes experienced by the
680 individuals. One recent study assessed patients' expectations and experiences of changes in
681 eating behaviour following bariatric surgery (Opozda, Wittert and Chur-Hansen 2018).
682 Individuals reported both positive (healthy, helpful and desired) and negative (unhealthy,
683 unhelpful, unwanted) eating-related behaviours with the majority of negative experiences
684 described at 18+ months after surgery. These findings, and those from the current study,
685 highlight the need for longer-term multidisciplinary care to prepare individuals for the
686 weight, eating behaviour and psychological changes that occur during this stage in the
687 bariatric surgery journey.

688 As individuals progress through the bariatric surgery journey, initial postoperative
689 weight loss excitement is often dulled by a weight loss plateau and in many cases, weight
690 regain (Groven and Glenn 2016). Participants in both the current study and others have
691 described periods of post-surgical weight regain following initial weight loss (e.g. Benson-
692 Davies, Davies and Kattelman 2013; Engstrom and Forsberg 2011; Geraci, Brunt, and
693 Marihart 2014). Individuals in the current study described returning to pre-surgery eating
694 habits either as a result of the lessening physical effect of surgery and the ability to eat more,
695 or because the body could only tolerate unhealthy foods. In agreement, another study which
696 drew on focus groups and interviews with 24 post-bariatric surgery patients revealed a return
697 to "old eating habits" as a contributing factor toward the observed 16.2 ± 12.7 kg weight regain
698 from 2 years post-surgery (Benson-Davies et al. 2013).

699 Although our findings add to an already extensive bank of research regarding weight
700 regain in the months and years following surgery, we have offered insights into the factors
701 which may contribute to the observed weight regain. For example, many felt that their weight
702 gain was because of psychological issues surrounding eating behaviours that had not been
703 addressed prior to surgery and consequently food continued to be used to manage emotions.

704 Clinicians tend to assess disordered eating in pre-bariatric surgery individuals, but some
705 patients who have eating disorders still undergo surgery. These individuals often receive little
706 dietary counselling prior to surgery and are often at a greater risk of disordered eating
707 following surgery (Raves et al. 2016), which emphasises the necessity to include
708 multidisciplinary care at all stages of the bariatric surgery process. Findings have revealed
709 that both group and individual based pre-bariatric surgery nutrition counselling are effective
710 in producing favourable post-surgery clinical outcomes (Lavertue and Salgueiro 2012).
711 Therefore, it seems pertinent to encourage health care practitioners to take the time to fully
712 understand their patient's history prior to bariatric surgery and to ensure that appropriate
713 support is provided to maximise both physical and psychological success following surgery.

714 In addition to weight regain, many individuals who were further along their bariatric
715 surgery journey experienced psychological and physical side effects because of continuing
716 issues with excess loose skin. Participants described how the excess skin had become a
717 barrier to physical activity, such that the associated embarrassment prevented one man from
718 going swimming despite feeling confident enough to swim before surgery. These experiences
719 are concurrent with previous findings that women, especially, struggle to cope with bodily
720 changes and the increased appearance of loose skin after surgery (Groven, Råheim and
721 Engelsrud 2013). The experience of living with the excess skin and scars after bariatric
722 surgery has been shown to generate ambivalence and discomfort, as individuals are
723 constantly reminded of the inability to completely escape their previously large body (Groven
724 et al. 2013). The majority of research demonstrates great improvements in patients'
725 emotional wellbeing, body image satisfaction, physical function, identity transformation and
726 quality of life following body contouring surgery after massive weight loss (Soldin 2011;
727 Gilmartin, Long, and Soldin 2012; Gilmartin, Long, and Soldin 2013). However, it appears
728 that this is still not being made available to enough people.

729 After surgery most participants reported improved perceptions of and increased
730 engagement in physical activity, which related to weight loss and increased self-confidence,
731 and aligns with previous literature (Jacobi et al. 2011). Particularly, individuals described
732 their change in mindset towards physical activity, as it was no longer viewed as a chore.
733 Nevertheless, despite participants in the current study generally reporting higher levels of
734 physical activity engagement after surgery, they still identified several barriers to exercise
735 which included physical side effects resulting from the surgery itself, as well as
736 environmental and time barriers. Concurrent with our investigation, a qualitative analysis of
737 post-surgery barriers to exercise has revealed that when barriers are split into motivational
738 and physical barriers, most participants report at least one internal motivational barrier with
739 the most frequent barrier being time (Peacock, Sloan and Cripps 2014). Wouters et al. (2010)
740 found that participants possessed negative cognitions towards exercise, for example the belief
741 that exercise is not useful for health benefits. Other qualitative interview studies assessing
742 barriers to physical activity following bariatric surgery have revealed discomfort associated
743 with excess skin or other weight-related issues, lack of support, lack of motivation and a lack
744 of time from preventing post-surgery exercise engagement (e.g. Lier, Aastrom, and
745 Rortveit, 2016; Dikareva et al. 2016; Stenmark Tullberg et al. 2017; Zabatiero et al. 2017), all
746 of which support the findings fo the current study. Given that individuals consistently
747 encounter barriers to exercise it seems that providing individuals with information about
748 these barriers prior to surgery, and most importantly, strategies to help them manage or
749 overcome these barriers, is critical if we are to improve the physical activity habits and
750 behaviours of these individuals. This education becomes increasingly important in later years
751 in the bariatric surgery journey when weight loss is slowed and psychological health
752 challenges may begin to arise.

753 ***Conclusion, Limitations, and Future Directions***

754 Our study was novel in its design whereby we were able to obtain insights into
755 patients' experiences of weight, diet, physical activity and wellbeing before and at two
756 different time points after bariatric surgery. In this sense, bariatric surgery was viewed as a
757 journey whereby we aimed to obtain an understanding of individuals' stories as they
758 transitioned through the bariatric surgery phases. It was then possible to determine how
759 experiences changed throughout the bariatric surgery journey. By obtaining a long-term
760 picture of these experiences, it is possible to identify the most suitable stages of intervention
761 to encourage healthy long-term outcomes. However, it must be noted that the most necessary
762 point for intervention is likely to differ between individuals and ongoing long-term support is
763 most definitely required to enhance post-surgery outcomes.

764 The study has demonstrated that the factors leading to weight gain prior to surgery,
765 and the weight loss and regain experiences following surgery are extremely complicated. In
766 the short term after surgery, the emotional wellbeing and quality of life of individuals is
767 improved but such improvements are not always present after three years post-surgery due to
768 poor body image associated with excessive skin. Most participants indicate enhanced
769 engagement in and perceptions of physical activity in the months following surgery however,
770 due to physical side-effects related to the surgery itself, environmental and time constraints,
771 participants often reported experiencing a number of barriers to exercise. Importantly,
772 participants believed that the issues surrounding their eating behaviours were never addressed
773 prior to surgery and therefore they continued to use food to control emotions after surgery
774 and experienced substantial weight regain. Such behaviours were clearly intertwined for
775 these participants and as such must be considered together, rather than separately when
776 seeking to help participants to lose/maintain loss of weight and improve psychological health.

777 Such findings must be considered within the study limitations, including the range in
778 time since surgery in the two post-surgery groups, the fact that interviews were conducted at

779 one time only, and the range in interview lengths, which may be an indication that some
780 participants were not fully engaged in the process. Future research should look to engage
781 with participants over an extended time to highlight individual changes in experience.
782 Finally, examining participants' engagement with pre- and post-surgery educational/support
783 programmes would be useful to highlight any areas within such programmes that may help
784 increase efficacy and appropriateness.

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786 ***Conflict of interest***

787 No potential conflict of interest was reported by the authors.

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