Lived experiences and unique psychosocial impacts following bariatric surgery in a publicly funded Australian tertiary hospital: a qualitative study

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ABSTRACT

Objective: Gain an understanding of the lived experiences and unique psychosocial impacts following bariatric surgery.

Methods: Qualitative study design, consisting of semi-structured interviews. Based on thematic analysis principles, transcripts were inductively coded.

Results: Fifteen participants were included; predominantly female (n = 9, 60%) and underwent Roux-en-Y gastric bypass (n = 12, 80%), with a mean age of 57 years. Five themes were generated including ‘Key Motivators to Undergo Bariatric Surgery’, ‘Positive Changes’, ‘Facing the Challenges’, ‘Tackling Social Relationships’, and ‘Skills to Move Forward’. There were common health-related motivators to undergo surgery, yet psychosocial motivators were not reported. Patients reported positive changes post-operatively; though not exclusively. Challenges included being surprised by the rapid weight loss, a delayed identification of their new body, and new body image concerns. Participants reported using different sources of support for the different types of support needs and were required to navigate negative confrontations and perceived stigma. Skills to move forward included implementing strategies and behaviour change techniques along with adjusting their lifestyle, routine, and mindset.

Conclusion: Experiences and psychosocial challenges post-operatively are multifaceted. Tailoring services to address these challenges in both pre- and post-operative healthcare settings is recommended.

KEY POINTS

What is already known about this topic:
(1) Long-term psychological and dietary support is important to help individuals navigate the challenges and maintain positive changes achieved after bariatric surgery.
(2) Lived experiences of bariatric surgery are characterised by normality, control, and ambivalence.
(3) To date, no qualitative study has been conducted in Australia to report the lived experience and unique psychosocial impacts following bariatric surgery.

What this topic adds:
(1) Health-related motivators to undergo bariatric surgery were common; however, there were no reports of psychosocial motivators to undergo surgery (i.e., improved body image).
(2) Patients electing bariatric surgery may not be fully prepared for the psychosocial challenges rapid weight loss presents.
(3) Different sources of support were utilized by patients for different types of social support, with the prominent use of Online Health Communities.

The effectiveness of bariatric surgery is well established; however, whilst initial weight loss is promising, weight regain is prominent (Magro et al., 2008; Mechanick et al., 2019). Individuals undergoing bariatric surgery often have psychological conditions of depression, anxiety, disordered eating, and lower quality of life compared to individuals undergoing less invasive non-surgical weight loss treatments (Dawes et al., 2016; Miras et al., 2015). Whilst post-operative weight loss is associated with less depressive...
symptoms, unsuccessful weight loss and weight regain after surgery may result in feelings of failure, helplessness and subsequently increase the risk of depression (Burgmer et al., 2014; Dawes et al., 2016).

Many individuals have unrealistic expectations of post-operative weight loss and unmet expectations can affect adherence to recommended lifestyle changes resulting in weight regain (Ames et al., 2016; Kaly et al., 2008). Clinical Practice Guidelines highlight the importance of multidisciplinary teams when supporting patients and recommend psychosocial evaluation (Mechanick et al., 2019). Psychosocial evaluations serve multiple functions and can enhance readiness for surgery and adjustment after surgery, and minimise barriers to weight loss (Sogg & Friedman, 2015).

Patient centred care is paramount in health care and the patient’s voice helps to reorientate medical research and clinical practice to the patient perspective and, thus, ensures priorities are aligned to the needs of those who experience disease (Dean et al., 2017). A recent review included studies investigating perspectives of adults after bariatric surgery (Coulman et al., 2017). The majority were conducted in the USA and Canada (n = 12), and no study has been conducted in Australia to date. The majority of participants were women (n = 529, 81%), highlighting the limited literature capturing the perspectives of males. Settings were generally not well defined; however, considering the majority of surgeries are in the private healthcare system, research with participants in the public health system is most likely absent (Registry, 2019).

Whilst knowledge can be drawn from studies conducted in other countries, the International Federation for the Surgery of Obesity and Metabolic Disorders reports clear differences in bariatric practice between countries (Welbourn et al., 2019). In addition, qualitative research findings have culturally laden meanings and comparison of interpretations across cultures is inadequate (Wagner et al., 2014). To better support and provide for patients within Australia, further qualitative research is needed. Therefore, this study aimed to gain an in-depth understanding of the lived experiences and unique psychosocial impacts following bariatric surgery in a publicly funded Australian tertiary hospital.

Method

Study design

This study utilised a qualitative design, with data collected using one-on-one interviews. Adults who were planning to or had undergone bariatric surgery were recruited into a mixed methods study with two objectives. The first objective, previously reported (Wright, Kelly et al., 2021), was to gain insight into whether bariatric surgery patients have common barriers to attending appointments in person, whether they access and use technology, and their opinions regarding the opportunity to integrate digital health into usual care. This study focused on the quantitative survey data which was complemented by inductive content analysis with the unit of analysis specifically relating to digital health.

The current study reports the qualitative findings relating specifically to the second objective which was to gain an understanding of the lived experiences and unique psychosocial impacts following bariatric surgery, and was analysed based on the principles of reflexive thematic analysis. The open-ended interview questions (Appendix S1) were based on the theoretical domains framework which provides a method for assessing health-related behaviours as a basis for intervention development (Cane et al., 2012; Michie, 2005). The study has been reported conferring the CORE-Q checklist (Tong et al., 2007). Ethical approval was provided by the Royal Brisbane and Women’s Hospital Human Research Ethics Committee (LNR/2020/QRBW/58948).

Study setting

In Australia, publicly funded bariatric surgery is delivered primarily out of metropolitan hospitals. In Queensland, these hospitals attract a wide geographical spread of patients with 60% from out of these catchment areas. A standard model of care is delivered whereby patients attend an initial assessment with an endocrinologist, dietitian, and psychologist to determine their suitability for bariatric surgery. Patients may be eligible for initial assessment if they are aged 18–65 years, have type 2 diabetes with HbA1c ≥6.5% despite treatment with Metformin (or alternative) plus at least one other diabetes medication, a body mass index ≥35 kg/m², and are already under the management of a public hospital specialist or Aboriginal and Torres Strait Islander health service. If a patient is deemed suitable to progress to surgery, patients are seen by a dietitian, endocrinologist, and physiotherapist at 1-month, 3-months, 6-months, and 12-months post-surgery. Patients are seen by a psychologist at 6-months post-surgery or if they are high-risk, with a referral.
Participant selection

Participants were recruited from one Queensland, Australia, tertiary hospital bariatric surgery service. To ensure a broad range of different experiences and perceptions were identified, consideration was given to the inclusion of information-rich cases that reflect the population diversity. Participants were purposively sampled with maximum variation for clinical characteristics (time since surgery, and procedure type) and demographic diversity (age and sex). Adults (≥18 years) who had undergone bariatric surgery and were still receiving care were eligible for recruitment. Potential participants were identified, telephoned, and invited to participate by author RH (response rate was 100%). RH obtained verbal consent and arranged a telephone interview in a setting (i.e., home, workplace) and at a time of day that was convenient for the participant. Following recommendations for studies of lived experience, we anticipated 10–20 participants would be sufficient to uncover and understand core themes (Bernard & Bernard, 2013).

Data collection

Participant characteristics were collected from medical records by RH. Interviews were conducted by CW, a female PhD candidate and Accredited Practicing Dietitian, with Masters-level qualifications and postgraduate studies relating to bariatric surgery. There was no prior relationship established with participants. Participants were notified that CW was a PhD candidate collaborating with the recruitment site.

The interview guide was pilot tested with members of the participant group via three initial interviews. It was reviewed by two members of the research team (CW, KC) to ensure relevant responses were drawn. Interviews were scheduled for 30 minutes and took place over a four-week period in April-May 2020, via telephone in a location separate from the recruiting hospital, with no other researchers present. Interviews were audio-recoded on two electronic devices to collect the data and mitigate the risk of data loss. Handwritten field notes were taken, and the interviewer kept a reflective journal recording ideas and issues expressed, similarities, and differences among interviews, and possible refinement of questions (Ahern, 1999). Repeat interviews were not carried out. Recruitment and interviews continued until no further themes were generated from the data (Braun & Clarke, 2021). Transcripts were not returned to participants.

Data analysis

Transcripts were coded in NVivo (version 12; Silver & Lewins, 2014). Data were analysed based on the principles of reflexive thematic analysis (Braun & Clarke, 2013, 2006) following a six-phase framework (Maguire & Delahunt, 2017). Analysis started with the first interview and continued concurrently with the data collection process. The first author became familiar with the data line-by-line and inductively identified initial codes. The codes and collated data were examined to identify significant broader patterns of meaning (potential themes) which were then reviewed and refined. Themes were defined and named which involved developing a detailed analysis of each theme, determining the scope and focus of each theme, and deciding on an informative name for each theme. This final step was conducted through discussion with the behavioural scientist on the research team (who was not present during the interviews). An iterative process in the data analysis was used in which data were coded and recoded to accommodate new themes until no new themes were generated. The final two interviews confirmed previously generated themes. In addition, the reflective journal helped facilitate the data interpretation and ensured identified themes fit the data. Participants did not provide feedback on the findings. Participant quotations are embedded and presented throughout the results to illustrate themes and subthemes (Eldh et al., 2020). Whilst the lead author’s PhD includes behavioural science in bariatric surgery care interpretation of the data generated in the current study was unlikely to have been influenced or biased.

Results

Participants included 15 adults (n = 9, 60% female), with a mean age of 57 ± 7.4 years, and a mean total weight loss of 21 ± 7.4% following surgery (15 ± 7.1 months post-surgery). The majority had undergone Roux-en-Y gastric bypass (n = 12, 80%), followed by single loop gastric bypass (n = 2, 13%) and sleeve gastrectomy (n = 1, 7%).

There were five main themes that were generated from the data; “Key Motivators to Undergo Bariatric Surgery”, “Positive Changes”, “Facing the Challenges”, “Tackling Social Relationships”, and “Skills to Move Forward”. In addition, each had several subthemes as seen in Figure 1 and detailed below.
Key motivators to undergo bariatric surgery

Facing deteriorating health
Motivators for undergoing bariatric surgery were health-related with the prospect of an increased life expectancy “I want to live that extra part of my life” and because surgery offered “the best situation” to get blood “sugars under control and lose the weight”.

Motivated to have surgery after years of non-success
Prior to undergoing surgery, participants described various weight loss journeys. Some “struggled for years to try and lose the weight” and realized they “couldn’t do it by just diet alone”. For others they were able to lose weight but could not maintain this weight loss, reporting they would regain more weight than what was lost; “you take 32 [kilograms] off [and] you put on 40”.

Positive changes
Finding a return to health
Before undergoing surgery, participants perceived their health to be on a detrimental trajectory. After surgery, their health was “starting to be back on track again”. Participants described feeling their life had “medically turned around” and as a result could “expect a full term of my life expectancy now”. Surgery provided a sense of control over comorbidities and additional health improvements included reduced joint pain, resolution of sleep apnoea, and overall reduced medication.

No longer reliant on medication
A reduction or cessation of diabetes medication was a positive for the majority of participants. Participants were either “off medication completely”, “no longer on insulin”, or had reduced the number “[I] dropped half of them [medications]”. This was an instant change, experiencing complete cessation after surgery and medications confiscated before discharge.

Finding renewed energy
Participants reported renewed energy as one of the best post-operative outcomes. Daily tasks were easier “I can bend down and put [my] own shoes and socks on” and they could do things they hadn’t been able to do in years. Participants described more confidence
and self-efficacy regarding exercise; “before [bariatric surgery] I just had no energy, so I’d never [exercise]. But now I am getting the energy [and] I can do it, so I want to”.

**The good outweighs the bad**
Undergoing bariatric surgery was described as the “best decision”, with participants holding no regrets. Whilst there were negative side effects participants felt it was worth it and overall, the good outweighed the bad; “the amount of pleasure that I’ve had in life since surgery, it just way outweighs the negatives side”. Surgery was said to be “very different to the way people perceive it to be” yet participants could not “say enough good things about it” and would recommend it to others.

**Facing the challenges**
**Surprised by the rapid weight loss**
Initial weight loss was described as rapid and effortless; “it came off really fast” and “dropping [weight] like you wouldn’t believe, so quickly”. This was described as “pretty mind-blowing” considering the last time some were at that weight was in primary school. After this initial weight loss, weight loss trajectories were reported differently by participants. Some experienced a constant decrease, others reported their weight loss had slowed down and for some, it had plateaued.

**Fear of weight regain**
Although participants had seen others regaining weight, there was a strong desire to avoid weight regain as it was considered not acceptable or something they could not afford due to social embarrassment. Contrastingly, a participant described a scenario where they planned to work towards reaching their goal weight, despite knowing it was “way too low”, and once reaching this goal they would allow their body to guide their weight which they anticipated being higher than this goal.

**Side effects are common, but patients are not always aware**
Despite side effects being common after bariatric surgery, participants were shocked and felt they were not suitably “forewarned”. There were challenges experienced with eating behaviours such as vomiting as a result of eating past fullness, hunger pain due to not eating every two hours, or pain from eating too fast. Whilst it was generally understood they needed to avoid eating fast and thoroughly chew food, it was challenging to “switch [their] brain on again” to slow down. Similarly, managing food versus water intake was challenging as “in your head you’re so used to having water with your meals”.

**Wary of new food intolerances and aversions**
Individuals described intolerances to various foods, relying on experimentation and learning from past experiences “once you’re sick from eating something you don’t forget it; it stays in your mind and you’re really cautious”. There were reports of changes in sense of smell and taste leading to nausea and foods they once enjoyed were now repulsive.

**Equivocal feelings to clothing**
There were mixed feelings towards purchasing new clothes. Some were liberated by the freedom. Contrastingly, purchasing clothes was a burden and financial strain for others. Similarly, there were mixed feelings about discarding old clothes. Some were excited, “everything that I use to wear I can throw away”, whilst for others, it took time and was a grieving process.

**Delayed identification of a new body**
It took individuals a long time after surgery to recognize their new self and felt their mind and body were “trying to catch up to each other”. The rapid change in their body was difficult to comprehend following a lifetime of learning to accept their larger body; “[it] takes 30 years to change physically and to mentally be fine with how you look and then in 8 weeks… you look very different”. Some participants thought they were still fat and had to implement strategies such as taking photos or “[looking] in the mirror every day to reinforce that that is me and who I am” to help the transition.

**New body image concerns**
As a result of the rapid weight loss, participants had loose and sagging skin. This was reported as shocking, really upsetting, and caused anxiety and depression for some. For some, the next goal was cosmetic surgery, whilst others felt it was “part of life now”.

**Discovery of self-esteem**
There were accounts of having to get “use to being confident again”. Others were embracing their confidence reporting “going out and socializing” more than ever as a result of “confidence and losing weight and feeling prettier”.
Tackling social relationships

Different sources of support used for the different types of support needed
Support systems included family and friends, peers, and online health communities. Family and friends were supportive immediately post-surgery and provided company during exercise. For one individual who was “totally alone” with no one to talk to, they described “a real spiral down” and suffered from their mental health. Many described connections with other individuals who had already undergone surgery. It was felt “you really need to pull on people that have been through this process with you and are at the same stage of the journey” and it was recommended future patients seek someone out; “it is important that new people going through it have that support”.

Navigating negative confrontations and perceived stigma
A scenario was described where an individual’s family had previously used their weight as a way to bully them and now they were jealous resulting in them “falling out”. In addition to family disruptions, challenging situations with friends were mentioned; “it’s good to catch up with people, but some people will put pressure on you to try and get you to eat things that you don’t want to eat”. For others keeping bariatric surgery a secret facilitated the avoidance of having “to deal with the negativity of the comments”.

Skills to move forward

A reactive approach to mental health
The mental health concerns participants had prior to surgery either remained or were exacerbated post-operatively. To the extent of a situation where an individual “got really depressed and thought I don’t care if I even live”. Responses to mental health challenges included counselling to get “back on track”, and commencement of medication for the treatment of depression. Seeking support was described as reactive and delayed “it took me a while before seeking help where I should have got it straight away”. Additionally, participants said they would seek support once they had struggles but currently did not feel they needed help.

A non-relationship with food after surgery
The relationship with food after surgery was rarely described. Prior to surgery participants reported eating “anything and everything” and now post-surgery it’s a “battle to eat” much at all; going from “one extreme to the other”. This was challenging as some participants described continuing to think they “should be eating more”, and if their mind was not “in the right place” they were unable to say, “that’s enough [food]”. Food no longer held pleasure or satisfaction “because there’s no quantity of food anymore” and rather it was perceived as “preventative medication”.

Able to implement strategies
Various strategies and behaviour change techniques were implemented by participants. Goal setting and self-monitoring were the most common for both exercise (daily steps and walking distance) and dietary intake. Followed by behaviour substitution; “I don’t eat out of a packet I always put my food in a bowl”. These strategies helped with consistency of behaviour and accountability. Smartphone applications and wearable devices were facilitators to keeping on track.

Learning the lifestyle change
Bariatric surgery was described as life-changing, a “learning curve”, and required participants to adjust their lifestyle, routine, and mindset. Exercise through walking was now a common practice and routine for many. Some reported feeling guilty if they did not exercise every day and exercise was an outlet, “rather than using food”. Some post-operative routines were described as “something you have to live with now” including daily vitamin and mineral tablets and supplementation.

Discussion
This study explored perspectives from adults that have undergone bariatric surgery in a publicly funded Australian tertiary hospital, on their post-operative experiences and psychosocial challenges. Health-related motivators to undergo surgery were common, yet psychosocial motivators were not reported. Patients reported positive changes post-operatively; though not exclusively. Challenges included being surprised by the rapid weight loss, a delayed identification of their new body, and new body image concerns. In addition, patients were required to navigate social relationships and adopt skills moving forward.

Motivators for undergoing bariatric surgery were health-related including the prospect of an increased life expectancy and improved diabetes management. Further influencing the decision, was previous failed dieting efforts and the inability to maintain the weight loss. These motivators are consistent with the literature.
Psychosocial motivators for undergoing surgery such as improved body image, clothing options, self-esteem, social life, and quality of life were absent from the interviews and not mentioned. Psychosocial motivators have been previously reported; however, in these studies participants were predominantly female (Pearl et al., 2019). Despite equal obesity rates across genders, a considerable gender disparity exists with women comprising 80% of bariatric surgery procedures (Aly et al., 2020; Munoz et al., 2007). The influence of obesity on quality of life and life satisfaction is stronger for women compared to men, and women place greater importance on physical appearance than men (Kolotkin et al., 2008). Considering the sample in the current study had a higher proportion of males, this may have contributed to the reported predominance of health-related motivators as opposed to psychosocial. Furthermore, patients must meet strict eligibility criteria to be referred into the service which has a strong emphasis on health, which may have also contributed to the predominance of health-related motivators reported. Considering psychosocial motivators were not emphasized, the degree of participant preparedness for such post-operative changes is likely to be low.

Patients electing bariatric surgery may not be fully prepared for the psychosocial challenges rapid weight loss presents. Participants reported their mind and body were “trying to catch up to each other”. A paradox defined as an allocentric lock or mind-body lag in which the individual’s body becomes smaller physically but remains obese in their mind (Riva, 2012). This is not too dissimilar to the experiences of individuals suffering anorexia or amputees; their lived body and experienced body differ (Hosseini & Padhy, 2021). Furthermore, because of the development of excess skin, some individuals continued to feel dissatisfied with their body image. Whilst body contouring can improve body image it also produces dissatisfaction with other parts of the body, suggesting that as individuals become closer to their ideal, these ideals may shift (Song et al., 2006). Negative body image perception is associated with psychopathology, and improvements in body image perception relate to a better quality of life after surgery (Bertoletti et al., 2019). To identify patients that may need additional support, it may be beneficial for routine pre- and post-operative psychological assessments to include tools that have been developed to measure concerns about body shape or perceptions of weight loss. Such as the body shape questionnaire, the BODY-Q, and the eating disorder inventory (Cooper et al., 1987; Garner, 2004; Klassen et al., 2016). An additional evidence-based approach may involve improving readiness for surgery and preparedness for associated challenges. Cognitive or behavioural therapy and visual therapy may help prepare patients for post-operative challenges, influence feelings of dissatisfaction, and body awareness (Riva & Melis, 1997). Furthermore, this may facilitate the adaption of the body schema to the new body shape post-operatively (Busseto et al., 2018).

Different sources of support were utilized by patients for different types of social support including emotional, instrumental, informational, and appraisal (Glanz et al., 2008). Friends and family members provided emotional support with an expression of care and a listening ear, along with instrumental support through tangible aid and service. Peers provided informational support with advice, suggestions, and information. Online health communities (OHC) similarly provided informational support, in addition to appraisal support. The way social support is communicated has shifted within the last decade due to advancements in technology, and OHCs have gained the attention of bariatric patients (Glanz et al., 2008; Martins et al., 2015). A recent narrative review focused on the developing roles of OHCs; however, no studies have gained insight into the role of OHCs in facilitating social support from the patient’s perspective (Robinson et al., 2020). Considering the proportion of patients turning to OHCs and that social support is protective against post-operative weight gain further research regarding the role of online health communities in facilitating social support would be beneficial (Athanasiadis et al., 2021).

Post-operatively participants were required to navigate negative confrontations and perceived stigma. Adults who undergo bariatric surgery are often susceptible to stigma due to the perception that they did not take responsibility for their weight loss and took the easy way out (Vartanian & Fardouly, 2013). Participants countered this idea, as surgery was described as a tool, requiring behaviour and lifestyle change, deployed as a last resort when all other options had failed. Facilitated by smartphone applications and wearable devices, participants were self-enacting behaviour change techniques including “goal setting” and “self-monitoring”. A recent systematic literature review found bariatric surgery digital health interventions commonly integrate the behaviour change techniques of “self-monitoring” and “goal setting” in addition to “problem solving”, “social support”, and “shaping knowledge” (Wright, Mutsekw et al., 2021). In continuing to support patients, it could be suggested “problem solving”, “social support”, and “shaping knowledge” and other
techniques could be prioritised given the independent implementation of self-monitoring and goal setting.

There were limitations in the present study. Findings are only reflective of the experiences of people who were interviewed and different services with different models of care may have different patient experiences and applicability of this evidence. A strength of the present study is it has a higher proportion of males, who are generally underrepresented in the literature. Whilst the interviewer kept a reflective journal it is possible personal beliefs of the researcher may have incidentally affected the research. Interviews were conducted during COVID-19 restrictions and social distancing regulations, which may have heightened post-operative challenges for individuals and hence impacted results. Interviews were conducted over the telephone with the possible presence of another individual, for example, a partner, listening into the conversation, which may have made participants more or less willing to respond honestly.

Conclusion

This study is the first to explore perspectives from adults that have undergone bariatric surgery in Australia, finding their experiences and psychosocial challenges post-operatively are multifaceted. Participants reported positive changes post-operatively; though not exclusively. Challenges included being surprised by the rapid weight loss, a delayed identification of their new body, and new body image concerns. In addition, participants were required to navigate social relationships and adopt skills moving forward. Tailoring services to address these challenges in both pre- and post-operative care settings is recommended.

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