Weight Stigma Narratives of Individuals with Depression after Bariatric Surgery

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Abstract

Weight stigma is defined as assigning negative attributes to individuals based on their weight status and includes both overt and subtle acts of discrimination. Although weight stigma affects people across the weight spectrum, this dissertation focused on the cumulative life experiences of higher weight individuals who received bariatric surgery. Individuals who pursue bariatric surgery tend to have more weight stigma experiences and depression compared to higher weight individuals who pursue alternate weight loss methods. Psychological screening is required to gain authorization for bariatric screening and, as a result, individuals risk having surgery delayed or denied if they disclose mental health issues such as depression. In the bariatric population depression has been shown to decrease during the first post-operative year but recurs one to three years after surgery. This study aimed to understand the effect of cumulative life experiences and depression on bariatric postoperative outcomes. Using a narrative life history approach, seventeen participants shared their experiences of weight stigma and the process of receiving bariatric surgery. Participants across the sample reported multiple sources of weight stigma and the onset of disordered eating patterns during childhood and adolescence. Aside from these commonalities participants' experiences diverged along two trajectories. Participants in the Improvement Trajectory had no history of abuse or neglect and fewer childhood traumas relative to those in the Persistence Trajectory who consistently reported these adverse childhood experiences. While Improvement Trajectory participants reported improvements in disordered eating, amelioration of depressive symptoms, and satisfactory maintenance of weight loss after bariatric surgery, those in the Persistence Trajectory were less likely to report such benefits. These findings point to a need to strengthen preoperative assessment of childhood trauma and weight stigma experiences while dropping barriers to

surgical access. Additionally, study results suggest patients would benefit from extended psychological support during the preoperative phase and one to two years after bariatric surgery.

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Chapter 1: Introduction

Although weight is objectively measured using a ratio scale, the social construction of weight has resulted in the thin/fat binary associated with personal characteristics. Those labeled as 'thin' are commonly viewed as being responsible and possessing good health, beauty, and happiness (Lewis et al., 2011). Alternatively, those who fall into the 'fat' category are commonly viewed as unhealthy, lazy, unattractive, and depressed (Lewis et al., 2011). Governmental campaigns targeting weight loss and wellness culture reinforce the thin/fat binary and reflect medical and social constructs of health.

Weight stigma is defined as assigning negative attributes to higher weight individuals and includes both overt and subtle acts of discrimination (Lewis et al., 2011; Williams, 2018). Weight stigma is pervasive and is made evident by portrayals of larger bodies in the media. Recent headlines show that weight stigma is thriving, that fat shaming is celebrated, and fat women, in particular, are being sexually victimized (Prohaska & Gailey, 2009; Andone & Johnston, 2018). Given that weight stigma can influence a person's ability to gain employment or access education, the socioeconomic consequences of having a large body can be devastating (Fikkan & Rothblum, 2012). Weight stigma limits a person's earning potential and serves to deter people from accessing the healthcare system due to fear of discrimination (Friedman et al., 2008; Puhl & Heuer, 2010). After unsuccessful attempts to lose weight, people desperate to improve their health and escape weight stigma may opt for bariatric surgery.

This chapter provides a brief background for the study purpose and enumerates three specific aims. Although we know that higher weight people experience weight stigma in a broad context, the decision to learn from individuals who have undergone surgery and are in the post-operative phase illuminated both sides of the thin/fat binary. As we acknowledge the experiences

of weight stigma for bariatric patients, healthcare providers can improve surgical outcomes by implementing appropriate assessment tools and avoiding stigmatizing behaviors.

The War on Obesity

In 1996, Dr. Everett Koop declared war on obesity and identified obesity as a national health crisis (Burgard et al., 2009). His successor, Dr. Carmona, likened excess weight to a terrorist threat, playing on Americans' fears post 9/11 (Burgard et al., 2009; Levy-Navarro, 2009). The language used to demonize higher weight categories has reinforced and perpetuated weight stigma in medical and social contexts, simplistically equating slimness with health. Indeed, the "war on obesity" has claimed more casualties than eliminating the enemy-excess weight. This war has stripped people of higher weight of their dignity, access to the world, and right to exist freely. The unrelenting narrative of the thin/fat binary is so deeply ingrained in our culture that people of higher weight accept responsibility for their perceived shortcomings and lack empathy from others of similar size (Friedman et al., 2005). Internalizing negative messages about weight status further contribute to weight stigma, making it difficult for people of a higher weight to challenge this form of oppression.

Bariatric surgery is considered the most effective treatment for weight management and the reduction of cardiometabolic issues (Chang et al., 2014; Mitchell et al., 2014). In 2019, as many as 256,000 people underwent bariatric surgery, which is nearly double the number of surgeries in 2011 (ASMBS, 2021). Four surgical approaches induce weight loss through structural restriction, malabsorption, or a combination of these two mechanisms (Schauer & Schirmer, 2018). People seeking bariatric surgery must undergo extensive preoperative evaluation and preparation. The preoperative evaluation process includes a physical examination by the surgeon, follow-up appointments with specialty physicians as needed (e.g., Cardiologists),

and diagnostic/ laboratory tests (Neil & Roberson, 2015). In addition to the evaluation process, those seeking surgical authorization are also required to attend bariatric support group meetings and educational seminars, meet with nutritionists and demonstrate the ability to lose weight following a restricted, usually liquid, diet (Neil & Roberson, 2015). Initially, insurance companies mandated that patients lose weight before surgery, as it was thought to lead to better post-operative weight loss; however, the American Society for Metabolic and Bariatric Surgery released a position statement against this practice after a review of the literature revealed this not to be true (ASMBS, 2016).

Aside from trying to lose weight preoperatively, another barrier people seeking bariatric surgery must overcome is the psychological examination. The requirement to pass a psychological examination perpetuates stigma on a population that has likely endured a life of weight stigma. First, given the social acceptability of demonstrating weight stigma, it is no surprise that depression is 1.5 times more likely to occur in people who seek bariatric surgery (Onyike, 2003). Second, the pre-surgical psychological evaluation process is not standardized, nor is the criteria that is sometimes used to deny surgical authorization (Bhatti et al., 2016; Rouleau et al., 2016; Snyder, 2009; Sogg et al., 2016). Further, it has been speculated that because people know admitting to depression may preclude surgical authorization, they may be reluctant to report their experiences honestly (Marek et al., 2015; Malik et al., 2014). The tendency to withhold surgical authorization from people who admit to depression is troubling, especially given the prevalence of depression in this population.

It is known that higher weight individuals commonly experience stigma in a variety of contexts, including during interactions with healthcare professionals. However, we do not know how these stigmatizing interactions shape the course of clinical care for patients. Clinical

guidelines, such as those guiding bariatric surgical preoperative evaluation processes, are steeped in assumptions reinforcing the thin/fat binary.

Weight Stigma and Bariatric Surgery

To qualify for bariatric surgery, a person's BMI must be ≥40 kg/m2 or ≥35 kg/m2 and suffer from at least one comorbidity (Sarwer et al., 2008). Due to presenting with a higher weight, people who seek bariatric surgery are more vulnerable to experiencing weight stigma. Evidence suggests that women are more vulnerable to weight bias internalization than men (Puhl et al., 2017). This evidence, coupled with societal pressures of thinness disproportionally affecting women, may partially explain why women pursue bariatric surgery at a higher rate. In a study evaluating associations between weight stigma experiences, psychological functioning, and binge eating, people undergoing evaluation for bariatric surgery reported frequent stigmatizing events in the past month, such as encountering physical barriers, being avoided or excluded, and having rude comments directed at them by others, including physicians (Friedman et al., 2008). These stigmatizing encounters have implications for mental health and post-surgical success and may influence the decision to pursue surgery in the first place.

Weight stigma appears to be associated with experiences of depression. In one study, experiences with weight stigma were linked to more symptoms of depression (Sarwer et al., 2008). Further, evidence shows that a higher frequency of stigmatizing experiences predicted the degree of psychological distress, including higher depression scores on the Beck Depression Inventory (Friedman et al., 2008). When the impact of weight stigma on mental health was explored, depression was more strongly associated with experiences of weight stigma than disordered eating or physical limitations (Chen et al., 2007). This evidence demonstrates the

power of stigmatizing experiences. Further, if experiences of weight stigma continue to be ignored, healthcare providers are missing a valuable opportunity to impact mental health.

Understanding how weight stigma affects post-surgical outcomes is lacking, but available information suggests that weight stigma leads to less favorable results. For example, negative body image was associated with worse psychological outcomes and less weight loss after bariatric surgery (Wimmelman et al., 2014). Another study found that higher weight bias internalization scores were associated with less weight loss up to one year after bariatric surgery (Lent et al., 2014). As many people pursue bariatric surgery in a desperate attempt to lose weight, less than desired outcomes can be devastating physically, psychologically, and socially.

There may be pressure riding on the success of bariatric surgery by the person who pursues it and their social network. There is also a stigma associated with having surgery to facilitate weight loss (Homer et al., 2016; Trainer & Benjamin, 2016). Therefore, people may have to justify bariatric surgery as a weight loss treatment method to their family and friends. In a study that used vignettes to assess participants' attitudes regarding the method of weight loss, the bariatric surgery vignette was evaluated more harshly than those depicting weight loss through diet and exercise (Vartanian & Fardouly, 2013). This finding may be due to misconceptions about the effort involved to lose weight with surgery. In addition, weight stigma persists for people even after weight loss from bariatric surgery (Latner et al., 2012). The reality that weight stigma may not resolve for people who have had bariatric surgery is troubling and may explain why depression tends to persist.

The Bariatric Population

The limited reach of bariatric surgery has occurred due to a specific demographic of people who can access this weight loss treatment method. Most bariatric surgery patients are

between 44.6 and 46.7 years old (Coleman et al., 2014). Of those who underwent bariatric surgery, 81% were women, 75% were white, and 80% indicated higher income categories (Taylor et al., 2009). In addition, a review of the literature that examined studies using structured diagnostic interviews found the bariatric population tends to report higher education levels than the general population (Malik et al., 2014). Therefore, what we know about the patient's journey through surgery and weight loss is limited to the homogenous demographic who can access it although the acceptability of higher weight status based on sociocultural beliefs may also play a part (Byrd et al., 2018; Wee et al., 2014).

Bariatric surgical procedures were initially limited to people who carried private health insurance. Even then, it was challenging to gain approval for the cost of surgery to be covered. While Medicaid now covers the cost of bariatric surgery, the payment does not consider the financial consequences of taking time off work to recover (Ortiz et al., 2017). Considering that obesity disproportionately affects people of lower socioeconomic status, surgery cannot be considered a feasible option for many. The substantial resources required to obtain bariatric surgery is likely why less than 1% of higher weight individuals who meet criteria actually seek out bariatric surgery (Neil & Roberson, 2015). Limited access to bariatric surgery has constrained what is known in the literature about the experiences of diverse populations navigating this weight loss method.

Benefits and Disadvantages of Bariatric Surgery

Although the degree to which people lose weight following bariatric surgery varies, this modality offers sustained results to a greater degree than behavioral or lifestyle weight loss interventions (Pinto-Bastos et al., 2017; Sjostrom et al., 2004). Weight loss through surgical intervention also leads to remission of diabetes mellitus, hypertension, hyperlipidemia, and sleep

apnea (Chang et al., 2014; Pinto-Bastos et al., 2017; Sjostrom et al., 2004). The changes in these conditions are promising irrespective of the degree of weight loss.

While weight loss is emphasized throughout all phases of care, up to 20% of people who undergo bariatric surgery fail to lose a significant amount of weight, and others regain weight (Legenbauer et al., 2011; Pinto-Bastos et al., 2017). Further, 25% of people undergo a revisional surgery necessitated by poor weight loss or complications from the original procedure (Pinto-Bastos et al., 2017). After bariatric surgery, people may also experience dumping syndrome, gastroesophageal reflux, gallstones, strictures, and ulcerations (Schauer & Schirmer, 2018). Nutritional deficiencies are also common due to the intended decreased absorption effect or nausea and vomiting. These nutritional deficiencies can also lead to profound hair loss. Lastly, rapid weight loss leads to loose skin, which may beget additional body contouring procedures. The many changes which occur after surgery, in addition to the risk of complications from it, warrant an exploration of the impact of mental health on the post-surgical course.

While screening is emphasized before surgery, the effect of psychological conditions, including depression, remains unclear post-surgery. Further, there is inconsistent evidence that depression leads to reduced weight loss and might even lead to more significant weight loss (Legenbauer et al., 2011). Therefore, using depression scores as guiding criteria for surgical authorization limits access to bariatric surgery and further stigmatizes an already vulnerable group.

The Pursuit of Bariatric Surgery

The metabolic benefits of bariatric surgery have demonstrated consistency, making this treatment modality preferred over other weight loss approaches (Pinto-Bastos et al., 2017). The psychological impact of surgical treatment for weight loss is less well-understood. Further, the

motivating factors for pursuing bariatric surgery are complex and somewhat unclear. The evidence suggests that experiences of weight stigma and depression may be motivating factors for pursuing bariatric surgery. For example, in a mixed-methods study which explored reasons for seeking bariatric surgery, people indicated seeking bariatric surgery to mitigate body dissatisfaction and depression (Munoz et al., 2007). Further, in their study examining primary motivations for bariatric surgery and weight loss outcomes, Libeton et al. (2004) found that 32% of respondents had pursued surgery due to embarrassment about their physical appearance. In another study, 84% of participants reported psychosocial factors influenced their decision to pursue bariatric surgery, with 9% citing it as the most important factor (Wee et al., 2006). These findings suggest that attention to the psychological well-being of people pursuing bariatric surgery is warranted throughout all phases of care. However, what is missing is a critical understanding of why body dissatisfaction is so common and if it changes throughout the weight loss journey.

Given the impact of stigmatizing experiences on mental health, people of a higher weight seek to achieve weight loss by any means. Wee et al. (2006) explored bariatric candidates' willingness to accept death to achieve weight loss. While 91% of participants were willing to accept the risk of death to achieve their dream weight, only 73% were willing to do so if a 20% reduction in weight was guaranteed (Wee et al., 2006). These findings are significant because a 20% reduction in weight is considered a reasonable result from the surgical team's perspective, yet fewer people were willing to undergo these procedures given that parameter. Overall, the findings demonstrate people's desperation to escape the confines of a stigmatizing condition.

Depression in Bariatric Surgery Patients

Depression is a common experience for people of a higher weight, and this holds for people who seek bariatric surgery. Compared to those who seek other weight loss methods, depression is more prevalent in the bariatric population (Fabricatore et al., 2005). This may be due to more women undergoing bariatric surgery than men because women carry an increased risk of depression, which is intensified when carrying more weight (Malik et al., 2014). For example, when compared to women with class I-II "obesity" (BMI 30-39.9), those with class III obesity (BMI ≥ 40) reported significantly more depressive symptoms (Wadden et al., 2006). The literature reveals that only a select group of people can access bariatric surgery (Booth et al., 2015), which may be due in part to excluding or delaying those who admit to depression. Given that people who seek bariatric surgery are more likely to suffer from depression, there is a need to allow them the opportunity to communicate their experiences openly without penalty.

While people who pursue bariatric surgery may hope weight loss will secondarily improve their symptoms of depression, long-term data suggests otherwise. Compared to preoperative levels, depression decreased in the year following surgery but recurred after the first post-operative year (Mitchell et al., 2014; Booth et al., 2014). After a six-year follow-up, there was an 18% increase in depression for people who were not depressed preoperatively (Booth et al., 2014). This concern is notable and suggests that people may underreport experiences of depression preoperatively, impacting their ability to access needed help.

The emphasis on depression screening for determining surgical authorization is unwarranted as it is unclear if/ how depression affects post-surgical results (Malik et al., 2014). Little is known about mental health outcomes postoperatively, but there is a call to improve understanding in this area (Malik et al., 2014; Wimmelman et al., 2014). The result of delaying or denying surgical authorization for those who pursue bariatric surgery based on depression

screening further stigmatizes this group and is not routinely performed before having most other types of surgery (Pearl et al., 2017). In light of this, depression screening has been justified based on assumptions of the thin/fat binary without a critical understanding of contributors to depression in the bariatric population.

Research Problem and Need for the Study

It is clear that society, including healthcare providers, stigmatizes people commonly viewed as overweight and that seeking bariatric surgery is also stigmatizing. Attitudes about carrying more weight persist after surgery, which is associated with reduced weight loss success. People may make comments to the person who underwent surgery about how much weight was lost, leaving the emphasis on physical appearance. This emphasis on appearance is particularly problematic when a person loses less weight than desired, has excess skin, or regains weight. Understanding how weight stigma influences depression is limited, but stigmatizing experiences negatively impact both depressive symptoms and the degree of weight loss after surgery. Further, no information exists from the patient's perspective regarding how to address or resolve stigma to improve outcomes.

People seeking bariatric surgery represent a doubly stigmatized population (Mizock, 2012). First, carrying more weight places a person at risk of experiencing stigma. Secondly, people who admit to a mental health issue, such as depression, are more likely to be stigmatized and be refused surgery. Healthcare professionals may have failed to realize the impact of weight stigma on these patients and may instead be another source of stigma, by limiting access to bariatric surgery based on mental health conditions. Before experiences of depression and weight stigma are illuminated, frank discussions with healthcare providers cannot occur, and the surgery's success will remain variable.

Purpose & Aims

The purpose of this study was to explore bariatric patients' experiences of weight stigma with a goal of improving care for them. The **specific aims** of this study were to:

Aim 1: Describe life course experiences of weight stigma for individuals who opt to undergo bariatric surgery.

Aim 2: Explore experiences of weight stigma in the context of bariatric clinical care.

Aim 3: Describe the trajectory of depression as it relates to weight stigma both before and after bariatric surgery.

Significance of the Problem to Nursing

People seeking treatment for weight loss, including by surgical means, report experiencing weight stigma by the healthcare team (Friedman et al., 2010; Schwartz et al., 2003). One of the responsibilities of the nurse is to serve as a patient advocate. Nurses spend the most time with patients through all phases of care, providing the opportunity to elicit discussions about weight stigma and depression. Therefore, nurses are uniquely positioned to impact the patient's experience and post-surgical recovery. There is a call to educate healthcare professionals on weight stigma and its implications (Friedman et al., 2008). Greater understanding of the relationship between weight stigma and depression is needed to improve practice.

Chapter 2: Review of the Literature

Overview

Higher weight individuals endure a life-long history of anti-obesity rhetoric and weight stigma. For those individuals with a BMI greater than 40, who have been unable to lose weight with diet and exercise, healthcare providers can recommend one of four types of bariatric surgery. Knowledge about bariatric post-operative care and outcomes focuses on improvement in biophysical indicators, such as cardiometabolic markers (e.g., blood pressure and Hemoglobin A1c). In contrast, there is a paucity of research focusing on psychosocial needs. In fact, individuals who report severe depression, which is common among individuals who experience ongoing stigma, risk being deemed ineligible for surgery.

There is a critical gap in understanding how to advocate for best practices to meet the needs of people who choose to undergo bariatric surgery. Anti-obesity rhetoric and weight stigma influence the patient's care experience when pursuing bariatric surgery as a weight-loss option. Weight stigma also influences the process by which people are granted surgical authorization and impacts post-surgical outcomes. This chapter begins with a discussion of weight stigma and is divided in two sections. The first section examines autobiographical accounts to gain an understanding of the broader context of the weight stigma experience outside of the healthcare setting. This decision was made to foreground the voices of individuals who experience weight stigma first-hand. Academic literature supplements the autobiographical accounts. This section makes up the majority of the chapter. The second section focuses on the barriers to accessing bariatric surgery, potential flaws in the preoperative screening process, and causes for seemingly inconsistent post-operative results. I used a two-fold approach to review literature in relation to the study aims.

The Concept of Stigma

Although Goffman (1974) was the original authority on stigma, others have expanded on his work and applied it to a broad range of social phenomena, including weight stigma. A strength of the concept of weight stigma is found in its name. By attaching the word "stigma" to the facet of experience by which someone is othered, it is clear we are discussing a social process. Link & Phelan (2001) offered a more robust definition of stigma than Goffman's. Their definition includes elements of "labeling, stereotyping, separation, status loss, and discrimination" which occur together in a power dynamic that allows them (p. 363). While weight stigma researchers have investigated many elements of the definition put forth by Link and Phelan, some aspects have gone without proper recognition.

Beyond describing a social process external to the affected person, the definition of weight stigma has expanded to include an intrapersonal process named "internalized weight stigma." However, controversy exists about the bounds of this concept. For example, Meadows and Higgs (2019) suggested a methodological limitation of internalized weight stigma is the notion that people actively devalue themselves, beyond simply believing messages sent from the broader culture.

The concept of weight stigma has existed since the late 1960s. The earliest article found in PubMed about "obesity stigma" was published in 1972 and written by a nurse, Kalisch. However, since the article was published 50 years ago, not much has changed beyond recognizing that weight stigma exists. Budd et al. (2011) examined 15 studies spanning 18 years. The authors asserted weight stigma attitudes had not changed and called for more qualitative research to explore the meaning of bias for HCPs and their patients, including the effect on care quality.

Other limitations of our understanding of weight stigma include the underrepresentation of men. Himmelstein et al. published a 2018 study focused on weight stigma experiences for men across the lifespan. Although weight stigma is common amongst women, the men in their study experienced it at comparable rates to the general public. Pearl & Wadden (2018) responded by calling for more research about men and diverse populations including a focus on age of onset of obesity, race, sexual orientation, and gender identity. Therefore, it is important to detail the broad reach and extent of weight stigma and how external forces situate it in unique facets of intersectional identity. Himmelstein et al. (2017) also suggested exploring intersectional identity as a useful framework for weight stigma research.

Puhl & Brownell (2001) asserted the Protestant work ethic leads people to blame others for their weight status; society assumes people who are unable to lose weight and maintain a lower weight lack a strong work-ethic. Many authors subsequently pointed to the significance of the Protestant work ethic for perpetuating weight stigma. Yet, we are limited in what we know about how other faith-based and cultural practices justify weight stigma.

Link and Phelan made an important addition to Goffman's definition of stigma by explicitly mentioning the power dynamic between those who are stigmatized and those who are not. In the health sciences, we have a fair amount of literature examining perceptions of the health care team members, but we know less about patients' perspectives. Therefore, there is a need to prioritize and amplify the voices of those with lived experiences of weight stigma to support their empowerment and to gain understanding of this experience.

To summarize, although weight stigma is pervasive and affects individuals across the weight spectrum, we lack understanding of the meaning of these experiences for people living in higher weight bodies. In 2014, Tylka et al. advocated for prioritizing weight inclusive

approaches to managing health over normative approaches and suggested deep understanding is needed to advance scholars' knowledge of the influence and expression of weight stigma. Along these lines, weight stigma for people who have undergone bariatric surgery is an understudied concept. The post-operative bariatric population can speak to living in larger and smaller bodies and perhaps the in-betweens.

Broad Context of the Weight Stigma Experience

Autobiographical accounts from higher weight individuals who have written about their experiences with weight stigma are included in this chapter to provide context and ensure representation of these voices in this review. Some of these authors identified themselves as fat-positive or body-positive feminists, offering a unique and novel lens through which to understand their experiences. I extracted quotes from the autobiographical accounts. Similar experiences were thematically organized and verified with Dr. Hassouneh. This process provided valuable insight into the experience of weight stigma not found in the health science or social science literature.

The weight stigma experience includes how gender performance changes when living in a higher weight body; the body as social currency; being treated as both hyper-visible and invisible; and the inaccessibility of public spaces due to body size. These concepts were then searched in the databased literature to identify what is known.

Gender Performance

Butler (2009) defined precarity as political, social, and economic conditions which fail to protect marginalized individuals and asserted these individuals could use gender performance as a protective mechanism. Gender performance describes the act of adherence to a gender binary, whereby individuals present themselves as strictly masculine or feminine to the outside world

(Butler, 2009). Unambiguous gender presentations are rewarded with security, whereas individuals who do not adhere to the gender binary standard are at increased risk for marginalization and violence (Butler, 2009; Wylie et al., 2010). Jeanes (2007) illuminated how the legal system reinforces gender norms by defining what is considered normative behavior. Therefore, gender performance becomes a way for individuals to negotiate power within a system to compete for resources and security.

Throughout history, society pushed to the margins those who belonged to groups that did not maintain heteronormative traditions such as procreation (Burgess, 2005; Levy-Navarro, 2009; Moore, 2007). Queer theory acknowledges the lived experiences of sexuality and gender (Halperin, 2003). Therefore, the frame of queer theory is best to examine the concept of gender expression. Although the experience of sexual expression is different from carrying weight, people of higher weight share the experience of social stigma as they seemingly fail to conform to diet culture, commonly thought to promise longevity. Common perceptions of people's disregard for a future-oriented recognition of time places people of higher weight in the 'queer' category. Fat activists describe the process of revealing to others that they no longer aspire to lose weight and call it "coming out as fat."

The Doing and Undoing of Gender

Although several authors have discussed the experience of gender performance while living in a higher weight body in autobiographical accounts, no studies have addressed this phenomenon. Six of the thirteen articles selected for review drew on the work of Butler to explain how participants in social interactions attribute gender performance to individuals (Burgess 2005; Bunn et al., 2016; Jeanes, 2007; Lenning, 2009; Moore, 2007; Triandafilidis et al., 2017; Wilton, 2000; Woodhill & Samuels, 2004). Butler's work is considered seminal in

queer theory, pre-dating the development of the term itself (Halperin, 2003). Butler proposed ‘doing gender’ is a social construct that individuals follow to varying degrees (Bunn et al., 2016; Drabinski, N.D.; Jeanes, 2007; Triandafilidis et al., 2017). ‘Undoing gender’ describes the process by which people resist or fail to uphold gender norms. The doing and undoing of gender offers a critical frame for understanding how people of a higher weight are perceived and treated by others.

Medicalization of Gender Performance and Body Size

Humans constantly confront a social appraisal of gender, yet we are rarely aware of this internal process. When confronted with an unusual cue, such as a gender performance that does not match perceived gender, we more consciously process the information until we arrive at a resolution. In an essay reflecting on how she both reaffirms the social construction of gender and deviates from it, Moore wrote, "the incongruent body has the potential to disrupt the harmonious flow of social exchange" (2007, p. 103). Burgess (2005) also reflected on encounters during which people stumbled over her gender performance due to the presence of facial hair. Although Burgess identified as a Black queer woman and Jess Baker (2018) identified as a fat, white, heterosexual woman, they shared similar sentiments about the social acceptability of facial hair:

> I certainly knew that hair growth was unladylike and beyond undesirable. (Imagine my surprise in my late teens when not so thin, not so curly, but definitely brown hair appeared on my *face*. *That* wasn't supposed to happen, not at all.) (p. 235)

Baker shared her formative experiences with facial hair and offered further insight into how body weight shaped her understanding of how body weight and concerns about gender performance are interrelated:

> The secrecy, along with a ubiquitously fat-hating world, had me counting each hair as it grew, blaming myself for this new and unwanted feature. I was firmly convinced that the reason chin hairs appeared was to serve as a reminder of my bodyweight failure. (p. 239)

The presence of facial hair on a woman otherwise perceived as cisgender highlights the influence of the medical community in shaping the social construction of gender. Several authors discussed the medicalization of gender performance, meaning when a mismatch occurs between perceived and performed gender, an individual is labeled as ill (Burgess, 2005; Lenning, 2009; Wilton, 2000). Facial hair, for example, can be attributed to polycystic ovarian syndrome or Hirsutism. Baker's insights into the messaging she internalized about the presence of facial hair while being at a higher weight suggests she feared being appraised as ill in more than one way.

Several authors aimed to explain the social phenomenon of gender performance through the lens of the transgender experience (Drabinski, N.D.; Lenning, 2009; Wilton, 2000; Wylie et al., 2010). The transgender experience allows for a glimpse into the spaces in-between binary gender categories to reveal social phenomena that are typically missed (Drabinski, N.D.). In a study aimed at understanding the self-ascribed language transgender individuals and their partners use to identify their gender, very few people offered a one-word response (Lenning, 2009). Another study aimed at informing the development of two survey questions about gender expression found adolescents and young adults had trouble identifying themselves because they were unsure how others perceived them (Wylie et al., 2010). A respondent who identified as gender fluid shared in their response that they may be called "ma'am walking into a store and sir on the way out" (Lenning, 2009, p. 46). The experience of being misgendered is not unlike what the authors of the autobiographical accounts reported due to body weight.

The In-Between Spaces of the Gender Binary

Although not focused on body size, Wilton's essay about the transgender experience demonstrates some interesting similarities with the bariatric population. Historically, when healthcare providers recognized gender affirmation surgery as a legitimate practice, people began researching the diagnostic criteria to ensure surgical approval (Wilton, 2000). As presented in chapter one, there may be reason to believe that people who seek bariatric surgery are similarly positioned to obscure assessment data that might otherwise result in denial of surgery. Again, Wilton offered poignant insight into why people seeking surgical approval for stigmatized procedures might be motivated to match diagnostic criteria closely, "If gender is such a powerful construct that the medical profession are prepared to cut out healthy tissue in order to flesh it out, what relation between gendered self and sexed body is implied..." (p. 243). We can draw a parallel to bariatric surgery. Some fat activists regard bariatric surgery as unacceptable because it removes healthy tissue, even going so far as to call it stomach amputation. The quote above from Wilton affirms the social emphasis on both gender performance and body weight.

The hegemonic forces which define a strict gender binary in medical, legal, and social realms shift power away from people who do not conform to the standard. To mitigate the consequences of being what others perceive as visibly defiant, people of higher weight often feel compelled to present themselves as an almost exaggerated form of their gender. Baker shared:

> In my early twenties, I was dedicated to dressing in pinup rockabilly wear or in impeccable vintage dresses and makeup, never leaving the house without looking “pulled together,” often using my makeup, hair, and clothing as a form of ultra-feminine penance for having a fat body.
>
> It makes perfect sense that because many fat women are desexualized, undesirable, and perceived as lazy in every way, we would attempt to prove all those

> things wrong by performing the most obvious form of desirability a woman can: Turning ourselves into sex objects.
>
> This helps us hold on to the currency that we are still trying. We know we're fat, but look at our attempts to fit your mold anyway! Do we fall on the right side of "good enough" yet? (2018, p. 77)

Roxanne Gay (2017) illustrated more explicitly how body weight informs the social appraisal of gender expression and highlighted the intersection of body size and race:

> My fat body empowers people to erase my gender. I am a woman, but they do not see me as a woman. I am often mistaken for a man. I am called "Sir," because people look at the bulk of me and ignore my face, my styled hair, my very ample breasts and other curves. It bothers me to have my gender erased, to be unseen in plain sight. I am a woman. I am large, but I am a woman. I deserve to be seen as such.
>
> We have such narrow ideas about femininity. When you are very tall and wide and, well, I guess the tattoos don't help, you all too often present as "not woman." Race plays a part in this too. Black women are rarely allowed their femininity. (p. 256)

Whereas Baker felt compelled to exaggerate a feminine appearance to compensate for a higher weight body, Gay described being misgendered as a consequence of living in a higher weight body without striving toward ultra-femininity. Later, in pursuing a more explicit gender performance, she described feeling like an imposter in her body. Despite her efforts, society reminded her she still fell short of adherence to gender norms.

> I bought a bunch of makeup so I could be a better girl. I went to their house to surprise them and they looked me up and down and told me what else I could do to be more tolerable, more presentable to them. I stood there on the front porch, wanting my body to

> collapse in on itself. I had been so excited, so happy I had made myself pretty, and it wasn't good enough. I certainly didn't try that again. I went home with all my expensive makeup and my pretty face and then I cried that makeup off. The makeup is still in a yellow bag in my closet. Sometimes, I take it out and look at it but I don't dare use it.
>
> When I get my makeup done for television appearances while I am promoting a book or when I am asked to comment on pop culture or the political climate, I feel like I'm wearing a mask I have no right to wear. The makeup feels far thicker than it really is. I feel like people are staring at me, laughing at me for daring to think I could do anything to make myself more presentable. And I remember how I felt the one time I tried to look pretty for someone, how it wasn't enough. The first chance I get, I scrub the makeup off. I choose to live in my own skin. (p. 250)

A study, which explored Australian women's smoking behaviors in the context of femininity, offers insight into how gender performance and body weight are linked. A multi-method approach used individual interviews, photovoice, and focus groups to guide the understanding of how gender and social class shape young women's experiences of smoking. The study results revealed participants held opinions about embodying femininity while smoking by holding the cigarette in a certain way or positioning their body with crossed legs or limp wrists (Triandafilidis et al., 2017). Participants also discussed the act of smoking as necessary for controlling weight and maintaining a thin body (Triandafilidis et al., 2017). Participants said smoking is a more acceptable alternative to carrying additional weight despite known health risks. This finding suggests smoking behavior is more in-line with heteronormative notions of what is considered appropriately feminine than living in a higher weight body.

Like people of a higher weight, gay men and women are also prone to being misgendered in relation to body size. Overt gender performance is most evident in specific subgroups, such as gay men who identify as "bears." For men, a higher weight body is sometimes considered a symbol of masculinity and dominance and thus favored (Song, Pettis, Piya, 2017). However, in the same way thinness is a marker of desirability for heterosexual people, the standard also exists in the gay male community. The bear subculture evolved out of a need to legitimize a higher weight body in the gay male community (Pyle & Loewy, 2009). For example, the bear subculture relies on a hyper-masculine aesthetic that includes body hair, a deep voice, toughness, and a masculine dress standard (Pyle & Loewy, 2009). Gay men of higher weight who conform to bear aesthetic work to increase their attractiveness and decrease the risk of being misgendered.

Similar to the way women of higher weight may perform hyper-femininity and men of higher weight hyper-masculinity, a study of Asian drag performers found they vacillated between feminine and masculine gender performances (Han, 2009). Participants felt pressure to present as hyper-feminine when performing in drag due to stereotypes regarding smaller body size and submissive nature (Han, 2009). On the other hand, participants strived to perform gender as hyper-masculine when not in drag by building muscle (Han, 2009). Han's study provided further evidence that gender performance is intentional based on body size. More importantly, and similar to what Roxanne Gay (2017) shared about her experience of race and body size, the study demonstrated the importance of giving recognition to aspects of intersectionality.

Gender performance is a complex phenomenon made only more complex by other aspects of intersectional identity such as race, sexual orientation, socioeconomic status, and level of physical ability. While no studies have examined gender performance in relation to body size,

evidence suggests the two present a unique facet of experience. One might even question if people pursue bariatric surgery to negotiate how society perceives their gender as people who meet social expectations tend to be granted more social power.

The Body as Social Currency

Gender performance affects an individual's interpersonal interactions, which in turn influences the social context in which they live. Pierre Bourdieu explained how social forces contribute to class formations and how such divisions reinforce social norms (Bourdieu, 1986). Bourdieu posited various forms of capital exist: economic, cultural, and social (Bourdieu, 1986; Christensen & Carpiano, 2011). The composition of each form of capital defines and positions an individual in a social class. 'Habitus' describes the individual's perspective based on experiences within their social class (Christensen & Carpiano, 2011; Wilkinson & Pickett, 2007). Given the relationship between social capital and body size, Bourdieu's theory provides a useful lens for understanding how body size affects social interaction.

Academic Literature

The terms "social capital" AND "body weight or body size" were used in the Academic Search Elite database. Twenty-one results returned, and I selected fourteen for a full review after screening abstracts. I excluded articles focusing on infants and those that did not explore higher weight individuals' perspectives. Half of the articles selected for full review cited or discussed Bourdieu's work (Christensen & Carpiano, 2014; Fitzpatrick et al., 2014; Powell et al., 2015; Robinovich et al., 2018; Song et al., 2017; Wilkinson & Pickett, 2007). Several authors drew on the work of other theorists alternative to or in conjunction with Bourdieu, such as; Aphramor (Robinovich et al., 2018), Bombak (Robinovich et al., 2018; Song et al., 2017), Bordo (Robinovich et al., 2018; Song et al., 2017), Coleman (Fitzpatrick et al., 2014), Cockerham

(Christensen & Carpiano, 2014), Putman (Zhu & Thomas, 2013) and Watson (Robinovich et al., 2018). Although authors of the remaining articles did not offer a specific philosophical or theoretical grounding for their research, it is reasonable to infer they were influenced by Bourdieu's theory based on the ways in which they explored social capital (Christian et al., 2011; Green et al., 2015; Goncalves et al., 2015; Mackenbach et al. 2016; Rosenthal-von der Putten, 2019; Schmidt et al., 2015).

The Homophily Principle

One way of understanding how individuals arrive at their respective social groups is through the homophily principle. Homophily describes the way individuals seek out others similar to them, whether this occurs due to body size or economic status (Powell et al., 2015; Song et al., 2017). In line with the homophily principle, Wilkinson & Pickett explained "social gradients reflect a tendency for social mobility to discriminate between the healthy and unhealthy so that the healthiest, most capable people move up the social ladder to the highest incomes while the least healthy end up earning the least" (2007, p. 1974). How individuals are othered and stigmatized based on body size is evident in the following quote:

> I did not meet many people who treated me with any kind of kindness or respect. I was a lightning rod for indifference, disdain, and outright aggression, and I tolerated all of this because I knew I didn't deserve any better, not after how I had been ruined and not after how I continued to ruin my body. (Gay, 2017, p. 115)

When physically dissimilar people pair up, the implications of violating the homophily principle and disrupting social norms garner reactions from strangers. West (2016) discussed how people often assumed her husband was a friend or roommate and even went so far as to make advances in front of her:

> Couples ought to “match.” Aham and I do not. I am fat and he is not. He is conventionally desirable and I am a before picture in an ad for liquefied bee eggs that you spray on your food "to tell cravings to buzz off!"…It is considered highly unlikely-borderline inconceivable- that he would choose to be with me in a culture where men are urged to perpetually "upgrade" to the "hottest" woman within reach, not only for their own supposed gratification but also to impress and compete with other men. It is women's job to be decorative (within a very narrow set of parameters), and it is men's job to collect them. My relationship throws off both sides of that equation, and a lot of people find it bewildering at best, enraging at worst. (p. 236)

In offering her perspective that men are expected to find the most attractive woman to commit to, West (2016) described how women are objectified. Bourdieu (1986) described social forces as making women's bodies objects for the consumption and approval of people in power, rendering them ‘bodies for others’ (Christensen & Carpiano, 2014; Robinovich et al., 2018; Song et al., 2017; Zhu & Thomas, 2013). The ‘bodies for others’ phenomena was present in the experiences of other writers as well:

> We each get just a few years to be perfect…Deep down, in my honest places, I knew it was already gone-I had stretch marks and cellulite long before twenty- but they tell you that if you hate yourself hard enough, you can grab just a tail feather or two of perfection. Chasing perfection was your duty and your birthright, as a woman, and I would never know what it was like- this thing, this most important thing for girls. (West, 2016, p. 17)
>
> Men explaining how all other men know more about me than I do. Men explaining who I am and what I’m worth. Men explaining how not only he but all other men as well can

> accurately predict my future health, relationship outcome, career successes, and life span. Men who have decided that policing a fat woman's body is a sport─one they are all striving to be best at. If it weren't so pervasive it might be funnier. (Baker, 2018, p. 108)

Gendered Effects of Body Size

By extension of the objectification of women's bodies, the research literature demonstrates gendered effects when exploring how different forms of capital relate to body size. A cross-sectional study showed as cultural capital increases, parents are more likely to assign their daughters to a higher weight category than their sons (Christensen, 2011). Further, women with more social capital tend to report greater dissatisfaction with body weight and appearance (Robinovich et al., 2018). In terms of economic capital, women are more affected by income inequality influenced by body size than men (Wilkinson & Pickett, 2007). In a multi-phasic, cross-sectional study, women who lived in unregulated and underdeveloped areas of Cape Verde reported less physical activity during leisure time (Goncalves et al., 2015). Finally, the authors of a scoping review asserted family demands make it harder for women to lose weight (Powell et al., 2015). Different social expectations for women's body size irrespective of age, socioeconomic conditions, religion, or racial and ethnic identity were presented in the autobiographical accounts:

> It's not just reality TV that is obsessed with weight. If you watch enough daytime television, particularly on "women's networks," you are treated to an endless of commercials about weight-loss products and diet foods- means of disciplining the body that will also fatten the offers of one corporation or another.

> It is a powerful lie to equate thinness with self-worth. Clearly, this lie is damn convincing because the weight loss industry thrives. Women continue to try to bend themselves to societal will. Women continue to hunger. And so do I.
>
> In 2015, Winfrey bought a 10 percent stake in Weight Watchers, an investment of $40 million. In one of her many commercials for the brand, she says, "Let's make this the year of our best body." The implication is, of course, that our current bodies are not our best bodies, not by a long shot. It is startling to realize that even Oprah, a woman in her early sixties, a billionaire and one of the most famous women in the world, isn't happy with herself, her body. That is how pervasive damaging cultural messages about unruly bodies are- that even as we age, no matter what material successes we achieve, we cannot be satisfied or happy unless we are also thin. (Gay, 2017, pp. 135, 138)
>
> The older I get and the longer I live in a fat body, the harder it is to depoliticize even simple acts. A public proposal to a publicly valued body might be personally significant, but culturally it shifts nothing. A public proposal to a publicly reviled body is a political statement. (West, 2016, p. 239)
>
> With eternal marriage always at the forefront of our minds, there was an unspoken rule that all the girls would spend their free time working out in the university's gym, aiming for a perfect body worthy of eternal commitment. (Baker, 2018, p. 15)
>
> Fat women are taught that we have failed at something that is unforgivable and that failure decreases our worth as human beings. (Baker, 2018, p. 106)

Higher Weight Limits Opportunities

The homophily principle seems to contribute to weight stigma overall and create disadvantages for higher weight women in particular. The literature demonstrates limited

opportunities exist for higher weight women to gain employment or develop and maintain romantic and social relationships (Powell et al., 2015; Robinovich et al., 2018; Song et al., 2017). The penalty for maintaining a higher weight is economic hardship, which affects social capital as people gravitate toward people similar to them while avoiding association with stigmatized groups. Education has been used as a proxy for economic capital and shows women, but not men, attain higher levels of education as their body size decreases (Song et al., 2017). Although the researchers did not mention a gender effect, Christian et al. also found education level was significantly associated with BMI (2011). In another study, individuals who were more likely to engage in weight control behaviors included women of younger age and high educational attainment (Green et al., 2015). Two authors discussed the stigmatizing and limiting nature of higher weight body size in their autobiographical accounts:

> As a woman, my body is scrutinized, policed, and treated as a public commodity. As a fat woman, my body is also lampooned, openly reviled, and associated with moral and intellectual failure. My body limits my job prospects, access to medical care and fair trials, and- the one thing Hollywood movies and Internet trolls most agree on- my ability to be loved. So the subtext, when a thin person asks a fat person, "Where do you get your confidence?" is, "You must be some sort of alien because if I looked like you, I would definitely throw myself into the sea" (West, 2016, p. 67)
>
> …I just wanted to prove to the world that I was worth marrying. I grew up assuming that I would never get married, because marriage was for thin women, the kind of women who deserved to be collected. How could I be a bride when I was already what men most feared their wives would become? (West, 2016, p. 234)

Income Inequality, Capital, And Neighborhood Safety

Income inequality describes the difference in wealth between those with the most wealth and those with the least within a geographical unit (Mackenbach et al., 2016). Some research teams have speculated perhaps it is not the total earnings of each individual but instead income inequality that contributes to differences in social capital and body size. In a study sampling from populations in eight European countries, neighborhood social networks significantly mediated BMI and income inequality (Mackenbach et al., 2016). Another study of 24 countries found that income inequality is associated with a higher BMI and impedes social mobility (Wilkinson & Pickett, 2007). In a longitudinal study that explored the effect of neighborhood characteristics on the BMI of school children, BMI consistently decreased with increased social capital (Schmidt et al., 2015). Along with economic capital at the individual level, income inequality enhances a broader understanding that various forms of social capital are related to body size.

Income disparities contribute to how neighborhoods and social networks are shaped, further impacting differences in body size. A perceived lack of neighborhood safety discourages people from engaging in physical activity, increasing their BMI scores (Christian et al., 2011; Goncalves et al., 2015; Schmidt et al., 2015). Through a weight neutral lens, such as Health at Every Size, a higher BMI is not as concerning as the limited opportunity to engage in joyful movement or the lack of social interaction as a result of feeling unsafe in the community. As previously discussed, higher weight individuals tend to have fewer social networks due to weight stigma. A high BMI in conjunction with a constrained social network is associated with depression (Fitzpatrick et al., 2014; Mackenbach et al., 2016, Powell et al., 2015; Rosenthal et al., 2019). Taken together, these findings demonstrate the interrelatedness of different forms of capital and how they contribute to body size while also highlighting the challenging existence of living in a higher weight body. Gay described how societal messages shaped her existence:

> I don't hate myself in the way society would have me hate myself, but I do live in the world. I live in this body in this world, and I hate how the world all too often responds to this body. Intellectually, I recognize that I am not the problem. This world and its unwillingness to accept and accommodate me are the problem. But I suspect it is more likely that I can change before this culture and its attitudes toward fat people will change. (Gay, 2017, p. 22)

The messaging Gay internalized about body size was rooted in social interactions influenced by the way people learn about weight status, beauty standards, and the pursuit of health in school and through public health messages. Given that economic, cultural, and social capital influences and is reinforced by weight status, examining wider public discourses about large bodies is worthwhile.

Public Discourse About Large Bodies

Public campaigns can help to increase awareness of health issues and promote engagement in healthy behaviors while avoiding risks. However, unintended consequences of these messages can include stigmatization of people representative of the target population, whether that be a specific disease group or physical attribute, such as body weight. For example, a consequence of using the maintenance of a youthful appearance as a deterrent to smoking sends a message that appearance is of great importance (Triandafilidis et al., 2017). Public campaigns to promote the adoption of healthy behaviors, such as improved nutrition and frequent physical activity, that focus on weight loss for improved appearance may be doing more harm than good (Chang et al., 2009). A careful assessment of how public health campaigns are perceived is needed to evaluate the presence of unintended consequences.

In the search for how various forms of capital influence body size, evidence has emerged regarding perceptions of public discourse on large bodies via health campaigns. Participants understand anti-obesity messaging as equating thinness with health and attractiveness (Robinovich et al., 2018). Anti-obesity messaging in schools has also resulted in implementing policies intended to control students' weight. Despite these efforts, girls reported less physical activity in states with strong anti-obesity campaigns but low social capital (Zhu & Thomas, 2013). The research team also found girls reported not eating less but fasting to control weight (Zhu & Thomas, 2013). This finding provides further evidence these campaigns do not necessarily lead to healthier habits, irrespective of weight status.

The perception of public discourse on higher weight bodies emerged as an important theme in the autobiographical accounts:

> The obese body is the expression of excess, decadence, and weakness. The obese body is a site of massive infection. It is a losing battleground in a war between willpower and food and metabolism in which you are the ultimate loser.
>
> Rarely does a day go by, particularly in the United States, without some new article discussing the obesity epidemic, the crisis. These articles are often harsh, alarmist, and filled with false concern for people afflicted by this epidemic and a profoundly genuine concern for life as we know it. Oh, the burdens on the health-care system, these articles lament. Obesity, these articles ultimately say, is killing us all and costing us an unacceptable fortune.
>
> There is, certainly, a very small grain of truth in these articles, in this frenzied panic. And also, there is fear, because no one wants to be infected by obesity, largely

> because people know how they see and treat and think about fat people and don't want such a fate to befall them. (Gay, 2017, p. 122)

Often in public health messages, an assumption exists that higher weight individuals do not understand nutrition or how to balance their dietary and energy expenditure needs. These assumptions bias public perception of the abilities of higher weight individuals to attend to their nutritional and activity needs. The literature indicates people with a high BMI and those who live in lower-income areas tend to be knowledgeable about their prescribed diet (Goncalves et al., 2015; Green et al., 2015). Similarly, the autobiographers cited in this chapter expressed almost extensive knowledge about health practices and the implications of not abiding by them when in public:

> Frequently "Good Fatty" is a term thrown around to describe a fat person who intends to convince the public that they are indeed healthy, or at least working on it. And the incentive to prove that they are "a working in progress" is understandable; fat people who publicly declare their refusal to diet are chased with metaphorical pitchforks. (Baker, 2018, pp. 76-77)

> Fat people, if anything, are more likely to be hyper aware of every bit of simplified obesity info and statistics already. Most of us have been hearing these warnings since we were in kindergarten. So, the reality is that a lot of fat people (even female fatties!) already know an extraordinary amount about "health." We are very familiar with the idea that being fat is "bad" and have likely heard it not only from our aunt, best friend, and maybe doctor but also from the old woman on the subway. Our world is saturated in anti-fat rhetoric, threats, and solutions.

> We've been on diets since we were children in the name of health. There is not one single thing you can tell us that we don't already know. We've gone to fat camps, gotten brochures from strangers, had long talks with our concerned parents, received those "helpful" articles about the new study that shows that eating almonds is now a bad thing, and butter was a bad thing but now it's a good thing, and raw nuts are actually the best, and you have to exercise for at least thirty minutes a day to not die when you're twenty. (Baker, 2018, pp. 108-109)

Providers of health care may not be able to change the forms of capital that our patients possess. We can, however, lessen the stigma they experience while under our care. First, we need to understand the extent of weight stigma to focus our efforts on reducing it and avoid perpetuating harmful beliefs among the public. Ideally, through modeling sensitive approaches to interactions with higher weight patients and by changing the public messaging about body size, broader society will begin to adopt more acceptance and respect for diverse body sizes. Further, by de-emphasizing the personal responsibility of weight status and educating the public on social factors that influence it, communities may be able to demonstrate improved health outcomes regardless of weight status.

Accessing the World in a Higher Weight Body

Although the way higher weight bodies navigate the world spatially is commonly understood to be challenging, it is difficult to find empirical literature documenting this. A search in the EBSCO host and Pubmed databases was performed using the terms "accessibility or health services accessibility AND body weight or body size." Rendered results were more closely aligned with how people access health care but did not illuminate embodied experiences of accessing the world in a higher weight body. After reviewing abstracts, new search terms were

identified and applied in hopes of getting closer to the idea of embodied experiences. EBSCO host was searched again using the terms “built environment or spatial environment AND body weight or body size”. Most of the articles screened out because their focus was on obesity prevention through manipulation of the environment rather than explaining embodied experiences. Additional literature about embodied experiences was identified by hand-checking references in the Pritchard (2014) article. This final strategy led to the identification of nine articles.

Interestingly, the literature focused on accessibility for higher weight bodies in public spaces emerged from a critical paradigm in geography referred to as the geographies of body size (Colls, 2014). Some scholars speculate accessibility for higher weight bodies is not prioritized due to morality judgments about weight status (Colls & Evans, 2014; Geddes, 2013). To further this point, neoliberal views about individual responsibility for weight status blame higher weight people (Evans et al., 2012; Guthman, 2009; Pritchard, 2014). Pritchard (2014) explained companies increase profits by manufacturing a product that is only one size rather than offering a variety of sizes, presumably through increased efficiency. Feelings of moral failing and evidence of neoliberal social structures are evidenced in the following quote:

> So what do you do when you’re too big, in a world where bigness is cast not only as aesthetically objectionable, but also as a moral failing? You fold yourself up like origami, you make yourself smaller in other ways, you take up less space with your personality, since you can’t with your body. You diet. You starve, you run till you taste blood in your throat, you count out your almonds, you try to buy back your humanity with pounds of flesh. (West, 2016, p. 12)

A Shift from Personal Responsibility

The neoliberal structures affecting social spaces and interactions have also influenced the study of how higher weight bodies exist in these spaces. The study of obesogenic environments shifts the focus of responsibility somewhat away from individuals living in higher weight bodies and instead looks at environmental factors contributing to weight gain. By presenting the notion that fat bodies are problematic, this area of research re-stigmatizes the group it seeks to help. Studies of the obesogenic environment also assume everyone maintains the same definition of health and desires to lose weight, which may not be accurate (Colls & Evans, 2014). While obesogenic environment research has offered recognition that weight management is not entirely under the control of an individual, more work is needed to understand how physical and social environments create or diminish weight stigma.

Navigating Physical and Social Spaces

The literature suggests higher weight individuals are often studied in a way that implies a disconnect between experiences of the body and the mind, in line with Cartesian Dualism (Brewis et al., 2016; Geddes, 2013; Guthman, 2009). When studying weight stigma, it is particularly important these distinctions in experience are not enforced because they are inextricably linked. Hopkins discussed inaccessibility might be environmental, depending on who a person is with or what activity they are engaged in (2012). For example, experiences of not fitting in spatially or socially might occur when dining out or shopping with friends. Such experiences were reflected in the personal narratives as well:

> If I am with friends, I cannot keep up, so I am constantly thinking up excuses to explain why I am walking slower than they are, as if they don't already know. Sometimes, they pretend not to know, and sometimes, it seems like they are genuinely that oblivious to how different bodies move and take up space as they look back at me and suggest we do

> impossible things like go to an amusement park or walk a mile up a hill to a stadium or go hiking to an overlook with a great view. (Gay, 2017, p. 18)
>
> There are very few spaces where bodies like mine fit. Chairs with arms are generally unbearable. So many chairs have arms. The bruises tend to linger. They remain tender to the touch hours and days after. My thighs have been bruised, more often than not, for the past twenty-four years. I cram my body into seats that are not meant to accommodate me, and an hour or two or more later, when I stand up and the blood rushes, the pain is intense. (Gay, 2017, p. 202)
>
> I insisted that shoes and accessories were just "my thing," because my friends didn't realize that I couldn't shop for clothes at a regular store and I was too mortified to explain it to them. I backed out of dinner plans if I remembered the restaurant had particularly narrow aisles or rickety chairs. I ordered salad even if everyone else was having fish and chips. (West, 2016, p. 16)

When people's social experiences in higher weight bodies are studied with more objective approaches, it is easy to miss the internal processing surrounding movement through social spaces. Brewis et al. (2016) identified three types of stigmatizing environmental cues related to body size: physical-spatial, public messaging about body weight, and social cues or reactions when a higher weight person accesses a public space. To avoid stigmatizing experiences, participants in a qualitative study described scanning the environment to assess for cues related to possible weight stigma and careful planning before leaving the house (Hopkins, 2012). These strategies were also echoed in the personal accounts:

> Anytime I enter a room where I might be expected to sit, I am overcome by anxiety. What kind of chairs will I find? Will they have arms? Will they be sturdy? How long will

> I have to sit in them? If I do manage to wedge myself between a chair's narrow arms, will I be able to pull myself out? This recitation of questions is constant, as are the recriminations I offer myself for putting myself in the position of having to deal with such anxieties by virtue of my fat body. (Gay, 2017, pp. 202-203)

Disability And Higher Weight Bodies

A contentious debate exists as to whether higher weight bodies should be considered disabled. A higher weight individual's experiences might align with physical disability, but this may not be true for others. The literature suggests the social model of disability could apply to embodied experiences of moving through physical spaces in a higher weight body (Brewis et al., 2016; Colls & Evans, 2014; Pritchard, 2014). The social model of disability insists the environment itself creates disability and restricts social engagement. Pritchard (2014) and many others in the research arena of disability have urged public spaces to include a universal design so a range of bodies could use the spaces with comfortable access.

Given higher weight bodies will always exist (Longhurst, 2005; Pritchard, 2014), and restrictive spaces do not increase motivation to lose weight but instead increase feelings of weight stigma (Longhurst, 2005), it is important to further illuminate the ways higher weight bodies navigate spaces in which they do not fit. Pritchard (2014) and Longhurst (2005) revealed higher weight people endure pain when attempting to fit into physically restrictive spaces. This was echoed in the personal accounts as well:

> [Experience of air travel] If you've never tried cramming your hips into an angular metal box that's an inch or two narrower than your flesh (under the watchful eye of resentful tourists), then sitting motionless in there for five hours while you fold your arms and

> shoulders up like a dying orchid in order to be as unobtrusive as possible, run, don't walk. (West, 2016, p.136)
>
> And then there is a how strangers treat my body. I am shoved in public spaces, as if my fat inures me from pain and /or as if I deserve pain, punishment for being fat. People step on my feet. They brush and bump against me. They run straight into me. I am highly visible, but I am regularly treated like I am invisible. My body receives no respect or consideration or care in public spaces. My body is treated like a public space. (Gay, 2017, p. 208)

Further, the debilitating social effects as a result of being unable to fit in public spaces physically are described by Gay (2017), "Even the happiest moments of my life are overshadowed by my body and how it doesn't fit anywhere. This is no way to live but this is how I live" (p. 205); "The bigger you are, the smaller your world becomes" (p. 210).

A mixed-methods study examined the ways in which higher weight individuals seeking or in the post-operative phases of bariatric surgery experienced 'public misfitting' and weight stigma (Brewis et al., 2016). Ethnographic and cross-sectional survey methods were used to observe and predict sensitivity to stigmatizing cues surrounding weight status. Not surprisingly, higher weight people described experiencing more stigmatizing cues than lower-weight people. The research team also inadvertently reinforced stigmatizing cues. For example, the authors reported interviews took place at a university. The areas participants visited were not accommodating to size. While they "never complained" participants commented on the tight spaces (Brewis et al., 2016, p. 264). An essential consideration of any research team studying weight stigma should be to ensure accommodations are made to interview this vulnerable population in environments that do not restigmatize them. While this study provided important

insight into facets of weight stigma experiences specifically for the bariatric population, the psychosocial needs of patients before, during, and after surgery remain unknown.

Accessibility and Hyper(in)visibility

In line with philosophical frameworks identified for understanding the concepts of gender performance and social capital, the understanding of accessibility of public spaces for higher weight people could be broadened using a critical stance (Colls & Evans, 2014; Hopkins, 2008; Hopkins, 2012; Guthman, 2009). Intersectionality theory is as a useful lens through which to examine stigmatizing experiences as different aspects of identity may further compound or mitigate stigma (Brewis et al., 2016; Longhurst, 2005). Roxanne Gay identified as a Haitian-American, queer, gender-conforming fat woman and described how these intersecting aspects of her identity elicited treatment from the public.

> Fat, much like skin color, is something you cannot hide, no matter how dark the clothing you wear, or how diligently you avoid horizontal stripes. You may become very adept at playing the role of wallflower. You may learn how to be the life of the party so that people are too busy laughing at or with you to focus on the elephant in the room. You may do whatever you have to do to survive a world that has little patience or compassion for a body like yours. Regardless of what you do, your body is the subject of public discourse with family, friends, and strangers alike. Your body is subject to commentary when you gain weight, lose weight, or maintain your unacceptable weight. People are quick to offer you statistics and information about the dangers of obesity, as if you are not only fast but also incredibly stupid, unaware, delusional about the realities of your body and a world that is vigorously inhospitable to that body. (Gay, 2017, p. 120)

Intersecting identities may lead higher weight people to be either more visible or treated as invisible due to weight stigma. The term hyper(in)visibility was created by Gailey (2014) to encompass the paradoxical experiences of fat women as being seen and unseen. People tend to be hyper-visible for the positive attributes they possess, such as being good at a particular subject; or negative attributes such as the typical framing of fatness as bad (Beggan & DeAngelis, 2015; Mowatt et al., 2013). On the other hand, people can also be rendered invisible by aspects of identity which position them within a marginalized group. The way higher weight individuals perceive themselves as hyper(in)visible changes the way they take up space:

> I deny myself the right to space when I am in public, trying to fold in on myself, to make my body invisible even though it is, in fact, grandly visible. I deny myself entry into certain spaces I have deemed inappropriate for a body like mine- most spaces inhabited by other people, public transportation, anywhere I could be seen or where I might be in the way, really. (Gay, 2017, p.145)

> I am hyperconscious of how I take up space. As a woman, as a fat woman, I am not supposed to take up space. And yet, as a feminist, I am encouraged to believe I can take up space but not too much of it, and not in the wrong way, where the wrong way is any way where my body is concerned. Whenever I am near other people, I try to fold into myself so that my body doesn't disrupt the spaces of others. I take this to extremes. I will spend five hour flights tucked against the window, my arm tucked into the seatbelt as if trying to create absence where there is excessive presence. I walk at the edge of sidewalks. In buildings I hug the walls. I try to walk as quickly as I can when I feel someone behind me so I don’t get in their way, as if I have less of a right to be in the world than anyone else. (Gay, 2017, p. 171)

Gailey (2014) completed extensive research on the phenomenon of hyper(in)visibility for higher weight people. She interviewed 71 higher weight people, including some who had undergone bariatric surgery. The concept of visibility is also studied in the context of racial and ethnic identities. Two papers discussed the intersecting identities of race and body image for African American women (Capodilupo, 2015; Mowatt et al., 2013). Mowatt et al. described how African American women are perceived as one of only three stereotypical figures; the Jezebel, the Mammy, or Sapphire (2013). Both "Jezebel" and the "Mammy" have centuries-long histories attached to them, beginning with the woman known as Hottentot Venus (Farrell, 2011; Mowatt et al., 2013). Sara Baartman (Hottentot Venus) was an enslaved African woman whose body was put on public display in life and death due to the weight she carried in her legs, hips, and buttocks (Farrell, 2011; Mowatt et al., 2013). Since then, African American women and later fat women more generally were stereotyped as hypersexual. Men are conditioned to dislike higher weight bodies through messages suggesting that associating with a fat woman lowers social and economic capital (Farrell, 2011). This negative stereotype of hypersexuality has persisted for African American women of higher weight, but seems to have changed for women of other racial identities.

Bourdieu's 'bodies for others' concept is also related to experiences of hyper(in)visibility. The study by Capodilupo found perceived effects of media on African American men promoted feelings of invisibility for African American women (2015). Further, feelings of increased invisibility led to decreased body esteem for women in the sample (Capodilupo, 2015). Meanwhile, an African American woman may remain hyper(in)visible to others based on race and body size. Given the research by Capodilupo and Gailey is so new and revolutionary, it is vital to continue building on the understanding of intersectional identity and

hyper(in)visibility. Further work on these concepts may reveal a changing landscape as social issues such as Black Lives Matter and Body/Fat Positivity gain ground.

One study described how lower-weight people also experience hyper(in)visibility and how the thin/fat binary reinforces weight stigma. Lower-weight people with BMIs between 16 and 23 were interviewed about their experiences with weight maintenance, how they felt about their bodies, and how they perceived others felt about their bodies (Beggan & DeAngelis, 2015). The participants felt hypervisible due to the positive attributes associated with being thin while simultaneously feeling invisible due to social exclusion. The authors were careful to point out similar experiences for people at either end of the weight spectrum are not parallel as they do not come with the same social cost (Beggan & DeAngelis, 2015). A contrasting experience is evident between the study and an autobiographical account in one instance. Some of the research participants mentioned they avoided going to the bathroom after sharing meals with others so no one would suspect or joke about them having an eating disorder. In contrast, one of the autobiographical accounts described hiding disordered eating because no one suspected a higher weight person was engaging in such behaviors:

> When you're fat, no one will pay attention to disordered eating or they will look the other way or they will look right through you. You get to hide in plain sight. I am fat, so I hid in plain sight, eating, throwing up, eating. (Gay, 2017, p. 196)

While some participants' quotes reflected concern for not wanting to make higher weight people uncomfortable with their presence as a thin person, others illuminated weight stigma. For example, participants described engaging in weight maintenance behaviors to maintain an ultra-thin figure due to societal pressure. Interestingly, the concept of hyper(in)visibility is present at either end of the weight spectrum. However, just as the authors mention, it is important to

remember the cost of being hyper(in)visible in a thin body does not equal that of a higher weight body.

> When I am at the gym, I want to be left alone in my sweaty misery. I want to disappear until my body is no longer a spectacle. (Gay, 2017, p. 165)
>
> I hate being fat. I hate the way people look at me, or don't. I hate being a joke; I hate the disorienting limbo between too visible and invisible; I hate the way complete strangers waste my life out of supposed concern for my death. I hate knowing that if I did die of a condition that correlates with weight, a certain subset of people would feel their prejudices validated, and some would outright celebrate. (West, 2016, p. 77)

Summary

Taken together, the autobiographies offer rich accounts of the physical, social, and psychological ramifications of living in a large body. The databased literature supports the autobiographical authors' reflections on performing gender, having decreased social capital, inaccessibility of public spaces and hyper(in)visibility. Still, more research can add to our understanding of these experiences, and by focusing on the bariatric population, we can clarify how the thin/fat binary reinforces weight stigma. As such this study has significant implications for nursing practice. The focus of the preceding chapter has been intentionally broad in scope. What follows is a more focused review of experiences of weight stigma and their socio-contextual influences in the health care setting.

Weight Stigma in the Healthcare Setting

Higher body weight is touted as a dangerous condition that should be vigilantly addressed and combatted. However, evidence demonstrates primary care providers (PCPs) are unwilling to address higher body weight due to many factors, including lower reimbursement from insurance

and biased beliefs about the efficacy of doing so. Such unwillingness limits access to bariatric surgery as a treatment for medical conditions refractory to other therapies.

Insurance Reimbursement

Several studies have shown lower reimbursement rates for the diagnostic code “obesity” has resulted in a barrier to addressing this patient concern in primary care (Ferrante et al., 2009; Funk et al., 2016; Reynolds & Rosenthal, 2010; Santry et al., 2007). In one cross-sectional study, as many as 45% of physician respondents ‘agreed’ or ‘strongly agreed’ there is not enough reimbursement to support spending time counseling patients about their weight status (Ferrante et al., 2009). This data points to the problematic nature of the brevity of clinical visits and the payment structure of the U.S. health care system.

Focus group interviews with physicians in Wisconsin revealed insurance reimbursement creates a two-fold systematic barrier to addressing weight status (Funk et al., 2016). First, physicians are reimbursed at a higher rate for conditions such as hypertension or diabetes (Funk et al., 2016). Second, physicians are hesitant to assign “obesity” as the primary condition or refer patients for bariatric surgery because they worry about patients’ financial responsibility (Funk et al., 2016). For example, dietician referrals are reimbursed differently, if at all, depending on the primary reason for referral (Funk et al., 2016). If "obesity" is listed as the primary reason for referral, the patient is left to pay the bill. In contrast, reimbursement occurs at a higher rate if the primary condition is listed as diabetes. This information highlights the variable nature of reimbursement and biases in the current payment structure.

Weight Stigma Influences Clinical Care

Although research examining weight stigma in the bariatric population is limited, existing evidence demonstrates how weight stigma influences the clinical care people of a higher

weight receive. PCPs hold many biased beliefs about people of a higher weight and indicate discussing weight management strategies with patients is frustrating. In one cross-sectional study of New Jersey physicians, 66% of respondents 'agreed' or 'strongly agreed' with the statement that dealing with obesity and weight loss is frustrating (Ferrante et al., 2009). Similarly, in another study, physical therapists lacked confidence and primarily used negative terms such as "challenging, difficult, risky, and dangerous" to describe working with people of a higher weight (Setchell et al., 2016). Frustrations and biases held by providers negatively impacts care quality for people of a higher weight.

While there is a link between having a higher body weight and lower socioeconomic status (SES), the findings of one study suggest physicians view SES as a barrier to adopting healthy behaviors (Funk et al., 2016). Thus, care recommendations are guided by the belief people of higher weight are financially constrained, though this is not always the case. Therefore, PCPs should assess each patient's financial means before making recommendations.

In addition to dispelling the bias that people of higher weight will reject recommendations due to financial constraints, care should be flexible and personalized to fit the patient's life context. In one study, only 19% of physician respondents had familiarity with community resources (Ferrante et al., 2009). Putting the patient in touch with resources usually falls to the RN case manager or social worker. However, each health care team member should be familiar with said resources. A lack of familiarity with resources creates barriers to making practical clinical recommendations based on SES. Further, weight stigma persists if the need to address health behaviors and adapt care according to SES remains unaccounted for.

The literature also suggests PCPs view people of higher weight as being dishonest about engaging in health behaviors. In particular, PCPs believed patients lie when they report nutrition

intake and physical activity (Ferrante et al., 2009; Jung et al., 2016; Funk et al., 2016; Phelan et al., 2015). In addition to viewing people of higher weight as intentionally deceitful, health care team members view these patients as lacking sufficient willpower to lose weight (Ferrante et al., 2009; Jung et al., 2016; Funk et al., 2016; Phelan, 2015). In one study, only 13.3% of physician respondents indicated they 'do not' or 'slightly agree' that people of a higher weight lack willpower (Jung et al., 2016). Doubting the truthfulness of information shared and viewing people of higher weight as lacking the willpower to adopt healthful strategies demonstrates weight stigma in clinical interactions. Further, perhaps shifting the focus from discussions about weight loss to discussions about improving nutrition and increasing activity irrespective of a weight change could positively impact communication between the health care team and patients.

There is a great deal of social and cultural emphasis regarding weight as a personal responsibility, and this view is evident in the realm of health care as well. Evidence suggests PCPs fail to recognize the many factors influencing body weight, such as genetics, environment, SES, community safety, and food accessibility (Beck, 2015). Disregard for the complex influencers of body weight has led health care teams to overestimate the efficacy of lifestyle changes (diet and exercise) which places responsibility on the individual rather than understanding the broader context in which individuals exists (Dietz et al., 2015; Setchell et al., 2015; Setchell et al., 2016). In one study, 74% of physician respondents indicated lifestyle change would be the most effective intervention in the future (Stolberg et al., 2017). Given lifestyle changes do not demonstrate long-term efficacy, continued reliance on them will render efforts ineffective and perpetuate frustration expressed by physicians and patients.

Health care providers are also hesitant to address weight status for fear doing so will hamper rapport with the patient or be otherwise ineffective. For example, a small number of physical therapists reported they avoid recommending weight loss or discussing weight-loss strategies unless the patient approaches the subject (Setchell et al., 2016). Similarly, 81% of PCPs were hesitant to initiate a conversation about bariatric surgery until the patient asked about it (Stolberg et al., 2017), and another study shared similar findings (Funk et al., 2016). While the timing of discussions regarding weight status should be navigated with care, there are dangers in waiting for the patient to initiate them.

Delaying discussions about weight status or bariatric surgery as one of several options used to manage health conditions can result in people of a higher weight seeking out inaccurate information. Phelan et al. suggested the simplistic view held by many people, including health care professionals, of managing energy balance to achieve weight loss encourages patients to formulate unrealistic expectations for weight loss (2015). Centering health goals on weight loss leads people of a higher weight to become frustrated when efforts do not meet expectations and may lead them to abandon healthy behaviors.

Another danger of PCPs' reluctance to refer people of higher weight for surgery is that these people will be lost to long-term follow-up after undergoing surgery (Dietz et al., 2015; Jung et al., 2016). Research demonstrates patients avoid care after experiencing weight stigma (Dietz et al., 2015; Setchell et al., 2015; Phelan et al., 2015). Delayed care seeking to avoid weight stigma leaves people who undergo bariatric surgery more vulnerable to health crises, even after pursuing weight loss treatment.

Taken together, weight stigma impacts the care people of a higher weight receive and restricts access to bariatric surgery. Weight stigmatizing beliefs may explain why the literature

suggests PCPs are reluctant to recommend bariatric surgery because they view it as "the easy way out" (Ferrante et al., 2009; Jung et al., 2016). Bariatric surgery is a promising option for people of higher weight who cannot manage medical conditions by other means. Shifting the view of bariatric surgery as an easy alternative and disrupting weight stigma expressed by the health care team is necessary to change how clinical care is delivered to people of higher weight.

Weight Stigma Influences Referral for Bariatric Surgery

Anecdotally, weight stigma causes some providers to recommend bariatric surgery to higher weight patients who are not interested in changing their weight status. On the other hand, of the patients interested in pursuing weight loss through bariatric surgery, new barriers surface once a person of higher weight is referred to a bariatric surgeon. These additional barriers further stigmatize this population and limit who ultimately gains authorization for surgery. One study found 43% of people seeking bariatric surgery reported experiencing weight stigma compared to 21% of people of higher weight who were not seeking surgery (Jung et al., 2016). This finding suggests a greater prevalence of stigma for bariatric surgical candidates. Given the limited knowledge about how weight stigma affects the trajectory of people who undergo bariatric surgery, more research is needed, particularly from the patient's perspective.

There is evidence indicating PCPs and other health care team members exhibit weight stigma, a problem that also occurs during encounters with the bariatric team. Santry et al. (2007) sought to understand what factors influenced authorization for bariatric surgery by having surgeons evaluate hypothetical patient profiles. Importantly, they ensured all hypothetical patients were eligible for surgery, yet only 57.8% were granted authorization (Santry et al., 2007). The researchers found age, body mass index (BMI), and social support were the most critical factors influencing surgical approval (Santry et al., 2007). While one can see the

importance of these factors, this study casts light on factors emphasized during the pre-surgical evaluation.

Interestingly, Santry et al. (2007) found having publicly funded insurance decreased the chances of gaining surgical approval and posed a barrier to gaining a referral. This trend is troubling given that people of higher weight may rely on publicly funded insurance due to lower SES. Again, this points to a need to assess resources individually rather than relying on assumptions to guide clinical care.

Little is known about the meaning of weight stigma from the perspective of people who seek bariatric surgery. Friedman et al. (2008) acknowledged that although weight stigma has been recognized since the 1960s, a paucity of research exists from the patient's perspective. Similarly, other researchers who investigate weight stigma have recommended more work explore the experiences of people of higher weight (Jung et al., 2016). Research aimed at understanding such experiences has relied primarily on quantitative measures.

One such study used cross-sectional surveys in which people seeking bariatric surgery were asked to rate the frequency of experiencing weight stigma during the past month (Friedman et al., 2008). The most common stigmatizing experiences related to weight were encountering environmental barriers (such as being unable to fit in physical spaces), negative attitudes expressed by physicians and families, and being stared at (Friedman et al., 2008). Over 50% of the participants reported experiencing each problem (Friedman et al., 2008). Overall, this provides further evidence that the bariatric population is vulnerable to weight stigma.

Other studies assessed weight stigma for people of higher weight who were not pursuing bariatric surgery. Similar to Friedman et al., participants described feeling stigmatized as a result of the environment when undergoing physical therapy (Setchell et al., 2015). Participants

reported feeling exposed when exercising in the open space and as a result of garments that were too small (Setchell et al., 2015). Additionally, they noted a lack of size diversity in fitness models displayed in posters and informational brochures (Setchell et al., 2015). Interestingly, when physical therapists were asked how patients might experience weight stigma, they had difficulty formulating an answer (Setchell et al., 2016). When PCPs were surveyed about accommodating equipment available in their office for people of a higher weight, 41.7% had a scale that measured over 350 pounds, 32.1% had larger exam tables, and 17.1% had large wheelchairs (Ferrante et al., 2009). These findings show the discordance between the patient's experience of weight stigma and the understanding of its impact by care providers.

Further evidence demonstrates people of a higher weight are eager to have their experiences with weight stigma understood. Although never directly asked, participants in two studies felt compelled to discuss the factors that influenced their body size throughout their life, aside from diet and exercise habits (Buxton & Snethen, 2013; Setchell et al., 2015). Participants also shared they wanted health care providers to believe their reports about engaging in health behaviors (Buxton & Snethen, 2013). These findings highlight a gap in understanding, given previous research revealing health care teams tend to disbelieve patients when reporting such information.

Assessing experiences of weight stigma and its implications should be done cautiously with pre-surgical candidates because of the potential for these individuals to be denied surgical authorization. In their study, Friedman et al. (2008) relied on measures gathered as part of the pre-surgical psychological evaluation. Therefore, findings were obscured by participants' desire to gain surgical clearance. Future work should consider investigating weight stigma separately

from the evaluation process or seek understanding from people who have already undergone bariatric surgery.

Psychosocial Patterns after Bariatric Surgery

People seeking bariatric surgery must pass a psychological evaluation to be granted surgical authorization. While good mental health is emphasized before surgery, long-term follow-up on this aspect of recovery is poor. The literature notes several reasons why little is known about psychosocial aspects of experience after bariatric surgery. Inconsistent reporting standards for outcomes of bariatric surgery are noted in the literature, which has implications for research (Coulman et al., 2016; Funk et al., 2016). Coulman et al. (2016) surveyed health care professionals and post-operative bariatric patients to develop a list of reporting standards for surgery and identify priorities. The findings highlighted differences between what members of the health care team and post-operative bariatric patients value in terms of long-term outcomes. For example, only 2% of health care providers rated quality of life (QOL) and well-being outcomes as highly important compared to 13.7% of patients (Coulman et al., 2016). This finding suggests more research is needed to understand mismatched priorities between health care providers and people who pursue bariatric surgery.

The strained resources available to address mental health are another reason for limited knowledge about psychosocial recovery after bariatric surgery. In a study of post-bariatric care, Lamore et al. (2016) noted that although France mandates long-term psychological follow-up, only 20% of psychologists and psychiatrists routinely met with patients. The literature points to a lack of clear guidelines for psychological follow-up after bariatric surgery as well as limited capacity for doing so (Grimaldi & Van Etten, 2010; Lamore et al., 2016). More research about

psychosocial changes after bariatric surgery is needed to strategize ways to meet the needs of this population.

Although what is known about long-term psychosocial outcomes is limited, a need to deepen knowledge in this area is apparent. To illustrate, as many as 25% of bariatric surgery patients expressed regret about having surgery (Reynolds & Rosenthal, 2010), and this has been noted elsewhere (Grimaldi & Van Etten, 2010). However, our understanding of regret after surgery is poor.

Disordered eating is also commonly experienced by people due to weight stigma. Thus, people adjusting to new eating habits after bariatric surgery may require long-term psychological support (Friedman et al., 2008; Woodworth & Jones, 2013). In addition to new eating habits, post-surgical bariatric patients may need help adjusting to changes in relationships (Grimaldi & Van Etten, 2010). For example, psychological support would be helpful if a romantic partner becomes unsupportive as the relationship dynamics change when the bariatric patient becomes less dependent or requires less care. Overall, the limited insight into this area suggests there are many reasons why post-surgical bariatric patients require long-term psychological support.

In sum, greater attention should be given to long-term psychological follow-up as it is highly valued by patients. A better understanding of psychosocial patterns after bariatric understanding can inform a plan used to provide this population with needed support.

Summary

The broad context of weight stigma contributes to how patients both present and are viewed in health care spaces. Weight stigma is embedded in health care systems through insurance regulation and provider attitudes. When higher weight people seek health care, the physical and social environment typically fail to provide a safe haven from weight stigma

experienced in the outside world. At the same time, higher weight people who seek bariatric surgery to improve chronic health conditions or escape weight stigma face additional stigma from others based on negative attitudes about bariatric surgery. The cumulative effect of weight stigma experiences has a negative influence on mental health and may impact the bariatric post-surgical journey. Hence, the overall purpose of this study was to understand the various contexts of weight stigma experiences in connection to the bariatric surgical journey.

Chapter 3: Methods

This chapter begins with a review of the study aims and philosophical underpinnings that guided the approach. This section is followed by methodological approach, including design, recruitment and participants, data collection and analysis. There is a brief overview of participant safety and protection of human subjects. I also outline analytic strategies with considerations for maintaining rigor, trustworthiness, and reflexivity. The chapter ends with my positionality statement.

Study Aims

Through this critical hermeneutic study, I sought to understand the experiences of weight stigma and their impact over the life course for persons who eventually decide to undergo bariatric surgery. Additionally, I explored the clinical care received by people who have had bariatric surgery, with emphasis on the psychosocial aspects of care.

The specific aims of this study were to:

Aim 1: Describe life course experiences of weight stigma for individuals who opt to undergo bariatric surgery.

Aim 2: Explore experiences of weight stigma in the context of bariatric clinical care.

Aim 3: Describe the trajectory of depression as it relates to weight stigma both before and after bariatric surgery.

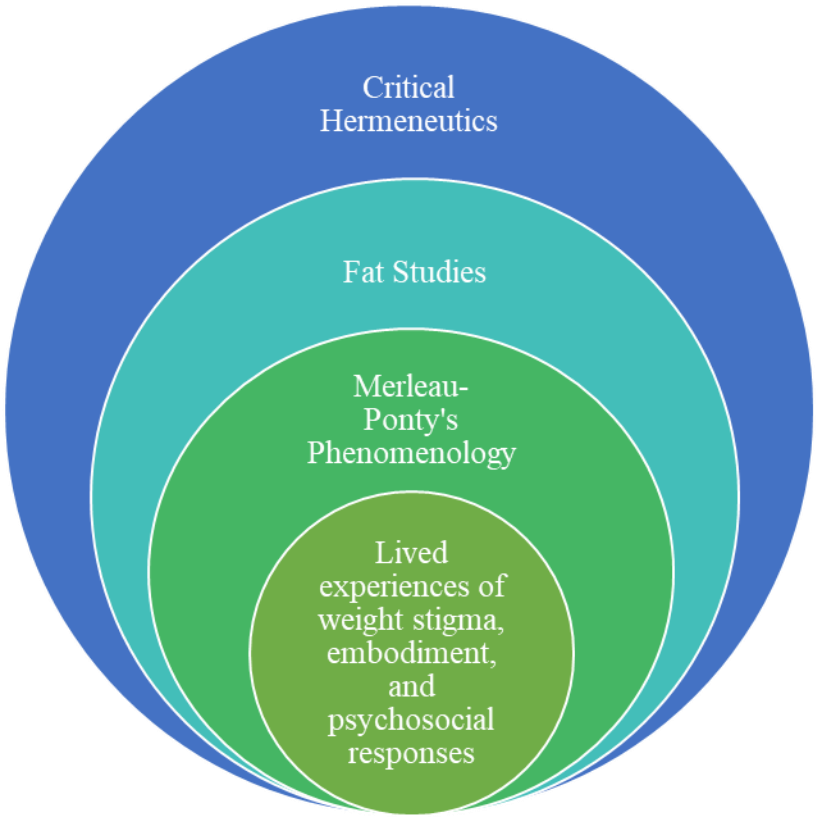
Philosophical Underpinnings

The overall aim of this study was to understand the lived experience of weight stigma, across the lifespan in persons who have undergone bariatric surgery in the larger context of society. The study was situated in the critical philosophical paradigm. I used Fat Studies to inform my conceptualization of the study aims, and overall approach. In addition, Merleau-Ponty's philosophy informed the hermeneutic elements of the study. Figure 1 offers a visual

representation of how the philosophical underpinnings were blended to illuminate experiences of weight stigma, embodiment, and psychosocial responses.

Figure 1

Philosophical Lenses



Merleau-Ponty's Phenomenology

Phenomenology aims to uncover unconscious existence, also referred to as the pre-reflective state, in order to gain understanding of lived experience (van Manen, 2014). Within this tradition, Merleau-Ponty described embodied experiences as the way the body is inextricably linked with identity as individuals navigate the world with their bodies and, in turn, their bodies contribute to lived experiences through the reactions offered by others during social exchange. Influenced by the phenomenology of Husserl, Merleau-Ponty's work was ontologically

distinguishable, as it recognized lived experience as coming from both mind and body as written in the *Phenomenology of Perception*:

> And since the genesis of the objective body is but a moment in the constitution of the object, the body, by withdrawing from the objective world will carry with it the intentional threads that unite it to its surroundings and that, in the end, will reveal to us the perceiving subject as well as the perceived world. (Merleau-Ponty, 2011, 74)

Merleau-Ponty asserted that we are largely unaware of the internal processes that help us make sense of how our bodies perceive and relate to the world. When conscious processing surfaces, an individual can see themselves as both object and subject (Merleau-Ponty, 2011). Further, the work of Merleau-Ponty lends itself to enhancing understanding of embodied experience, which in turn can improve healthcare providers, including nurses, attunement to client needs (Harrison et al., 2019). Within the healthcare team, nurses value holistic practice; yet there is limited research aimed at understanding the lived experience of weight stigma from a first-person perspective (Haga et al., 2019; Ueland et al., 2019). This study was intended to fill that gap.

Critical Hermeneutics

Whereas the phenomenology of Merleau-Ponty provided the ontological grounding for this study, critical hermeneutics provided the epistemological foundation. Critical researchers seek to understand the influence of unjust and exclusionary larger social forces as they manifest in everyday experiences (Roberge, 2011). This study was a call to action to identify and highlight the oppressive societal structures, including the healthcare industry, that produce and perpetuate weight stigma in order to increase awareness and develop strategies to reduce it.

Weight stigma affects individuals across many intersections of experience and identity. Kincheloe et al. (2018) suggested critical hermeneutics is an ideal frame for understanding "the relationship between individuals and their contexts" (p. 249). Roberge described critical hermeneutics as a theory of action, meaning, and experience (2011), as it yields rich, contextualized descriptions of sociocultural, political, and historical forces that shape lived experience and contribute to meaning making (Kincheloe & McLaren, 2011; Shaw & DeForge, 2014). This approach accounts for the interrelatedness of the whole and its parts:

> A critical hermeneutics beings (sic) the concrete, the parts, the particular into focus, but in a manner that grounds them contextually in a larger understanding of the social forces, the whole, the abstract (the general). Focus on the parts is dynamic that brings the particular into focus, sharpening our understanding of the individual in light of the social and psychological forces that shape him or her. (Kincheloe & McLaren, 2011, 295)

Thus, broad forces are identified and understood in relation to their bearing on individual experience and individual experience is understood in its contribution to perpetuating those same broad forces. The epistemological guidance of critical hermeneutics allows researchers to uncover an understudied facet of experience for individuals who have undergone bariatric surgery by exposing the broad context of the phenomenon of weight stigma and its effects. In addition to elucidating the whole of a phenomenon in relation to its parts (Kincheloe & McLaren, 2005), critical hermeneutics illuminates existing power structures. Kincheloe and McLaren (2011) asserted "…to seek critical enlightenment is to uncover the winners and losers in particular social arrangements and the processes by which such power plays operate" (p. 288).

The current study centered on questions related to the ways in which weight stigma exists and how it is perpetuated and maintained. In what facets of life is weight stigma present and how

is it affecting the lives of individuals who ultimately undergo bariatric surgery as a weight loss intervention? Further, are the needs of individuals who undergo bariatric surgery being met by the care team before, during, and after surgery? In summary, the use of critical hermeneutics allowed for deeper insight into how body weight intersects with other aspects of identity to produce lived experience.

Fat Studies

In line with Merleau-Ponty's philosophical perspective, emerging research in the field of Fat Studies highlights the need to uncover self and other objectifying experiences of weight stigma in an effort to improve understanding (Ueland et al., 2019). Fat Studies is the critical paradigm that grounds this study and served as the interpretive frame for analysis. Fat activism began in the 1960s with the goal of gaining recognition for stigma and discrimination enacted on the basis of large body size (Wann, 2009). Under the overarching category of Critical Theory, the academic field of Fat Studies emerged in the 1990s to disrupt common assumptions about body weight through rigorous critique and implementation of research (Wann, 2009). In this study, in order to center the lived experience of weight stigma, Fat Studies served as an analytic frame to explore assumptions about body weight and the social values placed on individuals of higher weight.

The discipline of Fat Studies is defined as "aggressive, consistent, rigorous critique of the negative assumptions, stereotypes, and stigma placed on fat and the fat body" (Wann, 2009, pg. 2). The conjunction of critical hermeneutics with Fat Studies is similar to the way in which other critical approaches have been used to rigorously engage inquiry and understanding about other aspects of marginalized identity, such as race, gender, sexuality, and disability (Wann, 2009). In addition to centering experiences of weight stigma, use of critical hermeneutics allowed for

deeper insight into how body weight intersects with other aspects of identity to produce lived experience.

An individual's body weight and shape are simultaneously a part of embodied experience and produce the lived experience. Given that body weight and shape fluctuate over the course of a lifetime, participants were asked to describe the trajectory of their body weight to understand how weight stigma impacted these individuals over time in various contexts. Having individuals recount their experiences over the course of a lifetime illuminated how historical, social, cultural, and political views about body weight and shape evolve over time and make an impact on an individual's health and psychosocial well-being.

Methodological Approach

Narrative Life History

This descriptive study used a critical narrative life history approach, which allowed for a multiplicity of truths to exist and entailed "a repositioning of the self in relation to internal and external psychosocial demands and expectations" (van Schalkwyk, 2010, 677). Accordingly, the focus was on the embodied experiences of weight stigma over the course of a lifetime and the pursuit of weight loss through surgical intervention. The narrative life history approach is helpful when seeking an individual's lived experience or a collective lived experience compiled from a group of participants who share experience with a particular phenomenon (Denzin, 1989; Reissman, 1993).

The narrative life history approach was used to collect data during individual interviews. Whereas some qualitative methods fracture participant's stories by interjecting questions to get to the essence of a phenomenon, the narrative life history approach leans into our natural tendency to tell stories to describe experience (Riessman, 1993). Riessman offered the following

insight that supports the decision to utilize a narrative life history approach and informed the development of the interview guide, “Where one chooses to begin and end a narrative can profoundly alter its shape and meaning” (1993, p. 18). The narrative life history approach accounts for not only the significant events in a participant’s life, but also for the meaning abstracted from these events made evident by the way a story is told (Frechette & Carnevale, 2019). Asking participants to recount their life history reduced the risk of fracturing their stories and losing the context that contributed to experiences of weight stigma.

Reissman (1993) described five broad levels of representation that allow qualitative researchers to access experiences of interest; attending, telling, transcribing, analyzing, and reading. Her explanation of the first two levels of representation, attending and telling, drew on the work of Merleau-Ponty. Attending to experience is the pre-reflective state wherein the individual takes in the experience without consciousness of what it means (Riessman, 1993). When telling others about the experience and choosing the details to include, the individual offers conscious thought about it and makes meaning out of it (Riessman, 1993; van Schalkwyk, 2010). Importantly, Riessman noted that the relation of a narrative is influenced by whom the narrative is being told to, what questions they ask about it, and how the person telling the story wants to be remembered (1993).

The strengths of using a retrospective, narrative life-history approach included greater likelihood that participants were forthright in sharing their experiences because fear of being denied surgery was not a concern post-surgery. As well, the retrospective account offered the benefit of participants’ “hindsight” about experiences and events, adding insights to the account that would likely be missing in a prospective design. Thus, participants were more likely to be forthcoming about their experiences of depression or other psychosocial challenges before,

during, and after surgery and were able to provide detail as to how these changed throughout time, in the presence or absence of needed support.

The narrative life history has been used across disciplines to understand an individual's role in society and how they interact with the greater whole (Atkinson, 2002; Denzin, 1989). Narrative life history was consistent with the critical philosophical orientation because it allowed participants to elaborate on the rich context of their experiences, while exposing social processes that contribute to weight stigma (Taber, 2013).

Given the complexity and interrelatedness of weight stigma and psychosocial patterns, it was important to gather information regarding the factors that shaped participants' experiences such as family contexts and experiences in education settings. Further, it was necessary to employ a design which allowed participants to share their story over the course of time in order to examine the complex processes which contributed to weight stigma and its consequences (Haglund, 2004). By asking participants to share their story, they had the freedom to provide information related to their earliest experiences of weight stigma and explain how such experiences influenced their life course, including the decision to pursue bariatric surgery.

Recruitment, Sampling, and Participants

For phenomenological studies, Creswell (1998) recommended 5 – 25 participants, while Morse (1994) suggested at least six. Fewer participants are typically needed to reach saturation when using narrative life history, given the depth of information collected with repeated interviews (Admi, 1995).

After obtaining approval from the Oregon Health and Science University (OHSU) Institutional Review Board, a purposeful sampling strategy was used to recruit 17 participants who had undergone bariatric surgery in the past 10 years and struggled with self-reported

depression (Admi, 1995). There are four bariatric surgical approaches, including the Roux-en-y Gastric Bypass, Vertical Sleeve Gastrectomy, Duodenal Switch with Biliopancreatic Diversion, and the Adjustable Gastric Band (ASMBS, 2020). For this reason, a maximum variation recruitment strategy was implemented to increase the demographic heterogeneity of the participants with respect to surgical approach (Maxwell, 2013; Patton, 2015; Sandelowski, 1995). This approach to recruitment was supplemented through the use of snowball sampling. Because of the COVID-19 pandemic all interviews were completed virtually, and recruitment was widened to anyone living in the United States.

The study was advertised on Twitter, the OHSU website, and Obesity Action Coalition websites. “In-person” advertisement of the study occurred at virtual bariatric support group meetings through OHSU, Southern Oregon Bariatric Center, and Norman Regional Hospital. The healthcare team at Southern Oregon Bariatric Center also offered the study flyer to their patients.

At the conclusion of their first interview, participants were also encouraged to share the interviewer’s contact information with other individuals who have experienced weight stigma or poor psychosocial recovery after bariatric surgery and may be interested in participating in the study. Recruitment ended when I determined that there was no new information being collected, also known as data redundancy or saturation (Fusch & Ness, 2015). The study’s rich data contributed to saturation and made it possible to describe complex, and nuanced experiences of weight stigma and clinical care before and after bariatric surgery (Fusch & Ness, 2015).

Inclusion criteria

The inclusion criteria for this study were: 1) History of bariatric surgery no greater than 10 years before the study’s start; 2) Self-identify as having a history of or currently experiencing depression; 3) 21 years of age or older; 4) Able to read and speak the English language; 5) Lives

in the United States. The age parameter was intended to avoid individuals who may have had bariatric surgery as an adolescent; whose experiences may have been shaped by parental involvement. Because the mean age of individuals undergoing bariatric surgery is 44.6-46.7 years old (Coleman et al., 2014), the lower age parameter was unlikely to result in exclusion of potential participants.

Exclusion criteria

Participation was limited to individuals who had not undergone bariatric surgical revision (i.e., switching from gastric banding to a sleeve gastrectomy). Excluding patients who required a surgical revision was based on the premise that their experience would differ from those patients who have undergone only one bariatric surgical procedure. Of note, however, was that by the conclusion of the study, one participant received a revisional procedure and another was beginning to seek consultation for surgical revision.

Participants

A total of 26 individuals responded to the study's recruitment efforts; 17 individuals completed the study. Of those individuals who indicated interest but did not join the study, three did not meet the time frame for completing bariatric surgery and others did not respond to follow-up for screening.

All 17 participants completed two interviews. Given that each participant was interviewed twice, a total of 34 interviews were conducted over the course of the study. Sixteen of 17 participants completed and returned the demographic questionnaire and BDI-II (Table 1). Participants ranged in age 26-66 years or older. The majority of participants (*n*=15; 88%) identified as female. Although recruitment was open to any bariatric surgical procedure, only the sleeve gastrectomy (*n*=12) and gastric bypass (*n*=4) approaches are represented in the sample. Over half of the participants (*n*=10; 59%) had bariatric surgery within three years of participating

in the study, while six (35%) were four or more years out from surgery. A third of the participants (*n*=5; 29%) indicated they had never been "officially" diagnosed with depression, despite having self-identified as experiencing depression and sharing their lived experiences with it.

Table 1

Participant Demographics

VARIABLE	**DISTRIBUTION** ***N=17***
U.S. REGION	West: 11 Midwest: 3 Northeast: 2 South: 1
AGE (IN YEARS)	26-35: 4 36-45: 1 46-55: 6 56-65: 5 66-80: 1
GENDER	Male: 2 Female: 15
RACE/ETHNICITY	White: 14 African American/ Black: 0 Asian: 1 Hispanic/ Latino: 1 Native American: 1
SURGICAL APPROACH	Sleeve Gastrectomy: 13 Gastric Bypass: 4
YEARS SINCE BARIATRIC SURGERY	0-3: 10 4-6: 5 6+: 2
OFFICIAL DIAGNOSIS OF DEPRESSION	Yes: 12 No: 2 Unsure: 1 No Response: 2

Data Collection

Data collection occurred in multiple ways. I screened participants over the telephone using a script that included five questions based on the inclusion criteria before appointments were made for in-person interviews (Appendix A). Participants who screened in and verbalized interest in participating were immediately scheduled for their first interview. I destroyed data obtained from people who screened out upon completion of the study.

I conducted in-person interviews using the WebEx videoconferencing software sponsored by OHSU. At the completion of the first interview, and after written consent was obtained, I asked participants to complete a demographic survey and the Beck Depression Inventory-II (BDI-II). The demographic survey was made-up of questions about participants' age, gender, gender identity, pronouns, race/ethnicity, type of bariatric surgery, year of bariatric surgery, preferred term to describe body size/weight status, and medical and psychological history. I used the BDI-II was to gauge the participant's level of depression within two weeks before the initial interview in an effort to identify those individuals who might benefit from additional psychological support. A list of mental health resources was compiled and approved by the OHSU IRB prior to the study's start date, with a plan to distribute it to participants as indicated.

Whereas narrative life history emphasizes the reconstruction of stories from interviews, a life history interviewing method stays near to the stories shared by participants (Atkinson, 2002) by viewing participants as collaborative partners (Haglund, 2004). During the study I employed a modified version of the three-interview method outlined by Seidman (2013). Participants were asked to complete two in-person individual interviews via WebEx in a private location of their choosing. Consistent with life history interviewing strategies and to reduce the burden of participation, each interview lasted no more than 1 ½ hours- 2 hours (Seidman, 2013).

First Interview

I used a semi-structured interview guide during the first interview with each participant. The goal of the first interview was to gain an understanding of the participant's experiences of weight stigma as they relate to bariatric surgery from as far back as the participant could remember up to the present time (Seidman, 2013). I also asked participants to share the meaning of their experiences within the context of their life during the first interview (Seidman, 2013). The semi-structured interview guide (Appendix B) was intentionally structured in a way that allowed participants to share their pre-reflective accounts of body weight and embodied lived experiences (van Manen, 2014). To support capturing these pre-reflective accounts, I was careful not to lead participants with questions about weight stigma, in particular; instead, the questions focused on uncovering how weight stigma was experienced in the world. To elicit rich detail about experiences, I asked follow-up questions during second interviews based on data obtained from first interviews (van Manen, 2014).

Second Interview

The primary focus of the second interview was to ask participants to elaborate on their experiences of the clinical care they experienced before, during, and after bariatric surgery (Seidman, 2013). With the second interview I gained a deeper understanding of the participant's experience and verified details from the first interview (Seidman, 2013). By having participants explain how weight stigma had influenced their clinical care to lead them to their present state of being, the complexity of their experience was made clearer (Seidman, 2013). Another focus for the second interview was to ask participants for their feedback on the emerging analysis, including verifying a story map generated after the first interview (van Manen, 2014; van Schalkwyk, 2010). Follow-up questions were formulated after completing the first cycle coding

and creating a story map. The purpose of follow-up questions was to thoroughly describe emerging concepts and confirm my understandings and interpretations. This participant check-in was a crucial step, as it shifted the power back to participants, which is especially important for those who have experienced oppression (Haglund, 2004; Leonard, 1994).

I conducted all first and second interviews within approximately 4-6 weeks of each other in order to maintain the relationship between participant and interviewer (Seidman, 2013). I contacted participants by phone or email every two weeks between interviews to maintain engagement, answer questions, and schedule upcoming appointments. Each interview was audio-recorded and transcribed verbatim. I completed some transcriptions and had others transcribed by a professional service in the interests of time. Transcribing the first several interviews allowed me to become familiar with the data. For professional transcriptions, I compared audio-recordings with transcripts to enhance my familiarity with the data and identify inconsistencies. I also recorded field notes during and immediately following each interview to document new ideas and questions to ask during later interviews (Rodgers, 1993). I also kept field notes during the various analytic phases prior to the second interview.

Safety Considerations

Reliving negative experiences can be distressing to research participants. In anticipation of this potential and to maintain ethical standards of research practice, I compiled a list of telephone and in-person psychiatric resources and bariatric support groups and offered them to participants when indicated. Similarly, if a participant disclosed suicidal ideation, I immediately put them in touch with the appropriate resources to ensure their safety.

To avoid penalizing and excluding participants for honest disclosure, my plan for those expressing distress was to offer a choice to complete the interview at the scheduled time or

reschedule for a time convenient for them. No participants expressed psychological distress during the study, and many had ongoing psychological support. Preparation beforehand ensured that participation in the study would involve minimal risk.

Analysis

I used a critical lens informed by Fat Studies to uncover experiences of weight stigma and illuminate power imbalance in the health care setting and broader society. Informed by this paradigm, I analyzed both covert and overt experiences of weight stigma reported during interviews. Data collection and analysis occurred concurrently so that emerging findings informed the development of new interview questions as well as refinement of existing ones. The concurrent analytic strategy also provided the opportunity to verify findings with participants during the follow-up interview.

Analytic Strategies

I analyzed interviews through several analytic strategies as described by Saldaña (2013) and Miles et al. (2020). First, I verified transcription by comparing the interview text with the audio files. This process allowed for familiarization with the interview text and gaining a sense of the whole before formal analysis began.

First cycle strategies

Coding occurred simultaneously employing descriptive line-by-line codes and in-vivo coding. *In-vivo coding* guided analysis efforts to honor the participants own words. Saldaña explained that in-vivo coding is useful for understanding subcultures or marginalized groups (2013). I anticipated that participants would have preferences for describing their body composition at various weights, and in-vivo coding allowed the research team to gain insight into patterns of preferred terminology. *Descriptive line-by-line* coding allowed for immersion in the

text as the researcher assigns short descriptive words or phrases to describe the meaning of the topic contained in each line of text (Saldaña, 2013). Line-by-line coding was used to identify facets of experience and assign a label that represented the meaning of that experience in the participant's larger life context.

At the conclusion of the first coding cycle, I created a *story map* that organized significant life events by actual and symbolic meanings for each participant's first interview (van Schalkwyk, 2010). I shared the story maps with participants during the second interview for feedback and further insight. The development of the story map guided the framing of the semi-structured interview guide for the second interview. In addition to formulating personalized questions to clarify and stimulate deeper sharing, I used a template of common questions for each follow-up interview (Appendix C).

Second cycle strategies

Second cycle strategies guided the analysis to deepen a critical understanding of experiences of weight stigma both on individual and societal levels. After reading the interview transcript as a whole and completing first cycle coding methods, I used *matrix analysis* to reorganize emerging themes based on intersections of lived experience (Miles et al., 2020). The matrix facilitated comparison and contrasts of experiences, clustering of phenomenon, and counting (Averill, 2002; Miles et al., 2020). I used matrix analysis to make across case comparisons of descriptive early life contexts and the impact of these contexts on bariatric surgery outcomes.

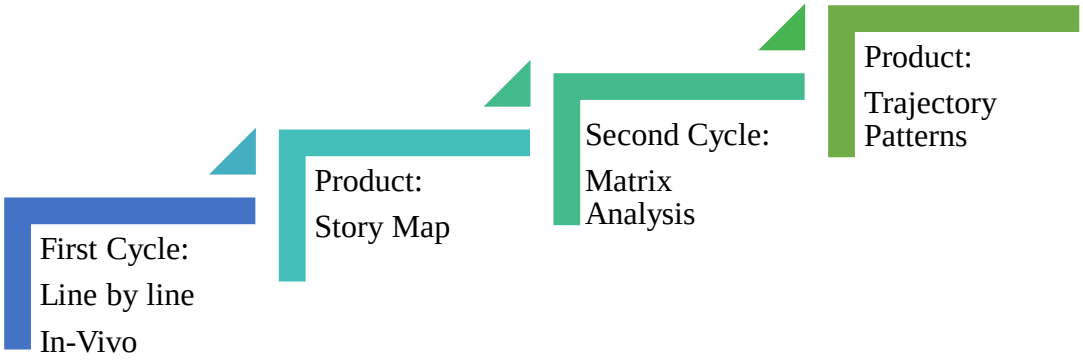
Summary

The goal of hermeneutics is to bring forth commonalities in lived experiences (Leonard, 1994). Ultimately, the various analytic strategies provided the groundwork for identifying

trajectories that described the pattern of early life experiences in relation to bariatric surgical outcomes. The research team discussed thematic patterns and the trajectories until consensus was reached. Figure 2 depicts the analytic process.

Figure 2

Analytic Process



Credibility, Rigor, Trustworthiness, Reflexivity

I employed several measures to support credibility, rigor, trustworthiness, and reflexivity, thereby demonstrating commitment to the production of high-quality research.

Credibility

Guba and Lincoln (1985) suggested that *credibility* is strengthened by prolonged engagement and triangulation of methods and investigators. The narrative life history interviewing approach fosters prolonged engagement between the researcher and participant (Morse, 2015). During and immediately after each interview, I recorded field notes to describe initial impressions (Rodgers, 1993). Triangulation occurred as experiences were repeated and confirmed during follow-up interviews (Morse, 2015).

Rigor

Rigor is defined by alignment between the researcher's worldview and adherence to methodological descriptions (Morse, 2018; Shaw & DeForge, 2014). The explicit description of the study plan, included in this chapter, is one strategy to enhance rigor. Other strategies that enhanced credibility and rigor centered on the documentation of the analytic process. As mentioned previously, my approach to data analysis was systematic and followed a series of analytic strategies in which each member of the research team coded select transcripts independently. The research team met regularly to discuss the emerging analysis.

Another strategy to support rigor was to reach data saturation (Morse, 2018). Data saturation is achieved when the researcher is immersed in the data enough to shift the focus of emerging analysis from the individual level to broader themes and when such themes relate back to concepts found in the literature (Morse, 2015). Data collection and analysis occurred concurrently, allowing for refinement of interview questions to add depth to understanding facets of lived experiences and how they related to bariatric surgical outcomes.

Validating research findings is another component of rigor (Morse, 2018). To enhance validity, I used member checking to gain participants' impressions of the emerging analysis, including soliciting feedback on the story maps from each initial interview (Haglund, 2004; Morse, 2015). Ultimately, findings included rich descriptions of each trajectory pattern to enhance transferability, wherein results can be applied to other individuals who share similar experiences (Morse, 2015).

Dependability is another key aspect of rigor (Morse, 2015). To enhance dependability, I developed a codebook, which in addition to field notes and team meeting summaries, created an audit trail (Rodgers, 1993; Morse, 2015). These practices ensured that a person authorized to view the data could follow how the research team developed the study's findings.

Trustworthiness

A goal of a high-quality research study should be to enhance *trustworthiness* so that people external to the study will want to review the findings (Morse, 2018). Trustworthiness was established by including elements of rigor and validity in the study design (Morse, 2018). Trustworthiness and credibility were enhanced by utilizing a data matrix to systematically arrange the essence of the full data for review (Miles et al., 2020).

Reflexivity

Reflexivity refers to the practice of careful self-reflection through the data analysis process. A reflexive practice strives to offer acknowledgement for how the researcher's experiences and worldview contribute to the interpretation of the research findings (Creswell, 2013; Kincheloe and McLaren, 2011). Reflexivity aligns with a critical approach as the researcher is, "aware that the consciousness, and the interpretive frames, they bring to their research are historically situated, ever changing, ever evolving in relationship to the cultural and ideological climate" (Kincheloe and McLaren, 2011, 296). The Hermeneutic Epoche-Reduction supports maintaining an openness to understanding lived experience as it happens in the natural, pre-reflective, world and avoids being led to frameworks or theories prematurely (van Manen, 2014). I was careful to avoid adopting a particular theory before hearing from the participants. The end of this chapter includes a positionality statement as a start to my reflexive research practice.

Positionality

Part of a reflexive research practice is intentional self-scrutiny by the researcher, referred to as positionality. Exploring personal identity in relation to the research unveils the assumptions, motivations, and narratives that are the "backstage" of the research process

(McCorkel and Myers, 2003). Explicitly recognizing that our identities influence our research helps to serve as a reminder of the subjective interpretation of participants' experience with a phenomenon in an effort to prioritize their voice over that of the researcher (Bourke, 2014). Positionality is intended to be explicit and reflective about the researcher's social location and how it influences the research process. Thus, I offer key aspects of my identity as it relates to the aims of the study to explore experiences of weight stigma.

I identify as a cisgender, fat, millennial, biracial, first-generation American and college student. I am also a digital native who developed scholarship in a time where information is readily available, and it is easy to maintain connectedness to fat positive and body positive communities via social media. Self-identifying as fat may signal to others where I am on my journey and understanding of Fat Studies scholarship, as I use the term to signal empowerment and solidarity with others. While learning about Fat Studies and gaining familiarity with this area of scholarship, I gained insight into personal experiences with weight stigma that I had not qualified as such before.

I have not always been body-positive or fat-positive but developed an interest in these areas of scholarship shortly before starting the doctoral program. I have spent much of my life disliking my body and engaging in cyclical restrictive eating and exercising excessively. Further, the body-positive and/or fat-positive journey is not linear, and I continue to work on breaking these cycles and embracing weight neutral approaches to health and wellness. Most study participants were unsure of how they felt or related to fat positivity and/or body positivity due to dominant norms and ideas about body size.

Over the years, both health care providers and patients I cared for on the bariatric surgical unit have asked if I have considered bariatric surgery. While I have not opted for bariatric

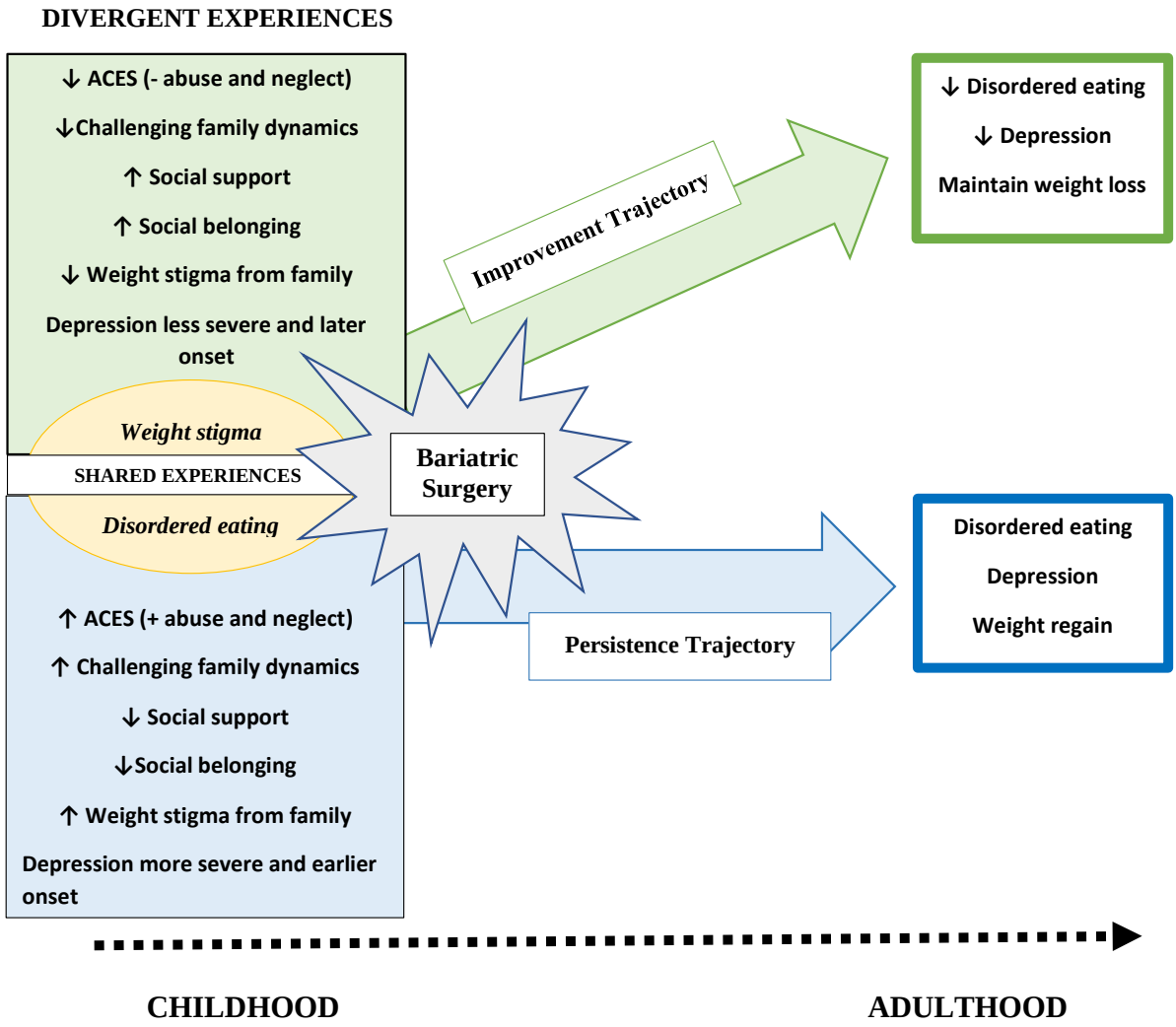
surgery, I understand why others may do so, due to either medical necessity or for deeply personal reasons, which may include a desire to escape weight stigma. Many Fat Studies scholars vehemently oppose bariatric surgery because they regard it as voluntary mutilation that undermines efforts to accept fat bodies as acceptable and worthy. Some Fat Studies scholars go so far to exclude and discount others who disclose they have undergone bariatric surgery. I am concerned that through this exclusion, we miss an opportunity to learn from the patient's experience through the surgical process. My identities as a fat person, a Fat Studies scholar, and a bariatric surgery nurse converge to bring a critical perspective to explore weight stigma and the bariatric surgery process.

Chapter 4: Findings

Findings in this dissertation shed light on the relationship between life experiences occurring in the first 18 years of life and post-bariatric surgery outcomes. The majority of participants in this study reported having one or more Adverse Childhood Experiences (ACEs). ACEs are defined as: food insecurity, neglect, physical, mental, or sexual abuse, living with a parent with mental illness, losing a parent through divorce, abandonment, death, or another reason, witnessing substance abuse, witnessing abuse between family members, or feeling unloved (Felitti et al., 1998). Clusters of childhood adversities made participants vulnerable, by their accounts, to struggles with depression and disordered eating. Both disordered eating and depression improved or persisted after surgery depending on the severity of childhood adversities. Participants in the *Improvement Trajectory* did not experience abuse or neglect and had lower Adverse Childhood Experiences (ACEs) scores. In contrast, those in the *Persistence Trajectory* experienced a disparate pattern, including more sources of weight stigma (see Figure 3).

Figure 3

Trajectories of Early Life Experiences and Post-Surgical Outcomes



In this chapter, I present findings in four major sections (see Table 2). The first section covers Shared Childhood Experiences. There I describe childhood experiences found across the sample, specifically, sources of weight stigma and the genesis and purpose of the onset of disordered eating during childhood and the teen years. The second section describes the *Improvement* and *Persistence Trajectories*, with an emphasis on post-surgery outcomes and the different patterns of early childhood adversity experienced by these groups. The third section

focuses on Shared Post-Surgical Experiences. Finally, the fourth section summarizes Participant Recommendations for Improving Bariatric Surgery Care.

Table 2

Overview of Findings Chapter

Shared Experiences	**Experiences of Weight Stigma** Direct Experiences Indirect Experiences Systems Experiences
	Childhood Patterns of Disordered Eating Food as Comfort Concealed Eating in Response to Weight Stigma Weight Cycling Weight Offered Protection
Divergent Trajectories	**Improvement Trajectory** Supportive Home Environments Less Direct Weight Stigma from Family Greater Social Belonging and Social Support Depression Severity and Onset **Post-Surgical Outcomes** Improvements in Depression Improvements in Disordered Eating Behavior Maintained Weight Loss
	Persistence Trajectory **Childhood Adversities** Housing and Food Insecurity Abuse and Neglect Living with Parent with Mental Illness Other Challenging Family Dynamics Weight Stigma from Family Lower Social Belonging and Social Support Depression Severity and Onset **Post-Surgical Outcomes** Depression Persisted Disordered Eating Persisted Weight Regain Common

Shared Post-Surgical Experiences	Patterns of Disordered Eating after Bariatric Surgery Body Dissatisfaction
Participant Recommendations for Improving Bariatric Surgery Care	Recommendations for Pre-Surgical Care Highlight Diverse Experiences Peer Mentoring and Support Recommendations for Post-Surgical Care

Shared Experiences

Although there were distinct differences in the early childhood experiences of participants in the *Improvement* and *Persistence Trajectories* experiences of weight stigma and the development of disordered eating in childhood or adolescence occurred in both groups. Shared post-surgical experiences included body dissatisfaction and patterns of disordered eating.

Experiences of Weight Stigma

Weight stigma is "negative weight-related attitudes and beliefs that are manifested by stereotypes, rejection, and prejudice towards individuals because they are of [higher weight]" (Puhl et al., 2008, 347). In this study, we identified four sources of weight stigma experiences occurring before age 18: 1) direct stigma in families through negative comments and differential treatment based on weight; 2) direct stigma from bullying by school peers; 3) indirect stigma in families through parental modeling; and 4) stigma perpetuated by adults in the health system or school system. All but one participant experienced multiple sources of weight stigma starting in childhood. These early life experiences of weight stigma affected the ways participants learned and felt about their bodies and their socialization within and outside of the family.

Direct Experiences: Weight Stigma in Families. "So That Got Me to Thinking I Was Fat."

Almost half (n=8) of the participants shared stories about family members making comments about their weight. These participants described conversations with family about their

weight as a source of shame and embarrassment, sometimes stemming from parents' idealized images of children's bodies. In turn, conversations about weight shaped participants' developing self-concept:

> …I'm going to use the term shame here. I [remember] going into the store and kind of being condemned by my mom because we have to buy the 6X because you "don't fit into the cute, little 6's." 11.1

> …My weight was something that my mother and my sister were embarrassed about… I didn't wear big girl clothes. But as far as anybody else was concerned, I was fat, and so that got me to thinking that I was fat. 20.1

One participant recalled only one instance when a family member commented on her weight, but this single comment had a lasting impact on her self-image. Despite the participant describing a stable, loving, and supportive family structure, the comment was particularly harmful because it reinforced stigmatizing messages internalized from other indirect and systemic sources:

> So, I still clearly remember my dad telling me my butt was big one time, which was kind of weird because he didn't really talk about my weight. But that really stayed with me… You kind of always really remember when your parents say stuff like that. And so, I just kind of grasped onto that and you just get messages like that here and there, and they sort of stay with you…. Again, it was the way society was that was more of the problem than the way they were. 8.1

Family concerns about weight often led to actions that singled out participants in relation to food. Family members, typically parents, restricted the type or amount of food participants

could eat; these foods were otherwise available to the entire family. Restriction led some participants to sneak food or eat in secret:

> The other challenge that came up, too, while I was still living at home was, aside from my dad, I had three brothers. And mom would cook – fix cakes and pies and whatever. And she would be like, "Oh, no, this isn't for you. This is for them because you can't eat this because you need to lose weight. This is just for them so don't touch it." Can't touch it, right?. Of course, after everybody went to bed, what do you think I'm doing? Cutting off a sliver, right? 11.1

> And when I went [to nana's house], my dad would weigh me [on] that scale and he would tell her, "Don't give her any snacks." I always had a weight problem. And then, when I got picked up [to go back home], I would also get weighed on her scale…. [My sisters] might have a treat, maybe ice cream or something, but my treat would be an apple if I gained weight at my nana's. 14.1

Almost all participants (n=6) who described their family as a source of weight stigma also experienced weight-related abuse and/or neglect within their family. One participant noted that her thinner sibling received preferential treatment from their father. Another participant described parental punishments as weight-related, reinforcing messages about weight loss or the unacceptability of participants' weight status:

> [My sister] kept in touch with him, and [our father] supported her, gave her cars, supported her through college, all this other stuff. And then, my sister got engaged. And at the engagement party…she got to see him treat me the way he treated me. And so, she confronted him and said, "Why are you treating her like shit?" And he said something along the lines of, "Well, she's fat. She deserves it." 20.1

> My dad was really critical of my weight. It was always talked about… When we would misbehave or had a chore to do, or we didn't do it, then he'd make us do sit-ups or pushups or we'd have to run around the block. It was physical stuff. And I always just felt like that was geared towards me… 7.1

Although most participants' stories described members of the immediate family commenting on their weight status, the comments sometimes also came from extended family members:

> I remember being in seventh grade, and we had taken a trip out to my grandparents. … It was for summer, and I had shorts, but my grandmother thought that I was too fat for shorts. And so, I had to go and get another long pair of pants…. 20.1

Participants described comments and differential treatment related to weight status as a source of hurt, conflict, and familial tension. They internalized these messages about their weight status and began to identify being of a higher weight as problematic from a young age.

Direct Experiences: Weight Bullying from Peers. "I Need to Keep People at Arms- Length."

Participants described weight bullying by peers at school as another source of weight stigma. Weight bullying contributed to internalized weight stigma and limited social belonging:

> Got teased a lot, oh God! Middle school and high school was rough, teased being the fat kid. I had a lot of like internalized self-esteem issues around that… 1.1

> I remember friends not wanting to talk to me. People not wanting to hang out with me. I remember being made fun of… 6.1

> And my peers referred to me as plump. The earliest memories I have of peer interactions are the plump kid, the chubby, plump kid. As an adult, I have looked at pictures…. I'm not. I'm not chubby. I'm not obese. I'm not even overweight. I am an averaged sized – I'm not thin but I'm an average sized 5-year-old. But I was referred to and had the self-image of being heavy and my medical stuff refers to me that way. 16.1

Weight bullying ranged from negative comments and exclusion to destruction of personal property and sabotage on school projects. Aside from sharing the verbal insults and public ridicule they experienced, one participant described specific instances where bullying escalated:

> Another girl was just picking on me in our home at class and just did stuff, you know, turned on, turned up the iron so that…it burned a hole in the shirt that I was ironing. And I mean, she put a coat that I had in the toilet and peed on my coat, and it was just terrible, terrible things. 14.1

Often the participants had no close friends in school or if they did have a peer group, the peer groups they bonded with had also been "othered" for various reasons such as academic achievement, appearance, behavior, etc. These early social interactions affected the way they related to others throughout their lives. Some participants remained introverted and cautious when meeting new people, even in adulthood:

> Like I've always been shy, never had the confidence to put myself out there, because of the way I was bullied or made fun of and I had like certain friends that were also kind of I guess in that category where they were shy but we all got along together. 3.1

> But I never really had any close friends…. I am feeling extremely lonely, and I ended up going to see a therapist. One of the key things was I really don't have anybody to talk to. I don't have a soul sister. 11.2
>
> …Because it's been my experience that I need to keep people at arm's length, because if I don't, they're going to take the opportunity to pick on me because of my weight… I had a lot of acquaintances, I knew a lot of people, but I didn't have friend friends…. I don't make close friends easily. I don't have many close friends. And I've got a lot of acquaintances. 24.1

One participant described relentless weight bullying in secondary school. While attending a women's college, she discovered body acceptance and learned about weight stigma. In this setting, she felt supported and protected by like-minded people. Her support systems were disrupted when she moved to another region of the United States and re-experienced feeling othered due to her body size:

> …I went to graduate school [on the west coast] where everyone is super health conscious and like weirdly obsessed about their bodies…. all of sudden, everyone was about like 90 pounds and tanning and all this other crap. And so that was a hard adjustment because I think I definitely became much more aware of my body size and how I moved through the world, particularly in that kind of space. And everyone was like moralizing food… I got through grad school, I found like people who were like, you know, not into that kind of mentality as much, where wellness was equated with how fit you were… 1.1

Weight bullying impacted participants' social connection with their peers. Early experiences with learning their bodies were different and unacceptable to others sensitized participants' future social interactions in advanced education and workplace settings.

Indirect Experiences: Parental Modeling. "The Body is a Project."

Internalized weight stigma is self-directed negative beliefs about oneself based on perceived weight status (Ratcliffe & Ellison, 2015). All but one participant described parents' modeling internalized weight stigma. This modeling occurred when parents spoke negatively about their own weight and role modeled efforts to lose or maintain weight. Two participants noted attitudes about weight were intergenerational:

> My mom had her own eating, body issues. And of course, we know this is family… generated. And that wasn't particularly helpful because she definitely had the kind of internalized fat phobia stuff, too. 1.1

> So, my maternal grandmother had a lot of food and weight bias issues. My grandmother was always very, very thin but she had a lot of issues related to this, which she passed onto my mother, which my mother passed onto me… Because of that, my mother had me on diets by the time I was 18 months of age. So, in her fear of having a fat child, she, literally, created one. She made it a lifetime of weight struggles and metabolic disorders and obesity out of her mother's fear of trying to prevent it. 16.1

Participants also learned about internalized weight stigma by watching their parents. While it was common for participants who reported direct weight stigma in families to have dietary restrictions imposed on them, participants who experienced indirect weight stigma typically self-imposed restrictions, often copying their parents' weight loss strategies. Two participants described overhearing their mothers express dissatisfaction with weight and body shape. The participants described learning from her mothers that the body requires constant attention to maintain or improve:

> I was never a skinny child. I was about an average sized child until I hit adolescence and then I started to gain weight and then…by high school, I was decidedly overweight… and that's when I started going through…attempts at dieting. 'Cause my mother was like always on a diet, always trying to lose weight. And…so I kind of had this vision that from looking, watching her that the body is a project… that you're always supposed to be working on yourself… 2.1

> My mom struggled with her weight too…My mom never got that big. She was just frustrated about her weight a lot. So, we kind of just heard that message growing up. She was never critical of us and our weight, but it was just on her mind a lot. 8.1

Two participants shared stories about how their parents' attitudes about weight status remained a focus, even when facing terminal illnesses. One participant found the focus on weight status at the end of life to be shocking, confirming just how deeply embedded her mother's internalized weight stigma was:

> She ended up getting skin cancer, melanoma, extremely metastatic. And so, she passed away from that… and my dad feels like if she would've lost weight that she would have maybe been able to fight that better because cancer is like that. 22.1

> I remember the year my mom died, she got pancreatic cancer…and I remember her saying in the hospital one time, "Oh now I'm at my goal weight." And I thought wow, okay. 8.1

Participants' weight stigma began at an early age leading to a lifetime focus on weight status. In families, participants learned a higher weight body was unacceptable, both directly and indirectly. Experiences of weight stigma outside of families strongly reinforced this message.

Systems Experiences: Weight Stigma in School and Health Systems. "You Gotta Do Something About Your Body, Kid."

Children learn about their bodies in school through health or physical education classes. Children also learn about their bodies during encounters with healthcare providers in a clinic or school setting. As a part of learning about their bodies, children begin to identify differences in appearance between themselves and others and internalize the reactions of others to their bodies. In particular, participants described how encounters with school nurses contributed to internalized weight stigma:

> … I distinctly remember being weighed in school, because they did health reports. And I have this very clear memory of…being 149 pounds at 10 years old and somehow that was a bad thing. [laughs] That was not good. And so spent probably most of like my prepubescent years to middle school where there's a lot of focus on eating and dieting and kind of needing to be smaller… I have this vague sense of the school nurse having to have a conversation with my mom about weight. …Around that time, that was when the weight conversations were always present at the doctor's offices. That was always a concern from medical professionals… you are noticeably fat and that internalized message of "you gotta do something about your body kid." 1.1
>
> Sometimes, I think I interpreted all the attention as being critical. So, I always felt like, when the nurse came, that I was bring criticized because of my weight, and like I should have been able to do something about it. And same with… It just seems like healthcare, throughout my younger years especially, it always focused on my weight. Everything that happened was because of my weight, whether it was true or not. 13.1

Participants shared stories about the school or health system labeling them as overweight and described how this label underpinned future health care experiences. In some cases, participants' parents sought help to address their child's weight while in others, primary care providers provided the impetus for this focus, referring them to specialty providers who focused on weight management:

> It was going to the doctor it was like yeah, she weighs too much. She needs to go on a diet. My dad had seen the same doctor. He was given a diet by the doctor to follow. He gives me the exact same diet, an adult and a child, the exact same diet. 11.1
>
> When I was… maybe first grade or so, we took a trip to [the city] to see a special doctor to help diagnose why I was overweight. And so, again, it's always just been part of my life and really, like I said, always overshadowed my life. 13.1

Experiences of weight stigma in school and health settings reinforced messages received or observed from family. Weight management became a major focus in participants' lives, typically from a young age. The focus on weight management would become a lifelong project, continuing on even after bariatric surgery.

Childhood Patterns of Disordered Eating

Participants across the sample described weight cycling throughout their lives as the result of patterns of disordered eating. Based on these data, I define disordered eating as being preoccupied with weight, food, or diet, engaging in severe food restriction, performing rituals with food such as binging after a cycle of restriction, or aiding weight loss with substance use, regardless of weight status. Many participants described disordered eating behavior, which typically began in childhood, as a response to traumatic events and/or family stigma.

Food as Comfort. "Food Was My Friend."

Almost half of the participants (n=9) described having Adverse Childhood Experiences that included abuse and neglect. Participants who described being impacted by multiple childhood traumas shared early memories of eating food to comfort and soothe distressing emotions. Eating was a pleasurable event that distracted from negative feelings such as loneliness, stress, or sadness:

> Food was my friend. It made me feel good. I felt that I didn't have stress or anxiety when I was eating. That was my comfort. 7.1
>
> So, there was a lot of emotional eating, which was a problem, which is why I was big was because food was always a comfort. Food was always just something that the whole experience made me happy. 26.1
>
> I always turned to food for comfort. I would, at the age of seven, eight years old, I was running home from school, and I would make a box of macaroni and cheese and eat the whole thing. 23.1

One participant described using food as a coping mechanism as early as five years old in response to multiple childhood traumas, including food insecurity. Although she internalized messages from family, health care providers, and peers at school that her weight status was problematic, she felt that her family simultaneously encouraged her to use food as a coping strategy:

> I definitely used food as a primary coping really early on. And that was something that I learned. I don't know how but I did. And in a lot of ways that was like, not even tolerated but kind of encouraged by my family because of all of the shit that I was dealing with. And by the time I hit middle school and high school, I was like I'd rather eat than do

> drugs, which is what everyone else in my family was doing. So, I was like food is great. 1.2

Another participant with multiple childhood traumas said food became not only a source of comfort but also a protective mechanism. She sought comfort, protection, and control over food intake as a way of coping with unpredictable and challenging dynamics with family and friends:

> And I think, food gave me a purpose and it made me feel good when I ate. And I feel like when I would eat food, it would give me endorphins. And food was my thing to focus on and it was my friend and it kept me busy. But yeah, I think that's the only thing I would describe as protector. 7.2

Participants used food as a coping strategy to soothe the effects of exposure to childhood trauma. Participants could typically recall the age around the time that they began using food to cope with life events and related their behavior to specific experiences such as sexual abuse or living with a parent with mental illness.

Concealed Eating in Response to Weight Stigma. "Forbidden Food."

The root of some participants' patterns of disordered eating occurred in response to weight stigma from family. Some families imposed food restrictions on participants due to concerns about weight status. In response, participants learned to hide when they ate to avoid further restriction, stigma, or conflict from their family. One participant also described how her family taught her to ignore hunger and satiety cues, resulting in dysregulation of eating patterns. At times she would be restricted from eating dessert in an effort to help her lose weight, and other times she would be required to finish everything on her plate to receive dessert:

> And I remember one time getting some money from my grandmother…and buying this bag of candy, which, to me, was like a treasure chest and wanting to eat all of it before I

> got home because then, it was going to be supper time. Lord knows that if my mother had known or my father, it would have been hell on wheels…So, I learned about closet eating, about hiding it. And even with coming to a place of even if I had been eating, eating beyond fullness because I had to finish my meal. I had to finish my dinner. 11.1

Concealed eating habits also created a positive feedback loop because participants felt a rush from eating without stigma and a thrill from getting away with it. For participants who experienced food insecurity or food restriction, the experience of eating food outside their usual routine created a pleasurable and reinforcing physiological response:

> I remember finding the Red Hots in the bakery portion of the pantry and stealing three or four at a time, and there was a kind of rush that I was getting away with something, and there was a rush because it was sugar. 20.1

The thrill of concealed eating was not limited to high sugar or high fat foods. Another participant described how her mother required a special diet due to chronic gastrointestinal issues. The foods her mother ate were supposed to be off limits to other household members, but the participant gained pleasure from eating these foods secretly because she was otherwise restricted from them:

> So, for me, it became like a treat, like a forbidden food, because they were just her food, and I wasn't supposed to eat it. But then, I would go sneak them because I thought they were good. 1.2

One participant described how concealed eating manifested from disordered eating patterns. Concealed eating necessitated eating all the forbidden food the participant possessed so that they could dispose of the evidence to avoid weight stigma. Periods of food restriction made it difficult to consider throwing some of the food away to avoid being caught eating it:

> So, the secret stuff, like, "I got a bag of – I bought them. I ate half of the sleeve, now I'm gonna finish the rest and now, I've gotta get rid of the evidence. So, I'll just finish it off." Or just not being able to stop, like, "Oh, this is so good." 25.1

Participants learned to conceal eating certain types or amounts of food to avoid weight stigma. For many concealed eating became a lifelong pattern. Concealed eating patterns persisted for some participants after surgery because they wanted to avoid attention on their new eating regimen or if they ate something that was not endorsed by the bariatric program.

Weight Cycling. "I've Probably Gained and Lost a Thousand Pounds."

Most participants reported a lifelong pattern of engaging in disordered eating for the purpose of weight loss. In many cases, participants felt driven to lose weight due to weight stigma. Participants also described behaviors learned from parents consistent with bulimia and anorexia:

> And…of course you know kind of hitting that sensitive like freshman in high school age where you feel sort of acutely aware, you know, that you're different than everybody else. So, I started trying to lose weight but my efforts at losing weight were very…very disordered. I went through bulimia and anorexia. 2.1

> When I was 19… they did all of these metabolic tests and stuff on me. They, essentially, determined that A) I was borderline anorexic, not in my body but in the way I approach food, the way I think about eating, the way I do or don't want to eat…. And B) that I had slow metabolism, metabolic disorder. 16.1

While some participants began disordered eating as children, others cycled between severe food restriction and binging without purging after becoming adults, a pattern that persisted throughout their lives. These participants described patterns of disordered eating

through obsessive tracking of food intake and weight loss. Participants pursued bariatric surgery hoping to achieve sustainable weight loss after a lifetime of weight cycling. Many of the participants described weight cycling as distressing and difficult to experience repeatedly (n=15). One participant described how with each weight loss effort, she would initiate new tracking systems as a way to signify a new start and avoid reminders of past failed attempts to maintain weight loss:

> It's just such a terrible feeling going up and down repeatedly on that scale… And I try to find all different ways to keep track of what I'm eating and try to have a fresh start. So, I'll create an email address in Gmail…. And it's almost like you're creating different personalities. 14.1

> So, many diets, many, many diets, many pounds lost and gained. It gets exhausting as you know. 8.1

> But yeah, I've always been overweight, and I've probably gained and lost a thousand pounds over the course of my lifetime. 24.1

In addition to traditional dietary approaches that involved obsessive tracking and weighing, participants related a history of using various substances to support weight loss. Friends and family systems taught that substance abuse facilitated weight loss:

> So, [my friends] partied a lot, and we were doing cocaine and stuff, and it was like making me not eat as much. I lost a bunch of weight, and I was like oh, this is great. I'm losing weight. So, really unhealthy but hey, if you lose weight, it's all good. 8.1

> My mom would start me doing black beauties and she even had me selling them for her. Black beauties, she was taking them for weight loss, but they weren't working. My mom had me selling drugs. 23.1

Weight Offered Protection. "***The Bigger I Was, the More Invisible I Was."***

After bariatric surgery, some participants realized their higher weight had served to offer protection, something that was lost as pounds were shed. One participant described the increased attention she received after losing weight as uncomfortable because she had learned to avoid being noticed in response to a lifetime of weight stigma. This participant and others described their pre-surgery higher weight as protective armor:

> … I didn't have that armor to protect me…. But that's what messed with my head even more because to go from not really being the person that is anybody's pick to being everybody's pick, to being the popular person, to being that person that everybody wants, that messes with your head. Because you don't know how to take all that attention because you're never had it. 6.1

> And then, like I said, later, I started to gain weight and I really think that that was a protective mechanism to keep people away from me. 25.1

> My weight is almost like a security blanket because the bigger I was, the more invisible I was and I really enjoyed that. And when I lost weight, was seen a lot more and I got the comments like, "Oh, you look so great or this or that." Or even just strangers, I feel like they're looking at me and it makes me super, extremely uncomfortable. 26.1

Participants shared reflections about the roots of their disordered eating patterns and how they maintained them throughout their life. Disordered eating behaviors were described as both helpful and harmful, at times being a source of emotional support while at other times

contributing to distressing emotions. The participants sought bariatric surgery to address weight and health concerns, including eating behaviors. Outcomes from surgery varied and the two trajectories appeared to be associated with divergent early childhood experiences.

Divergent Trajectories

In this section, I describe the *Improvement* and *Persistence Trajectories*. Each begins with a summary, followed by a description of childhood adversities, and concludes with a discussion of post-bariatric surgery outcomes. Hence, the trajectories show patterns of childhood adversity and their effects later in life (Table 3).

Table 3

Childhood Adversity and Post-Bariatric Surgery Outcomes

Early Childhood Experiences	Post-Bariatric Surgery Outcomes
Lower ACEs (Excludes abuse and neglect) Less challenging family dynamics Increased social support and belonging Decreased weight stigma from family Depression less severe and later onset	Reduced disordered eating Depression less severe Maintained weight loss
Higher ACEs (Includes abuse and neglect) More challenging family dynamics Decreased social support and belonging Increased weight stigma from family Depression more severe and earlier onset	Disordered eating persisted Depression severity maintained Weight regain common

Improvement Trajectory

In the *Improvement Trajectory*, participants reported fewer childhood traumas compared to those in the *Persistence Trajectory* and none reported abuse or neglect. Overall, the participants described less challenging family dynamics, greater social support and belonging, rarer instances of weight stigma from their family, and fewer sources of weight stigma. In contrast to the *Persistence Trajectory* participants who primarily reported depression onset before their teen years, participants in the *Improvement Trajectory* reported depression onset in

their late teen and adult years. Participants in the *Improvement Trajectory* were also more likely to report positive post-surgery outcomes relative to those in the *Persistence Trajectory*. Specifically, *Improvement Trajectory* participants reported amelioration of disordered eating and depressive symptoms and sustained weight maintenance.

Early Childhood Experiences

Participants in the *Improvement Trajectory* had more secure and stable childhoods than those in the *Persistence Trajectory*. Most of the former grew up in homes with both parents present and involved in their upbringing. While some *Improvement Trajectory* participants mentioned that their family did not have a lot of money growing up, most did not experience housing instability or food insecurity. Only one participant in the *Improvement Trajectory* lived with a parent who suffered from mental illness and none witnessed or experienced violence in their home or local community.

Supportive Home Environments. "A Loving, Caring Family." Participants in the *Improvement Trajectory* experienced fewer ACEs. In addition to having loving and supportive parents, many had siblings with whom they had close relationships during childhood and maintained throughout their life. Generally, participants in the *Improvement Trajectory* did not experience challenging family dynamics:

> So, I had a pretty undramatic childhood. It was great, very supportive. 8.1
>
> We were a close family, and close in age as well, in addition to just being close. 13.1
>
> … I know that I was in a loving, caring family. I know that everything was great. 24.1

Two participants' parents divorced during childhood. These participants experienced their parent(s) dating other people and remarrying. Unlike participants in the *Persistence Trajectory*, none in the *Improvement* group were abused by a stepparent. Both participants reported the parent they lived with was involved in their care, and they felt secure and supported. One participant described a difficult time in his life when his mother remarried and lived with her new husband. Instead of moving with his mother, he lived with his sisters:

> But yeah, it was a pretty good life I had, all things considered. My parents got divorced when I was 10. They separated when I was 8. And my mom had a series of boyfriends… she actually married one of the guys, a much older guy. And she moved in with him. And then I had to live with my two sisters for a little while. 12.1

Although the participant described the time when his mother moved away as traumatic and confusing, he also said he opted into the living arrangement as living under his sisters' supervision offered more freedom. The participant described that although he did not dislike his mother's new husband, he was not interested in living with him due to his stepfather's advanced age. Later, he added that his mother was readily available by phone during this time and frequently checked in on him and his sisters:

> I just kind of rolled with it. I think I tried to kind of look on the bright side, like, you know, when you're a 13-year-old, it would be kind of easier to get away with stuff and be a little rebellious when you're living with your sisters, rather than your mother. 12.2

The participants in the *Improvement Trajectory* reported more economic stability during childhood relative to those in the *Persistence Trajectory*. Although some were aware of financial constraints, they learned how to manage a budget from their parents. Parents of participants in

the *Improvement Trajectory* were financially secure by the time participants reached adolescence:

> So, growing up was very comfortable. I did not want for anything, but I did not get everything I wanted. 24.1
>
> …We took family vacations. My dad worked and like I said, my mom was able to stay home. They budgeted. So, they taught us budgeting. 22.1

One participant in the *Improvement Trajectory* experienced housing instability and food insecurity during childhood. This participant's mother would go without eating to ensure the children in the family had enough food. Although the participant moved a few times during childhood, she felt secure and well-supported in each home:

> My mom worked as a receptionist, and she literally made $2.00 too much to get any kind of assistance. So, she didn't get any kind of daycare assistance. She didn't get any kind of food stamps, anything. And so, my mom would go without eating. 6.1

The majority of participants in the *Improvement Trajectory* reported no ACEs. The ACEs present for participants in this trajectory included divorce, living with a parent with mental illness, and housing instability. All participants in this trajectory felt loved and well-supported by their families. Along with less challenging family dynamics, participants in the *Improvement Trajectory* were less likely to experience direct weight stigma from their families.

Less Direct Weight Stigma from Family. "A Serious Conversation for Us to Be Healthy." Only one participant in the *Improvement Trajectory* experienced direct weight stigma from her family in the form of food restriction relative to other family members. For others, conversations about weight centered around health goals and more flexible eating behaviors. A

key difference between the trajectories was that in the *Improvement Trajectory*, discussions about weight did not include attacking the child's character:

> But in the household with my parents, it was always something that was more positive. My parents never really put us down but they did try to make it a serious conversation for us to be healthy. 3.1

> I don't know that we've really talked about [body size], aside just from the facts. You know what I mean? Because of body size, we talked about where to get clothes and that kind of stuff, but I don't think we ever really talked about what it means or how we got that way or anything like that. 13.2

Other participants' families never commented directly on their weight. While their parents worked to instill positive self-esteem in their children, participants internalized negative beliefs about higher weight bodies by observing their parents' self-criticism of weight status. Sometimes, participants developed negative feelings about their weight because they maintained a higher weight than their parent who was deemed beautiful or attractive:

> And my mom was 35 whenever she had me, but she was still in her prime. She was still gorgeous and thin…. She has long legs and big boobs, and it was I always looked at her and I was never that…. But she never commented on my weight. 6.1

> My mom struggled with her weight too…. So, we kind of just heard that message growing up. She was never critical of us and our weight, but it was just on her mind a lot. 8.1

Some participants in the *Improvement Trajectory* did not experience significant weight gain until they reached late adolescence or adulthood. Later onset of weight gain shielded them

from experiencing direct weight stigma from family early in life. One participant began experiencing weight stigma from family when he gained weight after moving away from home:

> They didn't really say much [about my weight]. I remember my brother one time bought me this weight loss formula type thing that it was being advertised on the [radio] station…. It was all probably a big joke. 12.1

Participants in the *Improvement Trajectory* experienced more supportive home environments. Outside of their family, the participants also tended to experience more social belonging, and have greater sources of social support than participants in the *Persistence Trajectory*.

Greater Social Belonging and Social Support. "I Did Have Some Good Friends." Social belonging refers to a person's sense that they are a part of a system or environment (Choenarom et al., 2005). Social support is defined as a person's social network and perceived availability of resources. Although participants across the sample experienced weight bullying, those in the *Improvement Trajectory* had more social belonging and more sources of social support relative to those in the Persistence *Trajectory*. Often, *Improvement Trajectory* participants' social interactions were focused on a small group of close friends:

> We were sort of the nerdy girls, sort of the good girls, and some of us were really super smart honors students, a lot of us were country girls in 4-H and FFA [Future Farmers of America] and things like that, and we were kind of a close little cadre of people. So, yeah, I was not popular, but I did have some good friends. 2.2

> Like I've always been shy, never had the confidence to put myself out there, because of the way I was bullied or made fun of and I had like certain friends that were also kind of I guess in that category where they were shy but we all got along together… Uh, school

> life, socially it wasn't always the easiest because I just had that small group of friends that I hung out with. 3.1
>
> I related more to the band teacher and to the health teacher than I did to any of the students in the classes. At high school, I had three friends. They were the four Musketeers. 24.1

One participant was disciplined for truancy as a freshman in high school after she avoided going to school due to weight bullying. She eventually developed some friendships but was unable to integrate herself with the group due to misaligned schedules. Ultimately, a lack of social belonging and recognition led her to withdraw from high school and complete a GED before attending university:

> …my sophomore and my freshman year, I finally made friends. I had friends and things like that, but it was like they didn't have the same lunch that I did, and it was I always felt so by myself. And finally, I had friends at the same lunch. And then, my senior year, halfway through, I dropped out... 6.1

Along with weight bullying and feeling othered, another participant experienced barriers to making close friends before attending university because she lived in a rural community with no access to transportation. As an adult, she developed community through church, but the pattern of lacking close friendships remained:

> [Growing up] I didn't have a lot of close friends, but part of that could have been because there was no way to get to interact or do anything because living on the farm and we only had one car.... And even now, not so much different, but I think about when I hear people say their best friend, like, well, gosh, if I had [to name a] best friend. I don't know who that – I have a lot of friends, but not one that I could say is my best friend. 13.2

Other participants experienced adequate social belonging through sports, church, or other common interests:

> [Socializing] was either going and cruising somewhere, or hanging out at somebody's house, or whatever, pretty normal high school stuff. We had kind of our squad that always hung out together. I did some sports. 8.1

> In high school, high school was pretty good. Like I said, I'm active in my church and so I had church friends. And because I did play some sports, I had sporting friends. But, I never felt like the popular girl. 22.1

As adults, participants reported having friends and feeling secure in those friendships but did not maintain close friendships. In most cases, these participants knew people who they could reach out to for help when needed, but generally limited social interactions:

> I don't really… have close friends that I talk to like that right now. I'm introverted, and kind of solo, and I ask a neighbor if I need like a tool or something. It's a pretty small circle of people that I would call. 8.1

Despite experiencing social belonging amongst a small circle of friends, participants in the *Improvement Trajectory* had greater sources of social support compared to the *Persistence Trajectory*. One source of social support included extended family:

> So, it was my mom and then my brother, my younger brother…. And so, for the most part, single mom, no high school education…. And so, [my mom's older siblings] just basically adopted my brother and I and so that they were grandma and grandpa…. So, they were a support system. 6.1

Overall, participants in the *Improvement Trajectory* experienced greater sources of social support than those in the *Persistence Trajectory*. The participants felt supported by relationships and resources at school, church, and stable home environments. Greater social belonging and support led to differences in depression severity and onset for participants in the *Improvement Trajectory* compared to those in the *Persistence Trajectory*.

Depression Severity and Onset. "Small but Never Ending." Participants in the *Improvement Trajectory* experienced depression that was less severe and with a later onset than those in the *Persistence* group. Some participants recalled experiencing depression in childhood or adolescence and attributed it specifically to internalized weight stigma. However, they struggled with identifying their experiences of sadness as depression because they generally felt satisfied with support received from family and/or friends:

> I've never really been… a depressive person. I kind of always hid my feelings. Because the only thing I really was truly depressed about was probably my weight. Other than that, like my family life, my life with my friends and everything was always pretty good. 3.1

> …Maybe not always suffered from depression, but I feel like I was always sad or lonely as a child. And again, I just always blamed it on being overweight and kids not wanting to play with me, but maybe it was something else. I don't know. 13.1

Other participants described themselves as generally optimistic and resilient. Although they experienced temporary periods of depression, they were able to cope effectively through these episodes. Some participants in this group accessed therapy periodically throughout their life while others sought medication for depression. Some participants combined medication and therapy to address depression and other mental health challenges:

> So, I've always been… I'm pretty optimistic and positive. I'm really sarcastic or whatever, but I'm the cheerleader. I'm somebody that's always motivating people and for the most part, whenever I would get depressed or whatever, I'd get bad, it would be just for a little bit… 6.1
>
> I've always tried to be positive. There was a period probably in my mid-20s, especially after my mom passed away where I did feel like I was struggling with some depression. And, I did talk to a lady. 22.1

For some participants the onset of depression occurred during adolescence. One participant described a particularly stressful time in adolescence when he experienced sadness. Sadness was limited to the time when his parents divorced and his mom became absent after getting remarried. After getting settled in the new family structure, he reported good mental health until he reached adulthood when depression and anxiety recurred. Similarly, the onset of depression occurred in adulthood for another participant which, although not severe, remained ever-present:

> But, I remember there – between about 10, and 13, there were probably five, or 10 nights in there I cried myself to sleep, just kinda wondering about who loved me, and what life was about, and where things were going, and why things were happening to me, you know?... You know, it was all kind tumultuous for a few years there. 12.2
>
> Really, I have never had depression as a youngling… I would say that over the last, I'd say over the last 20 years or so, on a scale of 1 to 10, my depression level would be pi [π], small but never-ending. 24.1

Supportive home environments, ample resources, and social belonging delayed the onset of depression and made it less severe in most cases. Additionally, participants in the *Improvement Trajectory* tended to seek treatment for depression long before having bariatric surgery. Hence, although depression was still part of their life, *Improvement Trajectory* participants were positioned for better mental health outcomes after bariatric surgery than those in the *Persistence* group.

Improvement Trajectory Post-Surgical Outcomes

Improvements in Depression. "I'm Feeling Much Better." Participants in the *Improvement* group experienced less severe depression and were more likely to seek treatment and experience amelioration of symptoms of depression after bariatric surgery compared to those in the *Persistence* group. One participant did not realize she had been depressed throughout her life until after having bariatric surgery when she was no longer able to use food to cope:

> So, [my doctor] gave me some medicine for depression, and she gave me some medicine for anxiety, and I would take this medicine and I started realizing, "Oh, dude, I've got these issues that I never knew I had." Because, you know, I couldn't eat. I was eating, the way surgery prevents you from doing that. 6.1

Along with medication and therapy, changes in participants' mobility and physical fitness after surgery improved their mental health:

> …walking was good for me. I'd get upset and I'd go outside. And it would give me the ability to do whatever it is that I needed to go. I could pray. I could meditate while I was walking, and I could ground myself. And I did all those things while I was walking. 6.1

> I think [my mental health is] good. I felt good before that. I feel good in different ways now as far as just being more capable. I think I feel more confident. 8.1
>
> Once you get on a roll, and you start losing weight and seeing changes in your body and your quality of life, and you're wearing smaller clothes, and you look better, and you feel better, everything – your body's this whole thing where then your mental health gets better too, and you start feeling better about the world and being nicer to people and friendlier. 12.1

One participant felt happier overall and was pleased with her ability to maintain weight loss after surgery. The success of surgery gave her a new perspective resulting in more good mental health days than bad. She enjoyed new freedoms around travel and experienced less stigma after achieving a lower weight:

> … I would say it's 90% good days, 10% bad, and even bad, it's little things. I have a good life. 13.2

Two participants had depression recur as a result of worrying about the perceived failure of surgery:

> Even just Monday, I felt down. I was bummed. I was like, "Man. I don't wanna screw this up." I cried a little bit. So, I guess, is that considered depression?... I'm like, "Okay. I'm feeling down, but I need to do something." 22.1
>
> Since then, I was feeling good in 2017. I started to gain weight and chose to eat poorly through 2018…. I'm getting bigger, so I'm getting sadder because of the perceived waste of money, the perceived mutilation of the body, the tried and failure, kicking myself in the pants because of it. 24.1

Although the participants expressed disappointment and identified the root of their sadness, they reported that overall, their outlook and overall mood had not declined to lows previously experienced. They both felt confident in their ability to get back on track with weight loss goals because they had developed healthier patterns of eating and experienced success with weight loss after bariatric surgery.

Participants in the *Improvement Trajectory* developed new coping strategies and were able to stabilize depression after bariatric surgery, in some cases even after it had recurred. Improved coping strategies and mental health supported most participants to maintain weight loss after bariatric surgery:

Improvements in Disordered Eating Behavior. "A Natural Governor." All participants in the sample experienced disordered eating behaviors before bariatric surgery. Compared to the *Persistence Trajectory*, participants in the *Improvement Trajectory* had greater awareness of eating patterns and experienced better results with binge eating recovery. Some participants gained control over their food intake and were better able to moderate the types and quantity of food consumed. Instead of eliminating certain foods entirely, participants worked to find a way to establish balanced and flexible eating patterns:

> … just staying on a healthy workout routine, knowing that it's okay if you miss a day, knowing that it's okay if you have a cheat meal or something – give yourself a little break, but make sure that you stay focused on your goals. 3.2

> I never don't think about food. I know that that is something that I am addicted to. And it is an everyday battle. I think the difference between now and the way that it used to be is that I didn't know that before. 6.1

> But, now, in the last three years, it's definitely – my mindset about it is more – instead of trying to abstain, it's more like trying to contain [unhealthy eating]. 12.2

While some participants in the *Persistence Trajectory* resumed binge eating after having bariatric surgery, participants in the *Improvement Trajectory* were less likely to do so. Some participants in the latter group were able to relearn hunger and satiety cues after bariatric surgery. They also described the surgery as a helpful barrier that imposed portion control:

> So, some of it's kind of a natural governor that keeps me from going back to some of that. But I still find myself with some of those habits. It's that this [surgery] gave me that physical barrier so that there's some damage control, and you can't go as overboard as you did before, so very helpful. 8.1

> And so, I still have that tool [gastric restriction], and it still works in that regard, so I'm actually very grateful for that. At least, even if I want to eat a lot of things to comfort me, I just can't… 13.1

Another participant had a long history of disordered eating that included anorexia, bulimia, and binge eating without purging. She worked with therapists specializing in eating disorders before surgery. Although she experienced success with losing and maintaining weight loss after bariatric surgery, it required a great deal of awareness to avoid reverting to disordered eating:

> And so, I try to just…I try to sort of like keep perspective. Like so I don't want to slip into disordered eating. Like I don't want to slip [into] bulimia. I don't want to slip into anorexia because I know I've been there. 2.1

Another participant enjoyed significant weight loss after bariatric surgery and became a "bariathlete." During this transformative time, he was able to eliminate binge eating, enjoyed a healthier diet, and began running marathons. Eventually, he regained some weight but maintained a significantly lower weight. He and others reprioritized health goals to decenter weight status and instead focused on physical fitness, better eating habits, sleep, mental health, and energy levels:

> Well, I'm feeling better about my health than my weight. So, like a lot of people…I try to make some habitual changes because for a good three and a half years, I ate pretty well, and I exercised regularly. So, I know it's possible to do that for long periods of time….
>
> I'm feeling good about my heart rate. My resting heart rate is down. I have more energy. I feel stronger. I'm sleeping better. My mental health is better. Everything's better because of the exercise. And I'm eating better too. 12.1
>
> At the end of the day, I am going to keep trying to be healthy and work on losing weight and staying at a healthy weight. I try not to make it all about numbers anymore though, because I went through a time where my weight just stalled. 3.1

Participants in the *Improvement Trajectory* expressed greater satisfaction and success with managing disordered eating after bariatric surgery. Some were able to gain control over previous patterns of eating while others found the physical restriction helped to enforce portion control. Bariatric surgery also helped some participants reconsider health goals.

Maintained Weight Loss. "I Feel Like I've Won the Lottery." Bariatric surgery enabled all participants in the *Improvement Trajectory* to lose significant amounts of weight. In tandem with establishing new eating patterns and addressing their mental health, most participants in this group were committed to engaging in regular exercise. For some, physical

activity helped not only to maintain weight loss but also manage emotions and reduce depression:

> So I kind of got myself out of it after a while and I kept pushing and going to the gym, working out, definitely was a huge, stress relief. I think it helped big time with my depression. Just like getting out all of my like adrenaline… It made me feel better when I was actually able to work out and push through those feelings. 3.1

> And so, it's been good that I felt like I have [eating] under control, and I'm able to go take walks, and I'm don't feel like I'm out of breath all the time. So, that's been good. I think had it not been for that, I'd really be struggling [during COVID]. 8.1

> When the weather allows, I usually get up and out for a walk by 6:30 in the morning, and I walk at least to get my 10,000 steps in. If somebody would have told me that before surgery, I would have said, "You're crazy. I'm not gonna go do that." 13.1

Most of the participants in the *Improvement Trajectory* maintained significant weight loss. Even in instances of limited weight regain, the participants remained committed to maintaining or reestablishing the habits that helped them lose weight after surgery. Two participants described how they continued to lose or work on maintaining weight because they enjoyed serving as a model to others. After experiencing weight stigma throughout their lives, receiving positive attention about their health habits encouraged them to maintain them:

> I felt like I helped a few people by setting a good example and showing what can happen if you really change your habits. So, that was rewarding for me…. And even though I'm heavier, I still wanna go back and talk about my experiences because this is real life. Sometimes you're doing everything right, and sometimes you're sliding on the wrong track. 12.1

> A lot of people have looked up to me and they are very proud of me. And that really feels really good, because after everything I've been through, I've never really felt that way from people. 3.1

In addition to addressing disordered eating and improving physical fitness, changes after bariatric surgery in the *Improvement* group included improved confidence and life experiences that were not possible before surgery, such as travel and leisure activities. Two participants said bariatric surgery was life-changing and had improved their life overall. In turn, these positive experiences motivated participants to maintain weight loss:

> I feel like I've won the lottery because of how much it's helped me with my health problems. Nothing in my whole life has helped me as much. 8.1

> I would just emphasize that no matter the negatives, or perceived negatives, I wouldn't hesitate to do it again. It's been so life changing for me. And even with the days that are difficult, it's still… I feel more hopeful. 13.1

Participants in the *Improvement Trajectory* had sustained success with bariatric surgery. All participants in this group were able to lose significant amounts of weight, and most could maintain weight loss. Participants who experienced weight regain were still able to maintain physical activity and worked to adhere to the nutritional guidance learned in the program.

Persistence Trajectory

Participants in the *Persistence Trajectory* survived multiple ACEs, including child abuse and/or neglect relative to those in the *Improvement* group. A higher incidence of ACEs was associated with patterns of persistent depression and disordered eating after bariatric surgery in addition to body dissatisfaction and greater difficulty maintaining weight loss.

Early Childhood Experiences

Persistence Trajectory participants reported multiple childhood adversities including neglect, physical, verbal, or sexual abuse, challenging family dynamics, more sources of weight stigma, and lack of social support and belonging. Participants in the *Persistence Trajectory* were also more likely than those in the *Improvement Trajectory* to experience weight stigma from within their family in the form of imposed food restriction. Finally, *Persistence Trajectory* participants were also more likely to report childhood onset of depression compared to the *Improvement* group.

Housing and Food Insecurity. "We Were Evicted Out of Our Houses." Most participants in the *Persistence Trajectory* experienced housing and food insecurity in early life. Participants often described intergenerational poverty as part of their family context. Poverty sometimes meant participants' families qualified for public housing or faced frequent evictions and moves. In some instances, low earnings required extended family to share housing:

> We were evicted out of our houses, or we had to move before eviction probably… Well, I think we moved something like 15 times before I was 20 years old, something along those lines…. So, we didn't have financial security. We didn't have food security. 20.1
>
> But, my aunts and uncles were still also living with us, too. We all shared rent in a big, giant house. 23.2
>
> But, as a young child, he'd get laid off in the winter and we would be on food stamps and he got unemployment. So, we had food insecurity when I was younger… 25.2

The unpredictability of housing and food insecurity led participants to feel unsafe in their home environment. Other compounding factors, such as abuse and neglect, further contributed to feeling unsafe within their family unit.

Abuse and Neglect. "There Was Always Violence." Along with intergenerational poverty and housing instability, *Persistence Trajectory* participants often experienced abuse and neglect from family members who lived in the home. Participants commonly described the abuse as an intergenerational pattern. Their parents had experienced various forms of abuse during childhood and repeated the same pattern due to learned behavior and sometimes mental illness. In some cases, participants described changes to these harmful family dynamics over time, with less abuse occurring as they grew up. All participants who experienced abuse tried to break the cycle by serving as a protector for younger siblings and undergoing therapy in adulthood:

> And my mom loved us but had her own set of issues, so she wasn't always the best person to go to and I…basically parented my sister in a lot of ways. 1.1

> So, I felt like if my dad was triggered or at times when it wasn't so great, there was a lot of physical and psychological, verbal abuse that was going on. And so, us older kids would try to shield the younger kids from that. 7.1

> I mean, we were beat. My mom was really strict, but my mom was, was 20-years-old and had three kids in diapers. She was abused by her mom. I just think she didn't know any other way. 14.1

Some participants' parents struggled with substance abuse, which further contributed to unpredictable and unsafe home environments:

> My father was a verbally abusive alcoholic. 11.1

> Things were very difficult for my childhood and my upbringing. I had an alcoholic mother and she married three alcoholic men before I was 11, and they were all awful. 20.1
>
> Because my mother had control of us, she would send me to whatever aunt or uncle would take care of me this year…. My real father was an alcoholic. 23.1

A few participants also witnessed violence and abuse amongst family members. One participant's experiences with violence and instability extended beyond the home environment and into her surrounding community. These interrelated and cumulative ACEs undermined feelings of safety and security:

> So, the domestic violence, I do have clear memories of that while [my parents] were together…. The sexual abuse…. And then, just poverty. My entire impoverished kind of – we also grew up in public housing so there was always violence, whether it was in your house or outside of your house. And so, just generally a not safe space for those years. A lot of substance abuse in my family and extended family. 1.2

Living with Parent with Mental Illness. "I Never Felt Safe." All *Persistence Trajectory* participants had a parent with mental health issues, which in turn negatively affected their own mental health:

> But I would say that I had a difficult childhood as talking about Maslow's hierarchy of needs, I never felt safe, per se. Living with someone that has PTSD, you can be doing nothing. You can spill a glass of water, and that can trigger them to have this huge reaction. 7.1

> Not a great childhood. My mother is diagnosed with narcissistic personality disorder and some very strange family dynamics went on around that…. You know, at the time, we all adored our dad. But in hindsight, I recognize – and he had already passed, but I recognized he had some responsibility in those family dynamics too. 25.1

One participant described her family context as generally nurturing despite the presence of other ACEs, yet sometimes her home environment was uncomfortable due to her mother's depression and communication style:

> I feel like her having the depression and everything, it's almost like I was predisposed to have it as well, just because I know it runs in families and – mental health things. But as far as growing up with her and the depression – she yelled a lot. She was a big yeller. 26.2

Other Challenging Family Dynamics. "A Lot of Yelling." In the *Persistence* group, challenging family dynamics were interrelated with other ACEs such as abuse and neglect. In some cases, fathers were unpredictably involved with their children due to substance use, incarceration, or divorce:

> …fathers are always kind of like in and out of the picture for various reasons like either incarceration or drugs or alcohol or just like abusive relationships. So, there was always kind of like this tenuous like, my father was around but like never actually like in the kind of family, parenting structure kind of a thing. 1.1

> A lot of triangulating, a lot of yelling, verbal abuse, lack of boundaries, physical abuse…. If not sexually molesting them, essentially molesting them through lack of boundaries, both emotional and informational, that's emotional incest. That was my family dynamic. I was my father's emotional spouse; my brother was my mother's emotional spouse. 16.2

Compared to those in the *Improvement* group, *Persistence Trajectory* participants were more likely to experience challenging family dynamics in connection to their weight and food intake during childhood:

> And my mom said that I was the only kid that would come back to the table of those five kids who would always ask for seconds. She said that I always was hungry, and it was very distressing to her because we'd have a meal, and then the rest of the evening, I'd be like, "I'm hungry. I'm hungry. I'm hungry." 7.1

> And so, it was that place of conflict, constant conflict with the shaming. Because my mom was the – as a younger adult, she was referred to as Mini Mouse. She was thin. She was tiny. She could wear the little clothes. She was cute. And here's her older daughter not being little, thin, and tiny and being overweight. 11.1

These participants' early life experiences were complex, interrelated, and had cumulative effects that led to internalized negative beliefs. In addition to other ACEs, participants in the *Persistence Trajectory* discussed painful memories of enduring weight stigma from their families. Direct weight stigma from family added to feelings of insecurity.

Weight Stigma from Family. "My Family Was Generally Fat Phobic." Although experiencing multiple sources of weight stigma was common across cases, experiencing weight stigma from family was more prevalent in the *Persistence Trajectory*. Some participants described weight stigma from family as interrelated with other forms of abuse:

> [My dad] was verbally abusive, in general, but when it came to my weight, there was one time when he came up to me and he took his hands and put his hands around his thigh and then, he put his hands around my thigh to show me how much fatter I was than he was. 11.1

One participant shared that her family's focus on her weight status was frustrating because she was dealing with other traumas, including sexual abuse, the loss of her father, poverty, and a lack of social belonging due to weight bullying:

> My mom was always pretty weight critical. My family was generally fat phobic, even though some of them were fat. Um [pauses], and yeah I want to say like doctors. I mean it wasn't in the sense of like overt, "oh my God you're fat," but that kind of veiled concern about like oh this is a problem. Like this is…and this is going to be the issue. …I was like really? That's the issue? I think there's a few other things going on in my life [laughs] that might actually be more concerning than how much I weigh right now. 1.1

All of the participants who endured weight stigma from their family regarded it as problematic and said it further contributed to challenging family dynamics that continued throughout adulthood. ACEs affected social belonging, social support, and led to the onset of depression during childhood or the teen years.

Lower Social Belonging and Social Support. "Anxiety Around Friendships." In the *Persistence Trajectory*, weight stigma, weight bullying, and ACEs including abuse and/or neglect contributed to lower social belonging and social support. One participant's home environment was unsuitable for inviting others over, creating a barrier to bonding with peers:

> …I didn't, I had like friends, but like not super close friends. I didn't tell them a lot about kind of home or like family, and it wasn't like I wasn't inviting them over to my crazy ass house. 1.1

Some participants described cycles of social belonging where they experienced intermittent connections with peers. Participants would sometimes attribute lack of social belonging to their weight while others were unsure what the barriers were:

> And I had a lot of anxiety around friendships… I would go years where I would have best friends. We'd be super close. And then something would happen. Then I'd have no friends. 7.1

> I was never the popular person. That wasn't my thing, but I had friends. I had one or two friends at every point of my growing up. In grade school, it was a little harder to garner friends… 20.1

One participant who experienced multiple forms of abuse and neglect from various family members, also lacked social belonging and social support from her extended family. She said that no authorities intervened to stop the abuse and when she reached out to other family members for help, no one extended support:

> But every time I'd call somebody in my family, nobody would come. 23.1

Another participant experienced social belonging despite weight bullying until she became a teenage mother. Although she continued attending school, her social support systems diminished for many years until well after she entered adulthood. The participant endured long-standing intimate partner violence in addition to living with a parent with mental illness and reduced systems of support:

> But as far as after I had my son, I lost a bunch of friends because I wasn't one to really go out and do stuff too much anyway. 26.1

Social experiences in childhood established a pattern that continued into adulthood. Participants in the *Persistence Trajectory* described difficulty establishing and maintaining social connections as well as accessing supportive resources to address food insecurity, stable housing, and advanced education in adulthood. Higher childhood exposure to trauma laid the foundation for lifelong struggles with mental health.

Depression Severity and Onset. "Depression is Something That Has Been Around Me for a Long, Long Time." Multiple and complex childhood traumas led *Persistence Trajectory* participants to experience severe depression and suicidality early in life:

> I went to the group home because I was suicidal and depressive, not because I was getting in trouble with the law. 16.2
>
> But I remember being super young and feeling like I couldn't go on anymore.… It was after my mom had had one of her drunk sessions, and I was just talking to [my sister], and it was really one of those… I'd be okay if I didn't wake up tomorrow kind of thing, and I was probably 12 or 13. So, [depression is] something that has been around me for a long, long time. 20.1
>
> I think I probably had a lot of anxiety and then that manifested in depression, true depression. And, I would say even as a child, I thought of self-harm. 25.2

Complex trauma histories sometimes made it difficult for participants in the *Persistence Trajectory* to identify when the onset of depression occurred. It was not uncommon for participants to mention they did not identify as a depressed person until seeing a therapist while reflecting back on the origins of their depression during the research interview:

> Honestly, and this is where it gets hard because the trauma started so early that I don't know if I ever didn't have anxiety, PTSD. [Depression] manifested in kind of

> withdrawing, retreating, isolating, not – numbing down. I think it happened so early, it became so normalized that… I don't even think it occurred to me at the time to be like you're depressed. That was just a constant facet of what I was dealing with. 1.2
>
> Actually, I think I was pretty depressed when I was just a little girl, but I didn't know that's what it was. 23.2

Despite other childhood traumas, including experiencing abuse and living with a parent with depression, one participant shared that her depression was delayed until she was post-partum after a teen pregnancy. She described her depression as periodically debilitating throughout her life:

> I just had so much guilt and was just crying all of the time. It was bad. And so, my mom has depression and anxiety. And my brother does as well. And so, it kind of runs in our family. 26.1

While it is not surprising that multiple sources of childhood trauma negatively affected the participants' mental health, it is notable that participants in the *Persistence Trajectory* were more likely than Improvement Trajectory participants to describe their mental health needs as unaddressed and unmet by the bariatric program. For this vulnerable group, inadequate mental health support resulted in the persistence of disordered eating and depression as well as more difficulty in maintaining weight loss after bariatric surgery.

Persistence Trajectory Post-Surgical Outcomes

Depression Persisted. "Then Depression Came Back." Weight stigma from their family was almost exclusively limited to the *Persistence Trajectory* participants who also experienced abuse and/or neglect. These childhood traumas led *Persistence Trajectory* participants to suffer from persistent depression after bariatric surgery. Participants in the

Persistence Trajectory discussed how depression recurred because of altered food intake and body image dissatisfaction as weight loss slowed or weight regain occurred:

> So, when I had the surgery and I started losing the weight that depression started getting better. I wasn't so depressed until COVID hit and I started gaining the weight back. And, then depression came back because no matter if I was eating the same, but I'm not out getting the exercise, so I was getting depressed again because I started gaining weight. 23.2

One participant thought bariatric surgery would improve her mental health as she healed her relationship with her body, but instead her mental health deteriorated after surgery. She said she was in recovery from bariatric surgery and sought help from outside the program because she had not found the support she needed within it. This participant felt weight stigma was embedded in the bariatric program, which she described as a diet culture that exacerbated her disordered eating:

> … I think like honestly I believed that [depression] would improve. Like I thought my mental health stuff…not like I would stop being depressed or I would never have anxiety, but I thought it would…I thought my relationship with my body and food as I got smaller would somehow have an impact positively on my mental health. And it definitely has not, and in some cases it's worse. And that's why I feel like I'm in this place of recovering from weight loss surgery, like it's like an eating disorder. Right? 1.1

The recurrence of depression was debilitating for some participants and led to one participant being hospitalized. Another participant was able to meet her responsibilities for work and family, but beyond that she was withdrawn and drained of energy:

> So, it was like along the year anniversary – the one-year anniversary – I was still struggling. I was still struggling. And they had just hired this psychologist in the bariatric team, and they wanted me to go see her and talk to her and try and deal with my food issues with her. And so, I saw her about maybe six times over the first year, and then it was set that my own depression was getting worse, and so I actually got hospitalized. 20.1

> Ultimately, I just sleep. I don't really want to do anything. I isolate myself. I do the bare minimum of just getting through the day, making sure my kids are fed and whatever but then, I'm just in bed and not doing good. 26.1

The mental health challenges experienced by participants in the *Persistence Trajectory* highlights the need for sustained mental health support after bariatric surgery for people with a history of trauma and disordered eating. A lack of mental health support to deal with disordered eating and depression led participants to regain some or all of their weight loss. One possible explanation for this finding is that participants did not realize the impact of their trauma until after undergoing bariatric surgery.

Disordered Eating Behavior Persisted. "I Couldn't Trust My Body." While all participants in the sample had a history of disordered eating before bariatric surgery, disordered eating more commonly continued after surgery for participants in the *Persistence Trajectory*. Some participants said disordered eating persisted because it helped them cope with the effects of trauma. Another participant shared that "closet eating" had always been a part of her eating routine and because it was so deeply ingrained, it persisted after surgery:

> Well, it's trauma-based. It's coming from the little girl inside of me that is really, really traumatized over the different things that I had to deal with as a child. And instead of

> turning to alcohol or drugs, I chose food. And so, it's the mindless eating for huge amounts of calories, and it comes down to being mindful when you eat…, and I find myself still mindlessly coming at food and coming to the table and that kind of stuff. 20.1
>
> With the closet eating, that became a lifelong – it started back then, but…it still carries on, so it's always there. 11.2

Bariatric surgical programs teach surgical candidates how to adhere to a pre-surgical and post-surgical diet to facilitate weight loss and allow the body to heal. Nutrition education in programs focus on what types of food to eat and when, food quantity, and liquid intake at various stages in the program. Some participants shared as time passed after surgery, they found their programs' nutrition guidance to be limited to the first six months post-operative. One participant's program actually caused her to distrust her body's hunger cues in favor of following a regimented plan:

> But for me, it became really difficult to eat and know what to eat, how much to eat, and what felt good and what was normal and what wasn't because I couldn't trust my body to, actually, tell me that anymore. And that's a really fucked up –I, basically, signed up for medical anorexia and for them to, basically, convince me to not trust my body to know what the hell I need and when I need it. 1.2

Many participants experienced a reprieve from feeling hungry during the first year after surgery. As time passed, feelings of hunger returned and participants had to work to address them. Because some participants had a history of dysregulated hunger and satiety cues, a lack of support for nutritional guidance set them up to struggle with maintaining post-operative weight maintenance:

> I'm like, "You don't know what it feels like in my brain when it's always thinking about food all the time, telling you you're hungry, you're hungry, you're hungry, and you're having to be like, 'I'm not hungry. I'm not hungry.' And you're arguing with this person in your head or you don't feel full. 7.1
>
> You know those sounds that roll around in your stomach, the hunger pains, the hunger sounds? I get those all the time. All the time. So, it makes me feel like I'm hungry. It makes me think I'm hungry. Even right after I've eaten those sounds will come. It doesn't matter whether I've eaten or not. When those sounds come around it makes me psychologically think, "You're hungry," even when I'm not. 23.2
>
> And so, I had not an eating disorder, it's disordered eating. I ate too much. Also, until I had weight loss surgery, I couldn't distinguish, "I'm bored," from "I'm hungry." It was all hungry. 25.1

Another participant was distressed by the narrow scope her program's nutritional support as she struggled to maintain weight loss while dealing with the return of the insatiable hunger she had experienced throughout her life. In addition to other demands on her time such as work, family, and trying to maintain weight loss, she spent time reaching out for support to address her concerns. Eventually this participant faced a lack of options for addressing her hunger. Some participants became anxious when hunger returned or they noticed their weight increasing after bariatric surgery. They tried different strategies to curb appetite and avoid overeating:

> I think year one, I was having a lot of food obsession and anxiety around gaining weight. And the hunger was back. And it was distressing to me. I was very distressed. And I asked for help multiple times. I'm like, "What can I do?" I talked to the dietician. And there was no resources. I remember even sitting [at] my appointment with the PA just

> bawling because I was like, “I’m drinking so much caffeine.” I was like, “I’m literally using caffeine to curb my appetite because I’m so distressed.” And I’m like, “What can you do to help me?” And it basically was like, “Nothing.” 7.1

Participants in the *Persistence Trajectory* struggled with the return of hunger and lack of coping strategies when food was no longer an option. At the time of the interviews, some participants had tried sleeping between meals or using caffeine or appetite suppressants to avoid eating.

Weight Regain Common. “I Feel Like I am a Failure.” Most participants in the *Persistence Trajectory* regained some or all of their weight after surgery. For the entire sample, any amount of weight regain was distressing. When Persistence group participants regained weight, they felt like failures:

> …All those failure feelings when you start like, either regaining weight or your body starts stabilizing out and you’re like, why aren’t I losing more weight? I was supposed to lose more weight. 1.1

> Well, in a lot of ways, I feel like I am a failure. I'm a post-op failure because depending on the day and where the needle is on the scale, I have regained somewhere between 10 and 20 pounds from my lowest number. This morning that would be at 20. Earlier this month, it was at 18. A couple of months ago, it was at 15, whatever. 16.2

Another participant described how losing weight had improved her self-esteem and self-confidence. As she regained weight, she experienced diminished self-confidence and she felt inauthentic when offering advice about bariatric surgery to others. Her experience, as well as the experience of other participants who regained weight, offers an important insight about why

people further out from surgery who are struggling to maintain weight loss might disengage from bariatric communities:

> I think from the being able to lose the weight and get to what I'm going to refer to as a more normal body size, certainly has improved my self-esteem. And I'm going to say even a level of confidence as well. However, with regaining some weight, from getting to that low weight to where I am now, some of that has been stripped away a little bit. 11.2

One participant recognized changes in the way her clothes fit her body as evidence of weight regain. She expressed some apathy about regaining weight, which may have been related to the recurrence of depression and inadequate mental health support after bariatric surgery:

> I could feel my clothes getting tighter. And now, none of my clothes that originally had fit me fit me. I'm totally at another size. And I knew that it was happening but I kind of thought, I don't know, I didn't really care. I thought it wouldn't make me gain as much weight as I really thought it was going to. I don't know how I really justified it in my head, but I knew it was happening. I kind of just put it at the back of my head. 26.1

Participants in the *Persistence Trajectory* described complex trauma histories, few sources of support, severe depression, and long-standing patterns of disordered eating in response to trauma. These participants also experienced multiple sources of weight stigma throughout their life. Although *Persistence Trajectory* participants looked to bariatric surgery as a promising solution to help correct eating habits and improve physical and mental health, inadequate mental health and nutritional support before and after surgery made it difficult for them to maintain weight loss. The majority of the *Persistence Trajectory* participants experienced recurrent depression, a return to patterns of disordered eating, and weight regain after bariatric surgery.

Shared Post-Surgical Experiences

Patterns of Disordered Eating and Bariatric Surgery. "They Do Surgery on Your Stomach Not Your Brain."

Bariatric programs impose a regimented eating pattern in preparation for surgery and during the first year after surgery. All study participants described disordered eating as an enduring pattern that often began in childhood. Some participants' programs did not offer adequate support to address patterns of disordered eating before or after surgery, which made it difficult to maintain weight loss. Two participants felt that bariatric programs set people up for disordered eating, even if the pattern of disordered eating shifts from that established earlier in life:

> And [restricting] was reinforced by the weight loss and the whole program's emphasis on that. And at first that feels good, sustainable. But then, more and more it becomes food is the enemy. Like having – it's not just like there are good and bad foods but food and the amount of food and whatever food. It was the first time being like don't eat too many almonds. And so, I feel like the pre-program set up the foundations for some disordered eating. 1.2

> So, I had for many years, toyed with the idea of bariatric surgery for a long time and every time it came up, I had ultimately dismissed it. I saw it, and still see it, as basically a surgically induced clinically endorsed eating disorder. Truly what it is. 2.1

Due to a lifelong history of weight cycling and viewing bariatric surgery as the ultimate weight loss strategy, eating became an activity that produced fear and anxiety due to the possibility of weight regain. Some participants became hyper-focused on the effects of food intake on weight status after surgery. Obsessively checking weight, avoiding food or

experiencing fear and worry related to eating was a new form of disordered eating after bariatric surgery:

> It was that I was so afraid of gaining the weight back that I became obsessed with… you know. I'd weigh myself every day, maybe five times a day, just to see…. it was just obsessing to me, the whole idea of gaining the weight back. I was obsessed with it. And the other is being afraid to eat because of gaining the weight back and getting sick. 13.1
>
> I'm afraid to eat. For so much of my life and now still, every time – and I do mean this. Every time I put something from here to here [points from mouth to stomach], I have to ask myself how is this going to affect my body. Is this going to make me gain weight? Is this going to prevent me from losing weight? Is this going to hurt me or help me? 16.1
>
> So, right now with me starting with a trainer in earnest and stuff, I feel like I've gotten to the point where I'm still on a super-restricted caloric intake, and that is the only way I can maintain weight…. I really feel that there's a downside to the surgery is that my metabolism is severely damaged from it. 25.2

Some participants mentioned that therapy targeted at disordered eating patterns before and after bariatric surgery would be helpful in sustaining weight loss. However, as some sought out support after surgery, they noted a lack of providers who had experience caring for people with bariatric surgery:

> That was one of the things that I reached out to the bariatric clinic about resources like, Do you actually have a psychologist that works with binge eating disorder, has experience with bariatric clients? Because I don't wanna be told things like, 'Drink water and eat more protein,' to help me with that. That doesn't help you. 7.1

> And if I had to do it all over again, I would've gotten a lot more mental health counseling. I would have gone beforehand. I would've gone a lot more afterwards, and I didn't, and that, I think, more than anything, is the main thing facilitated me regaining the weight. Because they do surgery on your stomach, not on your brain. 24.2

One participant sought help from an eating disorders specialist after bariatric surgery. The provider dismissed her concerns about anxiety related to the amount and types of foods she allowed herself to eat after surgery and emphasized her success with sustained weight loss. Another participant found attending an addictions recovery group was helpful in addressing disordered eating and similarly related that when she shared this with her therapist, her therapist dismissed her feelings about food addiction:

> …The conversations would often end about, "Well, you're doing great. I mean, you've lost this weight. You're doing really great and you should be happy. You should be proud of yourself." I'm like, "Well, thank you. That's really nice to hear, but something's still is not – there's still something going on." 13.2

> Our church has an addiction recovery group. And so, I actually attended that and then took some time off and started again as addictions go because… [my therapist] basically said that I didn't have a food addiction, which sometimes I was like, "Are you kidding me?" Because, sometimes I'm just like, "Aahh!" 22.1

Patterns of disordered eating originated early in life for many of the participants. While some were able to develop and sustain new patterns of eating by relearning hunger and satiety cues and enhancing their understanding of nutrition, others experienced a return to disordered eating. Experiences with disordered eating differed after bariatric surgery depending on the context of early life experiences.

Adjusting to Weight Loss. "Shut the Hell Up. I Don't Want to Talk About My Weight."

Participants noted subtle and overt differences in the treatment they received from others after losing weight. People were generally more friendly and courteous toward participants after they lost weight. Some female-identifying participants described men as flirting with them after losing weight but not before:

> And, all of the sudden, I guess when your body gets to some size that is deemed socially acceptable, you start getting, looks and attention in public that you weren't getting before. People making eye contact with you that didn't make eye contact with you before. People speaking to you who might not otherwise have spoken to you, or offering you compliments or whatever. Maybe even getting catcalled or something like that on the street. The things that just didn't happen before started happening. People start being a little nice at some point. 2.1
>
> I think people tend to treat people with more respect if they view them as normal or – because when you're super obese, there's this perception somebody gets of you immediately that you're lazy, or you don't have willpower, or you're gluttonous, or whatever. And then you have to prove to them you're not those things. When you're more of a regular size, the default is that you're an okay person. But it's just really noticeable. 12.1
>
> Once I lost weight, everything was easier. So, traveling was easier. And I felt different, even opposed to it being easier, I felt like people treated me differently after I had lost weight. 13.1

Often people commented on participants' appearance after weight loss. Although participants were used to negative comments and reactions from others about their weight before bariatric surgery, they were unprepared for the feelings that surfaced when they were praised for weight loss. Sometimes, anger and resentment overshadowed compliments or praise for weight loss because these comments led to participants re-experiencing weight stigma:

> …just people that would comment on my appearance. People never commented on my appearance. It'd be like, "Wow, you're so beautiful," and all this stuff. And I was just like – it made me mad. So, I was like, "You wouldn't have said that when I was heavier." That's not right. 7.1
>
> It's nice being told you look good, but like it's almost like after you get surgery and you're told you look good because you've lost weight, you're like why weren't you telling me this before? I don't know. You kind of resent some of that. 8.1
>
> I remember [my friends] saying something along the lines of, "Oh, you are just disappearing. Look at you – blah, blah, blah." Just constantly getting the, "Well, don't you look good." It's hard to see that that's a compliment because I'm still the same person. I was the same person, but I didn't get any feedback like that unless I was losing weight. That's one of the biggest problems of anybody who's losing weight is that you want to be a good person all the time, somebody that is seen as a good person, somebody that generates praise. It's like that. You want to have that no matter what. It's not offered unless you're losing weight. 20.2
>
> …Afterwards, it made me uncomfortable, the attention that my body and weight loss was garnering. Because 40 years of, "You're fat and people are going to notice that," to, "After two weeks, you're thinning down and people are noticing that," in my mind, it

> doesn't matter which is good and which is bad, they both conflate into, "They are talking about your body weight." And that automatically raises the shields because it's always been negative. So, unfortunately for me, even when it's positive, even when it's, "Hey, you're looking good. How are you doing it?" It's just like, "Shut the hell up. I don't want to talk about my weight." 24.1

Some participants wondered if others responded to them differently because their demeanor or outlook had changed with weight loss. A few participants described how people close to them said they were nicer and more approachable after losing weight:

> But I never know if it's because I'm different. Maybe because I'm happier. I definitely noticed more male attention…. When you're overweight and you're nice and outgoing, you're friendly. When you're thinner and you're the same way, you're a flirt. I'm no different than I was before. 14.1

> I think I'm nicer. I think I'm nicer and I think that… kind of surprised me because I just was miserable, I was so unhappy. I don't think I was a nice person that people wanted to be around honestly. 7.2

After losing weight, the participants continued to experience weight stigma as comments about weight status reminded them larger bodies are viewed unfavorably and others had perceived them differently before. Participants experienced confusion, anger, resentment, and depressive symptoms when they realized how their lives before weight loss had been shaped by others' negative beliefs and attitudes.

Body Dissatisfaction. "I Feel Like a Deflated Balloon."

Across the sample and regardless of weight status or mood, many participants described being dissatisfied with their body after bariatric surgery. Several participants were dissatisfied with their bodies because of loose skin. Many reported looking in the mirror and finding their reflection unrecognizable. Some participants described their experience as body dysmorphia, but it remains uncertain if they were diagnosed with the condition or heard the term in their program before undergoing surgery:

> I'm not fat anymore, so now you can see me. And so I found that distressing…. The dramatic weight loss, results in a lot of… hanging and sagging flesh and I just always tell people that I feel like a deflated balloon. Like I am walking around in a skin suit that's a few sizes too big. …and so, you know, the effect is you don't really recognize your body anymore, like you look in the mirror and it's this kind of alien looking back at you... Like I actually have the experience sometimes of being startled sometimes when I walk by a mirror or window or something. Because I think I am seeing a different person and then I kind of like have a moment and, no that's, that's you. 2.1
>
> …like seeing myself the way I really am – body dysmorphia I guess… I try to look past the loose skin. And it's like when I look in the mirror, I see [my body], and then I have loose skin. 14.2
>
> So, I would look heavier to myself than what I actually appeared. And it really wasn't until I saw some pictures of myself at my significantly lower weight that I was able to say, "Wait, that's me? Is that really me because I don't see that when I look in the mirror?" And that was initially what prompted me to get back into therapy because my fear was, if I didn't find a way to begin to recognize the person I was seeing in the mirror, I would subconsciously find ways to return to the person I recognize. 16.2

Some participants described incongruence between how they and others saw their body size. They found themselves believing they needed more physical space to accommodate what was once a larger body or shopping for the wrong clothing size because they could not believe their new body size:

> So, I will still go in the store and go to the wrong size clothes section…. And, I'll look at the numbers and know my measurement, like, you're ordering online, you haven't tried it, so you have to go off of something, and still be, like, disbelief… And, I look in the mirror and I'm not happy, but I still see myself as heavy. 25.2
>
> … Early on I would still think I needed a bigger amount of space than I did. If I wanted to sit somewhere, I would think I needed more space. And sometimes when I think about my body and how it looks, I still see a large body, but then I look in the mirror and it's not. 13.2

For some participants body dissatisfaction was a roller coaster of emotion. Inhabiting a body that felt unfamiliar to them caused discomfort and negatively impacted mental health:

> And emotions just like social emotions, like feeling on top of the world one day and feeling good about yourself, and then the next day you're dealing with your body dysmorphia, or you're feeling gross, or disgusted with yourself… Those are emotions that are like a roller coaster. 3.2
>
> I couldn't get my head wrapped around the way that I looked, but then to me, it was almost like losing weight messed with my head and messed with me mentally more than anything else, I think. 6.1
>
> And now, when I would smile, there would be like three little lines of wrinkles. And I felt like my head was bigger because my body was smaller. And I don't know. There were

times I would just stand in the mirror and just look at myself and be really critical of it… I was really critical of how I looked and how I almost didn't feel like myself. 26.1

It is important to note that no participants experienced what they described as body dysmorphia before bariatric surgery. This feeling of dissatisfaction may be due to the rapid and profound change in weight that occurs after surgery. Experiencing body dissatisfaction after surgery caused some participants to unconsciously self-sabotage and regain weight. These actions further contributed to body dissatisfaction but restored some comfort by reintroducing the familiar. Participants who had not regained weight sometimes discussed the possibility of cosmetic surgeries but noted the expense associated with them. Despite body dissatisfaction, all of the participants expressed contentment with losing weight.

Participant Recommendations to Improve Bariatric Care

I asked participants to reflect on the care they received in their program and consider what might have made their experience better. All participants could identify strengths in their bariatric program. Only one participant felt completely satisfied with her experience and had no recommendations to improve bariatric care. The other participants shared ideas for improving the process of gaining authorization for surgery, pre-surgical preparation, and post-surgical support. Notably, no participants expressed concern about the care they received during surgery and the immediate post-surgical recovery.

Recommendations for Pre-Surgical Care

Participants discussed the challenging process of gaining authorization for bariatric surgery. Most participants experienced a life-long history of weight cycling with various weight management strategies. Bariatric surgery was life-changing for several of the participants after a

long history of distressing weight cycling. One participant recommended health care providers position bariatric surgery as a life-saving intervention, not an elective surgery:

> I'd also make sure we get it through to doctors' heads that this is a life-saving viable procedure that many people need. …if somebody has cancer, there's not a doctor around who's gonna say, "Oh, you should not get the cancer removed with surgery because if you change the way you eat, and exercise better, you might be able to live with it for the rest of your life, and it might never really affect you." Nobody would ever say that. But, we tell obese people all the time that they should just eat better, and exercise. So, we need to get it through to the health care community that this is a real solution for a lot of peoples' health problems. And, it should be not a last resort… if someone is significantly overweight, it should be one of the first things that's looked into. Not the last. 12.2

One participant was frustrated by her experience in pre-surgical education classes. She recommended programs screen the health literacy of people entering the bariatric program and offer a range of classes gauged at varying levels of understanding. Classes developed for varied levels of understanding would allow people to have their questions adequately addressed:

> I think that they need to have two different groups. I think people who need more focus on their health literacy level, education and information, and then maybe like an advanced group that has health literacy and wants to take things to the next level. 7.2

Some participants found accessing bariatric surgery challenging due to their insurance status. In some cases, participants had to make more than one attempt at navigating a bariatric program. One participant initially was denied authorization due to her mental health history, despite the support and endorsement from the psychologist and psychiatrist she had long-

standing relationships with outside of the bariatric program. The participant urged bariatric programs to avoid denying surgical authorization on the basis of mental health history:

> Don't deny people because of mental health…. It can only get better. It may get nowhere, like me. I'm still not all that stable and I still have a lot of problems and stuff like that, but I'm a lot better off than I was three years ago. I have a lot more going for me. And so, my mental health is on the right trajectory, if you will. And so, I just don't see the point in rejecting somebody. 20.2

Other participants were able to satisfy the pre-psychological screening. However, encounters with their program's psychologist lacked the time and depth needed to explore the cumulative life experiences leading up to bariatric surgery:

> I think there wasn't enough… I think I did 3 sessions with a therapist or a psychologist in the program…. [Counseling sessions] were like hour long sessions but you can't get into a whole lot in three hours [laughs] when it comes to… 'cause we know the majority of people who have bariatric surgery have mental health conditions… you're not going to unpack that stuff meaningfully. 1.1

> So, I was sort of distressed by… seeing the lack of attention, like I don't think anybody asked me through this whole process of getting ready for bariatric surgery if I had an eating disorder, or if I had been treated for eating disorders. Uh, which I found disturbing. 2.1

> …You're treating a person, you're not treating a stomach and they've got to have a little more empathy…I've met other surgeons who were amazing, amazing people but it's about listening to the person, understanding the person. What's their story? And I don't think they spend enough time on that. 11.2

Some participants' programs made psychological screening and support available while others were referred to providers outside the program. Either structure posed barriers to follow-up, including availability of appointments, cost, or the depth of care providers could offer. One participant who was connected online and at work with other post-bariatric surgery patients noted people's expectations and concerns about surgery were often inadequately addressed. In addition to managing expectations for surgery, she recommended programs work to improve access to mental health services:

> I think just managing people's expectations and supporting… a little bit more in terms of the therapy piece of it and getting people connected, or hooked in, or having resources to refer people to. 25.2

Another participant connected through online forums to people post-bariatric surgery across the U.S. noted a lack of consistent standards for nutritional intake between programs. She recommended bariatric programs work to standardize nutrition guidelines:

> …If I were designing bariatric programs in the United States and around the world, … the first thing I would do is I'd bring all of the major players together and I'd say, "You know what, get your shit together about what you're teaching and get some consistency of message." Because no two programs teach the same tools around what to eat and that's incredibly confusing. 16.2

Highlight Diverse Experiences

Participants discussed hearing from people who were successful at losing weight and maintaining it during the pre-surgical education sessions and support group meetings. While it can be helpful to learn strategies for sustained weight loss, some participants felt incorporating

diverse experiences would better support realistic expectations for surgery and make it easier to address post-surgical challenges such as weight regain:

> I would have other people, people that have had surgery that have succeeded and not succeeded, and have them be part of a webinar, have them be part of the "This is where you could be and this is where you could be," and make it more realistic than just "everybody is going to get down to a size four." That's just ridiculous. 20.2
>
> I really would have liked to have talked to people who have had surgery and be able to ask them questions, like real-life people that recently had it or had it 10 years ago…. depending on how old you are, you're probably gonna live 20 to 50 more years. So, what's my life gonna be like and what kind of habits am I gonna have to have and what am I gonna be eating and all this stuff for the rest of my life if I wanna stay healthy? 12.1
>
> They need some work on [setting expectations] because they know that weight regain [is] a natural thing that's gonna happen. They can't not know. And so, they need to be prepared to tell people that [weight regain] is natural and expected. If they can't find a way to say that and still sell their surgery, well, that's their problem, but they need to do a better job at supporting their people when their people start to regain their weight. 2.2
>
> I think my biggest complaint is that there was a lot more emphasis in the pre than the post. And the post emphasis was meeting with your dietician being like are you getting enough protein and not meeting with a psychologist or counselor to support you in that way or having both of those things happen. And then, I think some of it with the support group is having really honest conversations about failing. 1.2

In addition to including stories from people who have struggled to maintain weight loss after bariatric surgery, one participant recommended programs share stories from people who experienced depression after bariatric surgery. She said although her program had touched on potential mental health challenges after bariatric surgery it was not emphasized during pre-surgical preparation. When she began experiencing worsening mood after surgery, she felt isolated in the experience:

> [Depression] just got to a point where I didn't want to get worse, and maybe that's something they could talk about a little bit more – the depression after surgery. They just talk about it a little bit. I just didn't think they talked about it as much as maybe it affected me… 3.2

Bariatric programs commonly highlight people who have experienced post-surgical success with weight loss. Participants recommended expanding the practice of highlighting success stories to include honest accounts of challenging experiences. Offering access to diverse experiences allows people to ask questions or consider accessing supportive care sooner when or if they begin struggling after surgery.

Peer Mentoring and Support

Many participants' programs required them to identify a support person and involve them in pre-surgical preparation. The requirement to identify a support person for help with surgery is well-intentioned but can create a barrier for some people to gain authorization for surgery. Some participants had adequate support from their support person after surgery and others lacked this support, despite having had someone commit to the role. Two participants recommended bariatric programs develop a peer support system to help people navigate surgery, recovery, and maintenance:

> It's kind of like the whole idea of like in AA, having a sponsor, someone who's been through it. It would have been helpful to have some people that you could relate to, or that understood the process of what's going on. 7.
>
> I think it would be a barrier for a lot of people – requiring that you have that support person… And I've seen people who don't have that. And they try to bridge that gap by connecting some of us that have been through it with those people and having us agree to kind of mentor or help them. 25.1

Other participants recommended involving the patient's support system early in the process, such as during pre-surgical counseling sessions. Involving the support person in pre-surgical visits can help patients retain information about post-surgical requirements. Additionally, engaging a support person throughout the process allows the patient and bariatric team to get a sense of the support person's willingness to uphold the responsibilities of this role:

> Mainly I think the advice of bringing – when they're doing the psychological assessment, I think it's really important to have the family involved in that…. you really do need kind of a group session to really talk about it and have everybody hear the same message and not have it just be, "Mom went to the doctor and then came home and is telling us we gotta change now." I just think that message is better coming from somebody else and there's kind of more of a shared responsibility there. 8.2
>
> I would say is make sure 100% that people's support person will be there 100% support. Not just for show. Not just for appearance. Because it was hard. It's hard not having somebody, a support person. 23.2

The support person's role can be demanding and challenging in the immediate post-surgical recovery period and as the patient adjusts to long-term changes. To effectively address the demands placed on support persons one participant recommended programs offer them support:

> Maybe more support for support people. 22.2

Many participants' programs required them to identify a support person and they offered differing recommendations depending on the structure of their bariatric program and personal experience with their designated support person. Some participants noted this requirement introduces another barrier to bariatric surgery. To overcome the barrier, some participants recommended bariatric programs engage support persons early and often and offer resources to help them respond to the demands of the role. Other participants recommended programs implement peer mentoring to foster community to ensure that each patient has a source of support and guidance after bariatric surgery.

Recommendations for Post-Surgical Care

Participants described pre-surgical care as regimented and comprehensive. Often, they described requirements to meet with various team members including the surgeon, their primary care physician, a nutritionist or dietician, a psychologist, and a physical trainer or physical therapist. Participants were also required to attend a number of support groups or education sessions. Some participants had to complete these pre-surgical requirements over a specific amount of months in order to gain surgical authorization. Despite the regimented pre-surgical process, many participants felt long-term support was lacking:

> But like, there wasn't a lot of…support as structured after the surgery as there is before. 1.1

> I would absolutely mandate, and I do mean that, mandate, a sustained education and support program…. making sure that the money is there, not only for the treatment but for the long term; for the nutrition needs, for the supplementation, for the follow-up, for the labs. 16.2
>
> What I hear from other people too that there is a gap [in support after surgery] …. You can have surgery. If you fail, they don't offer you a lot, but they'll offer you a revision. 25.1

Participants needed long-term structured support for nutrition and to address other challenges post-surgery such as psychological distress:

> …And I think afterwards, there should be, after surgery, post-surgery there should be more of an emphasis on mental health care. People do go through disruptions in their relationships as a result of this surgery and the weight loss that ensues. And people do go through body dysmorphia and dysphoria, and I feel like [bariatric programs] ought to have more structures in place to kind of catch those people. …A little support group is not enough. They need more, they need better. 2.1
>
> …In the world where I am queen and I rule everything, in my world, from the day that you go in for evaluation and you're accepted, that's when you start not only your nutritional education, but you start seeing a therapist. Because we want to make sure your head is on right. And you have your surgery, and you stay with that therapist for one year after surgery. Because there are so many shifts and changes. 11.1

Although some participants had established long-standing psychological support before surgery, their providers were unprepared to address the experience of bariatric surgery, specifically. These participants desired long-term support from providers who understand bariatric surgery:

> I felt like because I was seeing my therapist and my psychiatrist, that it was… that somehow that equated that everything was okay, and it wasn't. It's like I still need support from the bariatric team. I do see a therapist, and I do see a psychiatrist on a regular basis, but I'm dealing with my trauma issues and stuff like that with them. I'm not dealing with my bariatric issues. I'm not coming to them going, "Well, today, I was able to eat two pieces of toast." 20.1

Many participants said it would have been helpful to discuss the ongoing changes they were experiencing and ways to cope with them during post-surgical counseling sessions. For example, some participants experienced challenging social dynamics related to restricted eating after bariatric surgery:

> …Eating wouldn't be very fun, and then that can lead to being afraid to eat and that can lead to – I think I could have very easily developed an eating disorder, and I'm not so sure that I don't sometimes have one. 13.2

> …Really in those [support group] meetings, they don't at all address kind of like the...you would think they would kind of deal with the psychological aspects of things, instead it's people trying to encourage each other to like eat less and lose more (laughs). Not so much like, "oh well here's the things you might encounter emotionally as a result of the surgery." Or "here are challenges you might run into in your relationships. You might find people trying to undermine your efforts." 2.1

While adjusting to new patterns of eating after bariatric surgery, participants grieved the loss of food or the experience of social eating. The participants who shared experiences of grief after bariatric surgery recommended that bariatric providers anticipate this event and address it. All participants who discussed grief experiences independently sought post-surgical counseling to address this issue with varied experiences:

> …There's just so much of grief. Like there's a ton of grief work around, you know, not being able to eat. Not being able to eat the things you want to eat. Not being able to eat socially…going out to eat. Like all those things come up really early on. 1.1

> Not so much depression for me but just sadness of loss of previous relationships with food and feelings around that and relationships and [an intentional] total difference of activities. 7.1

> [Social eating] just makes me really nervous… It's a really anxiety provoking situation for me. And so, I think that would be important… to talk about how much food is part of our social life, and sort of being able to deal with that after you had surgery…. So, [social eating is] just not a fun thing, which is part of that grief thing. 13.2

Another participant described how events in the post-surgical journey, such as hair loss, can be upsetting. She described a timeline of when she would have benefitted from post-surgical counseling sessions:

> …Maybe like at the 3-month mark like when most typical people may lose hair. Because that was something that was a…definitely a milestone in the weight loss surgery that affected me and how I felt, because that was just something that was important to me. So, I feel like maybe a 3-month mark and like a 6-month or a year. …'cause I basically started feeling the emotions of depression probably at the 8th to 9th month mark. 3.1

Other participants described the need to address their adjustment to changes after bariatric surgery in counseling sessions, such as coping with the differences in how people treat them as their bodies change:

> Because while [weight loss] is a positive thing, it's also hard. It's also… Even thinking about the differences in how people treat you. 13.1

> …The reactions you'll get from people, how to deal with those, how to deal with just the fact that you are going to change and not only physically but in all aspects. Everything changes. I feel like to be successful, everything changes. And change is good. And I like change. But when you are trying to change and then, your environment and everybody in your environment is all the same, it makes things very difficult. 26.1

Bariatric surgery induces profound physical and behavioral changes which in turn influence mental health. While programs require pre-surgical psychological assessment, psychological support before and after surgery varies. Most participants expressed the need for comprehensive psychological support through the surgical process.

Conclusion

Participants in this study had varied life experiences that led them to bariatric surgery and influenced surgical results. Pre-surgical experiences that occurred across the sample included enduring multiple sources of weight stigma and disordered eating behavior. Shared post-surgical experiences included body dissatisfaction and persistent patterns of disordered eating, with some new patterns emerging.

Two distinct trajectories emerged based on early life experiences. Participants with higher ACE scores, including abuse and/or neglect, experienced persistent disordered eating and depression as well as weight regain after bariatric surgery. Participants with lower ACE scores

who did not experience abuse or neglect, experienced improvements in disordered eating behavior and depression and were able to maintain weight loss.

Participants reflected on the care they received from their bariatric program. They recommended changes to the pre-surgical process to support better understanding of the long-term implications of surgery and manage expectations. Participants strongly recommended long-term follow-up that emphasizes psychological support after bariatric surgery.

Chapter 5: Discussion

Overview

This final chapter focuses on study findings and how they contribute to what we know about weight stigma and depression in individuals who have had bariatric surgery. The discussion begins with a brief summary of the divergent experiences that gave rise to two post-surgical trajectories. Specific findings from each trajectory are discussed more closely, emphasizing the impact of the type of adverse childhood experiences, disordered eating patterns, post-surgical weight outcomes, social support and belonging, and onset and persistence of depression and how these findings align with the literature. The chapter concludes with sections highlighting healthcare provider recommendations, strengths and limitations of the study, and directions for future research.

Divergent Experience Trajectories

Clusters of early life experiences separated the participants into two different post-surgical trajectories. The divergent experiences included the participants' experiences of childhood adversities including, family dynamics, social support/belonging, weight stigma within the family, and depression levels. The two trajectories resulted in different bariatric post-surgical outcomes related to whether or not their disordered eating and depression persisted, and if they were able to maintain their weight loss.

Adverse Childhood Experiences and Bariatric Surgery

Although ACEs were not included in the conceptualization of this study, participants typically described two or more ACEs when sharing their life histories. Twelve of the 17 participants in this study experienced two or more Adverse Childhood Experiences (ACEs) including; abuse and/or neglect, witnessing violence or substance use, losing a parent to death,

incarceration, or another reason, living with a parent with mental illness, experiencing housing or food insecurity, or feeling unloved. In this study, experiencing physical, emotional, or sexual abuse and/or neglect created the difference in post-surgical outcomes such as weight maintenance, depression severity, and eating behavior between groups.

Studies have consistently demonstrated that four or more ACE events are commonly reported in the bariatric patients and tend to be more prevalent in this population when compared to community samples (Fink & Ross, 2017; Grilo et al., 2005; Lodhia et al., 2015; Orcutt et al., 2020; Wildes et al., 2010). Findings from this study are consistent with this body of work indicating people who seek bariatric surgery tend to have complex trauma histories, impacted by multiple sources of childhood adversity.

ACEs are associated with an increased risk of maintaining a higher weight (Orcutt et al., 2020). Mediators that explain the association between ACEs and maintaining a higher weight include altering neurobiological pathways that lead individuals to develop disordered eating behaviors and the effects of weight stigma (Wiss & Brewerton, 2020). In this study, participants who experienced multiple childhood adversities, including abuse and neglect, reported earlier onset and greater severity of depression and disordered eating behavior relative to those who did not experience abuse and neglect during childhood.

While ACEs are known to be associated with higher BMI later in life, this study demonstrated the complex interrelated experiences that lead people to seek bariatric surgery. In 2010, Wildes et al. recommended that future research explore the long-term impact of childhood maltreatment on people who choose bariatric surgery. Orcutt et al. reasserted the need to explore the impact of childhood trauma on post-surgical outcomes ten years later (2020). This study

expands our understanding of the relationship between ACEs and bariatric post-surgical outcomes.

The authors of two studies found that ACEs were not associated with a difference in weight loss after bariatric surgery (King et al., 2019; Shinagawa et al., 2020). The findings from this study indicate that people with ACEs that included abuse and neglect had more difficulty maintaining weight loss.

In contrast to studies that did not find a relationship between ACEs and post-operative weight loss, Lodhia et al. (2015) found that bariatric patients with ACE scores greater than or equal to 6 have higher post-operative BMI at 6 and 12 months. This study aligns and extends the work of Lodhia et al. to include a sample more than 12 months out from bariatric surgery. Further, although some participants in this study experienced 4 or greater ACE experiences, most experienced 3 or fewer. Taken together, this study adds to prior literature by demonstrating that abuse and neglect had a lasting impact on weight maintenance in a sample of participants who tended to be further out from bariatric surgery, many of which presented with fewer than 6 ACE events.

Participants in this study represented a diverse range and number of ACEs. In contrast, much of the literature on the effects of trauma on bariatric post-surgical outcomes has focused exclusively on experiences of abuse and neglect in early life (Conceição & Goldschmidt, 2019; Grilo et al., 2005; King et al., 2019; Lu et al., 2019; Peterhänsel et al., 2019; Wildes et al., 2008). In line with previous research, participants in this study with a higher number of ACEs that included abuse and neglect experienced persistence in disordered eating and depression after bariatric surgery.

The majority of revious studies have used measures of childhood trauma limited to abuse and neglect and followed participants for two years or less post-surgery (King et al., 2019; Lu et al., 2019; Shinagawa et al., 2020). Findings from this study contribute to the knowledge base by providing insight about long-term post-surgical weight maintenance in a sample that experienced a range of childhood adversities.

Disordered Eating Patterns

Experiences of disordered eating in childhood were present in all participants. Further, experiences of disordered eating behaviors learned during childhood contributed to weight cycling before and after bariatric surgery, although to different degrees based on the post-surgical trajectory. Weight cycling was attributed to difficulty in abandoning coping strategies developed during childhood, an unconscious desire to return to a safe and familiar larger body, or bariatric programs' emphasis on habits similar in nature to disordered eating behaviors used in the past.

Disordered Eating and Child Abuse and Neglect

Participants discussed seeking food as a comfort source and learning to eat in secret to escape food restriction or negative comments from others. However, the persistence of disordered eating was mainly limited to participants with early life experiences of abuse and neglect. This finding is consistent with those of Orcutt et al. (2019), who found an association between severe non-sexual abuse and neglect and Binge Eating Disorder in their prospective study of the association between childhood maltreatment and psychopathology in individuals seeking bariatric surgery. Different types of trauma have different effects on eating behaviors (Akduman et al., 2021). This study aligns and extends the work of Akduman et al. by including participants with a range of ACE experiences and demonstrating that abuse and neglect typically

lead to persistence in disordered eating while an absence of abuse and neglect experiences leads to improvement in eating patterns.

Several investigators have documented an association between child abuse and neglect and disordered eating in bariatric surgery patients. Grilo et al. (2005) found emotional abuse and emotional neglect were significantly associated with disordered eating in patients seeking Gastric Bypass surgery. Similarly, King et al. (2019) found emotional abuse, emotional neglect, and physical abuse were associated with less improvement or worsening of eating pathology seven years after Gastric Bypass surgery (King et al., 2019). Finally, in their study of the associations of traumatic experiences, eating patterns, and weight loss outcomes, Ruffault et al. found bariatric patients with trauma histories were more likely to overeat and less likely to follow post-operative eating guidelines one year after surgery (Ruffault et al., 2018). This study confirms the presence of disordered eating in people who choose bariatric surgery including the gastric bypass and the sleeve gastrectomy procedures.

Although the recurrence of disordered eating after bariatric surgery occurred across both trajectories, those in the *Improvement Trajectory* had awareness of disruptive eating patterns and sought help to address them. This finding aligns with those of Braun et al. (2020) who found internalized weight stigma was associated with emotional eating after bariatric surgery in their study of weight bias, shame, self-compassion, and emotional eating in individuals seeking bariatric surgery.

Unwanted Attention and Weight Regain

In this study, participants reported a lifetime of weight cycling before bariatric surgery. Notably, participants shared that people often commented on their weight loss prior to surgery, resulting in feelings of discomfort. The participants reflected that the unwanted attention

unconsciously led them to regain weight by reverting to patterns of eating established before joining the bariatric program. Sarwer and Schroeder (2019) offered anecdotal evidence regarding women with a history of childhood maltreatment, particularly sexual abuse, who undergo bariatric surgery stating women experience emotional distress as they lose weight due to unsolicited comments and attention. Of those participants who reflected that they unconsciously regained weight to cope with uncomfortable attention on their lower weight body, all were actively working to lose weight, and some were considering a revisional bariatric procedure. This study confirms unsolicited comments about the body weight of childhood trauma survivors is distressing and may lead them back to disordered eating resulting in weight regain.

Weight Regain and Lack of Bariatric Surgery Program Supports

Participants across the sample expressed difficulty regulating post-operative eating behavior due to a lack of structured support. Participants remembered learning about barriers to maintaining post-operative eating recommendations but had difficulty integrating this knowledge because they felt the information presented about barriers did not pertain to them. Further, participants noted their pre-operative care was primarily focused on preparing for surgery and the short-term post-operative period, neglecting anticipatory guidance for the post-operative period.

Tolvanen et al. (2020) completed a qualitative descriptive study in a Swedish sample that explored the role of social support in weight regain after bariatric surgery. The team found that participants attributed weight regain to insufficient support from the bariatric program after surgery because post-operative visits with the bariatric team were too focused on weight loss outcomes, lacked discussion of helpful diet strategies, and assessment of disordered eating or addiction related problems (Tolvanen et al., 2020). In the current study, connection to the

bariatric program was not related to weight maintenance after bariatric surgery but participants shared similar concerns that bariatric programs offer insufficient post-operative support.

Conceição & Goldschmidt presented a literature review that found a lack of research on the development of post-operative disordered eating overall and noted the information that is available focuses solely on Binge Eating Disorder (2019). Recent literature highlights the importance of exploring how disordered eating presents in the bariatric population, as the criteria typically used to identify disordered eating fails to account for physiological changes and weight status after bariatric surgery (Conceição & Goldschmidt, 2019; Kalarchian et al., 2019; Parker & Brennan, 2015). Current evidence suggests patients with disordered eating behaviors after bariatric surgery lose weight more slowly, maintain higher weight post-operatively, and tend to regain weight (Conceição & Goldschmidt, 2019). Participants in this study explained they reverted to old patterns of disordered eating after bariatric surgery when food recommendations made by the program were no longer appealing and hunger cues returned. When reflecting on the mechanisms that led them to return to disordered eating and weight cycling patterns, participants said long-term nutritional and psychological support would have helped. This study builds on existing literature by offering insight about long-term post-surgical needs based on recommendations directly from bariatric surgical patients.

Conceição & Goldschmidt (2019) asserted pre-operative weight management and therapy appear to have no effect on post-operative disordered eating behavior and BMI. The authors recommended assessing disordered eating behavior post-operatively so that patients' needs are addressed and educational topics are relevant, making it easier to acquire new skills (Conceição & Goldschmidt, 2019). Still missing from the literature is a discussion of the ways regimented eating habits and weight tracking recommended by bariatric programs may induce disordered

eating after surgery. While some participants in this study returned to lifelong patterns of binging and restriction, others developed preoccupation with tracking food intake and measuring weight. Findings from this study offer new insight about the role bariatric programs play in the development of new patterns of disordered eating after surgery.

Social Support and Belonging and Bariatric Surgery

Participants in the *Improvement Trajectory* described a greater sense of social support and belonging during childhood and adolescence through involvement in extracurricular activities, including participating in sports and faith-based groups. The participants in the *Persistence Trajectory* reported less social support and lack of belonging due to inadequate resources to support extracurricular activities, and added responsibilities at home, such as caring for younger siblings.

Enduring Effects of Weight Bullying During Childhood

Participants in this study experienced up to four sources of weight stigma including direct and indirect comments from parents, weight bullying from peers, and weight stigma during healthcare encounters. Parents' modeling of weight stigma is a significant finding because it highlights the pattern and impact of weight-related attitudes communicated across generations. Early life experiences of weight stigma affected the ways participants learned and felt about their bodies and their socialization within and outside of the family. Participants in this study shared a range of childhood trauma that included weight stigma experiences. This finding is significant given evidence from the literature that weight stigma results in worse physical health, lower psychological well-being, lower self-esteem, higher depressive symptoms, and a higher number of diet attempts (Himmelstein et al. 2018).

Weight bullying, an enacted form of weight stigma, was a common experience for participants in both trajectories during childhood that led to feeling othered. Rosenberger et al. (2007) completed a cross-sectional study using data from the pre-surgical psychological evaluation with bariatric surgery candidates to explore the impact of weight-based teasing on eating behaviors and psychological functioning. The team found participants with a history of weight teasing began chronic dieting earlier, presented with lower self-esteem, higher depression, body dissatisfaction, and shame compared to bariatric patients who were not teased. Although the authors found participants with a history of weight teasing had higher eating disorder features, no difference in binge eating or dietary restraint was found in the sample (Rosenberger et al., 2007). The present findings confirm the enduring effects of weight teasing on bariatric surgery outcomes such as depression and disordered eating.

Although a pre-surgical psychological evaluation before bariatric surgery is required by insurance companies, a lack of standardized assessment exists and typically does not include assessment of ACEs or weight stigma experiences. Further, there are a limited number of trauma screening measures. Given that the existing ACEs questionnaire does not measure internal and external experiences of weight stigma, future research should explore the impact of addressing weight stigma as part of pre-surgical preparation. Grilo et al. (2005) noted although the Childhood Trauma Questionnaire assesses emotional abuse, the measure does not specify whether negative messages were targeted at bodyweight or physical appearance. Only one questionnaire assesses weight-related abuse (Salwen & Hymowitz, 2015) and although validated for use with the bariatric population, the measure is not commonly cited in bariatric studies. The prevalence and variety of ACEs and weight stigma sources among participants in this study and the known deleterious effects of weight stigma on physical and mental health support the

recommendations of others (Rosenberger et al., 2007; Shinagawa et al., 2020) to recognize weight stigma as another form of trauma.

Impact of Social Support and Belonging on Eating Patterns and Weight Regain

Participants in both trajectories discussed how the development of new eating patterns after bariatric surgery led to experiencing less social support and belonging as they were no longer able to engage in social eating. Conceição et al. (2020) also found perceived social support was lower in post-operative bariatric patients compared to a pre-operative sample. This study offers insight regarding why perceived social support is lower after bariatric surgery; participants described being hesitant to attend social events that involved eating as they wanted to avoid drawing others' attention to their newly established eating patterns and were uncomfortable with attention on weight loss.

Social support and belonging may influence long-term bariatric post-surgical outcomes such as eating behavior and weight maintenance. For example, one study found grazing behavior and weight regain is moderated by perceived family support (Conceição et al., 2020). Participants in the current study described mixed experiences regarding the role of family support on eating behavior or weight regain. Some participants felt unconditionally supported by family in their pursuit of bariatric surgery and this promoted adherence to post-surgical recommendations. Other participants shared their family misunderstood the dietary restrictions the procedure imposed long-term and that they found it challenging to maintain dietary recommendations. Sometimes participants described feeling guilty about weight regain when their family had been supportive of their decision to pursue bariatric surgery.

In a systematic review, Livhits et al. (2011) asserted no validated measures to assess social support in the bariatric population exist. However, in addition to typical informal support

networks such as family and friends, one study identified the bariatric team as a formal source of social support (Torrente-Sanchez et al., 2021). Although the handful of studies focused on the association of informal social support and weight loss have yielded inconsistent results, Livhits et al. (2011) found patient engagement with bariatric support groups for nine months or more after surgery had significantly more weight loss than those with shorter involvement. Despite evidence that ongoing participation in bariatric support groups is associated with weight loss, barriers to participation are numerous and include busy personal and professional lives and, more recently, COVID-19 restrictions. Many study participants discussed attending virtual support groups in response to the pandemic and explained how those meetings offered support and belonging.

Although connection to the bariatric program was mixed across both trajectories in this study, some participants stayed connected and felt comfortable reaching out to their bariatric program long after surgery. Even when weight regain occurred, participants who reestablished connection with a bariatric program discussed engagement in health behaviors such as being mindful about food intake and physical activity. Taken together, these findings suggest that social support needs change after bariatric surgery and bariatric care providers can serve as an ongoing source of formal support.

In addition to or sometimes in place of ongoing connection with their bariatric program, participants discussed fostering social support and belonging after bariatric surgery in private social media forums, such as Facebook groups. Using social media to bolster social support aligns with findings from another study that found post- bariatric surgery patients became more active on clinics' private Facebook groups in an effort to maintain motivation and access peer

support (Athanasiadis et al., 2021). Thus, there is evolving evidence that social media forums serve as a source of social support and belonging for bariatric patients.

To summarize, weight stigma enacted as bullying was a shared experience that decreased the participants' feelings of social support and belonging in early life. After bariatric surgery, participants again faced challenges accessing social support due to changes in eating habits affecting social eating and discomfort with attention on weight loss. In response to these challenges participants bolstered their social support by relying on family and friends, the bariatric program, and social media forums. Engagement with various sources of social support demonstrated mixed results on weight maintenance and long-term eating behavior.

Depression and Bariatric Surgery

To explore the trajectory of depression as it relates to weight stigma, participants in this study were recruited based on their experiences with self-reported depression. All participants confirmed a history of depression through self-report during the screening process. The literature demonstrates a strong association with childhood maltreatment and higher depression scores in the bariatric population (Grilo et al., 2005; King et al., 2019**;** Orcutt et al., 2019; Wildes et al., 2008**)**. This study builds on existing literature to confirm that people who choose bariatric surgery and self-report a history of depression tend to experience two or more traumatizing events during childhood.

For participants in the *Persistence Trajectory*, a higher number of ACE events that included abuse and neglect contributed to earlier onset and more severe depression compared to those in the *Improvement Trajectory*. Depression onset in *Improvement Trajectory* participants also occurred prior to adulthood but their symptoms were less severe. Findings from this study indicate trauma histories are complex and are comprised of a constellation of adverse

experiences including but not limited to abuse and neglect. Failure to assess for the full spectrum of trauma may contribute to late and inaccurate diagnosis of depression in survivors.

Data on the long-term effects of bariatric surgery on depression severity is limited. In a systematic review, Gill et al. (2019) found depressive symptoms were reduced for two years after bariatric surgery but eventually recurred. Although most studies demonstrate a reduction in the severity of depressive symptoms compared to pre-surgery levels, our understanding is constrained by varied sample characteristics and use of different depression measures across studies (Gill et al., 2019). Notably, Gill et al. did not consider the effect of ACEs on the trajectory of depression after bariatric surgery in their review. Despite this limitation, findings from the systematic review offer insight into long-term trends.

Fink and Ross (2017) measured the prevalence and severity of ACEs in post-surgical bariatric patients admitted to inpatient psychiatric treatment and found 96.8% of the sample reported 5 or greater ACEs. The authors also found ACEs predict moderate to high depression after bariatric surgery (Fink & Ross, 2017). Lu et al. (2019) compared depression scores between abused and non-abused women groups before and six months after bariatric surgery. The team found that women in the abused group had significantly higher depression scores before and after bariatric surgery than those in the non-abused group (Lu et al., 2019). In another study measuring depression seven years after gastric bypass surgery, emotional abuse and physical neglect during childhood were associated with less improvement or worsening depressive symptoms (King et al., 2019). A similar pattern of findings from this study confirms the recurrence and persistence of moderate to severe depression after bariatric surgery in people with histories of abuse and neglect.

Findings form this study indicate people who do not experience abuse and neglect during childhood also report the recurrence of depression after bariatric surgery. The difference in trajectories was that participants in the *Improvement Trajectory* described the recurrence of their depression as less severe, less frequent, and more manageable. One explanation for the difference in trajectories may be related to experiences of PTSD, which was not explored in the current study. Walsh et al. (2017) explored the relationship between abuse and PTSD experiences and physical and mental health in a pre-surgical bariatric sample. The research team found the combined impact of abuse and PTSD history results in a higher frequency of lifetime mood and anxiety disorder (Walsh et al., 2017). However, the impact of abuse and PTSD on bariatric post-surgical outcomes has yet to be explored.

In this study I interviewed bariatric surgery patients after surgery to ensure participants' disclosure of trauma and mental health histories would not affect surgical authorization. Although it is not known how participants in this study presented their experiences with depression to care providers during pre-operative assessment, there is discussion in the literature about the potential for bariatric patients to underreport mental health symptoms due to fear of being denied surgery. Orcutt et al. (2019) recommended not delaying surgery based on mental health diagnoses except in unusual circumstances when illness impacts the patient's ability to adhere to post-operative recommendations. Participants in this study openly shared life history experiences without fear of being denied authorization for surgery and confirmed their depression was present before bariatric surgery. With recognition of the prevalence of mood and anxiety disorders in the bariatric population and more recent exploration of ACEs and their effect on post-operative outcomes, including depression, the literature supports implementing robust psychological support before bariatric surgery that extends throughout the post-operative phase

without impact on surgical authorization (Fink & Ross, 2017; Kalarchian et al., 2019). Fink & Ross (2017) recommended implementing trauma-informed care approaches for bariatric patients in inpatient psychiatric programs. However, given the diverse trauma histories represented in this study's sample, trauma-informed care should be extended beyond inpatient psychiatric settings. Participants in both trajectories recommended ongoing psychological counseling that begins before surgery and is ongoing throughout the first post-operative year.

Healthcare Provider Recommendations

To ameliorate the presence of weight stigma in healthcare delivery and better serve higher-weight people who may eventually choose bariatric surgery, recommendations from the researcher and participants of this study are aimed at the interprofessional healthcare team in pediatric and family primary care and bariatric settings. The first recommendation is to acknowledge the presence and significance of ACEs, including but not limited to childhood emotional, physical, and sexual abuse and neglect. Holistic care should include assessment of the severity and chronicity of ACEs. Along these lines, the healthcare community should incorporate weight stigma sources as part of the ACE assessment. Based on the four sources of weight stigma identified in this study, suggested questions to assess for weight stigma experiences include:

> Have you ever been bullied or teased about your body shape/size? weight? If so, when did it start? Who bullied or teased you?
>
> How did your family discuss your weight and body shape/size?
>
> How did your parents discuss their weight and body shape/size?
>
> What were typical healthcare encounters /providers like for you during childhood

How often have unsolicited conversations about your weight occurred throughout your life?

Healthcare providers in pediatric and family primary care settings could address and interrupt intergenerational weight stigma by encouraging parents to adopt weight-neutral practices when discussing nutrition, food intake, or health practices. Participants in this study and others noted that the emphasis of bariatric programs on weight monitoring and the relevance placed on weight as an indicator of health status was distressing, reinforced feelings of failure, and promoted disengagement with the program. A recommendation is for bariatric programs to implement weight-neutral health approaches after surgery where health-related behaviors are positively reinforced, and goals are constructed independent of weight.

Braun et al. (2020) found self-compassion protects against the effects of weight stigma. Given how common the experience of weight stigma is, healthcare providers could proactively integrate self-compassion practices into ongoing care, as well as purposefully model and teach about self-compassion to at-risk children and young adults to reduce the effects of weight stigma. Further, bariatric programs should incorporate trauma-informed care approaches through all phases of the bariatric surgical process.

Bariatric programs should work to establish more robust support structures and extended follow-up to better meet the needs of people who undergo bariatric surgery. Bariatric programs could benefit from a full-time case manager to help patients coordinate resources in and outside the program to ensure their needs are met. Currently, psychological care is limited to pre-surgical screening. However, participants in this study and others voiced the need for in-depth counseling to address distressing life experiences, mental health, eating behaviors, and adapting to changes after bariatric surgery. Participants in this study advocated for psychological support to be

available for at least one to two years after bariatric surgery. Limited knowledge about disordered eating after bariatric surgery exists, including how it might present differently in individuals with varied life contexts. As part of ongoing psychological care, the healthcare team should assess for disordered eating patterns before and after bariatric surgery, developing targeted interventions that could then be tailored to individuals.

Participants also made recommendations to reduce disengagement from bariatric programs. First, bariatric programs should offer pre-operative education classes geared toward varying levels of health literacy. Some participants grew frustrated by not having their more complicated questions answered and attending meetings that did not deepen their knowledge about bariatric surgery leading them to seek information from other sources. In line with previous research, participants in this study identified peer support as another source that could support understanding of pre-operative preparation and post-operative adjustments. Consistent with the findings of Tolvanen et al. (2021) several participants suggested it would be helpful to hear from bariatric peers to highlight varying degrees of success and "failure" after surgery. A peer support program may require some start-up cost but could eventually be self-sustaining if engagement meets the education and psychosocial needs of the patients. Peer support may help to reduce some demand on care providers in the bariatric program and promote sustained engagement in bariatric programs by designating a person for questions. Future researchers should explore how peers are ideally matched in bariatric programs.

Strengths and Limitations

Strengths

The current study has several strengths and limitations. A strength of this study was its use of a narrative life history approach completed over two interviews. The narrative life history

approach allowed me to build rapport and consider the complexity and range of ACEs represented amongst participants. Weight stigma was addressed explicitly in this study, and the absence of this concept from bariatric surgery literature is notable. Another strength was use of a Fat Studies framework which informed our weight-neutral approach when developing interview guides and follow-up questions.

Researchers acknowledge that studies conducted with pre-surgical bariatric patients may be affected by underreporting of mental health conditions and eating disorders due to fear of denial of surgical authorization. Given the study's retrospective nature, participants could share openly without worrying that inclusion in the study might affect access to bariatric surgery. An additional strength was our use of member checking (i.e., respondent validation) of story maps and synthesized analysis with participants during second interviews (Birt et al., 2016). With member checking, findings are returned to participants to check for accuracy and resonance with their experience.

Many bariatric surgery studies limit their inclusion of participants to one surgical approach. A strength of this study was that it was open to people with different bariatric surgical approaches. The literature lacks long-term follow-up after bariatric surgery, but this study included several participants who were 4+ years out from surgery. This study illuminated how early childhood experiences affect long-term outcomes of bariatric surgery and offers a perspective on the needs of patients who are working to maintain life-long adherence to recommendations made by their bariatric program.

Limitations

While recruitment was open to patients who underwent any bariatric surgical procedure, the study ultimately only recruited participants who underwent the sleeve gastrectomy or gastric

bypass. To qualify for inclusion in this study, participants had to self-identify as having experienced weight stigma and depression. This may limit the transferability of findings to patients who do not identify in this way. Despite recruiting across the United States, the study sample lacks race/ethnicity and gender identity diversity. Therefore, the study is primarily transferrable to white patients who underwent sleeve gastrectomy or gastric bypass and self-identify as experiencing weight stigma and depression. The bariatric surgery literature is constrained by a lack of racial/ethnic representation because utilization of surgery by members of diverse racial and ethnic groups is low (Chao et al., 2022).

To minimize the potential for imposing weight stigma on study participants, I intentionally avoided collecting pre-operative weights or weight at the time of the study. In light of this, the discussion of weight loss outcomes should be interpreted cautiously as one group may have had more weight loss due to their relative starting points.

Although participants generously shared their stories, another limitation was the face-to-face format which may have led them to withhold details. There were a few instances in which reviewing the story maps together elicited more or different details than what was shared during the first interview. These instances could be an indication of the presence of social desirability bias during the research interviews. Alternatively, participants offering new or greater detail might have signaled increased trust or that the story maps stimulated memory recall. Another possible limitation is my positionality and visibility as a woman in a large body who has not undergone bariatric surgery, which may have caused participants to hold back weight stigmatizing beliefs. It is also possible my positionality helped participants share their weight stigma experiences more openly. This understanding is informed by participants sharing that

health care providers on the lower end of the weight spectrum could not understand their lived experiences of weight stigma.

Future Research Directions

While the current study sheds light on the trajectory of early life experiences and post-bariatric surgical outcomes, more work is needed to explore these trajectories. Future research should explore the association of ACEs, including weight stigma, on post-bariatric surgery outcomes, such as eating behaviors and mental health, in diverse samples, as well as in those individuals who do not self-identify as depressed. Future studies should also explore how disordered eating presents differently in the bariatric population before and after surgery.

Based on recommendations to include in-depth psychological support before surgery and extend this support for 1-2 years after bariatric surgery, future research should evaluate the impact and effectiveness of psychosocial interventions. Additionally, researchers should explore the value of peer support programs in supporting mental health and post-operative outcomes in the bariatric surgery population.

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Appendix A

Screening Criteria

I'm going to give a list of things that would PROHIBIT you from being in the study. Please do not indicate if these things apply to you until the end of the list. When I'm finished with the list, feel free to ask questions or tell me if you do NOT have any of the following.

1. Having weight loss surgery more than 10 years ago.
2. After having weight loss surgery having any revisional surgeries.
3. Having weight loss surgery before you turned 21 years old.
4. Do not identify as experiencing depression.
5. Do not feel comfortable reading important forms in English.

Appendix B

Semi-Structured Interview Guide (Interview 1)

Specific Aims	Interview Question(s)/ Probe(s)
Aim 1: Describe life course experiences of weight stigma for individuals who opt to undergo bariatric surgery.	▪ Tell me about your life, beginning as far back as you remember through present day, including any experiences you had around weight ▪ **Alternate question**: Tell me about how you grew up. What was your family like? What do you remember about school and social life? ▪ **Probe**: What do you remember about the experience of your body throughout your life, until the time you decided to undergo bariatric surgery? How about since the time of surgery? ▪ Can you recall anyone being critical of your weight throughout your life? ▪ Tell me about your first memory of someone being critical of your weight. ▪ How did these criticisms affect your mood, your behavior, your decision to pursue bariatric surgery? ▪ **Alternate probe**, if needed: When did you first recognize your body as different from others? ▪ What informed your choice in clothes or how you conveyed your personal style? ▪ How have restrictions associated with the COVID-19 pandemic affected how others treat you about your body? ▪ How has the pandemic affected the way you feel about your body?
Aim 2: Explore experiences of weight stigma in the context of bariatric clinical care.	▪ How did you first learn about bariatric surgery? ▪ Please describe what you remember about your encounters with health care professionals since the time you decided to pursue bariatric surgery through present day. ▪ Alternate probe, if needed: Tell me about the first conversation you had with a health care provider about bariatric surgery. ▪ Tell me about conversations you had with your friends and family about bariatric surgery before undergoing it. ▪ **Probe**: How would you describe the health care you received before, during, and after bariatric surgery?

Aim 3: Describe the trajectory of depression as it relates to weight stigma both before and after bariatric surgery.	▪ What supportive care or counseling services did you need (find helpful) before surgery? How about after? ▪ I am particularly interested in learning about the ups and downs of the bariatric surgical process. What aspects of care/services did the bariatric surgical program do well? ▪ What aspects of care/services would you want more of? ▪ Please tell me about your mental health before and after bariatric surgery. ▪ How has the pandemic affected your perspective? ▪ What kind of psychological care did you receive before, during, and after surgery? ▪ **Probe:** How long after surgery did you have access to psychological care?
	Closing question:
	Thank you so much for sharing your experiences with me. We have discussed a lot of things today. Is there anything that we have not talked about that you would either like to share with me or feel I should have asked?

Appendix C

Common Follow-up Interview Questions

Follow-up Questions

- Looking to the future, what three points would follow the [last point on the timeline]?
- If you trace the depression back, when did it start?
- Some participants have related experiencing body dysmorphia after losing weight with bariatric surgery. How does this match with your experience?
- What was your health status before surgery?
- What is your personal definition of health?
- Do you identify as body positive or fat positive?
- What are some of the mental changes that have occurred since having surgery?
- What did you expect it to be?
- What has surprised you?
- About how many people have you known that had bariatric surgery?
- What do you think the difference is between people who are happy/satisfied with the surgery versus those who are not?
- If you had the opportunity for a do-over. Would you make the same decision?
- What advice would you give to the bariatric team in hopes of giving others a good experience?
- What advice would you give a person who is considering bariatric surgery?