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Pre-surgical, surgical, and post-surgical experiences of weight loss surgery patients: a closer look at social determinants of health

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Abstract

Using a novel qualitative approach, Photovoice, researchers assessed social, psychological, physical and economic barriers encountered by patients of weight-loss surgery. Applying the Photovoice approach and Williams' (1984) theory of narrative reconstruction for qualitative interviewing, the research team set out to investigate the bariatric patient experience from pre-surgery to hospitalization to post-surgery. Fifteen participants were given digital cameras and asked to take photographs that represented their weight loss journeys. Photographs and qualitative interviews were used to theorize the role played by co-morbidities, social determinants of health, provider communication experiences, and understanding of insurance coverage in patient outcomes. Several themes emerged from the interviews and photographs including themes centered around: (a) racial/ethnic standards of beauty, (b) gender expectations, (c) co-morbidities, depression/disordered eating and obesity discrimination, and (d) financial hardship impacting adherence. Photographs also illuminated the impact of hospital and state-wide policies on patient lives. Results suggest that Photovoice may be a useful adjunct to standard-of-care to help patients identify barriers, and to identify shortcomings in health services. Additional screening tools for

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CONFLICT OF INTEREST STATEMENT

The authors have no conflicts of interest to disclose. The results of the study are presented clearly, honestly, and without fabrication, falsification, or inappropriate data manipulation.

gender–and income–related barriers (and concomitant referrals to support services) provide an opportunity to improve patient care and reduce post-operative readmissions.

Keywords

Photovoice; narrative reconstruction; social barriers; psychological barriers; patient care

INTRODUCTION

In the United States (U.S.) obesity is a major public health concern, with as many as two out of three American adults considered overweight or affected by obesity (1–3). Adverse physical and mental risk factors associated with obesity including anxiety, depression, hypertension, Type 2 diabetes (T2DM), coronary heart disease, stroke, dyslipidemia, degenerative joint disease, sleep apnea and some cancers (4). Due to the increased risk of obesity associated chronic diseases, the obesity epidemic has impacted the U.S. economy. In 2005, an estimated \$190 billion dollars were spent on obesity-related health care expenses (5). The causes for obesity are multifactorial—genes, too little physical activity, early life course influences, poor diet, and sedentary lifestyle—and its physical, mental and economic impacts are growing (5). Individuals who are considered as having obesity or overweight can face “bias and stigma, and they are vulnerable to negative attitudes in multiple domains of living including places of employment, educational institutions, medical facilities, the mass media, and interpersonal relationships” (5).

Weight loss surgery is an increasingly sought after weight loss solution method by individuals who are overweight or affected by obesity (6, 7). Some forms of weight loss surgery involve making a person’s stomach smaller; while other forms also make changes to the small intestine (6, 8). The most common forms of weight loss surgery include Roux-en-Y Gastric Bypass, Laparoscopic Adjustable Gastric Band, Laparoscopic Sleeve Gastrectomy, and Biliopancreatic Diversion with Duodenal Switch (9). Weight loss surgery can be used in complement with lifestyle choices and treatment/maintenance of co-occurring conditions.

While weight loss surgery has been successful in patient sustained weight loss (10), it is not without its logistical and medical complications. Nearly one in ten patients enter an emergency department (ED) within 30 days of the procedure, with an estimated admission rate of one-third. A significant portion of hospital admissions are for preventable conditions (11); and common complaints include abdominal pain, dehydration, and nausea. Patients also struggle with adherence to required post-operative vitamin supplementation. Severe micronutrient deficiencies may lead to serious physical and neuropsychiatric conditions (12). However, little is known about the contextual experience of patients, and what these patients need in order to be successful.

There is a small, but growing field of qualitative research about the weight loss surgery experience. Qualitative weight loss surgery research often includes experiences of patients in non-medical settings. For example, Graham et al (2017) and other studies highlighted that media perception of weight loss procedures is that they are “‘cheating’ and ‘taking the easy

way out” ((7), p. 324). Because these procedures require significant lifestyle changes, not all outsiders will immediately understand patients’ dietary choices (7). With this in mind, qualitative studies of weight loss patients often look at the intersections of the psychological, social and clinical environments.

This study fills a gap in weight loss surgery qualitative literature by exploring the intersections of the social, cultural, and economic barriers and facilitators to successful recovery among urban weight loss surgery patients in the context of their daily lives. To date, few studies have explored both the clinical practice of obesity reduction and the psychosocial implications. The stigma attached to obesity, and the all-encompassing impact that obesity can have on one’s life is important to understand. This research also explores the role of Photovoice as an effective research method. Furthermore, ways to inform patient-provider communication, service provision, and health promotion are also explored.

MATERIALS AND METHODS

Photovoice approach

To provide richness to the traditional qualitative data collection, the research team also employed a modified version of the community-based participatory research (CBPR) method known as Photovoice. CBPR “helps address the gap between research and practice” by offering the “development of synergistic collaborations between researchers and community members that capitalize on their shared knowledge and wisdom” ((13), p. 619). The Photovoice technique is described as a “process in which people—usually those with limited power due to poverty, language barriers, race, class, ethnicity, gender, culture, or other circumstances—use video and/or photo images to capture various aspects of their environment and experiences in order to share with others” (14).

Photovoice has been used in a number of community settings, but it has been infrequently used in the clinical setting. The use of Photovoice with a clinical population is one of this project’s unique contributions to the literature. Another common visual approach is photo-elicitation, which asks for feedback to images. In photo-elicitation projects, such as the Lives at Risk Study highlighted in Rapport et al. (2017), study participants are responding to visual and text stimuli, which is most often produced by the researchers (15). The researchers’ image selection guides and influences the conversation. On the other hand, all of the content Photovoice participants are responding to, including the interview questions, are co-developed by the participants and the researchers. In the case of this study, healthcare providers and patients helped to determine the domains of the guiding questions of the project.

Operating on the advice of the Bariatric Center staff about patient schedules, the researchers decided to conduct the Photovoice data collection on a one-on-one basis—a modification to traditional Photovoice. After receiving permission from the head of the Center (a surgeon), the research team worked with Center staff—nurses, front office staff, and dietitians. Staff had more regular contact with patients, before and after the procedure, than the surgeon. For instance, the front office staff often worked with the patients to schedule their multiple required appointments with allied health professionals (required by payers for “clearance”).

Therefore, the patients often developed a close relationship with the front office staff, and staff were often the first call when patients were experiencing barriers.

Development of materials and recruitment

In order to recruit a diverse participant pool, the primary researcher was invited to attend monthly bariatric surgery support group meetings, to conduct participant observation in the Center waiting room, and to post fliers in the waiting room of the Center. Staff introduced the primary researcher to the patients as a researcher whose aim was to improve health care for the weight loss surgery patients, emphasizing that the researcher was external to the Center. Offering this information was key in gaining the patients' trust—patients understood that they could speak freely, without retribution or judgment. Also, repeated engagement with the primary researcher (through participant observation and in the support groups) increased potential participants' comfort levels with the project and with the primary researcher.

In keeping with the CBPR tradition, the interview schedule and photography prompts were developed in partnership with Center staff. During the first few informal conversations during the support group meetings, and in the waiting rooms, the primary researcher offered potential participants the opportunity to suggest possible domains to address during the project resulting in questions that were modified accordingly. Once the interview questions and photography prompts were set and approved by the Institutional Review Board, the primary researcher began to recruit for the project.

The Photography prompts and interview questions

Patients suggested that questions address—family, work life, love life, patient-provider interaction, community/cultural views of beauty, and mental health. Questions were divided by time period—pre, during, and post-surgery, and gauged changes in relationships across these times. Study questions covered the following areas: personal history (describing their theories for how they became obese, and the updates post-surgery), personal/work/economic stresses, culture (and its influence on food choices/preferences for body types), family support, health literacy (expectations about surgery and understanding the causes of obesity/co-morbidities), self-efficacy. The continuity of the themes across the two interviews was helpful, as participants often reflected on their initial responses and made corrections, based on their increased clarity on their experiences.

The research team used the same process to develop the Photovoice prompts. Understanding patient vulnerability, the research team was discouraged from prompting “selfies” or other pictures that were tracking weight. Instead, the team was encouraged to think about developing prompts that addressed barriers, facilitators, and personal motivations. Therefore, when patients were given instruction about the cameras and the experience, they were asked to think of “creative” (i.e., non-selfie) ways to mark their journey. As the interviews were covering many personal, health and work domains, most participants chose topics from interview 1 to cover in their photographs. The cameras were brought to the Center for downloading and processing, (often on a day of an appointment) and the discussion about the photos occurred during the second interview.

Inclusion Criteria and Methods

This was the first study of its kind at the Center; therefore, the research team decided on a short, but open enrollment period. In order to participate in the study patients were required to be eighteen years or older, must have scheduled their weight loss surgery, must be able to read and write in English, and demonstrate a willingness to participate in both the interview and photography portions of the study. Enrolled participants were in various stages of the surgery process—either pre-op or post-op. Patients could be of any payment source, and there were no exclusions based on comorbidities. Only pre-operative patients who had a firm date set for the surgery were allowed to participate. If the patients were post-operative, they had to demonstrate that they had an initial or revisional surgery with the Center.

Patients had to commit to lifestyle changes and weight loss consistent with the standards set by the American Society for Metabolic and Bariatric Surgery (ASMBS) (16–18). Standards, used by providers and insurers working in this area, were based on a number of peer reviewed studies about optimal results for these procedures. Therefore, study participants would have lost between 5-15% of their body weight before surgery, bearing in mind variances due to comorbidities and other procedures (16–18). Center staff provided patients with individualized lifestyle and dietary plans.

Patients learned about study participation via one of three methods: (1) introduction to the research team (by the front office staff) in the waiting room; (2) meeting the primary researcher at the aforementioned support groups; or (3) seeing a flier in the waiting room and calling the researcher.

Study consent materials included study information, contact information for the research team, and contact information for the IRB study approval office. Informed consent was obtained from each participant after participants reviewed all materials and before allowing study participation.

Power sharing and reflexivity: Interview location and place

At enrollment, participants were invited to participate in two semi-structured interviews—one before the photography, and the other after the photography (typically coinciding with their pre- and post-operation periods). Participants were encouraged to select convenient locations and times convenient to them; another key component of traditional CBPR.

The primary researcher's flexibility for time and location was key for helping participants see this as a collaborative process, and afforded some methodological advantages. Elwood and Martin (2000) found that participants who were allowed to pick locations often felt empowered in their relationship with the researcher, and a sense of control in the research process (19). Because they were often interviewed on a day of an appointment or support group, and the Bariatric Center was located in a large, urban academic medical center, participants were often interviewed in one of the cafés of the Medical Center. Participants were also given the option of an open office in or near the Center suite, if available. These offices typically had a door that could close for privacy, and most had little or no medical equipment in them. The offering of options of a community-based (off-site), Center-connected (i.e., the offices), or Center-adjacent (i.e., cafes on/near the Medical Center

campus), was deliberate. In 2015, Gagnon et al., noted that qualitative interview locations tell stories about power, constraints, and relationships that researchers must pay attention to (20). Ultimately, no clear pattern emerged for which participants chose a more public space over the offices.

The risks to confidentiality, the possibilities of self-censorship, and the danger of public disclosure need to be considered in public space vs. therapeutic space vs. secure environment (20). To protect participants, the primary researcher often met the participant in the lobby of the larger Medical Center (rather than the Bariatric Center), and together, they would walk to the interview location. Travelling to any of the locations, the primary researcher engaged in “small talk” unrelated to the study, in an effort to protect the purpose of the meeting from bystanders. The primary researcher and participant typically chose a table or booth furthest away from others when conducting an interview in the public space, but on busy days contact with others was often unavoidable. Participants understood the risk of being overheard, but some still seemed to prefer the collegiality of the cafés over the offices.

In the initial interview/meeting, the primary researcher taught the study participant how to use the camera, and provided them with a “cheat sheet” that addressed common errors/struggles with the cameras. This sheet also addressed the rules and regulations of Photovoice and addressed the specific request not to take photos inside of the Medical Center, per the request of the Center’s legal counsel. Participants were given a call-in number to use to ask questions about the cameras, or to schedule the next interview early. The primary researcher and the participant developed an agreed upon timeline (usually a couple of weeks) for the duo to meet and discuss the photos, usually coinciding with a follow up appointment.

Data Analysis

All interviews were transcribed verbatim. Because of the limited CBPR-based work done with weight loss surgery patients, the research team decided to focus on using the grounded theory method to understand the weight-loss patient experience. Grounded theory is an iterative method that uses the following steps: open coding (looking for broad themes), axial coding (grouping with generic relationships), selective coding (narrowing to specific story), and memoing. Coding ideas were shared through meetings and memos, and the team would make adjustments accordingly. Similar analysis methods were employed by Wharton et al (2016) in their publically funded study involving Canadian weight loss surgery patients (21).

RESULTS

Fifteen patients affected by morbid obesity participated in this IRB-approved pilot study. Demographics data for the sample can be found in Table 1 (age range 37 – 65 years; 73.3% female, pre-op = 12, post-op = 3). All participants adhered to traditional pre-operative screening and weight-loss requirements, and all were covered through insurance. When this study was conducted in 2009, universal health care was not established in the U.S. Therefore, two forms of insurance were reflected in our study; private and public. If participants had public insurance, these individuals were 150% below the U.S. poverty level or were disabled (22–24).

All participants took part in two interviews; taking an average of 10 photographs each. Key themes included issues around mindless eating, and resisting eating during family meal preparation. The demand to purchase vitamin supplements created financial hardships for low-income patients; therefore, supplements were a source of non-adherence. Men less often expressed interference by caretaking/housework expectations in their ability to adhere to recommendations. Below are descriptions of the pictures and associated themes (Figures 2, 3, 4, and 5).

The broken mirror: obesity discrimination/shame

Participants connected their current weight to a combination of mental health, genetics, stress, socioeconomic status, and cultural influences. A number also implicated traumatic experiences as part of their stories. Regardless of the cause of the weight gain, many had endured a lifetime of social exclusion, self-blame, and self-destructive behaviors. All had tried numerous diets and weight loss programs, often with some (short-term) success. Even in times of progress, all indicated that they had experienced weight discrimination.

In all of the interviews, the participants recalled situations of “fat shaming” by peers, family members, and colleagues. While they came to expect these efforts, they were particularly difficult during the times when they were doggedly pursuing weight loss. As highlighted in the Introduction, it is difficult for non-obese members of society to understand how difficult the weight loss surgery (and obese, in general) experience is.

A seat at the table: Depression/disordered eating

Some of the impetus for the social fears was connected to their fear of eating in front of others and the response that it would get. Social and familial eating, and the fear of it, left them feeling out of control, as if others around them had more say in what they should be doing. As they struggled to make decisions for themselves, they fought to have a “seat at the table” in group discussions about their weight and personal choices. During weight loss times, they were frequently on very specific, and restricted diets. These were not compatible to some popular restaurants. Bringing one’s own food, or refusing to participate in the social act of sharing a meal, would draw attention to the participant’s weight and dietary habits. This could set up a stressful set of events—either a group conversation about the person’s weight and/or several follow-up, well-intentioned inquiries about the status of one’s weight loss goals. If the patient had experienced the “double failure” (25) of weight regain, this was not something they’d want to discuss. Discussion of the regain might send them into a cycle of disordered eating.

In this theme, many patients showed pictures of photos or representations (wedding rings, mementos from events) of “better” (often, thinner) times. In old pictures, patients were always smiling, and usually surrounded by supporters. Demonstrating family dynamics, they often showed pictures of events that represented their shaky familial relationships. In showing these pictures, they would discuss arguments about food, or moments when a heavy sibling compared weight-loss journeys, or events they were feeling like they were missing out on because of their weight (for instance, discussing amusement park weight restrictions).

The new age panacea: Co-Morbidities

A number of the patients discussed the idea that the surgery had been “prescribed” to help address comorbidities like diabetes, heart disease, and joint/knee damage. While the prescription’s intent, on the surface, was to improve outcomes, many of the publically insured patients commented on discussions they had with others about the perceived cost of obesity, and that the state was concerned more about the “bottom line”. Because they saw their weight as the cause of personal, work, and health problems, a “cure” for obesity could help their lives move in the right direction. A heavy burden was placed (by the patients) on the outcomes of the surgery, a burden informed by absent or incomplete patient education. This theme connects with previously outlined themes of passivity.

Connected to this theme, pictures that were often taken were all of the ways that they felt “different” from others, (aside from their weight)—pictures of diabetes testing supplies, prescription medications, and “selfies” on crutches.

Good Mother, Thin Mother: Gender expectations

The theme of gendered expectations manifested in stories about the causes of weight gain, reasons for lack of participation in regular, preventive care, reasons for not being physically active, and justifications for overeating/grazing. Despite equal rates of obesity among U.S. men and women, approximately 80% of bariatric surgery patients are women (26). Of note, this study included similar demographic results, with women making up 73% of the sample. Study participants, mostly women, expressed being more than happy to fulfill their gendered, mostly caregiving related, expectations; when their weight interfered with these expectations, frustration with lack of fairness appeared. Specifically, women discussed the gendered nature of what was driving them to do the surgery; while the men gave more details about getting the surgery due to health reasons.

“Real women have curves”: Racial/ethnic standards of beauty

Patients participating in weight loss surgery, across payment methods, represented a number of different cultures. Just as they chose not to leave childhood trauma, societal views, and personal relationships out of their stories of their weight journeys, they did not leave their cultural lenses out of their narratives. While race/ethnicity was a source of pride for many, it caused friction in patient-provider interactions. These interactions comprised the final leg of the shame table, becoming the “quadruple shame” of living up to racially/ethnically approved standards while failing in the White, Western standards for diet gender and beauty.

Racial/ethnic minority patients (men and women) discussed the BMI standards upon which they were measured were for White, Western bodies, and did not reflect the “natural” body sizes/styles of racial/ethnic minorities. Regardless of the specious scientific basis for these claims of racial body types, the patients believed they were true, and spoke of the initial weight loss goals being imposed on them (by a mostly White team) as being biased and unfair. As a result, they started their clinical weight loss journey discouraged, and feeling disrespected. In several interviews, patients discussed trying to negotiate the weight loss goals with the surgeon at the start of the process, or passively resisting the goal weight, and setting their own, “racially consistent” goal weight. They were aware that this new, modified

weight may or may not have ultimately put them in the “White” non-overweight categories, but it was a matter of principle. Two weight loss goals were set by the provider and each patient, and included the following: (1) a pre-op weight loss goal between 5-15%, and (2) a post-op weight loss goal of a body mass index within the normal range of 18.5-24.9%. While they may have agreed to the initial goal weight at the start of the process, as participants began to see their bodies change and began to more clearly understand how those pounds translated on their frames, they began to push back.

DISCUSSION AND CONCLUSIONS

The photos and interviews revealed issues consistent with the findings of previous studies (27, 28) Personal (psychiatric/psychological disorders), health behavior, and (lack of) knowledge/self-efficacy played a role in patients’ ability to reach personal/medical goals before and after surgery. As previous studies on the stigma of obesity (29), obesity-related depression (30), and anxiety (31) have indicated, these internal struggles must be acknowledged and addressed in order to increase the likelihood of long-term weight loss.

Study participants shared various experiences of obesity discrimination and shame, similar to findings in other qualitative studies of obese/bariatric patients. Using a modified Photovoice method, study results from Homer et al. (2016) noted that prior to bariatric surgery participants experienced stigmatization, shame, poor health, and reliance on medications (32). Fruh et al. (2016) depicted participant’s experience of widespread community, and even provider, weight discrimination (33–35). As a result of these negative experiences, participants were wary of interactions with others, including, initially, the primary researcher. Regardless of how participants felt about their journey, they began to internalize the experiences of discrimination—they could only see themselves in a broken mirror, a mirror that reflected the views of the community. Along with obesity discrimination, depression and disordered eating were also themes that emerged from this study. A possible mechanism to explain the disordered eating experienced by our participants is the interplay of brain chemistry and emotional eating. Although the complexities of the role of brain chemistry, in addition to emotion, are not completely understood, this echoes recent literature about disordered eating (36, 37). The theme of co-morbidities was also a significant finding of this study. It should be noted that there have been a number of high-profile reports in the US media about the cost of obesity on taxpayers and insurers. Regardless of the reason for the surgery suggestion, patients often saw the surgery as a panacea for much that ailed them. Therefore, the promise of the surgery to “cure” diabetes and to introduce them to a longer, and pain-free life was very appealing. Surgery as a panacea for many weight-related ills was the “pitch” made by the staff and other patients that propelled them to continue the arduous weight loss surgery process. Although the evidence for the long-term impact of weight-loss surgery on T2DM are still being understood (38), the idea of bariatric surgery “curing” diabetes was regularly on the lips of participants. Regarding the gender expectations theme, many women involved in the study devalued their efforts because their size and restrictive diets changed their roles. Similar results were found in Graham et al. (2017) where participants felt that the lack of community understanding of the dramatic lifestyle changes for bariatric surgery was a significant barrier to their success (7). In regards to the racial and ethnic standards theme,

surgeries were performed in a racially and ethnically diverse urban area in the Northeast United States. Of note, research has shown differential outcomes among whites and non-white patients (39). Much of the previous work has focused on difference in biology or access. Similar to our study, Morton (2016) looked more closely at ethnicity and culture as a means to understanding differing outcomes (40). Optimal health is the ultimate goal for these patients, so approaching these discussions with a culturally competent understanding of how weight loss and body types will be key to their success (41, 42).

The study results and themes place emphasis on the need to integrate mental health diagnostic and treatment services that extend beyond the cursory “clearance” appointment required by some payers will be key to helping obese patients adhere to weight loss plans.

Additionally, external barriers—such as cultural views of body styles (39), complicated family meal prep, dietary temptations, economic struggles (43), lack of clinical support, and logistical difficulties with adherence to follow-up appointments—served to disrupt patients’ journeys to wellness. With the exception of genetic causes of obesity, many of the behaviors that caused barriers for our study participants (grazing, lack of exercise, and emotional eating), have developed over years, or in some cases, lifetimes. In our study, cultural views on meal preparation roles and body sizes were difficult barriers to overcome—culturally responsive educational materials, and partnering patients with ethnically/racially similar peers may offer some constructive discussions about how to address these issues. Borrowing from pediatric obesity models (44) and addressing the family system will be key in adult weight loss surgery patients’ success. Inviting family members to the appointment, and integrating them into the long-range plans may be helpful. In the broader view, understanding the community-level influences on health beliefs and behaviors was also key, particularly for our racial/ethnic minority and low SES patients. Their disproportionate appearance in obesity populations does not happen in vacuum, and frank conversations about the structural violence that they experience in their everyday lives will need to be undertaken by providers, patients, and policy makers.

Based on our findings, healthcare teams may improve patient outcomes and provide a more patient-centered experience by:

- Engaging in robust **interdisciplinary partnerships** that allow for interventions around cognitive, motivational, health behavior, and emotional barriers ¹⁹.
- Taking extensive **social histories**, including learning about cultural views of meal time, body types, neighborhood fitness/healthy food resources, and access to the Internet (for online support groups, more affordable dietary supplements, and web-based provider support).
- Promoting community-staff-provider **participatory evaluation** of the current weight loss surgery process that allows for conversation with patients and training of staff to improve processes (Figure 1 provides useful tool for healthcare practitioners to use to help mitigate the chances of an unsuccessful patient outcome).

LIMITATIONS

While not overly small for qualitative studies, the sample size of fifteen participants could be a limitation of the study. The study findings and methods can, however, be a guide to those interested in working with urban populations, as the Photovoice method was appealing to a wide range of ethnic/racial/gender populations in the study.

The location of the interviews is also a limitation. Consistent with the discussions in Gagnon et al. (2015), the team—in trying to assure some power sharing with participants—were forced to accept that there were some constraints and possibilities for the more public spaces and the more private spaces for interviews (20). The private spaces allowed for frank conversation and tactile interactions with the pictures, but because of its location in a medical setting, may have encouraged restraint for patients who are nervous in medical settings. The public settings (when larger tables were available) still allowed for the interactions with the pictures, and offered a more relaxed conversational structure, but potentially added a level of nervousness, as Medical Center-affiliated staff had access to these spaces, along with the general public. However, we believe that the offering of the choice put participants at ease, as they felt in control of some of the process.

Another limitation of the study was the scope of the questions. Because of limited time with each participant, the research team was not able to go as in depth with health services questions as they would have liked. They were not able to obtain the rich detail of all of their pre-op appointments with providers outside of the weight loss clinic. Many of the participants discussed those experiences, but often time did not allow for more discussion. As these appointments can be integral for setting the tone for the weight loss surgery experience, we recommend allowing for more time to ask these questions, or even starting the project during the time of these appointments, to create a better understanding of how those teams can better assist in the weight loss surgery journey.

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What is already known about this subject

- Two out of three American adults are considered overweight or affected by obesity; making obesity a major American public health concern.
- Adverse physical and mental risk factors associated with obesity include: anxiety, depression, hypertension, Type 2 diabetes (T2DM), coronary heart disease, stroke, dyslipidemia, degenerative joint disease, sleep apnea and some cancers.

What this study adds

- Provides insight on how Photovoice, a qualitative research approach, can be used to gain a better understanding of the social, cultural, and economic barriers and facilitators to successful recovery among urban weight-loss surgery patients.
- This research explores the role of Photovoice in the clinical setting, and in psychosocial domain as a tool to increase successful patient outcomes after weight loss surgery.

Figure 1.
Care of Continuum

Figure 2.
Female participant, post-op, picture of her mirror: “I don’t see myself looking any different...Definitely the mirror is a fighter... That’s definitely a struggle for me...”

Figure 3.

Photo of cooking pot: “One of the hardest things for me...you’re on that liquid diet, and you really wanna eat, and you just can’t...That was definitely hard, I still had to cook for my family, but I can’t eat it...”–female participant, single mother of small child

Figure 4.
Photo of diabetes testing supplies: Female, post-op, single mother: “That was my biggest motivator... That is my glucose monitor...I was testing my sugar everyday...This is why I’m doing the surgery...”

Figure 5.

Photo of messy play room. This is a photograph of the laundry room/play room of a single mom of toddler. It is messier than normal. She was struggling with restrictions on lifting heavy things, post-surgery. Felt the staff left her unprepared for this. Also felt guilt for having to be remiss in her “motherly” duties like cleaning and laundry.

Table 1**Demographics¹**

<i>Subject Characteristics</i>	
Sex F/M	11(73.3)/4 (26.7)
Age (range in years)	37 - 65
<i>Ethnicity²</i>	
Hispanic or Latino	5 (33)
Not Hispanic or Latino	10 (66)
<i>Surgery Status</i>	
Pre-op	12 (80)
Post-op	3 (20)
<i>Insurance Type³</i>	
Public insurance	5 (33)
Private insurance	10 (66)

¹Data presented as n (%).

²Ethnicity classifications reflect standard ethnic categories that appear in U.S. Census (45). Hispanic or Latino ethnicity refers to refers to a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin regardless of race. Not Hispanic or Latino refers to a person that is not from Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin regardless of race (46).

³To be eligible for public insurance, individuals need to be 150% below the U.S. poverty level or were disabled (22–24).