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Motivators and Barriers to Seeking Metabolic and Bariatric Surgery Among Adolescents: A Qualitative Study

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ABSTRACT

Background: The prevalence of severe obesity among adolescents has increased the use of metabolic and bariatric surgery (MBS) as a therapeutic option. Understanding factors influencing adolescent MBS choice and the support needed to undergo MBS is crucial for improving health outcomes. This study examines the motivations and support needs of a diverse sample of adolescents seeking MBS via the patient voice.

Methods: Adolescents (n = 14) at a weight loss surgery clinic in a large academic healthcare system participated in qualitative interviews. Of the participants, 10 were female, 6 were non-Hispanic Black, 3 were non-Hispanic White, and 5 were Hispanic. Interviews were recorded, transcribed, and thematically analyzed.

Results: Three themes emerged: Intrinsic motivators, extrinsic motivators, and barriers. Intrinsic motivators include personal physical and mental health goals. Extrinsic motivators involved family and medical team support, which provided encouragement, validation, and perceived confidence for lifestyle changes. Additionally, observing family members who previously completed MBS was a significant extrinsic motivator. Concerns included fear of dying/complications from MBS, and possible weight regain post-MBS.

Conclusion: Adolescent MBS programs should enhance intrinsic motivation for behavior changes. Findings highlight opportunities for bolstering support pre- and post-MBS and addressing MBS-related anxieties related to long-term weight management.

1 | Introduction

Obesity affects nearly 14.7 million US adolescents between the ages of 2 and 19 years (19.7%) [1]. Moreover, about 6% of adolescents experience severe obesity, defined as a BMI greater than

or equal to 120% of the 95th percentile [2]. Metabolic and bariatric (MBS) surgery is safe and efficacious and has become an increasingly common method of weight management in adolescents who are experiencing severe obesity [3–5]. While there is clinical support for adolescents seeking MBS [6], little is known

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about the factors relevant to the decision-making process that led to the decision to pursue surgery and the support needed to execute this decision.

Understanding the factors influencing an adolescent's decision to pursue surgical weight loss programs is essential, as it provides insights into the complex interplay of societal, psychological, and physiological factors that shape this choice. One of the primary drivers behind this decision is the societal pressure to conform to a narrow and often unattainable standard of beauty [7]. Studies show that factors that influence adolescent decisions to pursue weight loss programs include body image, peer pressure, and parental support [8-10]. Studies report that adolescents were motivated to lose weight because they were unhappy with their body image [11–13]. Body dissatisfaction is particularly prevalent among adolescents, especially girls, due to physiological, social, and psychological changes [14]. Of note, concerns regarding the promotion of body dissatisfaction among teenagers have led several eating disorder groups to express disagreement with recent guidelines by the American Academy of Pediatrics [15], which recommends expanded access to MBS and other weight loss resources for children and adolescents.

The decision to undergo MBS is significant as it can improve health and well-being, increase confidence, and improve quality of life; however, it also represents a permanent physical change and lifestyle commitment that requires careful, informed decision-making for each patient [16, 17]. Previously, research on factors influencing adolescents' decisions to pursue MBS programs among adolescents has been limited. Some research points to adolescent motivation for seeking MBS, including negative body image and a desire for social acceptance after a pivotal event [18], along with a need to avoid bullying, a desire to fit in, and health and physical ability [19]. One qualitative study from the United Kingdom with nine adolescents found that wanting a different future, to be confident, healthy, and "normal" along with surgery as a last resort were significant drivers of the decision to have bariatric surgery [20]. A randomized controlled trial conducted in Sweden of 50 adolescents 13-16 years randomized to bariatric surgery or an 8-week lowcalorie diet showed that 42% of patients in the bariatric arm had at least one parent who had undergone bariatric surgery [21]. The researchers suggested that parent experience with bariatric surgery made parents and participants more confident to participate in the trial [21]. A few other studies [20, 22-24] affirmed this finding. The current qualitative study further aimed to identify factors related to the adolescents' decision to undergo MBS in this group.

2 | Methods

Adolescents and parents were recruited at the multidisciplinary adolescent weight loss surgery clinics at Children's Health System of Texas to participate in developing "TeenLYFT (lifestyle support for teens)"-an intervention to support youth preand post-MBS [25]. As part of this study, adolescents (ages 13–17) were invited to participate in an interview to learn more about their intervention design preferences and their pre-MBS health journey, decisions, and desires regarding weight loss and support. All but two adolescents had not yet completed surgery and were in various stages of preparation for MBS. Our qualitative approach adhered to the guidelines of the consolidated criteria for reporting qualitative research (COREQ) [26]. Our research team of experts in pediatric obesity and related fields (i.e., exercise physiology, nutrition, psychology) used both the socioecological model (SEM) [27, 28] and the Social Cognitive Theory (SCT) [29] to guide our understanding of weight management among adolescents. The SEM describes behavioral level influences (intrapersonal, interpersonal, group/ community, societal/environmental) that influence weight management behaviors and decisions. The SCT explains human behavior as a dynamic, reciprocal model in which personal factors, individual influences, and behaviors continually interact. SEM guided our questions about barriers/facilitators to SEM/SCT intrapersonal constructs (e.g., body image), interpersonal factors (e.g., peer influence on the decision to have MBS/ weight loss after MBS), group/community constructs (e.g., MBS support system[s], food/activity environments to support MBS), and macro/policy level (media influences).

Participants and Procedures. Adolescents were eligible if they were between 13 and 17 years of age, English-speaking, and met the National Institute of Health criteria for MBS [5]. Parents consented first, and adolescents assented after their parents gave permission. They completed consent and assent via an online Qualtrics survey that collected demographic information and information about preferences for a weight management support program for the main study. Upon completion, they were invited to participate in a focus group or a 15-25-min interview. All participants who expressed interest opted to complete individual interviews. These interviews were completed at baseline in the study timeline before surgery, from May 2022 to June 2023. All study procedures were approved by the institutional review boards at The University of Texas Health Science Center at Houston and The University of Texas Southwestern Medical Center.

Qualitative Interview Description. Adolescents completed a semistructured interview via ZOOM/Microsoft Teams with a research team member that was digitally recorded (see Supporting Information S1 for questions). Participants were queried about their pre-MBS health journey and discussed their decisions and desires regarding weight loss and support. While parent presence was not required to complete the interview, a parent was present at one interview. A total of 14 participants completed the interviews, with 2 completing their interviews 1–2 weeks post-op due to scheduling conflicts. All interviews were transcribed via a contracted professional transcription service.

2.1 | Data Analysis

Transcribed qualitative interviews were reviewed and analyzed using NVivo 12.0 (QSR International, AUS). Three team members (RK, JF, AA) conducted interview coding. Each coder began by coding three interviews independently to identify key concepts and create a preliminary code structure. Each transcript was reviewed by a secondary reviewer. After coding the interviews, two team members (RK, JF) performed thematic analysis. Utilizing the constant comparative approach, our code structure was applied to all transcripts and adjusted as new concepts emerged. The resulting themes were deemed "saturated" by the data analysts. Any discrepancies in coding were resolved by consensus among the research team.

3 | Results

Of the 14 participants, 10 were Female, 6 were non-Hispanic Black, 3 were non-Hispanic White, and 5 were Hispanic. Participant ages ranged from 13 to 17 years with a mean age of 15. Adolescents were in middle school (n = 3) or high school (n = 11). All interviews were conducted in English, and no requests were made for Spanish. Four key themes relate to our adolescent participants' motivations to proceed with the prescribed MBS (Table 1). These themes fall into three broad categories: Intrinsic Motivators, Extrinsic Motivators, and Barriers (Table 2). All themes and the overarching categories are visually represented (Figure 1).

3.1 | Intrinsic Motivations

Intrinsic motivators are internal factors that drive individuals to engage in behaviors based on satisfaction, interest, or enjoyment rather than external influences [30]. These motivators stem from psychological and emotional needs, such as personal growth and self-fulfillment. Our study found that physical and mental health was the central intrinsic motivation among adolescents considering MBS.

3.1.1 | Theme 1: Personal Health

The primary reason adolescents wanted to proceed with MBS was to improve their personal health. Participants believed that MBS and the subsequent weight loss would help them improve their physical and mental health. Physical health was discussed

TABLE 1 Demographics of participants.

	Interview Participants
Demographics, N (%)	(N = 14)
Age (13–17), mean (sd)	15.4 (1.4)
Sex, <i>n</i> (%)	
Male	4 (29)
Female	10 (71)
Race/Ethnicity, n (%)	
Non-Hispanic black	6 (43)
Non-Hispanic white	3 (21)
Hispanic	5 (36)
Education level, n (%)	
Attending middle school	3 (21)
Attending high school	11 (79)
BMI Z-score, mean (sd)	3.4 (1.1)

as overall health improvement, the ability to move more, movement without pain, alleviating current co-morbidities such as metabolic-associated steatotic liver disease, and preventing future co-morbidities like diabetes.

A lot of different hereditary diseases run in my family, including diabetes. And I already am pre-diabetic, and I want to get that nipped in the bud because I don't want to live that way. I want to be as healthy as humanly possible and to be able to do all the things that I want to do in the future, and to have things that my weight is making difficult. It [my weight] is something I wish I could get rid of, so I'm trying to.

Female, 16 years old

Mental health focused on the belief that MBS would help improve their motivation and help improve or eliminate existing anxieties and depressive symptoms related to their weight and health.

Mainly for my mental and physical health. I have a really bad mindset. Low motivation, and depression...I want to have a better mindset, like when I lose the weight from the surgery and to feel better from that. Female, 16 years old.

3.2 | Extrinsic Motivations

Extrinsic motivators are external factors influencing individuals to engage in behaviors due to outside pressures [30]. This can include social recognition, approval from others, or tangible rewards. Our study identified two main extrinsic motivations among adolescents considering MBS: support and behavior modeling. Adolescents discussed how support from their family and medical team provided encouragement and validation, reinforcing their decision to pursue surgery and improving their confidence to adhere to necessary lifestyle changes. Additionally, behavior modeling, such as observing family members or people online who had undergone surgery, significantly influenced their decision-making by providing relatable examples of successful outcomes.

3.2.1 | Theme 2: External Support

One of the main reasons adolescents were confident about proceeding with MBS was the support they received from their families and medical teams. The participants discussed how this support provided crucial encouragement and motivation as they considered the surgery. Family members played a significant role by offering emotional support, practical help, and reassurance throughout the decision-making process. For example, parents helped with weight management behaviors such as staying on track with diets and ensured that the home environment would support healthy eating.

I think my mom mostly. She's been supporting me a lot. She's gotten rid of mostly every bad thing in our

TABLE 2|Qualitative themes & supporting quotes.

Theme name	Theme description	Supporting Quote(s)
Intrinsic Motivators		
Personal health	Personal health encompasses both physical and mental well-being. Physically, adolescents anticipated better overall health, increased mobility without pain, and relief from current conditions such as fatty liver disease. They also aimed to prevent future health problems like diabetes. Mentally, they hoped the weight loss would lead to improved self-esteem and emotional well-being	"I made my decision to get the surgery because I'm 16, and I'm 80 pounds overweight. And it concerns me because I don't want to get to become 18 and possibly have so many health problems"
		"I want to be more active because I like to be moving and doing stuff. I Would like that to be easier"
		"It was a pretty big factor to it. I'd say between getting rid of that disease (fatty liver) and being able to drop the weight finally, that was my, pretty much, deciding factor"
		"I would think it [surgery] would definitely help my mindset a lot more"
Extrinsic motivators		
team support dis pro du med by o reas	The family and medical team support theme discusses how adolescents felt confident about proceeding with metabolic and bariatric surgery due to strong support from their families and medical teams. Family members played a key role by offering emotional support, practical help, and reassurance during the decision-making process. Medical teams often offered support by providing knowledge	"My mom is my major support in my weight loss journeyShe does everything for me, and we started working out a little more"
		"My cousins and uncles, they are doing the same things as me, they workout with me"
		"It [information provided by the medical team] made me want to get it. It made it to where I fel safe with it because a lot of the research that we di says it was sort of a good idea. It was mostly a goo idea, and it will help"
		"Sometimes, I lack a little bit of motivation to go t the gym and work out. But then my mom says, "hey, let's go. Come on. Let's go to the gym""
		"Well, I figure since they're my family, they're always going to be there for me. So, I feel like they' be the ones that keep me on track. My mom bring me to the appointments and then keeps me in the gym. So, they just basically keep an eye on me so that I won't go back to old habits"
		"I get most of my information from my doctor and the hospital. They explain everything about the surgery, the process, and what to expect afterward
		"It's helped a lot (discussing with the doctor). I Wa skeptical. I thought about getting the surgery. Bu once I talked to her (participant's doctor) about it, changed my mind. I Was prepared to do the surgery"
Behavior modeling	Behavior modeling addresses how adolescents were motivated to proceed with MBS by observing family members or individuals online who had successfully undergone the procedure. These role models showcased the potential benefits and positive outcomes of MBS. Seeing these successes made similar results seem attainable for the	"Well, it's more so about my mom. She's a big motivation because she did have the surgery. And saw her results and how she's living a healthier lifestyle. And I feel like the surgery could help m with my eating habits and how I can live a healthier lifestyle"

(Continues)

Theme name	Theme description	Supporting Quote(s)
	participants and provided practical insights into lifestyle changes before and after surgery	"I follow these accounts on TikTok where people share their bariatric surgery journeys. It's motivating to see real people and their transformations. That's where I get a lot of my information"
		"On TikTok. There's this one girl who shows wha she ate throughout the dayafter she had the surgery. There's another girl who is getting the surgery, and she shows what she eats in a day too
		"Sometimes I find good articles where people talk about their experience. And then, sometimes, I go directly to hospitals that have posted about their bariatric team and how they have successful transformationThey more so talk about it in rea life"
		"Well, my brother had the surgery. He was really overweight. He was probably 500 pounds. And he got the surgery. He just seems a lot healthier and happier. And as you know, we're the two biggest kids my mom ever had, so. He just looked a lot healthier and happier. And he lost a lot of weight in a very short amount of time"
		"It (videos of people discussing their MBS experience) did really make me want it, even though I was feeling nervous. But those videos, them saying how it did change their lives and the way they are now, that made me want to do it"
Barriers		
Fear	Fear was a significant barrier to adolescents completing MBS. Concerns included anxiety about the surgery itself, potential complications, and even death. Participants worried about the risks involved, the uncertainty of the results, and the lifestyle changes required post-surgery	"Sometimes I have concerns of, if I have surgery what if I don't wake up?"
		"I mean, they said I won't be as hungry, so I don think I'm going to like that because I like food"
		"I guess more of like just getting put to sleepwhat if something goes wrong?"
		"One concern I have. My stomach opening back up"
		"The whole point of the surgery was to lose weigh and to gain weight back would make me feel like didn't really succeed"
	tives, stuff like that. So she's definitely a bec ystem for me.	ved on the diet with me, so that really motivated me ause everybody around me was doing it too. So, I n't feel like an outcast.
	Male, 17 years old	Female, 15 years old.

Yeah, I feel motivation because my mom really helps me. Everybody in my family were really supportive and they still are...They were just saying how it's my decision and anything is possible. They will help me if I need anything. They'll go on walks with me...they

support:

Similarly, medical teams provided essential information, guidance, and professional validation, which helped adolescents feel more confident and informed about their choices.

Of course, my team, like the bariatric team. Because they said, "We're going to have to see for, like, five years afterwards," which I'm pretty glad with that... They want to make sure after surgery that there's no

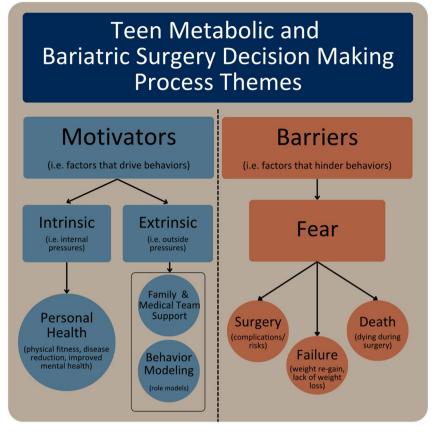


FIGURE 1 | Teen metabolic and bariatric surgery making process themes.

complications and that I'm actually losing weight and doing the program right. Because they say, "If you're not doing it right, don't do it at all. Don't cut corners," which I like to cut corners, so. Then, being there kind of helps me not half it, half do stuff.

Female, 17 years old

3.2.2 | Theme 3: Behavior Modeling

Another key extrinsic motivator for adolescents considering MBS was behavior modeling observed by family members or individuals online who had successfully undergone MBS. These role models provided examples of the procedure's potential benefits and positive outcomes. Seeing others achieve significant weight loss, improved health, and enhanced quality of life helped the participants envision similar successes for themselves and made success seem attainable. These figures also provided practical insights for navigating the pre-surgery and postsurgery lifestyle changes.

My dad had the surgery...He was up there weight wise and after the surgery, he really dropped almost all the way. He lost over, I think, 175 pounds. That definitely influenced my decision for sure.

Male, 17 years old

3.3 | Motivational Barriers

Motivational barriers hinder individuals from pursuing actions or goals despite potential benefits [31]. These barriers can arise from psychological concerns, environmental obstacles, or perceived risks that outweigh the rewards [32]. For adolescents considering MBS, such barriers can significantly impact their decision-making. Our study identified fear as the main barrier, encompassing fear of surgery, death, and a fear of failure.

3.3.1 | Theme 4: Fear

Participants expressed various fears, including fear of the surgical procedure, encompassing concerns about potential complications and the risks associated with undergoing major surgery. For example:

Right now, I'm ready to do it, but also, I just have hesitation of just like me being nervous of getting the surgery...Just being in surgery, I guess more of like just getting put to sleep. I get afraid sometimes. I always just have awareness of like what if I wake up or if something goes different...I think those are just my main concerns, just having a fear of being in surgery. Female, 16 years old For others, the fear was dying from the surgery.

Additionally, there was a fear of failure, with adolescents worrying about the possibility of not achieving their desired outcomes or being unable to maintain long-term results from the MBS.

4 | Discussion

In this qualitative study, a primary driver of the decision to move forward with MBS centered around the need to improve both physical and mental health. This finding is similar to other research [19, 33] citing health and physical ability as reasons adolescents desire weight loss. While improvements in mental health encompass a crucial motivation, Jarvholm et al. found that mental health problems persisted in adolescents 5 years after bariatric surgery [34]. They recommend that adolescents with severe obesity and their caregivers are advised that mental health issues do not automatically improve after a massive weight loss and that realistic expectations should be encouraged [34]. Other research indicate a desire for social acceptance [18], avoidance of bullying, and health and physical ability [19] are factors relevant to choosing MBS. While issues like bullying or negative social acceptance are common social effects of high weight, participants in the current study did not cite these as reasons for pursuing MBS. Rather, they discussed the need to eliminate/reduce current and future illnesses, depressive symptoms, and the ability to move in the world with greater ease and participate in physical activity. This indicates that physical appearance may not be a primary driver for decision-making in this sample. Participants in this study wanted surgery for health reasons. Aspects of body composition may be less powerful predictors of decision-making regarding weight loss when compared to perceptual psychological indices such as physical self-perceptions and centrality of weight concerns [35]. This finding of a key desire to improve one's physical and mental health reinforces the importance of cognitive behavioral approaches that examine intrinsic motivations prior to MBS acceptance. Intrinsic goals concerning personal health and mental well-being versus extrinsic goals such as physical appearance are thought to be more successful in generating motivation that drives long-term change [30, 36]. When new behaviors align with core values and beliefs, the likelihood of maintaining change increases. Young adulthood is a key time when the identity of self is developed [37]; thus, understanding how intrinsic goals align with values and beliefs can support behavior change.

Key motivators for pursuing MBS were emotional support, practical help, and reassurance from family members throughout the decision-making process and preparation for MBS. A systematic review [38] of qualitative studies of children and youth pursuing weight loss maintenance indicated that family support comprises practical strategies (such as making changes in the home environment that supported eating healthy foods, providing resources for physical activity, and role modeling healthy lifestyle behaviors) facilitated maintenance of healthy changes. Additionally, our study participants acknowledged that guidance from their health team and validation from other health professionals, including therapists, provided a sense that MBS was a good choice for supporting their weight management. Other literature [12, 39, 40] has pointed to the importance of positive relationships with healthcare professionals that include constructive conversations about managing weight, health, and well-being as supportive for weight management. In the present study, participants stressed that both interpersonal family-level support and clinical-level support were conducive to reinforcing their MBS goals and indicative of the future long-term support to increase their chances of success. The importance of family involvement is critical. Other studies have found that low motivation of parents predicted child dropout in weight management programs [41] and that motivation to start or remain in weight management programs depended on parental support [19]. Opportunities to bolster parental involvement to include emotional, practical, and information support could be valuable for supporting lifestyle changes. Both parental and clinical level support strategies may shift the responsibility of weight management from the adolescent alone to reflect a shared responsibility for lifestyle changes. An additional factor that encouraged the choice of undergoing MBS was having family members and seeing other adolescents on social media who had completed MBS. Exposure to others' positive outcomes and modeling healthy lifestyles are instrumental in performing new behaviors [42]. This study corroborates the importance of role modeling and sharing success stories to support healthy lifestyle changes [18].

Adolescents in the present study highlighted key support factors for pursuing MBS but also expressed fears about undergoing the surgery. In particular, fear of dying and of medical complications were prevalent. Even if the surgery were to be successful, some expressed concern that they may fail to maintain weight loss. Concerns about post-operative complications have previously been expressed by adolescents exploring MBS [18, 20]. Doyle et al. found that adolescents with these concerns actively bracketed away fears and focused on the positive hopes of surgery outcomes, (re)-interpreted the probability of risk, trusted health professionals, and relied on the knowledge and experience of family members and others on social media who previously completed weight surgery [20]. Standard MBS preparation includes education about the proposed surgical procedure, the laparoscopic sleeve gastrectomy, the risks and benefits, as well as the postoperative expectations. Included in the post-operative expectations are significant dietary and lifestyle modifications as well as multiple follow-up visits, especially in the first 2 years. This study stresses that adolescents may still have lingering concerns and unexpressed fears about the procedure despite multiple counseling and education sessions.

Childerhose and colleagues [18] pointed out that part of adolescent decision-making involves concerns about how MBS would change their appearance and what postoperative complications might ensue. Thus, it is critical to assess and address psychological fears that accompany surgery beyond discussing potential risks and outcomes. While adolescents in our sample did not discuss post-operative fears regarding complications or appearance, they did consistently discuss concerns about failure to sustain weight loss even if the procedure was successful. Weight regain is indeed a concern in several long-term studies of adolescent MBS, and our participants' responses highlight a need for support tools to prevent postoperative weight gain and increase adolescent patients' confidence and efficacy in adhering to post-operative dietary guidelines and lifestyle changes. In addition to being informed about the risks and benefits of weight loss surgery before deciding, adolescents need to understand the importance of adhering to a healthy diet and physical activity recommendations and to be supported in making choices that support their weight loss goals.

Metabolic and bariatric surgery is a significant decision that can profoundly impact adolescents' lives, and the participation of the adolescent patient in the clinical decision-making process is critical to a successful outcome. In one study [43], adolescents who had completed MBS were followed up for 10 years. Those who could make healthy choices and cope with the challenges of surgery (such as changes in body image and relationships with friends and family) were more likely to maintain their weight loss and improve their overall health with significant, sustained reductions in weight and comorbidities and low rates of long-term complications [43]. Another study found that adolescents involved in decision-making about MBS were more likely to be satisfied with the results. Adolescents engaged in decision-making were more likely to report a better understanding of the risks and benefits of surgery. They were more likely to feel that they had made the right decision [44]. These studies suggest that it is essential for teens to be involved in decision-making about weight loss surgery. MBS is a crucial and life-changing decision that requires careful consideration. Understanding the risks and benefits along with informational, instrumental, and appraisal support from family and healthcare providers may be important to help adolescents seeking MBS to be successful long term.

Study Limitations. All study participants, except two, were preoperative. They were patients at a weight management clinic and eligible for MBS; however, the study team did not track whether all had completed surgery. Adolescent perspectives were captured at the time they were eligible for MBS and in the process of completing the clinical requirements for surgery. It is not uncommon for adolescents who initially want surgery to change their minds [17]. In the main study from which this sample was drawn, of the 75 adolescents enrolled, to date, about 24% have completed MBS. Additionally, one interview was completed while the adolescent was with a parent in proximity, which may have impacted how adolescents responded to questions and reflected a social desirability bias. However, responses of that individual did not differ greatly from those of the other participants in this racially/ethnically diverse sample. While it is notable that adolescents in this study did not verbalize bullying or self-image as major motivators for pursuing MBS, it is possible that these factors contributed to mental health concerns verbalized by our participants. More research is needed to determine whether these are common themes in determining mental health status for adolescent patients seeking MBS.

5 | Conclusion

Interviews with adolescents seeking MBS provide insight into factors relevant to pursuing surgery. In this sample, adolescents were driven primarily by personal health and well-being goals and viewed social support from family and healthcare providers as critical indicators of success for lifestyle changes. Despite these positive influences, adolescents harbored fears about surgery and future long-term success. These factors may contribute to decisions about undergoing MBS and weight management behaviors and are important for developing effective interventions to support adolescents' pre-and post-MBS.

Author Contributions

Drs. Marlyn A. Allicock and Sarah Messiah conceptualized and designed the study, drafted the initial manuscript, and critically reviewed and revised the manuscript. Jackson M. Francis and Rashon Braxton collected the data, conducted the qualitative analyses, and critically reviewed and revised the manuscript. Dhatri Polavarapu conducted qualitative analyses and critically reviewed and revised the manuscript. M. Sunil Mathew designed the data collection instruments and critically reviewed and revised the manuscript. Maral Misserian, Drs. Alica Wheelington, Bethany R. Cartwright, Faisal G. Qureshi, and Sarah E. Barlow critically reviewed and revised the manuscript. All authors approved the final manuscript as submitted and agree to be accountable for all aspects of the work.

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Conflicts of Interest

The authors declare no conflicts of interest.

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Supporting Information

Additional supporting information can be found online in the Supporting Information section.