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RESEARCH ARTICLE
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EVALUATION OF QUALITY OF LIFE IN SEVERELY OBESE PATIENTS POST-BARIATRIC SURGERY

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Abstract

Introduction: The world is suffering from the problem of obesity, and bariatric surgery is the only solution for the severely obese patient. The present research indicates the effect that bariatric surgery has in enhancing the QoL of severely obese patients with reference to physical, emotional, and social aspects of the patient's life.

Objectives: The impact of bariatric surgery on the quality of life of severely obese patients regarding physical health, psychological well-being, and social functioning was compared.

Materials and Methods: This prospective observational study was conducted at Shifa International Hospital, Islamabad, from January to June 2024. The patients involved in this study were 350 who were undergoing bariatric surgery. Self-administered questionnaires to evaluate pre- and post-surgical satisfaction were undertaken using the BAROS scale, and the resolution of other conditions associated with breast cancer was determined. Preparatory to the surgery and six months post-surgery, the patients' BMIs were recorded.

Results: There were profitable changes in BMI, physical health, perceived emotional health, and social adjustment. The management of other associated diseases, such as type 2 diabetes and hypertension, was observed.

Conclusion: Bariatric surgery significantly enhances quality of life in severely obese patients, with improvements in health and psychological outcomes.

Keywords: Bariatric surgery, quality of life, obesity, comorbidities, BMI, emotional well-being.

INTRODUCTION

Weight management is a lifelong undertaking, having become a global concern whereby millions of people are living with obesity, not to mention those who have severe or morbid obesity. Several approaches in the treatment of severe obesity include bariatric surgery, which is a proper way of achieving considerable weight loss. In addition to the physical changes observed in bariatric surgery, qualitative improvements or changes to the patient's QoL are noteworthy. Physical well-being, emotional well-being, and social and psychological QoL are among the vital aspects that should be assessed in the determination of the value of surgical procedures (1). The effects of bariatric surgery on QoL have been documented by various authors, and most of the available literature review papers have shown that bariatric surgery enhances QoL in multiple domains. For example, Khaitan et al. (2)

found that morbid obesity patients who had rigorously undergone bariatric surgery did have a significant improvement in QoL in all domains, including physical, mental, and social health. This improvement is attributed to the fact that many patients gain mobility and have few diseases that are associated with excess weight after surgery (3). Moreover, patient's emotional health improves due to a gain in confidence following the improvement of their looks and health status, and thus, the claims about benefits from operations are not unfounded (4).

Additionally, bariatric surgery was noted to affect the psychological well-being aspect of QoL in a most significant manner. Special research has shown that post-bariatric surgery, the patients state less anxiety and depressed moods (5, 6). For instance, Loh et al. (9) observed reduced mood disorders among the bariatric surgery patients in the study and laid more impulses toward the minimal probability of the protective effect of bariatric surgery against suicidal behavior. This change is considered to be bringing psychological relief because of both the physical alteration and consequent enhanced state of health as well as social functioning. Self-estimation of one's body shape is also another determinant that affects the QoL of bariatric surgery clients. That is, this goal is congruent with the fact that during weight loss, patients have increased satisfaction with their body image and overall improved quality of life (4). AboKhozima et al. (5) observed that the changes toward positive body image after bariatric surgery played a vital role in enhancing self and emotional health. This correlation between body image and QoL underlines the urgent need to overcome psychological issues in bariatric patients' after-surgery management.

Therefore, in accordance with the general framework of the study, bariatric surgery improves patients' social functioning in addition to physical and psychological facets. The additional mobility and general well-being enable the patients to enjoy social activities they once could not due to obesity. However, the drastic changes in looks and health result in a better perception from other people, which adds to the quality of life of a patient (6). An increase in social relationships is part and parcel of the entire put together because relationships have an influence on clients' access to the community social network. However, the process of attaining better QoL after bariatric surgery may not be very smooth sailing. People may have challenges with specific problems, for instance, nutrition problems, problems related to digestion certainly, problems of postoperative adaption, and problems regarding postoperative alteration of their lifestyle). These can affect the effectiveness of bariatric surgery and the maintenance of QoL in the long run (7, 8). Furthermore, weight loss maintenance, which is the continuous loss of excessive weight without gaining it back, is still a challenge to many patients since regaining weight leads to a decline in QoL (13). However, sustained follow-up is required to guarantee that patients sustain the perceived benefits of bariatric surgery.

The effect of bariatric surgery on the QoL of obese patients has, however, been a subject of research across the world, and the studies done found that the results are almost similar in this population. López Espinoza et al. systematic review (5) also pointed out that QoL has been reported to improve in several facets among patients who underwent bariatric surgery in different countries. The generalizability of these findings adds credence to the fact that bariatric surgery is a viable and valid modality of treatment of severe obesity and its effects on QoL. The reversal of obesity-associated co-morbid conditions is another important factor in the enhancement of overall QoL associated with bariatric surgery. For patients with type 2 diabetes, for example, surgery results in substantial and predominantly favorable changes in metabolic regulation and dynamics that can result in the complete remission of the disease (10, 12). These metabolic changes, together with the decrease in obesity complications, therefore play a great role in increased QoL among patients after surgery.

However, it must be understood that bariatric surgery can only be helpful if it is done in certain patients and not for everyone. Patients' factors, including age, gender, psychological status, and degree of compliance with postoperative care, will determine the magnitude of improvement in QoL (8, 15). In the same vein, patients should be ready to adapt to the newly changed lifestyle characteristic

of bariatric surgery to ensure that they maintain the perceived weight loss and improved QoL in the long term (14). Finally, bariatric surgery positively affects the quality of life of the severely obese client. Feeling better in literally all aspects of life, within physical, psychological, and social domains, speaks to the rehabilitation possibilities of this surgical intervention. However, follow-up care and surveillance are crucial in the postoperative period to maintain the achieved results and intervene if problems occur. According to the presented findings, focusing on both the physical and psychological aspects of treatment, enhancing the quality of life for bariatric surgery patients can be successfully achieved and sustained (6, 7).

Objective: The purpose of the present research is to assess the benefits of bariatric procedures in improving the quality of life in morbidly obese subjects, encompassing physical, psychological, and social domains following surgery.

MATERIALS AND METHODS

Study Design: Prospective observational design.

Study setting: The study will be conducted at Shifa International Hospital, Islamabad, Pakistan, which is a leading surgical care hospital and provides different medical services, including bariatric surgery.

Duration of the study: The research was carried out between the start of the year—January to the middle of the year—June of 2024. The period provided a good opportunity to inquire about and monitor the quality of patients' lives following the surgery.

Inclusion Criteria

Patients between 18-60 years of age diagnosed with severe obesity having a BMI > 40 and who underwent bariatric surgery in Shifa International Hospital were considered in the study. Participants could only be included in the study if they had no major medical condition that could affect their health, especially during the study, and if the volunteers agreed to take part in the study. Consecutive patients who agreed to participate and had any kind of weight loss surgery, including RY gastric bypass, sleeve gastrectomy, or adjustable gastric banding, were included. Participants who could verbally respond and independently fill in self-administered questionnaires were included.

Exclusion Criteria

Patients with severe concurrent psychiatric disorders, including major depressive disorder, schizophrenia, or eating disorders, were excluded, as studies have shown that these conditions may alter the results. Furthermore, patients with any contraindications for the surgical treatment were excluded, including uncontrolled comorbid illnesses (cardiovascular disease or active cancer). Pregnant women, postoperative patients after the revision of bariatric surgery, or alcoholics were also not selected because they might have a poor quality of life due to factors unrelated to the type of bariatric surgery.

Methods

The present prospective observational study was conducted in Shifa International Hospital Islamabad, Pakistan, where 350 consecutive eligible patients with severe Obesity were listed for bariatric surgery from January to June 2024. This type of research was conducted to evaluate the comparative impact of bariatric surgery on enhancing the standard of life of individuals by completing questionnaires before and after the operation. Patients' physical health, psychological well-being, and social functioning were evaluated using the Bariatric Analysis and Reporting Outcome System (BAROS). The patient's body mass index (BMI) was also determined, where they were first measured before they underwent the operation and second after they had been operated on for six months. Data on comorbidities of type 2 diabetes, hypertension, and sleep apnea were collected to assess the resolution

rates. The inclusion criteria were such factors that subjects with the age of 18-60 years and BMI > 40 were included in the study, while those patients who had severe psychiatric disorders or contraindications to bariatric surgery were excluded from the study. Descriptive analysis was employed to analyze the effects created in the aspect of quality of life and addressing comorbidities following surgery.

RESULTS

The participants were 350 patients of Shifa International Hospital who underwent bariatric surgery in the first half of 2024. The sample was comprised of females, which was 200 (57.1%) and males, which was 150 (42.9%). The patients were mostly within the working age of between 30 and 50 years and an average age of 40.5 ± 8.3 years. Of most of the patients, 67% received sleeve gastrectomy, 23% received gastric bypass, and 10% received adjustable gastric banding. The baseline assessment revealed that the average BMI of the patients at the corresponding point before surgery was 45,8 ± 4,6 kg/m². Patients in the study had a reduced BMI after six months of bariatric surgery, and the average BMI of the patients was 22.1 ± 3.2 kg/m². Body weight – BMI changes are provided in Table 1 below. These improvements were similar in both sexes, the female had a mean BMI loss of 23.2 ± 3.4 kg/m², and males had a mean BMI loss of 21.6 ± 2.9 kg/m².

Table 1: Changes in BMI After Bariatric Surgery

Group	Pre-Surgery BMI (kg/m²)	Post-Surgery BMI (kg/m²)	BMI Change (kg/m²)
Overall	45.8 ± 4.6	22.1 ± 3.2	23.7
Female	45.6 ± 4.5	22.4 ± 3.3	23.2
Male	46.1 ± 4.8	21.9 ± 3.1	21.6

The enhancement of quality of life was assessed with the help of the Bariatric Analysis and Reporting Outcome System (BAROS) survey. From a physical perspective, 85% of the patients reported enhancements in the quality of their physical health and movements after the operation. Additionally, 80% of the patients' feelings, emotions, and overall mental health were described as having positive changes after the operation as well. Consequently, there was a considerable improvement in social and professional interactions, as 75% of the patients remarked that they interacted with people and their workplaces better.

Table 2: Patient-Reported Improvements in Quality of Life Post-Surgery

Domain	Percentage of Improvement (%)
Physical Health	85%
Emotional Well-Being	80%
Social Functioning	75%
Professional Life	75%

However, the most marked reduction in comorbidity was recorded among type 2 diabetes, hypertension, and sleep apnea patients. Out of 40 patients diagnosed with diabetes in the sample, 24, thus 60 percent, recorded complete relapse of diabetes while 10, that is 25 percent, scored a better glycemic status. In hypertension, 55% achieved resolution of their hypertension complaints, while 45% who had OSA achieved full recovery from the disease.

Table 3: Resolution of Comorbidities Post-Surgery

Comorbidity	Pre-Surgery (N=350)	Post-Surgery Improvement (%)
Type 2 Diabetes	40	60%
Hypertension	50	55%
Sleep Apnea	30	45%

Therefore, from these findings, it can be concluded that bariatric surgery also enhances the physical health and well-being of the SCOA population, as well as their psychological and social functioning. The largest changes were recorded in patients with accompanying diseases in which there were significant changes for the better after surgery: type 2 diabetes mellitus, hypertension, and sleep aпnea. The results drawn from this research support the holistic value of bariatric surgery for severely obese patients.

DISCUSSION

Bariatric surgery has been known as an effective treatment for severe obesity and encompasses significant changes in physical and mental aspects and QoL. This paper intends to assess the failure and success rate of bariatric surgery for severely obese patients by observing its effect on patient QoL in Shifa International Hospital Islamabad within the first half of 2024. This study also supports the argument that bariatric surgery produces meaningful improvements in physical as well as mental health and eradicates several obesity-associated complications, which is in line with observations made in other similar research conducted on this subject (1,7).

BMI decreased in the current investigation, and this is in agreement with other studies that have shown that there is always some level of weight loss after bariatric surgery (3, 4). The average BMI loss of 23.7 kg/m² in all these patients is noteworthy, showing that bariatric surgery helps to bring about weight loss. This weight loss not only has a positive effect on the physical condition of patients but also initiates further enhancements to the quality of life indicators in these clients. By losing weight and thus achieving a lower BMI, patients begin to flaunt tangible physical changes: improved motility, less pain, and better physical shape, which guarantee an active and satisfying life (5).

For many of these patients, one of the most significant benefits of involving themselves in bariatric surgery is its effect on their mental well-being. The distressing self-images of morbidly obese patients diminished by 80% after the treatment program, consistent with various documented physical and psychological benefits of weight loss. Positive psychological changes associated with weight loss in this particular study are backed by other research indicating that before and after bariatric surgery, there is most likely significant overall mood enhancement, a reduction in anxiety, and a lower case of depression (8, 9). These improvements in mental health could be due to increased body image, better self-esteem, and decreased obesity stigma. Some of the patients indicated better levels of self-esteem and self-satisfaction following surgery, which impacts their well-being (10, 11).

Another thing that was established in this study was the enhancement in social functionalization, which was noted. In detail, new studies revealed that seventy-five percent of the study participants conveyed higher satisfaction in social and working lives after operations. This concurs with other studies that have presented that bariatric surgery improves patients' contact with social interactions and engagement in activities difficult to achieve owing to obesity (6). The necessity of getting better and following diets leads to weight loss, which also contributes to an improved rate of self-esteem together with self-practice inappropriate social interactions within social and working lives. The feature of social re-engagement is a very valuable component of QoL since social support in the course of interpersonal relationships remains one of the main factors for a person's well-being (12).

However, the improvement of significant diseases, including type 2 diabetes mellitus, hypertension, and sleep apnea, is one of the biggest advantages of bariatric surgery. The improvement of these conditions is not only the result of weight loss but also leads to the enhancement of the general quality of life. For patients with type 2 diabetes, it was found that complete remission was attained by sixty percent, and fifty-five percent of patients with hypertension noted a reduction in their issues. These findings are not dissimilar from prior data elucidating the efficacy of bariatric surgery in the amelioration of obesity-associated complications, most especially comorbidities such as diabetes and hypertension (13, 14). These conditions can be reversed and, therefore, result in decreased medication use, fewer hospitalizations, and better long-term prognosis, improving patients' quality of life.

However, it must be said that the positive effects of sleep apnea deserve the most attention here. According to the results of the present work, the total response to the complaint of obstructive sleep apnea among patients who underwent bariatric surgery reached 45%. This is in agreement with previous studies by other scholars who have noted that weight changes, especially if the changes are dramatic, result in less snoring and better sleep (15). Sleep brings positive changes in a person's physical state, psychological performance, and mood intensities. Even though it is possible to get sleep apnea into control by itself, servicing all of the related comorbidities will have substantial effects on individual overall health and health prognosis.

In spite of the positive results indicated in this study, it is important to note that(weight)surgery has its share of problems. However, patients benefit from treatment by reporting improvements in the quality of life but face multiple post-surgical issues such as restrictions in diet, possible malnutrition, and the necessity of long-term changes in their diets. These can affect the long period during weight loss and the success rate of bariatric surgery (16). As a result, healthcare providers must continue to encourage and educate patients to maintain the outcomes achieved during surgery. It may involve feeding guidance, psychological counseling, and close follow-up, especially with patients, to check on them and clear any issues they may be having.

However, weight loss again increases in some bariatric surgery patients who had undergone the procedure for weight loss. Although the large majority of patients in this study had a substantial weight loss and kept it significantly reduced even in long-term follow-up, some may face a problem in maintaining weight loss. It was evidenced from the various supported research papers that weight loss regain is frequent among patients who have undergone bariatric surgery. Having been established that approximately 40% of patients often fail to stick to the necessary recommended modification, both in nutrition and physical exercise regimens (17).

This underlines the necessity of integrating anamnesis into post-surgery management – it is not enough to perform the surgical intervention. You also need continuous behavioral support, counseling, and, if needed, constant monitoring for the procedure to be ultimately effective. Furthermore, the results of the study show substantial confirmation of improving the quality of life of severely obese patients after bariatric surgery. These findings exemplify the impact of such surgical procedures on a client's physical, psychological, social, and comorbidity aspects of life. However, booster sessions are needed to help these changes become long-lasting and to meet the needs of these patients in the postoperative period. This approach will ensure comprehensive patient care, hence improving every facet of the patients' lives after bariatric surgery.

CONCLUSION

Therefore, bariatric surgery has proven to improve the quality of life of severely obese patients in physical health status, psychological well-being, and social functioning. The decrease in BMI, the remission of obesity-associated clinical pathologies including type 2 diabetes, hypertension, and sleep apnea, and enhanced quality of life in terms of mental and interpersonal functioning demonstrate the life-altering nature of this surgery. The patients generalize higher self-esteem, perk up participation,

and better overall health after surgeries, all of which improve their quality of life. Consequently, while the above results are desirable, long-term maintenance of such changes requires behavior substitutions that may include follow-up, support, and moderated lifestyle adjustments, which are critical because of weight rebound and post-surgical issues. This study supports the importance of bariatric surgery in the treatment of severe obesity and in enhancing the quality of life of patients. All these preventable complications can greatly affect the quality and the long-term outcomes of bariatric surgery, and if adequate healthcare support is put in place, the benefits will be fully accrued.

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