


**ORIGINAL RESEARCH**

## **Quality of Life Post Sleeve Gastrectomy in Alqassim Region, Saudi Arabia**

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### **ABSTRACT**

**Introduction :** Morbid obesity together with obesity-related diseases has a significant negative impact on the quality of life. Our study aims to assess the quality of life amongst patients with morbid obesity post-bariatric (sleeve gastrectomy) surgery in relation to their pre-operative state

**Methods :** A questionnaire was developed and administered to 298 patients, 52% of the participants were females. The highest percentage (42.3%) was in the age group 30-40 years. The mean preoperative weight was 127kg, and the preoperative BMI was 46.6Kg/m<sup>2</sup>. The quality of life assessed regarding various criteria such as physical pain, psychological manifestation and self-esteem

**Results :** There is an overall noticeable improvement in practicing different activities; Patients are able to participate in various sports (61%) with no marked alteration in terms of social activity. Productivity in terms of everyday work tasks was enhanced (57%) compared to the pre-operative Regarding post-operative pain, (57%) reported experiencing post-operative pain, the majority of these (64%) experienced post-operative pain for a total duration of less than one month. the percentage of patients who said that there is much improvement in their health status compared to their preoperative situation was higher in those who had preoperative chronic illness.

**Conclusion :** sleeve gastrectomy for patients with morbid obesity showed a tremendous positive impact on the quality of life of the majority of patients regarding different spectrums of functioning including physical and psychological aspects.

**KEY WORDS:** Quality of Life - Sleeve Gastrectomy - Saudi Arabia.

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### **INTRODUCTION**

Obesity is a chronic problem which is related to genetic, environmental, and cultural causes due to an increase of fat percentage in the body. Obesity is defined when the body mass index (BMI) is more than 30 kg/m<sup>2</sup>.(1)

In 2013, a study conducted by the ministry of health in Saudi Arabia showed that the Prevalence of obesity among Saudi citizens was approximately 28.7% (2).The risk rate for many of comorbid diseases such as hypertension, dyslipidemia, cardiovascular disease and diabetes mellitus will be significantly high with obesity and overweight. (3-4)

Treatment of obesity mainly depends on the lifestyle modification including low fat, low calorie, low carbohydrate diet and regular exercises. However, the patient's motivation and willingness to lose weight are the most important parts in the effectiveness of the treatment. (5-6)

Bariatric surgery is the most efficient method of morbid obesity treatment. It is recommended to people who have

a BMI of 30-34,9kg/m<sup>2</sup>. (7)They are reasonably considered safe in adults, with the importance of preoperative psychological support as a positive influencer to the outcome of the surgery.(8)

The quality of life is defined by the WHO as perception of individuals toward their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns.(9)

The improvement in the quality of life and mental health of obese patients post-operatively is mainly due to weight loss and its subsequent sequelae such as positive change in self-esteem, self-concept and body image. Postoperative psychological health is also influenced by the patient's sense of taking control of their life and by physical and mental support from health care providers. (10)

We intended to conduct this study to assess the changes and impacts of sleeve gastrectomy procedure on the quality of life postoperatively compared to the preoperative level of functioning.

**Objectives:** To evaluate the effect of sleeve gastrectomy on patient's quality of life regarding physical pain, self-esteem, self-confidence, psychological manifestations and social activities.

#### METHODOLOGY

##### Study design:

The study design was a cross sectional study. The questionnaires distributed to patients already had sleeve gastrectomy done in Al-Qassim region ,Saudi Arabia

##### Study setting:

The questionnaires were distributed to patients through contacting them via social medial already exciting whatsapp groups and twitter accounts-and the responses were collected through online questionnaires designed by Google forms.

##### Study population:

The target group of our study were individuals from the general population who had undergone the sleeve gastrectomy operation in Al-Qassim region .

##### Study sample:

The study technique was a Simple random sampling

##### Study duration:

The study conducted in May 2017

##### Inclusion criteria:

All patients undergone sleeve gastrectomy regardless of their age and gender.

##### Exclusion criteria:

Other types of weight loss interventions or Failure of sleeve gastrectomy and all patients undergone sleeve gastrectomy after March 2017 were excluded.

##### Data collection:

The data were collected by distributing validated questionnaires Mos core 36 item survey .The questionnaires were in Arabic language. The words used in the questionnaires are simple to avoid misinterpretation and confusion of the participants. The questionnaires were containing personal data questions (age, gender, residence and education level). A Question to ensure the patient had sleeve gastrectomy or not. Some question about patient's health parameters before the surgery (weight, height, and if he /she had chronic medical illness). General questions about the patient' health status. What was the effect of the surgery on your health? Questions to measure the physical activity and fitness of the patients. How the surgery was affected the patients' work and social activities. Also, questions to evaluate the patients psychological aspects including self-esteem, self-confidence and sadness or depression.

##### Date analysis:

The statistical package for social science (SPSS v19) software was used for data entry and statistical analysis.

## RESULTS

More than 290 surveys received, after full evaluation and exclusion of noninvolved subjects 208 were fit our criteria. 111 (53.4%) female and 97 (46.6%) were male. BMI before sleeve gastrectomy was calculated for each patient and according to it, we classify them into different categories of obesity according to WHO (see table 1).

The mean preoperative weight was 127 kg (SD  $\pm$ 27), and the preoperative BMI was 46.6 Kg/m<sup>2</sup> (SD  $\pm$ 8.7). There is noticeable improvement regarding different physical activity as shown in (Table 2). Also a dramatic improvement was achieved in desire and ability to work hardly after the surgery (See Table 3 &4). The surgery was not made any marked conflicts with the social activities the participants were practicing before the operation (Table 5).

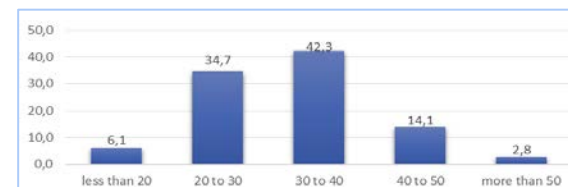
Regarding postoperative pain, (57 %) experienced post-operative pain. In this group (64%) had pain only for less than one month, (30%) between one and six months and (7%) for more than six months. (Figure 3) illustrate the effects of the operation on the chronic illnesses such as diabetes mellitus, high blood pressure and dyslipidemia. (Table 6) show the answers of participants regarding activity, depression, tiredness and self-confidence in percentages and (Table 7) show the overall opinions about the health compared to preoperative period overall.

Opinion of participants regarding their general health and how the surgery can affect their health illustrated in figure 1 and 2.

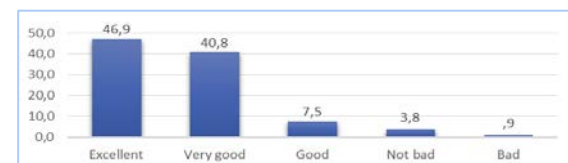
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**Table 1:** Categories of obesity before sleeve gastrectomy

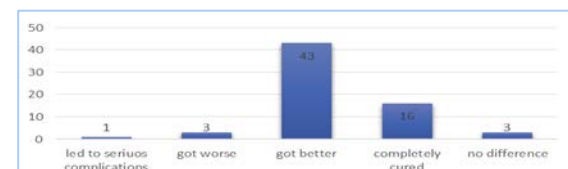
WHO classification	No.
Overweight (25-30kg/m <sup>2</sup> )	1
Obesity grade 1 (30-35 kg/m <sup>2</sup> )	6
Obesity grade 2 (35-40 kg/m <sup>2</sup> )	136
Morbid obesity (more than 40 kg/m <sup>2</sup> )	65



**Figure 1:** Age of participants (percentage)



**Figure 2:** Opinion of participants regarding their health status now



**Figure 3:** Effect of the procedure on the chronic illness (number of cases)

**Table 2:** Answers of participants regarding changes in doing their work.

	No.	%
Much improved	121	56.8
Little improved	42	19.7
No difference	44	20.7
It became worse	6	2.8
It was affected very badly	0	0.0

**Table 3:** Answers of participants regarding changes in the practical achievement after the operation.

	No.	%
Yes , there is more desire to achieve	153	71.8
No Change	53	24.9
It affected the desire to achieve badly	7	3.3

**Table 4:** Answers of participants regarding the existence of any conflict after the surgery with your usual social activities.

	No.	%
No conflict at all	129	60.6
little conflict	54	25.4
some conflict	21	9.9
much conflict	6	2.8
very much conflict	3	1.4

**Table 5:** Answers of participants regarding effects of surgery on physical activity.

	Fr.	%
I can practice hard activities and sports	130	61.0
I can walk up the stairs for many floors	134	62.9
I can do bowing and prostration easily during prayer	133	62.4
I can walk for long distances (more than 1 Km)	159	74.6

**Table 6:** Answers of participants regarding activity, depression, tiredness and self-confidence in percentages

	All the time	Most of the time	Sometimes	Rarely	Never
Feel active and full of energy	24.9%	43.2%	27.7%	2.3%	1.9%
Feel in sorrow and depression	0.9%	8.5%	23.5%	34.3%	32.9%
Feel tired and exhausted	2.3%	13.1%	31.9%	35.2%	17.4%
Higher self-confidence	61.5%	30.5%	4.7%	0.9%	2.3%

**Table 6:** Answers of participants regarding their health status in percentages.

	Correct for sure	Mostly correct	Don't know	Mostly wrong	Wrong for sure
it seems that I get sick more than others	4.2%	6.1%	30.5%	20.7%	38.5%
I am as healthy as anyone else	21.1%	24.9%	31.9%	11.3%	10.8%
I expect that my health will go worse	1.4%	4.2%	31.9%	14.6%	47.9%
My health is perfect	47.9%	43.2%	6.1%	2.8%	0.0%

## DISCUSSION

There is an overall noticeable improvement in practicing different activities; Patients are able to participate in various sports (61%) with no marked alteration in terms of social activity. Productivity in terms of everyday work tasks was enhanced (57%) compared to the pre-operative period. sleeve gastrectomy is effective procedure for Weight loss and associated with significant initial improvement in psychosocial aspects regarding to depression, anxiety, self-esteem, and mental aspects ,our

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study found that Body image and self-esteem improved significantly after sleeve gastrectomy (11) . Also, sleeve gastrectomy has favorable effects on obesity related co-morbidities such as diabetes mellitus, hypertension and dyslipidemia (12) (13). There is significant association between the opinion of the participants on their health status compared to the preoperative one and the presence of chronic illness with p value = 0.03. The percentage of patient who said that there is much improvement in their health status compared to the preoperative situation was higher in those who had preoperative chronic illness (P value =0.37). Post-operative pain was not altered the quality of life since only about 57 % of patients experienced some degrees of pain and the majority not exceeding one month duration .

## CONCLUSION

Sleeve gastrectomy for patients with morbid obesity showed a tremendous positive impact on the quality of life of the majority of patients regarding different spectrums of functioning including physical and psychological aspects.

## AUTHORS' CONTRIBUTIONS

The participation of each author corresponds to the criteria of authorship and contributorship emphasized in the [Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly work in Medical Journals of the International Committee of Medical Journal Editors](#). Indeed, all the authors have actively participated in the redaction, the revision of the manuscript and provided approval for this final revised version.

## PATIENTS' CONSENT

Written informed consent was obtained from each patient for publication of this study.

## COMPETING INTERESTS

All authors disclose that there was no conflict of interest.