

## Lived Experience of Patients Following Robotic Sleeve Surgery

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### Abstract:

**Background:** Surviving with morbid obesity is perplexing since it disturbs numerous aspect of life. Sustainable weight loss via bariatric surgery services patients with morbid obesity to live a healthy and significant life. **The aim:** Was to understand the essence, explore in depth and interpret the lived experiences of patients undergoing robotic bariatric surgery. **Methods:** Phenomenology qualitative research was carried out in Cairo-Egypt. A purposive sample of 24 of patients who done sleeve bariatric surgery were participate and done surgery at different private hospital at Cairo, Egypt, Data was collected through a semi-structured individual interview using audio recording, what app meeting. **Result:** Total 8 themes were identified divided as two main themes were branded regarding pre-operative period, three for intra- operative ( the robotic technique) and three for post-operative:- For pre- operative period: - (1) social withdrawal (2) experiencing bias and stigmatization, For intra -operative period (3) fear of reboot,(4) the physician encouragement (5) available knowledge and For post -operative period (6) Virtuous outcome of robotic surgery, (7) starting new life, (8) developing self-esteem **conclusion:** This research consider as a reference to explain/explore the challenges that morbid obesity patients confronted as well as the diverse happening after the robotic bariatric to curb the rising number of people with morbid obesity. **Recommendation:** More information must be available and the government health sectors must support such surgeries

**Keywords:** Lived experience, Robotic bariatric surgery & Morbid obesity

### Introduction

Obesity is stored glut body fat to such a degree that health and wellbeing are implicitly and adversely affectedly. A diagnosis of obesity is confirmed, if Body Mass Index (BMI = weight divided by height squared) exceeds 30kg/m<sup>2</sup> with comorbid medical diseases, consequently morbid obesity confirmed if BMI exceeds 40kg/m<sup>2</sup>, in developed countries, the prevalence of obesity had been flourished over the last two decades, one every four adults is currently obese, with more than half the adult population overweight or obese. (Falk, 2022)

Obesity appears accountable for more than 2.8 million universal deaths annually owed to the high frequency of related co-morbidities diseases, such as Type 2 diabetes, hypertension, heart disease, stroke, cancers types and other psychiatric conditions such as depression, social dysfunction, psychological morbidity, confrontational social concerns linked to stigmatization, social isolation, are highly associated combined by bad mood, anxiety and suicidal behavior. The incidences of obesity which related to comorbidities escalate with BMI, as 40% of patients with a BMI of less than 40kg/m<sup>2</sup> suffer from 3 or more comorbid- diseases. This rises to >50% among people with BMI 40- 49.9kg/m<sup>2</sup>, as well increase to 70% among people with BMI 50-59.9kg/m<sup>2</sup> and lastly rises to 89% among people with BMI > 59.9kg/m<sup>2</sup> (Choudhury, & Rajeswari, 2021).

The financial burden for both patients and community are significant. Approximations the cost of managing this obesity related diseases, proposed direct costs of obesity stand at £6.1bn per year, with extensive societal costs of £27bn per year and for patients who are obese are 30% higher than those people with adequate weight. As such, treating obesity to accomplish long term weight loss and compact comorbidities holds a social and economic challenge which is expected to be double by the mid-century. (Gardner, 2021)

Such burdens necessitate essential interventions such as the bariatric surgeries which are now the intervention key for treating the morbid obesity for patients who had committed to a structured weight loss programs and failed as well go through evidence-based non-invasive procedures without success. Bariatric sleeve surgery incorporates surgical procedures plainly tailored to promote weight reduction, which contains procedures that are 'restrictive' (limiting the size of the stomach, accordingly decreasing food consumptions), 'malabsorptive' (by passing some of the small intestine, therefore restraining absorption of calories), or by combining between the two procedures. (Voglino, et al, 2022)

At the meantime, bariatric surgery offers the best chance of reaching sustained weight loss and it is directed to treat comorbid medical problems, improve health related quality of life, as well as, it appears

predominantly effective in enhancing physical, psychological, and social alarms, with specific progresses in co-morbidities, such as diabetes, sleep apnea and cardiovascular problems, therefore the effort to enhance such surgical procedures at the topmost of medical priorities which lead to the development of the sleeve robotic surgeries that still deliberate a challenges to both the surgical team and the patients on other hand signifies a potential further improvement particularly because of decreasing the disfigures and morbidity linked with open surgeries. (Chumakova-Orin, et al., 2021)

### Significance of the Study:

The WHO just published in May 2022 about obesity considering it as a pandemic disease in Europe, affirming that 60% of populations in Europe are one or the other overweight or obese, particularly as it interacts with the COVID pandemic to produce a twin pandemic which increase morbidity and mortality rate. Obesity is a multifaceted disease which had dimensions of pandemic touched. The global incidence of obesity had been almost multiply by three since 1975, mainly due to the exhibit of a more and more sedentary lifestyle and the depletion of un-healthy diets. (Boutari, & Mantzoros, 2022)

Based upon the World Population Review 2020, Egypt classified as the uppermost 19th country in the world and the 7th top country among the Arab countries with 32% and accordingly to the “100 million Seha” project is initiative, as 39.8% of the Egyptian citizens suffering from obesity. Obesity prevalence could differ rendering the geographical setting, gender, and socioeconomic status, obesity is a predisposing for several Non-Communicable Diseases such as diabetes. (Guest, & Sahebkar, 2021)

Non-invasive treatment such as Lifestyle changing and diet control lead to little weight loss. However, the outcomes are not usually continued and greater than 95% of the people failed within 1-year. Moreover, they have tiny effects on cardiovascular morbidity and mortality, kidney failure, and regression of nonalcoholic steatohepatitis (NASH) to liver cirrhosis or hepatocellular carcinoma as a result, the bariatric surgeries are the most valid way to control weight (Angelidi, et al., 2022).

Bariatric surgery is acclaimed for patients with BMI greater than 40 or BMI greater than 35 with obesity-related comorbidities, because it reduces the mortality rate by 89% among patients who are morbidly obese. Bariatric surgery control obesity by body weight reduction, loss of visceral fat, gastric volume restriction, malabsorption, and alterations of gut hormones. Consequently performing this surgeries with assistant robotic device ensure the best result and

understanding of the experience from the patient prospective guarantee proper nursing and surgical care for RSS. (Cosentino, et al., 2021)

### Aim of study:

The aim of the hermeneutic phenomenological study was to understand the essence, explore in depth and interpret the lived experiences of patients undergoing robotic bariatric surgery.

### Research question

To achieve the aim of the current study a research question is enlisted as follows:

1. What is the lived experience of patient's undergone Bariatric robotic surgery who were suffering from obesity grad III and IV?

### Subjects and Methods

#### Research Design:

A qualitative approach built on phenomenological interpretative perception the approach focuses on individuals' interpretation of their experiences and the ways in which they express them. It used to explore participants lived experiences in depth, as it concerned with the lived experience and its respondents, as only those who experience phenomena are capable to communicate it to the outside world. A qualitative approach would smooth documentation and description of the inadequate information, currently existing on the lived experience of patient's undergone robotic bariatric surgery.

#### Sample:

Patients who fulfill the inclusion criteria as aged more than 18 years old who suffer from obesity grad III or IV, post-operative within 18 months periods, contacted by phone call and messages via (WhatsApp). Participants were recruited from those who replied and agree to participate. Recruitment of patients was stopped once redundancy patterns had emerged during the interview, and theoretical saturation was achieved from 24 interviews.

#### Study Setting

Due to the nature of the design as well as the type of the sampling technique utilized, data was collected from different sites like health care centers and private hospitals at Cairo, Egypt.

#### Tool of data collection:

Data related to the current study will be collected via:

- Background information that covers the personal and medical data, it was developed by the investigator after reviewing the current related literatures.
- Semi-structure telephonic interview with open ended questions to explore in-depth essences of robotic bariatric surgery experience.
- Audio recording was used.

- What's app application (written and voice massages) was also used.

### **Procedures**

#### **Ethical Considerations**

An official approval was obtained from the Ethical Research Committee at the Faculty of Nursing, Cairo University to carry out the current study. All participants were delivered with information pin massages on what's app describing the aim of the study and the study process; they were also given the chance to ask questions about the research; and were fully assured that they could withdraw from the study at any time without any negative consequences. Participant informed consent was obtained prior to the beginning of data collection stating recording approval. Anonymity and confidentiality of the collected data was guaranteed through coding as well as keeping the documents in a closed non accessible drawer.

After gaining the official permissions from ethical committee at faculty of nursing to proceed with the proposed study, the participant will be recruited with the help from the surgical ward nurses who were give the contact information to the investigator and ask for permission to call the participants from the investigator. Accordingly the nurses were give the investigator the contact numbers of the patient. So, the investigator clarified the purpose of the study and the process of communication passage through individual discussion with each potential participants, then patient voice consent approval to participate in the study recorded. The interviews were held and advanced via telephonic calls or what's app massages and this encouraged the participants to express their feelings and experience spontaneously. Additionally, the call was recorded as a vital aspect of the interviews. Every participant was interviewed individually from four to five times and each interview secession ranged from 15 to 30 minutes. The subsequent interviews were guided by open ended questions that designed to collect significant data. Interviews ended when participants are exhausted from the explanation of their experiences and when no new codes, categories and themes are emerging as long as there is repetition of similar data, all interviews ended by thanking the patients for their participation and assuring them of the confidentiality and anonymity of their replies. The notes were written after the interviews are concluded aiming to write down all remarks that may be related to the data analysis. Upon saturation, data collection process stopped, and data analysis process started.

#### **Trustworthiness**

Trustworthiness of data processing was guaranteed utilizing the subsequent proceedings: all the participants were interviewed by the same questions

and continue till data saturation point; long engagement with the patients done to achieve more in-depth aiming to explore; patients' explanations in depth, check and clarified feedback approach was also given with description of the meetings in depth as well the data process and outcomes examined with prevailing related literatures and research.

#### **Data analysis**

The data processing was constructed by Colaizzi's 1978, phenomenological method. Transcription of the phone call recording and what's app conversations which was done by the investigators handwriting after each encounter; than the investigators revise the transcript word by word very cautiously, extracting trivial testimonials and coding each of them. Then the codes fused into categories, which are then clustered together into subthemes, and lastly, main themes.

## Results

Personal data, the current research includes 24 adult patients (20 females and 4 males). Most of the patients were Muslim with a mean age of  $(37.7 \pm 9.8)$  years. Most of them were Egyptian and Twenty-two of them had comorbidities before the surgery.

**Table (1): Summarizes the detailed characteristic of the participants.**

| Code | Age | Nationality | Gender | Marital status | Comorbidity   | Pre-Operation BMI (kg/m <sup>2</sup> ) | Post-Operation BMI (kg/m <sup>2</sup> ) |
|------|-----|-------------|--------|----------------|---------------|--|---|
| 1.   | 40  | Egyptian    | Male   | Married        | HPL           | 53                                     | 42.8                                    |
| 2.   | 41  | Egyptian    | Female | Single         | HPL           | 49.3                                   | 31.4                                    |
| 3.   | 56  | Egyptian    | Female | Widow          | HPL,HTN,OA    | 37.2                                   | 23.3                                    |
| 4.   | 37  | Egyptian    | Female | Single         | HTN,DM        | 70.1                                   | 51.3                                    |
| 5.   | 29  | Saudi       | Female | Single         | HPL           | 67.2                                   | 55.1                                    |
| 6.   | 44  | Egyptian    | Male   | Married        | HPL,SA        | 45.8                                   | 34.5                                    |
| 7.   | 25  | Egyptian    | Female | Single         | HTN,DM        | 52                                     | 42.6                                    |
| 8.   | 38  | Egyptian    | Female | Single         | HTN,DM        | 41.9                                   | 30.1                                    |
| 9.   | 51  | Egyptian    | Female | Divorced       | HTN,OA        | 50.9                                   | 30.5                                    |
| 10.  | 42  | Egyptian    | Female | Single         | HTN,DM        | 57                                     | 43                                      |
| 11.  | 30  | Egyptian    | Female | Single         | HPL           | 42.3                                   | 30.3                                    |
| 12.  | 49  | Palestinian | Female | Married        | HPL           | 40.3                                   | 29                                      |
| 13.  | 34  | Egyptian    | Female | Single         | HPL           | 45.8                                   | 35.6                                    |
| 14.  | 45  | Egyptian    | Female | Single         | HPL,HTN,DM    | 57.7                                   | 40                                      |
| 15.  | 24  | Egyptian    | Female | Single         | HPL           | 41.8                                   | 32                                      |
| 16.  | 23  | Moroccan    | Female | Single         | HPL           | 54.5                                   | 42.2                                    |
| 17.  | 54  | Saudi       | Female | Married        | HPL,HTN,DM,OA | 65.6                                   | 49.8                                    |
| 18.  | 20  | Egyptian    | Female | Single         | ND            | 37.2                                   | 27.7                                    |
| 19.  | 40  | Egyptian    | Female | Married        | OSA,HPL       | 91.4                                   | 72.5                                    |
| 20.  | 33  | Egyptian    | Female | Married        | HTN,DM        | 37.1                                   | 28.7                                    |
| 21.  | 40  | Egyptian    | Male   | Married        | HPL           | 52,9                                   | 42.1                                    |
| 22.  | 35  | Egyptian    | Female | Married        | HPL           | 47                                     | 33.7                                    |
| 23.  | 45  | Egyptian    | Female | Divorced       | HPL,OA        | 37.9                                   | 27.1                                    |
| 24.  | 36  | Saudi       | Male   | Married        | HPL           | 42                                     | 33.1                                    |

\*DM, diabetes mellitus; HTN, hypertension; HPL, hyperlipidemia; ID, Identification ND no abnormality; OA, osteoarthritis; OSA, obstructive sleep apnea

## Themes

Total 8 themes were generated divided as two main themes were branded regarding pre operative period, three for intra- operative ( the robotic technique) and three for post operative:-

For pre- operative period: - (1) social withdrawal (2) experiencing bias and stigmatization (table 2)

For intra -operative period (1) fear of reboot,(2) the physician encouragement (3) available knowledge (table 3)

For post -operative period (1) Virtuous outcome of robotic surgery, (2) starting new life, (3) developing self-esteem (Table 4)

**Table (2): Pre-operative themes of patients performing robotic surgery (n 24)**

| Themes                               | Sub themes             | Axial code  |
|--------------------------------------|------------------------|---|
| Social withdrawal                    | No shopping            | - I get very embarrassed while shopping for clothes<br>- Always being bullying from sale personal |
|                                      | Struggling for living  | - Can't do stairs<br>- Don't want to use public transportation                                    |
|                                      | Difficulties at prayer | - Can't breathe during prostration<br>- Feeling pain at kneeling                                  |
| Experiencing bias and stigmatization | Demureness from family | - Even my close family member asking me to stop eating and lose wait                              |
|                                      | Humiliating remarks    | - Negative comment from my boss and co-workers<br>- Complaining of my inequalities                |

**Table (3): Intra-operative themes of patients performing robotic surgery (n 24)**

| Themes                  | Sub                                | Axial code  |
|-------------------------|------------------------------------|---|
| fear of reboot          | New experience                     | - Very new at Egypt   |
|                         | Malfunction                        | - What if the is mal function at the reboot   |
| Physician encouragement | The normal development             | - Every day there is new technology at medical filed  |
|                         | More advantages                    | - More time saving only from 30 -40 min<br>- The surgical incision very small<br>- More recover rates   |
|                         | The physician very skillful        | - Certified at robotic surgery<br>- Trainer for other doctors<br>- Doctor attitude very helpful   |
| Available knowledge     | Good role model and video watching | - Previous patients<br>- Educational material<br>- Available application (be-light)   |
| Starting new life       | Improved physical health           | - Control of diabetes, hypertension and high cholesterol<br>- OSA symptoms subsided<br>- Disappearance of skin pigmentation and acne<br>- Decreasing debilitating knee pain |
|                         | Pleasant intimacy                  | - Increased sexual drive - Can have sex longer-<br>Improved couple satisfaction   |
| Developing self esteem  | Integration at social activity     | - Confident to use transportation<br>- Sports as new hobbies<br>- Enjoying beach and exciting games at park with kids and family<br>- Feeling acceptable                    |
|                         | Capable at work                    | - Improved working quality<br>- Enthusiastic about work relation  |

**Themes: A. regarding the pre –operative period****Theme 1 Social withdrawal**

The patients with obesity problem were distress from multiple co-morbid conditions such as hypertensive, diabetes, muscular problem but what really bother them actually was the psychological suffering especially from their destructive perspectives for their look and their privation of confidence; they prefer most of time to withdraw from any avoidable social interaction for example one female patient 4 told that “when I need to buy new clothes I am asking my cousin to go buy for me and she choose the clothes 3 number more her actual size for me but I never go myself” another female patient 8 express “ when the sale personals see me they are saying they don’t have my size from even the door they even didn’t let me ask about what I want “ and a male patient 1 Saied “ I can’t go to regular shops always go to special sizes shape to save my self the embracement “even at the daily life interaction the obese patients face a lot of situations which increase their self -loathing spoke patient 13 “ at the metro I can’t set down unless I am taking two seats together that make the people looking to me annoyingly “ patient 14 told “when I ever use microbus, I have to pay for two seats because one seat is never enough” patient 9 voiced “ whenever she get out of the house and that a rear she always joined by someone to carry a potable chair

for her because she can’t climb the stairs and must take break at every floor hall”

The risky weight also carried a harmful consequence on their spiritual life. Fattiness is important for performing the prayers, which requires standing, bending down, and prostration which preferred to be done at home for women but it’s preferable to be done at mosque for men with espouse more physical efforts and must be done five time /day. Especially Gomaa Prayer which must be done at the mosque. A lot of men with obesity feel unwilling to went to the mosque as walking to makes them breathless with nasty body odor due to too much sweating. P6 shared his experience, “ I have to go really early for Gomma prayers to park at the nearest place so I don’t have to walk a lot imagine entering the mosque with all that sweating and odor regarding what ALLA ask us to smell nice especially at his home .” Furthermore, the constrained movements make it tough for them to do the prayers probably. For example, P 6 said further that his body Wight affects his capability to do the prayer. “ Ramadan is only one month per year and one of my need to do Traweh prayers but it’s to long and It’s very painful to me to do it “ While patient 28 said “ I am always using chair at my prayer although I am not that old and not any chair it must be big enough .....the men leaving a specific chair only for

me to use it's making me sad I know it's nice of them but it makes me feel different in a bad way"

Theme 2 experiencing bias and stigmatization.

patients with obesity confronting daily discrimination and body disgracing because of all the hateful names thrown to them, making them hurting much if it is coming from their own family and friends, which lead to psychological trauma. P7 tells her harsh experience when she was once a victim of body shaming from her own father: "once on the dining table dad told me to stop eating by his exact word I become fatter than your mother and you still a single and that no one is going to accept to marry me like that "

Dealing with people on daily base becoming a burden. The humiliating situation that they are exposed to at the public was undeniably soul breaking, as people used to discriminate them upon their body weight. P18 had express "if people know how much their small gesture or laughing or whispering hurt me mentally and psychologically, I am sure they will never do that some time they pulley me by the look .... I fell like an animal as if I am eating their food or something,. I am very angry they don't know that I am feeling bad myself I don't need them to add to my misery."

The working patients was suffering more because they have to face the ill-judgments even at wok as they always fell, they are not appreciated and like their colleagues avoid participating with them at any shared assignment fearing there in-qualities. P13, stressed: "sometimes my colleague asking me if I gain more weight and laughing .... Even one of them refuses to work with me at a signed project saying that I am going to slow him."

#### **Themes: B. regarding the intra operative period**

Theme 3 fear of reboot

It's normal that the human always fear from the unknown and it's well accounted that we resist the changes from our norm therefore any new implantation is taking a transit period to be familiar with and accepted and that what was expressed by most of the patients at the study for example patient 2 stated that " I was very afraid from the new experience.....the new technology may have its drawbacks ", patient 15 emphasis " I was terrified at

the beginning how come I am going to be operated by a reboot " and patient 19 verbalized " for sure it was a unusual experience for me .....few that I know will agree to operated by a machine"

Theme 4 the physician encouragement

The trust relationship that built between the patients and the care giver is essential as a corn stone at the medical field as any other industry branch, the skillful doctors with necessity tools could convince the patient by the right action and that what happened at the study patients as confirmed by patient 3 " doctor Mohammed explain the advantages of robotic surgery and it's superiors on the laparoscopic surgery " many researches proved that robotic surgery is more safer with higher recovery rate that for the smaller surgical wounds and the clear vision of the tiny vessels during the surgery which lead to better control and less intra \post operative complications that match patients 11 opinion " after talking with post operative robotic patients at the clinic and seeing my self that they are doing better than the tradition laparoscopic patient with less pain level the decision become more easy and clear that the robotic surgery is much better"

Even though patient 7 emphasis on the skills of the physician "dr. Mohammed is one of the most skillful doctors at bariatric surgery and he is certified from England in additional to he is one of the trainer of the robotic surgery who get a very good review from his patient .... I trust him"

Theme 5 available knowledge

The availability of knowledge at the 23 centuries through the internet embower the people to take decisions and get fast-tract insight about any mysterious matter which was easy for the study patient because they are having a high socioeconomic status with proper education that enable them of using the internet, patient 5 declared " there is the web site of dr. Mohammed which present a lot of robotic surgery patients who talk about their experiences " and patient 23 said " I search for hours on robotic surgery .... And came with the decision of performing the surgery immediately even if there is available application for post robotic bariatric patient to monitor the diet "



**Figurer (1):** Robotic surgery @ <https://www.medicaldevice-network.com/features/da-vinci-surgical-robot-competitors/>

### Themes C. regarding the post –operative period

#### Theme 6 virtuous outcomes of robotic surgery

Post-operative complications are the core reasons for people to evade bariatric surgeries but with the up to date technology and the scientific revolution that will plaster at the medical filed every second to try to improve the quality of life for patients, naturally the appearance of robotic surgeries after exploration of artificial intelligence is quite normal as expressed by patient 23 “ I must utilized the new technologies .....especially the one considering my heath” patient 17 “the result of the robotic surgery were actually up to my expectations” patient 2’ thank god on such innovation I hope it’s going to be implemented on wider range”

#### Theme 7 starting new life.

Most of patients were suffering from co-morbid disease such as (hypertension, diabetes, arthritis ..... ) that threatened their life and hinder the quality of their barely life, so it’s not enough they live an isolated ill-life but they also suffering in it, which dramatically changed after surgery, patient 20 pronounced ““ . . . I was so sick of being ill all the time that any tiny effect could affect my health greatly.” “Postoperative, my health problems seem as if not existed.” Patient 19 “the cystic acne disappears finally after trying so many cosmetic and nothing work no it’s gone. [ . . . ] About six month’s post-operative, most of the pigmentation at the armpit and neck clear. My neck and armpit appears brighter

now.” Patient 8 “of course my arthritis still there but the pain is much less” Patient 3

One of life aspects that affected greatly by Obesity is the sexual life. Their unattractive look contributes to poor intimacy, low self-esteem, and self-conscious. P21 felt it was such misery to have sexual intimacy due to his heavy weight his physical movement was restricted. “my partner was always dissatisfied after our time .....and I will denied me also” . P19 expressed that for her having an intimate relationship was upsetting: “every time I asked to turn off the light I don’t want to be seen, .....but I also don’t want to be felt so I don’t want this intimacy” after losing weight and doing exercises may patient express an increasing in sexual desire. P20 expressed, “before surgery I never ask my husband to come to bed .... But I was surprised by myself when I do it after surgery, that I even go to the extend to plan for romantic evening, wearing a beautiful dress” Similarly, P22 expressed: “ . . . in relations of intimacy, I felt . . . my husband and I are more active now (laugh). My body becomes fitter, so I believe he is more pleased because we can cuddle now.”

#### Theme 8 developing self esteem

After the surgery, the patient social life changed greatly, they face the daily stigmatization as before. P16 stated he feels relieved with his current life. “ now I am more open to the idea of engagement , before the surgery the near idea that someone will judge my appearance was terrifying.” The

discriminating gestures are now no more. They feel at ease being in a public place. P10 stated: "When I get into a public transportation, I occasionally use people used to be annoying. Now, I feel at ease getting into it". P2 stated she felt more optimistic about her life. "Now I am pleased about going to work . . . enthusiastic about going back to my home ground . . . stop with my relatives . . . choosing my clothes. I felt the lost enjoyment had returned." And "Before this, I can't take my kids to sport training. Now, I can fetch them to the park and the training and play with them even if my husband can't be with us. A few days back, I drove to aquapark using the highway. I can drive, swim and wearing a swimming suit"

### Discussion

The current study highlights the experiences handled by patients with morbid obesity and the influence of robotic sleeve surgery on their life. Obesity carries a much of unconstructiveness into a patient's life. It affects the patient's bio-psychosocial aspects. Which lead to social withdrawal as well as poorly impacting the body biomechanics and restricting the movement. The patients in the study vented their feeling about the extreme weight which stands as a enormous barrier to participate at the life. Their movement restrictions, ill-fated public services, lack of attractive appearance, and uncomfortable public encounters kept them bashful. Life was hard for them, doing the responsibilities at the work and the daily routine. Moreover, the obesity also caused excessive energy outflow, making them breathless and continuously exhausted which leading to social withdrawal. The response of the studied patients matches the finding of many other studies (Shahed,

**Baranowska, Galavazi, Cao & van Nieuwenhoven, 2022).**

The obesity had compromised the patient's freedom to live a healthy life, which was one of the main causes which push the patients to decide to go through the surgery without a hesitation that go along with other studies regarding obesity stigmatization and bias experienced by patients at several situations. This includes stigmatization at the work, as obese people are slow, lazy, and also agonize from body disgracing. As for The patients in the current study, are labeling by animal names were indeed soul-destructive moments, especially when it came from their supposed to supporting personals. What make it worse, the bellicose and discriminating due to public behavior caused them to degrade themselves and further enlarge to their traumatizing self-esteem. (Williams, et al, 2022)

The traditional way of controlling weight using exercise and dieting failed for most of the patients with morbid obesity, even if they did, the patients gain weight fast and easy. sleeve surgery has verified to be an operational way for sustainable weight control especially the robotic surgery which confirmed to be safer, easier and with high recovery rate than the traditional laparoscopic surgery which last only from 20 to 30 Min.. Maximum (Bauerle, et al, 2023)

The analysis of the current study results is channeled by humanistic theory using Maslow's hierarchy of needs (Figure 1). The five-stage of the modal framework helps to explore the responses of patients with morbid obesity during the peri-operative period at various domains of their life.



Figure (2): Maslow hierarchy at <https://www.simplypsychology.org/maslow.html>

At the current study including 24 patients who were previously suffering from co-morbid diseases testified to have noteworthy progress in controlling the associated diseases. The surgery enabled them to

achieve the next level of the hierarchy, and confirmed that the robotic sleeve surgery helps cure certain diseases such as OSA, diabetes, hypertension, and hyperlipidemia. This finding matches with another



study done by Lim & Boster, 2022, who revealed that the intentional weight loss after surgery among patients with morbid obesity lead to marked decreases in frequency of hypertension, diabetes, and hyperlipidemia and other diseases.

Spirituality is the next level at the model. It is a vital aspect of quality of life, as a lot of patients had experienced an improvement regarding the spiritual health practices after the weight loss, For a Muslim, the physical capability is helpful at the pray, reading the Quran, doing Hajj, and during fasting as well. Religions are a crucial aspect of well-being, as it empowers the individual to cope with personal existential stressors in different aspects of life (Visioli, et al, 2022.)

The sexuality of patients with morbid obesity is often compromised, while the third level of the hierarchy is the belongingness and love needs which must be fulfilled. In the current study, patients explained that they experienced sexual complications. As, difficulties during movement and decreased libido This finding is in the same line with a previous study done among 500 participants patients with obesity in North Carolina, which reported that their participants patients suffer from lack of sexual satisfaction, absence of sexual desire, trouble with sexual routine, and even escaping of sexual happenstances. The current study showed that the patients with high BMI suffer deficiencies of sexual life, Bariatric surgery helped such the patients to have a great improvement in the sexual life by enabling them to have pleasurable sexual life. (Nimbi, et al, 2022).

Becoming a custom that society today undervalues overweight and obese personals and idealizes the ultra-thinness. This view assumed that underweight represents a symbol for success in our society and that obesity is to be ducked and dreaded both because of its effect on the allure and the character flaws accompanying with it, which additionally added to the patient's low self-esteem and the sensation of withdrawal. After the surgery, with the weight loss, the studied patients managed to make a respected changeover into society. Their steps to the 3<sup>rd</sup> level of the hierarchy were eloquent as they don't confronted discriminating any more, This results approves with a previous study which was done by Langford, Davies, Howe & Cabral, 2022 and reported that among peoples who had undergone sleeve surgery, demonstrating that social acceptance according to Maslow, is the most crucial need for the humans as respect, self-esteem and dignity. All the above confident changes represent a backbone for the patients to jump to stage four of Maslow hierarchy of needs, this confident was fitted with the patient's appearance and had heightened their self-confidence after bariatric surgery.

Obesity is often accompanying with other diseases and disability, the patients testified that because of their obesity their performance at work become unaccepted. Following surgery, they were more passionate about their work, and they were finally able to reach the top level of the hierarchy. According to Maslow, self-actualization is about realizing one's potential and looking for personal progression in their favorite field, containing inspired accomplishments These results are in line with a previous study that reported a significant enhancement in work efficiency gotten among post-bariatric surgery patients, also found that a lot of patients were also enthusiastic with their post-surgery experiences, discovering new hobbies and entertaining activities either alone or with their families. This agree with a prior study, which reported that there is a positive change in leisure activity among such group of patients post-surgery (Mazhar & Rehman, 2022).

despite the positive outcomes of bariatric surgery, self-control and assumption of a healthier lifestyle are dominant after bariatric surgery to sustain their ideal BMI. The finding of this study is within the phenomenological analysis involving in-depth interviews, acquisition insight into analyzing changes in life that the participants experience before and after the weight loss surgery. Understanding the profits and problems of the surgery could backing the community need as supportive role to comprehend the medical team and to bring the robotic surgery to the eyes of the public. However, this study is limited by the small sample size, and confined to high socioeconomic standards. Different themes may be observed post bariatric surgery if the studied patients from different ethnicities, religions, age groups, and sociodemographic profiles, which require further study.

## Conclusions

The findings put forward that all the patients experienced many progressive changes in their lives after the surgery. Bariatric surgery has given them a second chance in life. Paybacks of robotic surgery were apparent in numerous traits, beginning from disease controlling and improvement as; improved of the spirituality, enhanced self-esteem, sexual health, and productivity, The profits of robotic bariatric surgery should be brought to the public with the help of joint efforts from both the stakeholders and healthcare specialists, so that a lot of people will benefit from it. Although bariatric surgery had evidenced to be the answer to most of the problems related to morbid obesity, it is essential for the person involved to learn to adapt to a healthy lifestyle and practice healthy eating habits following the surgery to achieve and maintain an ideal weight.

## Recommendations

- The majority of the current qualitative study samples were from high socio-economic patients which could offered the surgery. As a result, generalizing the findings should be done with caution, and additional research should be done in varied cultures and conditions to have a recovered understanding of the experience.
- Continuous introduction at media about the availability of such surgery must be generalized.
- The government should consider these surgeries at the public hospital

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