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Quality of Life: Mental and Physical Satisfaction after Abdominoplasty

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ABSTRACT

Objective: To determine the impact of abdominoplasty on quality of life.
Study Design: Cross-sectional study.
Place and Duration of study: Psychiatry Department and Plastic Surgery Department, Combined Military Hospital, Multan Pakistan, from Nov 2019 to Apr 2021.
Methodology: We recruited 88 patients who were given a specifically designed proforma to fill before surgery and six months after the surgery. The proforma contained questions prepared to assess specific parameters. Demographic variables, general health, expectations from the operation, satisfaction with the outcome and any adverse outcomes of the operation were recorded. WHOQOL Bref for Life Satisfaction and the Patient Health Questionnaire (PHQ-4) were administered.
Results: The mean patient age was 41.43±11.24 years. 68(78%) patients belonged to rural areas, while 19(22%) were from urban dwellings. Regarding body mass index (BMI), 43(49.6%) patients had obesity Class-I, 33(37.4%) were overweight, 8(9.4%) had obesity Class-II, and only 4(3.6%) fell into the category of obesity Class-III. There was high satisfaction post-operatively after abdominoplasty surgery. There were improvements in Quality of Life (p<0.001), depression (p<0.001) and anxiety (p=0.01).
Conclusion: This study highlighted that abdominoplasty reduces psychological distress by reducing depression and anxiety; in addition, there is an improvement in the general perception of quality of health and life.

Keywords: Abdominoplasty, life satisfaction (LS), quality of life (QoL).

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INTRODUCTION

Abdominoplasty is one of the common cosmetic procedures carried out for body contouring. It is carried out following massive weight loss.[1] It is also performed in conjunction with the repair of ventral hernias and after multiple pregnancies. It carries a high satisfaction rate.[2] However, there is a need for more local patient satisfaction level. Evidence has shown that quality of life is a purely subjective feeling that sprouts from an individual's culture, social setup and the surrounding environment in which he/she dwells.[3] Obesity hampers mobility, directly affecting routine daily activities and reducing work capacity.[4] In obesity, physiological distress is aggravated by psychological distress of depression and anxiety, leading to somatic complaints of pain and discomfort along with restlessness, disturbed libido and fatigability.[5,6]

The physical and psychological impact of obesity is counterbalanced if an obese person enjoys good social support with caring and supporting relationships.[7] Financial resources also play an important part, especially in countries like Pakistan, where the concept of social security is lacking. In the absence of financial resources, it is natural that obese persons will feel deprived of appropriate health facilities, safety, security and mobility.[8] Abdominoplasty is becoming the most commonly performed aesthetic surgery. Patients undergo abdominoplasty with the expectation of becoming attractive and socially acceptable.[9]

Previous studies suggest that abdominoplasty improves appearance and self-image, which leads to general satisfaction with health and other aspects of life functionality, mobility, and productivity, in addition to the reduction in psychological distress.[10] There are many international studies on the subject of quality of life after abdominoplasty, but there needs to be more local data that correlates with local social and cultural contexts. This study assessed the post-operative quality of life among local patients seeking abdominoplasty.

METHODOLOGY

After approval of the Ethical Committee (IERB approval certificate number 13/Trg/2021, the cross-sectional study was conducted at the Departments of Psychiatry in liaison with Plastic Surgery Combined

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Military Hospital Multan from November 2019 to April 2021. The sample size was estimated via the EpiTools calculator based on the study which has shown that post-operatively, 76.3% of participants felt more attractive and 68.4% were satisfied with body appearance.[10]

Inclusion Criteria: All patients who reported for abdominoplasty were included after informed consent.

Exclusion Criteria: Patients with body dysmorphic disorders, Hepatitis C/Hepatitis B+Ve patients were excluded.

We included 88 patients using convenience non-probability sampling technique. The patients were given a specifically designed Performa to fill before surgery and six months after. This Performa contained questions prepared to assess specific parameters. Demographic variables, general health, expectations from the operation, satisfaction with the outcome and any adverse outcomes of the operation were recorded. We used the World Health Organization Quality of Life (WHOQOL-BREF) questionnaire to assess the quality of life. WHOQOL-BREF covers quality of life in four domains: physical, psychological, social relationship and environmental. Mean scores within each domain are used to calculate the domain score. The raw score is then converted as per instructions. The converted score range is from 4-20 and 0-100 (comparable with WHOQOL-100). Higher scores denote higher quality of life.[11]

Patient Health Questionnaire (PHQ-4) is a brief questionnaire that is a screening tool for depression and anxiety. Patients were asked to rate how often they experienced certain problems on a scale from "not at all" (0 points) to "almost every day" (3 points) in the past two weeks.[12]

Data was analyzed using Statistical Package for the Social Sciences (SPSS) version 23.00 and MS Excel 2016 software. Mean±SD was calculated for continuous variables. Frequency and percentage were calculated for categorical variables. Chi-square and independent sample t-test were used. The *p*-value of ≤0.05 was considered significant.

RESULTS

The mean patient age was 41.43±11.24 years. 68(78%) patients belonged to rural areas, while 19(22%) were from urban dwellings. Regarding body mass index (BMI), 43(49.6%) patients had obesity Class I, 33(37.4%) were overweight, 8(9.4%) had obesity Class II, and only 4(3.6%) fell into the category of obesity Class III. The waist-hip ratio of 52(59.2%) patients was more than 0.85. When the level of physical work was assessed, 82(93%) patients were only involved in household work, 6(7%) had sedentary office work, and none of the patients were involved in active physical work (Table-I).

Table-I: Demographic variables (n=88)

Variables	n(%)
Age (Years) Mean±SD	41.3±11.24
Body mass index	N(%)
Over weight(25-29.9)	33(37.4)
Obesity Class-I (30-34.9)	43(49.6)
Obesity Class-II(35-39.9)	8(9.4)
Obesity Class-III (>40)	4(3.6)
Waist Hip Ratio (WHR)	
<0.85	36 (40.8)
>0.85	52 (59.2)
Nature of work	
Active physical work	0
Sedentary office work	6(7)
House hold work	82(93)
Residential area	
Urban	19(22)
Rural	68(78)
Educational status	
Primary	1(1)
Middle	2(3)
Matric	52(57)
Undergraduate	32(37)
Graduate	1(1)
Economic status	
Good	56 (63)
Average	32(37)
Poor	None

Patients were asked how they became aware of abdominoplasty 55(62.3%) patients attributed it to YouTube, 36 (41.5%) from family or friends, 24(27.7%) from Facebook, and 19(21.67%) from TV (morning shows). In comparison, the watts app played a part in imparting information in 12(13.8%). When asked about the onset of obesity, 42(47.8%) attributed postpartum as a point of onset; for 16(17.71%), it was pregnancy; for 12(13.12%), it started at puberty and in 8(10.1%) patients, obesity started after menopause. All the participants wanted to be attractive after surgery, while 79(89.6%) felt more attractive after surgery (Table-II).

When pre and post-operative severity levels of depression among patients were compared, there was a marked reduction in depression after the operation (p<0.001). Scores on WHOQOL domains also showed improvement after surgery, with the physical health domain mean score from 46.3±2.9 pre-operatively to 95.4±2.5 post-operatively (p<0.001), mean score on the

psychological domain from 45.7±2.7 to 98.7±2.4 (p<0.001), social domain score from 85.4±6.1 to 83.2±4.9 (p<0.001). Pre-operative and post-operative anxiety levels (p=0.031) and perception of quality of health (p=0.24) did not show marked differences in Table-III.

Table-II: Distribution of variables in relation to abdominoplasty (n=88)

Variables	n(%)
Source of awareness	
Watts app	12(13.8)
Facebook	24(27.7)
You tube	55(62.3)
Health web sites	8(9)
TV (morning shows)	19(21.67)
Family/friends	36(41.57)
Health professional	4(5)
Onset of obesity	
Childhood	10(11.37)
Puberty	12(13.12)
Pregnancy	16(17.71)
Post-partum	42(47.81)
Menopause	8(10.1)
Past Abdominoplasty	
Yes	4(4.7)
No	84(95.3)
Comorbidity	
Hypothyroidism	37(42.2)
Insulin resistance	9(10.7)
Hypertension	12(14.3)
Arthritis	26(27.5)
Lymphedema	4(5.3)
Wish to be attractive after surgery	88 (100)
Feeling more attractive after	
surgery	79 (89.65)

DISCUSSION

In our study, there was a high rate of patient satisfaction and improvement in quality of life after abdominoplasty, along with a reduction in anxiety and depression among these patients. A previous study showed similar results. In their study, abdominoplasty was carried out in obese and overweight patients.[11]

In this study, seventy-eight per cent of patients belonged to rural areas as compared to the study done by Dudek et al. where the majority of patients came from urban areas.[12] Although the reason for this difference requires further exploration, it can be explained by the fact that this study was conducted in the city of Multan, which is surrounded by orchids, farms and cultivated rural lands from where there is constant, frequent and fluent to and fro movement towards city amenities. In contrast, Mechanick *et al*. noted that ninety-three per cent of patients were involved only in household work, and six per cent had sedentary office work results, explaining the difference in culture and habits.[13] Forty-nine per cent of the patients had Class I obesity, and only three per cent met the criteria of obesity Class III as compared to the study done by Lung *et al*.[14] This study noted that the waist-hip ratio in ninety-three per cent was more than 0.85 compared to other study where most participants had a waist-hip ratio of less than 0.85.[15]

Table-III: Whoqol and phq statistics (n=88)

Pre-Operative		Post-operative	*p*-value
Severity of Depression n(%)			
Normal	14(15)	42(47.7)	<0.001
Mild	26(29.5)	20(27.7)	
Moderate	40(45.5)	25(28.4)	
Severe	8(9.1)	1(1)	
Severity of Anxiety n(%)			
Normal	40(45.5)	45(51.1)	0.01
Mild	25(28.4)	30(34.1)	
Moderate	22(25.1)	13(14.8)	
Severe	1(1)	0	
Quality of life n(%)			
Poor	1(1)	0	<0.001
Very poor	12(13.6)	3 (3.4)	
Good	74(84.1)	80 (90.9)	
Very good	1(1)	5 (5.7)	
Quality of Health n(%)			
Poor	0	7(8)	0.24
Very poor	65(73.9)	0	
Good	23(26.1)	71(80.7)	
Very good	0	10(11.4)	
WHOQoL Domains			
Domain	Mean±SD	Mean±SD	
Physical	46.3±2.9	95.4±2.5	<0.001
Psychological	45.7±2.7	98.7±2.4	0.001
Social	85.4±6.1	83.2±4.9	<0.001
environmental	32.7±3.04	38.6±1.9	<0.001

The difference between this result and other studies warrants further exploration of local strata for reasons ranging from hereditary to dietary habits that differ from other regions and cultures. It is interesting to note that, like other studies, sixty-two per cent were influenced by YouTube when asked how they became aware of abdominoplasty. In comparison, only five per cent of health professionals' contributions were involved, highlighting the importance of media in health awareness.[16] Other studies indicate that the onset of obesity is in childhood.[17] However, our study indicated that in forty-seven per cent of patients, obesity started after the delivery of the child, and only in ten per cent, the onset was in childhood. In this study, only five per cent of patients had past abdominoplasty, compared to other studies showing a higher

abdominoplasty rate. Results of this study show that forty-two per cent suffered from hypothyroidism, twenty-nine per cent had arthritis, and only four per cent had lymphedema as compared to other studies where lymphedema and insulin resistance were common comorbidity.[18] All the study participants wished to be attractive after surgery, but eighty-nine per cent felt more attractive post-operatively, similar to the study done by Papadopulos *et al*.[19]

It is important to highlight that scores on the environmental domain of WHOQOL did improve, but they remained low both pre-operatively and post-operatively; therefore, further research and exploration into the cause are required. Although it also requires further inquiry, social support can be explained in the context of Pakistan's rural culture. This study has endeavoured to provide basic knowledge and information regarding the impact of abdominoplasty on quality of life in the context of our own culture and settings. This study has raised a few questions that warrant further inquiry for improved understanding based on our indigenous data.

LIMITATION OF STUDY

Cross-sectional design of this study does not help determine why a high number of participants had a waist-hip ratio of more than 85 compared to other international studies. Only 5% of the participants in this study had lymphedema as a comorbidity compared to higher in international studies.

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CONCLUSION

This study highlighted that abdominoplasty reduces psychological distress by reducing depression and anxiety; in addition, there is an improvement in the general perception of quality of health and life.

Conflict of Interest: None.

Author's Contribution

Following authors have made substantial contributions to the manuscript as under:

SAK & GA: Data acquisition, data analysis, data interpretation, critical review, approval of the final version to be published.

MT & MAS: Study design, data interpretation, drafting the manuscript, critical review, approval of the final version to be published.

MA & MSA: Concept, data acquisition, drafting the manuscript, approval of the final version to be published.

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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