

# The effect of breast augmentation surgery on quality of life, satisfaction, and marital life in married women using BREAST-Q as a validation tool

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## ABSTRACT

**Introduction:** The results of previous studies show that breast augmentation surgery is effective in improving women's satisfaction and the quality of life. The type of surgical survey tool can be effective in validating the results. The BREAST-Q is a strong and valid questionnaire that has not been performed nationwide as a breast augmentation's survey tool on the quality of life indicators. Therefore, in this study, the effect of breast augmentation surgery on quality of life, satisfaction, and marital life was assessed in married women using BREAST-Q as a validation tool. **Materials and Methods:** This prospective study was performed on 60 married women who underwent breast augmentation surgery from April 2014 to April 2015. Participants were asked to complete the BREAST-Q questionnaires before and 6 weeks after surgery. Statistical analysis was performed using *t*-test. The level of significance was considered 0.05. **Results:** The results of patients filling out the BREAST-Q questionnaires showed that breast augmentation surgery improved the three variables of satisfaction with breasts, psychosocial well-being, and sexual well-being significantly ( $P < 0.001$ ). The mean values of the significance of change index also show that a significant improvement is achieved in all three variables up to 100%. **Conclusion:** The results of this study show that in addition to the direct relationship between breast augmentation surgery and quality of life improvement, satisfaction, and marital relationships, using the BREAST-Q questionnaire can be a tool for physicians to assess the psychometric effects of the breast surgery.

**Keywords:** Breast augmentation, BREAST-Q, psychosocial well-being, satisfaction with breasts, and sexual well-being

## Introduction

Married women's dissatisfaction with their breast form could lead to impaired self-esteem, marital relationships, and eventually divorce. In Iran, this issue is the cause of more than 50% of marriages that lead to divorce.<sup>[1]</sup> According to a US surgeon's report, breast augmentation surgeries have increased by 300% over the past decade.<sup>[2,3]</sup> Studies show that breast augmentation surgery increases the quality of marital life in women by 80% to 95%.<sup>[2,4]</sup>

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The results of a study by Murphy *et al.* (2008) showed that breast augmentation surgery enhances sexual attraction, self-esteem, and marital and social relationships significantly.<sup>[5]</sup> Young *et al.* (2004) and Stofman *et al.* (2006) also reported that breast augmentation surgery could improve women's self-esteem and sexual satisfaction by 80%.<sup>[4,6]</sup> Nowadays, in studies conducted on plastic surgery, much attention is paid to the patient report and the effect of surgery on the quality of life.<sup>[7]</sup> In spite of many studies evaluating satisfaction and the quality of life under breast augmentation surgery, a limited number of studies have used validated surveys.<sup>[2,8]</sup> The BREAST-Q questionnaire was designed to measure the patient's reports and comments on breast reconstruction, breast reduction, and breast augmentation outcomes.<sup>[8]</sup> Six sections including satisfaction with breasts,

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satisfaction with overall outcomes, psychosocial well-being, sexual well-being, physical well-being, and satisfaction with care are examined.<sup>[8]</sup> BREAST-Q is the only questionnaire in the field of breast augmentation surgery that complies with international standards for the development of the questionnaire. Although the questionnaire has been used in studies of breast reconstruction surgery, few studies in the field of breast augmentation surgery have applied it. In the only study in this field, Michelle *et al.* (2013) reported that the three variables of satisfaction with breasts, psychosocial well-being, and sexual well-being improved significantly in patients with breast augmentation surgery that completed the BREAST-Q questionnaire.<sup>[9]</sup> Therefore, in this study, the effect of breast augmentation surgery on the quality of life, satisfaction, and marital life in married women was evaluated using BREAST-Q as a survey tool for the first time in Iran.

## Materials and Methods

This prospective and interventional study was conducted between April 2015 and April 2016 on 60 married women who underwent breast augmentation surgery in hospitals affiliated to Shiraz University of Medical Sciences. The research proposal was first approved by the Department of Plastic Surgery of the Medical School. The BREAST-Q questionnaire was completed before and 2 months after the surgery by the participants. The questionnaires were completed in person, by telephone and online. In this study, three sections and criteria of BREAST-Q questionnaire including satisfaction with breasts, psychosocial well-being, and sexual well-being were investigated. The Satisfaction with Breasts section, which contains 17 items, aims to assess satisfaction with breast size, shape, sense of touch, and body shape with and without clothing. In the psychosocial well-being section, which contains nine items, the issues such as attractiveness, self-esteem, and value in society are addressed. The sexual well-being section, which contains five items, addresses the person's sentiments in terms of attractiveness, self-esteem, and comfort during the sexual intercourse. Scoring and grading of the collected data after completing the questionnaires were done by the BREAST-Q system itself using the Q-score program and graded from 0 to 100. Higher scores indicate greater satisfaction with the post-surgical conditions. Statistical analysis was performed at the inter-group and individual levels by *t*-test. The statistical significance was set at 0.05.

## Results

The demographic data of the patients are shown in Table 1. According to this table, about 75% of the implants were in the subpectoral area and 25% in the subglandular area. Based on the volume of injection, in 85% of the implants, the volume was 400 cc and in about 15% of the implants the volume was over 400 cc.

## Intergroup

Comparisons based on the BREAST-Q questionnaire showed that breast augmentation surgery significantly improved the

scores of satisfaction with breasts, psychosocial well-being, and sexual well-being [Table 2].

Based on the results of individual-level comparisons, the individual values of the Significant of Change index in all three criteria including Satisfaction with Breasts, Psychosocial Well-being, and Sexual Well-being were 23.4, 81.1, and 19.7, respectively. Considering the obtained number, the base value of 1.96 indicates that there is a significant improvement in 100% of the cases [Table 3].

## Discussion

The goal of all cosmetic surgeries is to improve the patient's quality of life based on increased self-esteem and confidence.<sup>[10]</sup> This attitude has been in the researchers' minds for many years, and the results of numerous studies suggest that breast augmentation surgery could increase marital satisfaction and self-esteem in married women.<sup>[11,12]</sup> There are a large number of methods for measuring and analyzing the results of a history report of patients undergoing breast surgery. Some the methods that have been used in the previous studies include the Brief symptom inventory, Rosenberg Self-esteem scale, Short form-36, and Breast-related symptom questionnaire. Although these methods have also reported improved satisfaction and improved quality of life following breast augmentation surgery, the measurement tools have been generic instead of condition specific; therefore, they cannot measure all of the important aspects of quality of life. In contrast, the Q-Breast method may be a more accurate tool in validating the results because of its greater accuracy in

**Table 1: Demographic information of patients**

Age, mean±SD	32.1±4.8
Subpectoral implants, No. (%)	45 (75%)
Subglandular placement, No. (%)	15 (25%)
Size of gel implant, cc, mean±SD, <400	51 (85%)
Size of gel implant, cc, mean±SD, >400	9 (15%)

**Table 2: The mean of preoperative scores and postoperative scores satisfaction with breasts, psychosocial well-being, and sexual well-being**

Item	Preoperative Score, Mean±SD	Postoperative Score, Mean±SD	P
Satisfaction with Breasts	49.4±7.25	86.7±11.15	<0.001
Psychosocial Well-being	37.9±9.60	68.0±2.81	<0.001
Sexual Well-being	28.7±12.7	62.3±2.67	<0.001

**Table 3: Individual values of significance of change in the three variables studied**

Variables	Significance of change			SD
	Minimum	Maximum	Mean	
Satisfaction with Breasts	6.28	39.5	23.4	7.74
Psychosocial Well-being	3.76	36.8	18.1	7.74
Sexual Well-being	6.46	37	19.7	7.74

interviewing the patient and focusing on all aspects of psychology based on expert work. Therefore, for the first time in Iran, the effect of breast augmentation surgery was investigated on the quality of life, marital satisfaction, and body shape and confidence in married women using Q-Breast questionnaire. In this study, breast augmentation surgery significantly improved the post-surgical score of the criteria including satisfaction with breasts, psychosocial well-being, and sexual well-being in married women. Given that nearly 50% of marriages that result in divorce are caused by sexual dissatisfaction, breast augmentation surgery can reduce these statistics. According to the results of this study, an 80–96% increase in postoperative satisfaction was reported.<sup>[2,5]</sup> Moreover, along with the results of the present study, Michelle *et al.* (2013) reported that breast augmentation with Q-Breast method improves the score of satisfaction with breasts, psychosocial well-being, and sexual well-being.<sup>[9]</sup> In the individual comparison study in this study, since the minimum significance of change index in all three criteria was higher than the baseline value of 1.96, significant improvement occurred in 100% of cases. This result shows a significant improvement in the psychometric indices in each individual before and after surgery. Consistent with the observed result, McCarthy *et al.* (2013) in their study in New York City found that Q-Breast surgery resulted in significant improvement in the three criteria of satisfaction with breasts, psychosocial well-being, and sexual well-being.<sup>[13]</sup>

## Conclusion

Based on the Q-Breast Survey system, the results of this study showed that breast augmentation plastic surgery in married women could significantly improve marital satisfaction and the quality of life in married women. Using the Q-Breast system will strengthen the patient-physician relationship and can ultimately enhance the self-esteem of married women in terms of their marital status. On the other hand, good psychiatric performance, coupled with improving the quality of health care, can also be effective in determining the effectiveness of medical care in health policies.

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## Conflicts of interest

There are no conflicts of interest.

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