



Psychosocial characteristics and motivational factors in woman seeking cosmetic breast augmentation surgery

Psihosocijalne karakteristike i motivacioni faktori kod žena koje žele estetsko uvećanje grudi

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Abstract

Background/Aim. There are various opinions regarding the factors motivating women to undergo breast augmentation. The aim of this study was to estimate motivation for augmentation mammoplasty (AM), self-esteem and body image perception in breast augmentation patients. **Methods.** This prospective study involved AM patients operated in the Clinical Center of Vojvodina during a 3-year period. A total of 45 patients responded to our package of questionnaires designed to assess motivation for surgery, self-esteem level and body image perception. Those patients were compared to the control group of women who did not want to change their breast size, and who were similar in their age, social status and education level. Our package of questionnaires included a general questionnaire, Photographic Figure Rating Scale (PFRS) and Rosenberg's Self-Esteem Scale. **Results.** Differences in marital status, educational level, habitation and employment status were statistically insignificant, but there was a significantly lower body mass index (BMI) in the operated women. Considering motives for surgery, a few factors were distinguished: desire to feel more feminine (82.2%), confident (75.5%) and attractive (73.3%), to feel less shy with men (64.4%), to improve their sex life (46.5%), teasing history (42.2%) and easier to find a partner (11.1%) and job (2.2%). Both groups demonstrated a high self-esteem level, but in the the AM group results were lower than in the control group. The mean current self-rating by the PFRS in the group AM was lower than in the control group (4.28 ± 1.3 vs 5.12 ± 1.23 , respectively) and this coincided with lower BMI in the AM group. The women in the AM group had chosen significantly smaller body size as maximally attractive, and had chosen a narrower attractive body size range than the women in the control group. **Conclusion.** Preoperative evaluation of patients' motives for surgery can help surgeons to exclude woman with unrealistic expectations and different psychological problems.

Key words:

esthetics; mammoplasty; psychology; personality assessment; questionnaires.

Apstrakt

Uvod/Cilj. Postoje različita mišljenja o činiocima koji motivišu žene da se podvrgnu operaciji uvećanja grudi. Cilj ove studije bio je da se procene motivi za operaciju uvećanja grudi, nivo samopouzdanja kod tih pacijentkinja i lični doživljaj sopstvene slike tela. **Metode.** Ova prospektivna studija obuhvatila je pacijentkinje kojima je urađena augmentaciona mamoplastika (grupa AM) u Kliničkom centru Vojvodine u toku tri godine. Na paket upitnika koji je osmišljen da se procene motivi za operaciju, nivo samopouzdanja i lični doživljaj slike tela odgovorilo je 45 pacijentkinja. Kontrolnu grupu činile su žene sličnog životnog doba, socijalnog statusa i nivoa obrazovanja koje nisu želele da menjaju veličinu grudi. U istraživanju su korišteni opšti upitnik, Rozenbergov upitnik za procenu samopoštovanja i *Photographic Figure Rating Scale* (PFRS) test. **Rezultati.** Nisu utvrđene statistički značajne razlike između dve grupe žena u sociodemografskim varijablama (bračnom statusu, nivou obrazovanja, mestu stanovanja i zaposlenju), ali je utvrđen značajno niži indeks telesne mase (BMI) kod žena koje su želele uvećanje grudi. Najčešće navođeni motivi za operaciju bili su: želja za povećanjem žensvenosti (82,2%), samopouzdanja (75,5%) i atraktivnosti (73,3%), zatim smanjenje stidljivosti u kontaktu sa muškarcima (64,4%), poboljšanje seksualnih odnosa (46,5%) i smanjeno zadirkivanje zbog izgleda grudi od strane okoline (42,2%), kao i lakše nalaženje partnera (11,1%) i posla (2,2%). Obe grupe pokazale su visok nivo samopouzdanja, ali su dobijene vrednosti testa bile značajno niže u grupi AM. Srednja vrednost dobijena u samoprocenivanju slike tela po PFRS skali bila je značajno niža u grupi AM nego u kontrolnoj grupi ($4,28 \pm 1,3$ vs $5,12 \pm 1,23$), što koicidira sa vrednostima BMI. Žene u grupi AM pokazale su statistički značajno niže vrednosti u proceni najmršavije i najdeblje atraktivne figure prema PFRS skali, i imale su užu raspon procene atraktivnosti figura. **Zaključak.** Preoperativna procena činilaca koji upućuju žene da se odluče za uvećanje grudi treba da pomogne hirurzima da isključe one sa nerealnim očekivanjima i različitim tendencijama ka psihičkim poremećajima.

Cljučne reči:

estetika; mamoplastika; psihologija; ličnost, procena; upitnici.

Introduction

Augmentation mammoplasty (AM) is one of the commonest aesthetic surgical procedures being sought by women preoccupied with their breast size and shape. Actually, the American Society for Aesthetic Plastic Surgery (ASAPS) published in their 15th annual statistical report that there was an increase of 213.2% in AM procedures from 1997 to 2011 with AM being the second rated aesthetic surgical procedure after liposuction in 2011¹.

There are different opinions concerning the reasons and motivations for this surgery. The fact that these women are ready to undergo surgery in order to solve an aesthetic problem, accepting the risk of postoperative pain and possible side effects and paying often significant amounts of money, tells us that there is a strong underlying motivation for this decision. It is very important for plastic surgeons to understand these motives and get an insight into women's expectations in order to be able to fulfill their wishes and arrive to the best solution for the patient whether or not that in fact involves surgery.

The idea of the idealized image offered by media and entertainment industry in the 21st century on how women should look, think, feel and behave should not be underestimated. Media images depict an unrealistic image of ultra thin, forever young women with ideal proportions. On the other hand, people often tend to associate that 'perfect' image with the competence and social desirability. This image certainly contributes to drastic increase in cultural expectations for attractiveness. Actually, this social pressure set unattainable standards of attractiveness by which we evaluate ourselves. Although important, these factors are not the only ones influencing positive attitudes toward cosmetic surgery.

There is an accumulating evidence that body image is the most relevant factor that predicts an interest in cosmetic surgery². A basic component of body image is appearance evaluation which represents the judgmental beliefs regarding the body, commonly in terms of body dissatisfaction. The second aspect of body image is investing in appearance, a measure of how much importance individuals place on their looks and how much they pay attention to their appearance. Actually, investing in appearance suggests the importance of appearance to self worth³. Various researches show that women interested in breast augmentation report greater investment in their appearance, greater distress about their appearance in a variety of situations, and more frequent appearance related teasing⁴.

Other common factors that may lead women to consider cosmetic surgery are body image dissatisfaction⁵, low self-rated attractiveness⁶, lack of confidence and a feeling of embarrassment and insecurity^{7,8}. Desire to feel more feminine and more attractive to men is a common motive for cosmetic surgery that could be seen in the literature⁹. Typically, cosmetic surgery is desirable for women when it enhances youthfulness and beauty. Specifically, it is considered "normal" for women to have cosmetic surgery in order to become or remain attractive to the opposite sex¹⁰.

The relation of psychological problems or different profiles of patients and aesthetic surgery is well-known both in practice and the literature^{11,12}. A recent review notes that among 7 and 15 percent of patients who undergo cosmetic procedures meet the diagnostic criteria for the presence of body dysmorphic disorder (BDD), and considering that they should not be operated¹³. Also, results published after introduction of psychological service in some plastic surgery units in the United Kingdom reveal that 42% referrals receive psychological instead of surgical recommendation¹⁴. Unrecognized problems, such as BDD, eating disorders or any unrealistic expectations can affect an outcome of operation, compromise postoperative rehabilitation and lead to poor patient compliance and the patient dissatisfaction in general¹⁵.

Despite the growing popularity of cosmetic surgery, our knowledge about the factors that influence attitudes toward these procedures is still humble. The aim of this study was to estimate motivation for AM, psychological status and body image dissatisfaction in breast augmentation patients.

Methods

This prospective study involved 52 patients who were operated in the Clinic for Plastic and Reconstructive Surgery, Clinical Center of Vojvodina, during a 3-year period, from 2008 to 2010. Those patients were asked to participate in the study during initial consultation at the Clinic. Those who agreed to participate (50 of them), were asked to sign an informed consent and fulfill a package of questionnaires, and return them on the day of surgery. Forty five patients responded completely to the packet of questionnaires designed to assess motivation for surgery, current psychological status, body image dissatisfaction (the AM group). The control group consisted of 70 women, similar in their age, social status and education level, but who did not want to change their breast size.

Our package of questionnaires included three questionnaires: general questionnaire, the Photographic Figure Rating Scale (PFRS) and Rosenberg's Self-Esteem Scale.

General questionnaire provided data on age, highest educational qualification, marital status, employment, motivation for surgery, teasing history.

The PFRS was used as a body image assessment scale that consists of ten photographic images of real women who presented the 5 established body mass index (BMI) categories, from emaciated to obese (BMI: Image 1 – 12.51, Image 2 – 14.72, Image 3 – 16.65, Image 4 – 18.45, Image 5 – 20.33, Image 6 – 23.09, Image 7 – 26.94, Image 8 – 29.26, Image 9 – 35.92, Image 10 – 41.23)¹⁶. The women were asked to self rate their body image, most attractive body figure, largest and thinnest figure they found attractive, in order to calculate body dissatisfaction score (a difference between the current self-rated body size image and ideal body size image) and attractiveness range (thinnest figure subtracted from the largest attractive figure).

The Rosenberg's Self-Esteem Scale was used to assess a self esteem level in both groups¹⁷. It is most widely used, self-report measure of self esteem. The scale was scored as Likert's scale on four points (1 – strongly agree to 4 –

strongly disagree). The results were interpreted in a way that the high score indicated high self-esteem, and the final score was accepted as low, medium or high.

The statistical package SPSS for Windows (ver. 16) was used for statistical analysis. To test the significance of differences between the two groups of women, *t*-test was used for parametric and χ^2 test for nonparametric categories. Statistical significance was accepted at the level of $p < 0.05$.

Results

The majority of patients requesting AM at the Clinical Center of Vojvodina, 45 (86.5%) women, agreed to participate in this investigation.

The sociodemographic characteristics of the patients were shown in Table 1. The mean age of the female respondents in the breast augmentation group (the AM group) was 28.7 ± 5.82 (age range 18 to 40) years. Out of all patients, 46.7% were married, 11.1% were divorced, and 42.2% were single. In terms of the highest education level 71.1% had secondary school and only 26.7% of women had a postgraduate degree. In the AM group, 31.1% lived with parents, 57.8% lived with a partner and only 8.9% lived alone. Out of all women in the AM group 26.7% were unemployed. The mean BMI was 19.85 ± 1.92 (from 15.6 to 26.3 kg/m²) which was considered normal.

The motivation for surgery is shown in Table 2. Concerning motivation for surgery, most women, 34 (75.5%) of them, said that an important reason for seeking surgery was to feel more confident. They also stressed the desire to feel more feminine [37 (82.2%)], and less shy with men [29 (64.4%)]. Most of them thought that they would be or might be more attractive to men after breast augmentation [33 (73.3%)].

Table 2
Motivational factors for breast augmentation in the group of women with augmentation mammoplasty (AM)

Motivational factor	Patients (%)
To feel more feminine	82.2
To feel more confident	75.5
To be more attractive	73.3
To feel less shy with men	64.4
To improve their sex life	46.5
Teasing history	42.2
Easier to find a partner	11.1
To help them to get a job	2.2

The AM group was divided in three subgroups: women who always had small or no breast and wanted them "normal" (the subgroup I – 19 women), women who referred to

Table 1
Sociodemographic characteristics of women who underwent augmentation mammoplasty (AM) and the control group

Characteristics	AM group (%)	Control group (%)
Married	46.7	58.6
Divorced	11.1	8.6
Single	42.2	32.8
Secondary school education	71.1	
Postgraduate education	26.7	22.86
Employment	83.3	64.8
Live with parents	31.1	29.3
Live with partner	57.8	62.1
Live alone	8.9	7
BMI ($\bar{x} \pm SD$)	19.85 ± 1.92	22.71 ± 3.14

BMI – body mass index.

The control group included 70 women who addressed Clinic for Plastic and Reconstructive Surgery as they had some other, but non aesthetic problems in a field of plastic surgery, who were in the same age range as the AM group (from 18 to 40 years), who did not have any aesthetic operations before and who did not want to change their breast appearance. The mean age in this group was 30.2 ± 5.2 . More than half women of the control group, 41 (58.6%), were married, 6 (8.6 %) divorced and 23 (32.8%) single. There were 35.2% unemployed women. In the control group, 29.3% lived with their parents, 62.1% with a partner and 7% alone. Most of the women in this group had secondary education level [54 (77.14%)]. Further analysis showed that there was not a statistically significant difference in marital status, educational level, cohabiting and employment status (χ^2 test, $p > 0.05$). The mean BMI was 22.71 ± 3.14 kg/m². There was a statistically significant difference in BMI (*t*-test, $p < 0.05$).

their breast size as "normal" but wanted to have them big (the subgroup II – 11 women) and women who considered their breast "damaged" with breast feeding or weight loss and wanted them to look as they were before (the subgroup III – 15 women). Only one (2.2%) woman answered that augmenting breast would help her to get a better job. Only 6 (13.3%) women said that after AM they wanted to correct some other part of her body.

We further found that 53.5% of women did not expect that augmenting breast would improve their sex life and 88.9% did not think that it would make them easier to find a partner. Feelings of embarrassment that lead to avoidance of sex were present in 12 (26.7%) of patients.

Psychometric measures addressed self-esteem and appearance-related teasing.

The Rosenberg's Self Esteem Scale showed that both groups of women had high self-esteem. The AM group had

lower results than the control group, the mean value was 22.54 ± 4.99 in the AM group and 25.14 ± 4.7 in the control group, and this difference was statistically significant ($p < 0.01$). A statistically significant difference was found between the subgroup I of the AM women (women who always had small or no breast and wanted them “normal”) and the control group, as those women had lowest results with the average value of 20.16 ± 2.62 (t -test, $p < 0.01$).

Considering teasing history in the subgroup I of the AM women, teasing history was a significant motive for seeking surgery and it was present in 12 (63.15%) women which were more than in the other two subgroups and the complete AM group of 45 (42.2%) women. Teasing history was not present in the control group.

The results of PFRS are represented in Table 3. Mean current self-rating by PFRS in the AM group is lower than in

tion after surgery to even modified body posture with repositioning of the head and anterior positioning of the pelvis^{18,19}. Data from the literature say that hypomastia is often associated with kyphosis as women are trying to hide what they consider a deficiency¹⁹. These postural changes after breast augmentation are believed to happen mostly because of psychological changes in women after surgery, as they feel more confident and more satisfied with their own body image.

Although in a waste world of surgery, aesthetic surgery is often considered less important and sometimes a little bit frivolous as it is “just” making people look beautiful, it has to be kept in mind that changing patients’ appearance is changing his/her life, touching his/her soul and often giving him/her a completely new beginning. By correcting disfigurement and restoring harmonic appearance, the surgeon improves patients’ self-esteem, social and psychological functioning and signifi-

Table 3

Photographic Figure Rating Scale in the women with augmentation mammoplasty (the AM group) and the control group

Parameter	AM group ($\bar{x} \pm SD$)	Control group ($\bar{x} \pm SD$)	p
Mean current self rating	4.28 ± 1.3	5.12 ± 1.23	< 0.05
Ideal body size	3.04 ± 0.63	3.52 ± 0.81	< 0.05
Body dissatisfaction rate	1.24 ± 1.07	1.6 ± 1.22	> 0.05
Thinnest attractive figure	2.91 ± 0.42	3.07 ± 0.35	> 0.05
Largest attractive figure	4.93 ± 0.62	5.8 ± 0.76	< 0.05

the control group, (4.28 ± 1.3 vs 5.12 ± 1.23 , respectively) and this coincided with lower BMI in the AM group. Image number 4 represented an underweight group in the PFRS scale ($15\text{--}18.5$ kg/m² BMI), while a picture number 5 was considered normal weight women ($18.5\text{--}24.9$ kg/m² BMI).

The mean ideal body size, represented by the chosen image number in the PFRS scale, was lower in the AM group than in the control one (3.04 ± 0.63 vs 3.52 ± 0.81 , respectively). Body dissatisfaction rate was higher in the control group (1.6 ± 1.22 vs 1.24 ± 1.07), but this was not statistically significant (t -test, $p > 0.05$).

Women in the AM group had chosen significantly smaller body size as maximally attractive, and a narrower attractive body size range than women in the control group. Interestingly, the women in the control group accepted the largest body size as still attractive with the average upper limit of 5.8 ± 0.76 while 20% of them accepted image 7 as an upper limit. Nobody in the AM group answered that image 7 was still attractive body size. The average upper limit in the AM group was 4.93 ± 0.62 . Between the two groups there was statistically significant difference in upper body attractive limits (t -test, $p < 0.01$), but there was not in thinnest attractive figure.

Discussion

The benefits of aesthetic surgery operations are numerous. Results of those procedures could not be measured just by a change in the breast volume. Scientific studies underline far-reaching influence that this procedure has on a woman's life; from highly significant improvement in the patients self-confidence, significantly improved level of sexual satisfac-

cantly influences the quality of life²⁰. In all societies and through different cultures, a physical beauty has been socially appreciated and this gives a special impulse to people to look for a surgical solution to sometimes non-surgical problems.

Aesthetic surgery in general, and AM as one of the most often done procedures, is often sought to relieve marital, psychosexual and interpersonal problems. Even though surgery is influencing different segments of a woman's life, expectations can be unrealistic and that can create postoperative problems both to the patient and the surgeon.

Data analysis revealed different factors associated with a decision making process. It was found that most often seen motives for seeking breast augmentation were the following: dissatisfaction with size and shape of breasts, a wish to feel more confident, more feminine, less shy with men, more attractive to men. These reasons coincide with the motives for surgery found in the literature. A feeling of embarrassment that leads to avoidance of sex was present in 26.7% of women. It was noticed that dissatisfaction with body in general was not a motive for surgery in the AM group as dissatisfaction with the specific body region, in this case breasts. Literature data show that cosmetic surgery patients generally do not differ from non-patients in body satisfaction, but that they rather express dissatisfaction with specific feature considered for surgery^{21,22}. Only 13.3% of the AM women expressed dissatisfaction with some other parts of the body as well, and they wanted to do more surgeries in the future.

We did not find many unrealistic expectations as only 13.3% answered that having this surgery would solve their marital problems or easy job getting (2.2%). Teasing history was strongly associated with an interest in the breast augmentation, especially in the subgroup I (63.15%) as we could

see in some other studies^{23–25}. In this study, as in the literature²⁵, knowing someone who had previous breast augmentation, was a factor that eased making a decision to undergo surgery in 60% of women.

Motivations for all forms of the cosmetic surgery, including breast augmentation, can be classified as internal or external. An example of an internal motivation would be undergoing breast augmentation to improve body image or boost confidence. In contrast, an external motivation would undergo the surgery for a secondary reason, such as to please another (e.g. a romantic partner), to decrease stress factors (life crisis) or career planning.

It is found that the most frequent motivation (or a goal) for breast augmentation is related to a desire to feel more attractive, more feminine and more confident. Actually, it could be said that internal motivation factors are prevalent in the group of AM women. Many researches show that internally motivated women are thought to be more likely to achieve their goals for surgery²⁶. If it is known that the ultimate goal of plastic surgery is the improvement of the patient's well being, then understanding and processing motivational factors in preoperative counseling becomes even more important.

Previous studies revealed that women with breast augmentation had a higher divorce rate, but even though in the AM group of this study divorce rate was higher, this difference was not statistically significant²⁷. Although some investigations found that low education level was a strong predictor of an interest in breast augmentation, we did not notice any difference in education levels in the two groups²⁸. Women in the AM group had mostly secondary education level (71.1%) as it could be seen in the control group (77.14%) and in Serbian general population.

Women in the AM group appear to have lower BMI than women in the control group and below average body weight. This could implicate greater prevalence of eating disorders in breast augmentation patients. They have not been inquired in that direction, but this would be interesting, since the data from literature often suggest that distorted eating attitude is a significant predictor of an interest in some types of cosmetic surgery^{11, 29}. Eating disorders, like increase in cosmetic surgery operations, could be a consequence of western beauty concept where being thin and young is an imperative. As eating disorders are one of the manifestations of some psychological problems, diagnosing them could be useful for a plastic surgeon as a warning that this patient requires a psychological help prior or instead of an aesthetic surgery.

The hypothesis that patients seeking aesthetic surgery operations have low self-esteem, altered perception of their body and often even psychiatric disorders could be seen earlier in the literature. It could be expected that women who have aesthetic problems consider so important that they should address a plastic surgeon, have low self-esteem. In our study it was found that women seeking AM had a high score in the Rosenberg Self-Esteem Test indicating that they had positive orientation toward themselves and their worth. This coincided with the data from other studies^{11, 30, 31}. The subgroup of women with small or “no breasts” and wanted them normal (not big) had the lowest self-esteem, and this is

understandable. As breasts are often considered an important symbol of femininity, “not having” them can create a sense of insecurity in women and decreased her self-esteem, as it is seen in the study.

The results of the PFRS should be interpreted carefully considering all limitations of this study designed to see if women who want to do breast augmentation have different physical attractiveness perception than other women. We did not correlate those results with potential differences in personality traits in the two groups which might lead to interesting conclusions. Also as the PFRS can be useful for assessing perception of body size, it would be interesting to see how those results correlate with Multidimensional Body Self Relations questionnaire results, or some other standardized tests used for body image disorder assessment used in this population. This should be done in future studies. As current self rating of body weight based on the PFRS according to the authors strongly correlate with participants BMI, and could be used for assessing perception of body size, we compared BMI of operated women and their current self-rating body size image in order to see if there will be any big discrepancy.¹⁶ In the AM group, like in the control one, women mostly marked their body size accurately or one picture up or down, and there were no any great discrepancies that would implicate distorted body image, so it was not considered that significant. As the aim of this study was not to detect women with BDD, no other test was used for body perception disorders, and therefore it was not possible to present any valid conclusions considering this point.

A “perfect” candidate for the surgery has a healthy body image, and the desire to improve upon a specific feature (e.g. breasts), not the entire body and mind. There is a big difference between the idea of self-improvement with aesthetic surgery and narcissistic, unhealthy fixation with beauty.

Initial psychiatric evaluations of an aesthetic surgery patient conceptualized the desire for cosmetic surgery in terms of unconscious motivations, involving the symbolic meaning of body parts and unresolved sexual conflicts. Contemporary opinion has largely refuted these notions, stating that motivation for aesthetic surgery is not derived from the psychiatric pathology, but rather represents a normal patients attempting to remedy an inconsistency between general and specific body-part esteem³². Many researchers have found that cosmetic surgery results in an increased satisfaction with the specific body part that alter, and potentially a slight overall increase in self-confidence^{33, 34}. In that respect, it would be interesting to conduct a follow-up study with women of the AM group in order to check whether they achieved their goals, and follow the long-term effects, as well. Some investigations propose that the quality of life and body image measures are probably the most important components of patient's satisfaction and, therefore, they are the most appropriate means addressing the issue of measuring patient's satisfaction in cosmetic surgery³².

The strength of this study is in various non-surgical aspects that were addressed, and which should provide better overall understanding of patients seeking aesthetic surgery. Different approaches to surgical problems in specific fields

of plastic surgery lead to interesting results. There are of course some limitations of the study that we have to underline. All our patients were from one region, all Caucasian race, all Christian, so the results could not be generalized.

Conclusion

Preoperative evaluation could help surgeons to exclude women with nonrealistic expectations, motivations that are

not correlated with real aesthetic problems or those with different body image disorders. Unlike other necessary surgeries, women are often driven to consider cosmetic surgery from a combination of social and emotional factors. Thorough preoperative patients evaluation, not only physical check-up and breast measurement, but also psychological analysis will allow the surgeon to create a good relationship with them, create realistic plans and do good surgery with satisfying outcomes for both sides.

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