



Body dissatisfaction and influence of media in women who undergo plastic surgery

Insatisfação corporal e influência da mídia em mulheres submetidas à cirurgia plástica

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■ ABSTRACT

Introduction: Brazil is the world leader in the number of plastic surgeries being performed. Body dissatisfaction and sociocultural influence are the main factors that lead persons to undergo these procedures. Thus, in this study, we aimed to compare the levels of body dissatisfaction and sociocultural influence among women who have already undergone some type of plastic surgery and those who have never undergone such procedures. **Method:** A total of 115 volunteers were divided into groups according to the number of surgeries. The Body Shape Questionnaire (BSQ, for body dissatisfaction) and the Sociocultural Attitudes Toward Appearance Questionnaire (SATAQ-3, for sociocultural influence) were used. A normality test was performed, and descriptive and inferential statistics were calculated. The Kruskal-Wallis test was performed for the comparison between groups in terms of the analyzed variables. **Results:** Body dissatisfaction was observed in 25.71% of the unoperated group, in 17.78% of women who had undergone one plastic surgery, and in 20% of the group with more than one surgery. In SATAQ-3, no statistically significant difference was found in the subscale scores. **Conclusion:** The body dissatisfaction of women who had undergone plastic surgeries was not different from those who have not undergone such procedures. Moreover, the sociocultural influence was not different between the groups. The contribution of body satisfaction and the influence of media on the decision to undergo plastic surgery may be modulated by other factors.

Keywords: Body image; Plastic surgery; Media; Women.

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■ RESUMO

Introdução: O Brasil encontra-se no primeiro lugar do ranking mundial de realizações de cirurgias plásticas. A insatisfação corporal e a influência sociocultural são os principais fatores que levam esses indivíduos a optarem pela realização do procedimento. Dessa maneira, objetivou-se comparar os níveis de insatisfação corporal e influência sociocultural entre mulheres que já foram submetidas a algum tipo de cirurgia plástica e aquelas que nunca passaram por este procedimento.

Método: Participaram da amostra 115 voluntárias divididas em grupos quanto ao número de cirurgias. Foram utilizados o *Body Shape Questionnaire* (BSQ - insatisfação corporal) e o Questionário de Atitudes Socioculturais em Relação à Aparência (SATAQ-3 - influência sociocultural). Realizou-se o teste de normalidade, estatística descritiva e inferencial. O teste de Kruskal Wallis foi realizado para comparação entre os grupos quanto as variáveis analisadas. **Resultados:** Verificou-se insatisfação corporal em 25,71% do grupo de não cirurgiadas, 17,78% das mulheres que passaram por uma cirurgia plástica e em 20% no grupo com mais de uma cirurgia. Quanto ao SATAQ-3, não houve diferença estatisticamente significativa quanto às suas subescalas e escores. **Conclusão:** A insatisfação corporal de mulheres que realizaram cirurgias plásticas não foi diferente daquelas que não realizaram. Ademais, a influência sociocultural não foi diferente entre os grupos. Acredita-se que a participação da satisfação corporal e influência da mídia na decisão de realização da cirurgia plástica pode ser modulada por outros fatores.

Descritores: Imagem corporal; Cirurgia plástica; Meios de comunicação; Mulheres.

INTRODUCTION

In 2013, a survey conducted on the number of plastic surgeries performed in different countries revealed that Brazil holds the first place in the world ranking¹. This fact can be attributed to the tropical climate of the country, which leads to people wearing clothes that expose more of their bodies². Other possible contributory factors are the ease of payment for these aesthetic procedures, the rise of some social classes, and the international success of Brazilian plastic surgeons³.

According to Goldenberg⁴, the end of the 20th century and the beginning of the 21st century marks the period when obsession with body image and appearance has become prevalent and gained influence on people's lifestyle. In particular, there exists a "body/prestige" association that turns the body into a "physical capital" in the Brazilian culture, which, in part, justifies the large demand for cosmetic plastic surgeries in the country.

Concern with physical appearance is one of the main characteristics of patients undergoing plastic surgery⁵. According to the theoretical model proposed

by Sarwer et al.⁶, body image is a variable mediator that influences the decision-making about undergoing a surgical procedure.

The attitudes with regard to body image have two dimensions: body image value and body image valence⁵. People with high levels of valence base their levels of self-esteem on their body image. Meanwhile, value is a measure of the degree of a person's dissatisfaction with his or her appearance. Dissatisfaction with physical appearance, in turn, generates motivational thoughts that cause behavioral changes aimed at changing the body and image, such as adopting diets for weight loss, engaging in physical exercise, purchasing new clothes, and undergoing plastic surgeries. The interaction between valence and value ultimately influences the decision to undergo plastic surgery⁶.

In addition, sociocultural pressure, intensified by the media by disseminating images of "perfect bodies" that become adopted as the cultural standard of beauty, increases the risk for the development of body dissatisfaction and can lead to interest in plastic surgery⁷. The acceptance of plastic surgery and the influence on its implementation are related not only

to the messages in the media, but also to the views of closely connected people such as family members or acquaintances who have undergone such procedures⁸. Moreover, there is a direct and positive association between the acceptance of cosmetic surgery, the influence of media, and the body mass index (BMI)⁹.

Several studies have been performed with unique samples of women submitted to surgical procedures^{4,10}, and those that compared unoperated with operated women¹¹. However, there is a lack of studies comparing the level of body dissatisfaction and the influence of media among patients who were submitted to one or more plastic surgeries. There may be a gradation in relation to the different levels of demand for plastic surgery, such that the larger the number of surgeries performed, the greater the body dissatisfaction and the media influence.

OBJECTIVE

In addition to this shortcoming, it is necessary to highlight the current global ranking of Brazil in the number of plastic surgeries performed, which has become increasingly higher over the years. Consequently, we developed an interest in comparing the levels of body dissatisfaction and the influence of media on the internalization of body standards among women who have had one, more than one, or no plastic surgery.

METHOD

Participants

The present work is an exploratory, cross-sectional, and comparative study¹², and was performed in the city of Juiz de Fora, Minas Gerais. Women who had never undergone any aesthetic surgical procedure and those who already had at least one surgery of this nature took part in this study.

Because of the difficulty in finding volunteers gathered in the same place or groups that together fit the profile of "patients undergoing cosmetic surgery," the sample was composed by convenience and by using the "snowball" sampling technique¹². This method is characterized by the selection of a random group of participants who, after taking part in the study, identified other persons who fit the category of the target population¹³. All those indicated and who decided to participate voluntarily after signing a consent form were included in this study. Women who underwent reparative surgical procedures and those aged > 50 years or < 18 years were excluded.

The study was approved by the ethics committee on human research of the Federal University of Juiz de

Fora under opinion no. 254/2011, and was performed in accordance with the standards of Ordinance 466/12 of the National Health Council. All volunteers signed a Free and Informed Consent form. In addition, anonymity was guaranteed to all participants in addition to the right to withdraw from the study at any time.

Instruments

The volunteers self-reported their age. The anthropometric data (body mass and height) were collected by using a stadiometer and Welmi balance, and used for the calculation of the BMI [body mass (in kilograms) divided by height (in meters squared)].

To evaluate the influence of media, the Sociocultural Attitudes Toward Appearance Questionnaire (SATAQ-3) was applied with the psychometric properties already evaluated for the Brazilian population and considered adequate¹⁰. The questionnaire is composed of 30 items intended to evaluate the general internalization of socially established standards, including the athletic body ideal, the pressure exerted by these standards, and the media as a source of information about appearance. The results were interpreted by using a Likert scale, ranging from 1 (never) to 5 (always). The total score was calculated by the sum of the responses, with items 3, 6, 9, 12, 13, 27, and 28 being of inverse scores. The score may vary from 30 to 150 points. A higher score represents a greater influence of the sociocultural aspects on the individual body image. The items were divided into five factors: information, pressures, general internalization, athletic internalization, and items of inverse scores¹⁰. For the sample of this study, the internal consistency assessed by using Cronbach's alpha coefficient was considered appropriate (0.83).

The general body dissatisfaction and the concerns with body shape were evaluated by using the *Body Shape Questionnaire (BSQ)*¹⁴.

The BSQ is a self-report questionnaire composed of 34 items in a 6-point Likert scale, in which the participant specifies with what frequency, in the last 4 weeks, he or she experienced the events proposed by alternatives. The final score is given by the sum total of the items; the higher the score, the higher the dissatisfaction with the body. The classification of the results of the BSQ was divided into four levels of body dissatisfaction: ≤110 points (no dissatisfaction), between 110 and 138 points (mild dissatisfaction), between 138 and 167 (moderate dissatisfaction), and >168 points (serious dissatisfaction). For this study, the following classification was adopted: volunteers who were satisfied with their bodies scored <110 points, and volunteers with a score ≥110 points were considered unsatisfied. The internal consistency of the BSQ for the studied sample was 0.94.

Procedures

A schedule was set with each participant for the collection of anthropometric and age data, at a place determined by the women according to their availability. The questionnaires were handed to the subjects who then received verbal guidance. Each questionnaire contained a header with written guidelines. Any doubts were clarified at the time of filling by the person responsible for the application of the instrument. The completion of the questionnaires was not limited by time.

Statistical Analysis

Initially, a descriptive statistical analysis of the studied variables was carried out. The central tendency measures (mean) and dispersion (minimum and maximum value, and standard deviation) for age, BMI, body dissatisfaction (BSQ), and media influence (SATAQ-3) were calculated. In addition, the relative and absolute frequency scores of the BSQ were verified. A normality test (Kolmogorov-Smirnov test) was then performed to assess the distribution of data. As the data did not meet the criteria of normality, the Kruskal-Wallis test was used to compare the groups in accordance with the satisfaction with their own body (BSQ) and the influence of media on body image (SATAQ-3 and its factors). For both measures, the women were divided into the following groups: group 1-women who did not undergo plastic surgery; group 2-volunteers who have already undergone one surgery; group 3-women who have already undergone more than one plastic surgery. All data were processed with the SPSS 19.0 software, adopting a significance level of 5%.

RESULTS

A total of 115 women participated in this study: group 1, n = 35 (30.43%); group 2, n = 45 (39.14%); and group 3, n = 35 (30.43%). With respect to the classification of nutritional status (BMI), 7 participants (6.1%) had low weight, 74 (64.3%) were eutrophic, and 34 (29.6%) overweight/obese. The most frequent plastic surgeries performed were liposuction of the abdomen and breast prosthesis implantation. Table 1 presents the data on age and BMI in the different groups.

Concerning the BSQ scores, body dissatisfaction was present in 25.71% (n = 9) of the unoperated group, in 17.78% (n = 8) of the women who had undergone one plastic surgery, and in 20% (n = 7) in the group with more than one surgery.

The results of the comparisons between groups with regard to the scores obtained in BSQ (body dissatisfaction) and SATAQ-3 (influence of the media)

Table 1. Descriptive data analysis.

Variables	Group 1	Group 2	Group 3
	Mean (SD)	Mean (SD)	Mean (SD)
Age (years)	29.74 (10.77)	31.13 (7.66)	36.11 (11.02)
BMI (kg/m ²)	23.92 (2.89)	22.93 (3.35)	24.15 (2.49)

Group 1, no surgery; group 2, one surgery; group 3, more than one surgery; SD: Standard deviation; BMI: Body mass index.

are shown in Table 2. There was no statistically significant difference between the groups for the variables evaluated.

DISCUSSION

In the present study, we aimed to compare body dissatisfaction and the influence of media between a group of women who had never undergone plastic surgeries and those who had undergone one or more surgical procedures. There is a lack of studies in the Brazilian population concerning the attainment of plastic surgeries¹⁵. Moreover, there are no known studies on the possible differences in body satisfaction among women who have undergone one or more plastic surgeries.

Body dissatisfaction and the influence of media are factors that influence the decision making about undergoing cosmetic surgery^{7,10,16}. Therefore, the understanding of these factors and their possible gradations in different populations (women with one or more surgeries) is an important aspect in the clinical and epidemiological fields.

Body dissatisfaction was detected in 20.86% (n = 24) of the total sample, with a small variation in prevalence between the groups. No statistically significant differences in the BSQ scores (body dissatisfaction) were found between the groups analyzed. Amaral et al.¹⁰ also did not find high levels of body dissatisfaction (25%) in a group of women submitted to surgical procedures. However, Sante and Pasian¹¹, who compared a group of women who underwent plastic surgeries with another unoperated group by using the Body Image Satisfaction Scale¹¹, verified that those who had undergone plastic surgeries were more dissatisfied with their bodies than the unoperated women. In addition, concerning personality traits, they found higher sensitivity, signs of mistrust and retraction from interpersonal contacts, and greater dissatisfaction with appearance in the operated women.

According to Housman¹⁷, those features can be explained by the decrease in the capacity of self-perception of body forms. In addition, the internalization of feelings of guilt for not obeying the standards of female beauty as dictated by society and media arouses, in unsatisfied women, a deep feeling of

Table 2. Descriptive analysis of the BSQ, SATAQ-3, and subscales, by groups

	Statistic	Group 1	Group 2	Group 3	p-value
BSQ	Mean (SD)	83.91 (28.74 in)	83.36 (26.92)	89.77 (29.70)	0.572
	Median	85	81	88	
	Min-max	34-148	38-141	34-161	
SATAQ-3	Mean (SD)	83.37 (19.24)	88.98 (18.30)	91.11 (17.46)	0.211
	Median	83	88	89	
	Min-max	46-129	51-128	51-131	
General intern.	Mean (SD)	19.09 (6.51)	21.44 (7.15)	20.34 (7.96)	0.419
	Median	20	22	20	
	Min-max	7-28	7-35	7-35	
Information	Mean (SD)	16.83 (5.04)	18.91 (5.44)	19.74 (8.04)	0.135
	Median	16	18	20	
	Min-max	6-26	7-30	8-57	
Pressure	Mean (SD)	16.94 (6.74)	16.44 (6.27)	18.06 (6.27)	0.633
	Median	18	16	20	
	Min-max	06-29	06-30	06-29	
Athletic intern.	Mean (SD)	10.57 (3.38)	10.02 (2.87)	12.06 (4.09)	0.109
	Median	10	11	12	
	Min-max	04-18	04-15	04-20	
Inverse scores	Mean (SD)	22.00 (5.11)	22.00 (4.04)	20.00 (5.05)	0.143
	Median	21	21	19	
	Min-max	11-34	15-33	11-30	

BSQ: Body Shape Questionnaire; SD: Standard deviation; SATAQ-3: Sociocultural Attitudes Toward Appearance Questionnaire.

shame with regard to their physical appearance, which leads them, among other aspects, to feel insufficiently attractive.

Accordingly, it was found that 30.43% (n = 7) of the women who had already undergone more than one surgical procedure were still unsatisfied with their bodies. It must be emphasized that plastic surgery, in some cases, is used as a method to overcome deep discontent with one's own physical appearance, serving as an intervention to raise self-esteem¹⁸. However, some studies^{5,6,18} observed a high prevalence of body dysmorphic disorder (BDD) in patients who are candidates for plastic surgery. This is a cause for concern because of the ease with which such surgical procedures are being performed in the country, when, in these cases, the supposed benefit of such an intervention (improvement of self-esteem and body image) may not be achieved. Coelho et al.¹⁵ suggested that most of the women who have had one or more plastic surgeries are willing to go through another aesthetic surgical procedure. For these authors, this can be a reflection of the presence of traces of BDD observed in the participants of the study.

According to Campana et al.¹⁶, there is an association between the acceptance of plastic surgery

and life satisfaction among women. Additionally, there was a positive and direct correlation with regard to exposure to media content and the decision to undergo plastic surgery in a group of unoperated women. In this sense, both the group of women who had already had plastic surgeries and the unoperated women reported that they perceive pressure from media to feel satisfied personally, socially, and in other aspects of their lives.

These data were confirmed by the findings of the present study, in which no statistically significant difference was found between the groups concerning the influence of media in the internalization of body standards. Therefore, the results show that regardless of the number of surgical interventions or the absence of aesthetic surgical procedures, women's perception of an ideal body is influenced by media.

According to Markey and Markey⁷, persons who are exposed to television programs related to aesthetic and plastic surgeries are more prone to develop an interest for such procedures. Campana et al.¹⁶ reported that advertisements about beauty and physical attractiveness are based on the body ideal and promote an existing body standard, which can generate body dissatisfaction in women who had never had plastic surgery.

On the basis of this study, it can be inferred that body satisfaction and the influence of media are not the only explanatory factors for the decision to undergo one or more plastic surgeries. The pressure exerted by media and the socially determined body ideal seem to influence women in the same way. The intervening factors in the decision to undergo or not to undergo surgical procedures remain obscure.

Neto and Caponi¹⁹ described that the medical literature highlights the legitimacy of plastic surgery by describing the problems as a form of pathology. Thus, plastic surgery becomes imperative for women who seek to fit the aesthetic standards. Moreover, the medical field has been providing justification for the performance of plastic surgery for persons with low levels of self-esteem and those seeking bodily satisfaction⁷.

According to Swami²⁰, one of the justifications for the performance of plastic surgery is the treatment of depreciative emotional aspects, especially with regard to a person's self-esteem. According to the author, cosmetic surgery has a reparative character, as it offers the possibility of suppression or treatment of a psychological pathology.

The attempt to create a pathology as a justification for the implementation of plastic surgery is one of the factors that explains the outcome of this study. It is possible that there is, in fact, no significant difference in bodily satisfaction between women who have and those who have not undergone plastic surgery. According to the data obtained, the media equally influences these women who present very similar levels of body satisfaction.

The perspective of curing a psychological discomfort through plastic surgery seems more of a medical justification for carrying out the surgery than an empirical scientific observation¹⁹. Therefore, the consideration of the deep body dissatisfaction presented by women serves more as a background and as a legitimizing factor for the need to perform plastic surgery. On the other hand, women who had undergone one or more plastic surgeries did not display a greater body satisfaction, which generates doubt about the healing function of such surgical procedures.

This study presents data comparing women who had never had and those who had undergone one or more cosmetic surgical procedures—a subject little studied in Brazil. However, it has some limitations, including the sample selection and the size of the groups analyzed.

Nevertheless, similar studies can be found such as that by Sante and Pasian¹¹, in which the number of the subjects compared was similar to that in the present investigation.

In addition, some intervening variables were not controlled, such as educational and socioeconomic levels. According to Housman¹⁷, there is a positive correlation between high socioeconomic levels and high scores of body dissatisfaction.

Another important aspect that could influence the results would be the application of the instruments in the pre- and postoperative periods. Brito et al.¹⁸ stated that plastic surgery had positive impacts on the body image when they compared the pre- and postoperative periods. Therefore, controlling these variables could facilitate a better comparison between all the operated and nonoperated groups concerning the aspects analyzed.

Despite these limitations, this study presents important results on body image and the influence of media in a group of women who were never submitted to cosmetic surgery and those submitted to one or more surgical procedures. According to the results presented in this study, regardless of the number of procedures performed, these women showed similar levels of body satisfaction and a similar influence of media on their internalization of body standards. Such a result raises doubts about the real curative power of plastic surgery in the context of self-esteem and self-image, while it also questions the influence of media as being the main precursor for undergoing cosmetic procedures.

In view of the complexity of the issue, the results of the present study and the possible role of other variables in this context suggest the need for further studies involving other aspects implicated in this phenomenon, such as the pre- and postoperative period, control of the socioeconomic and educational levels of the sample, the type of surgery performed, and personal history.

CONCLUSION

The body dissatisfaction of women who had undergone plastic surgeries was not different from those who have had no intervention. Moreover, the sociocultural influence was not different between the groups. Therefore, the contribution of body satisfaction and the influence of media on the decision to undergo plastic surgery may be modulated by other factors.

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