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# Body image and sexual life satisfaction in women considering female genital cosmetic surgery in Iran

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## Abstract

**Background** Further attention to genital organs has become a concern for women in line with changes in society's culture. In recent years, the number of surgeries has grown increasingly. The aim of this study was to investigate the relationship between body image and satisfaction with sexual life of female genital cosmetic surgery volunteers in reproductive age women in Shiraz.

**Methods** This cross-sectional study was performed on 160 women referring to Shiraz Health and Medical Centers willing to undergo female genital cosmetic surgery. Data collection was performed using Demographic Information Questionnaire, SWBI and Enrich Marital Satisfaction Questionnaire. The data were analyzed through Spss24 software using Pearson statistical methods of correlation coefficient and one-sample t-test.

**Results** This cross-sectional study was conducted on 160 women (average age of  $30.83 \pm 5.48$ ) willing to undergo genital cosmetic surgery at Shiraz health and medical centers. The results of this study showed that women willing to undergo female genital cosmetic surgery are satisfied with their physical appearance. Correlation coefficient test between body image and satisfaction with marital life also showed that there is a significant relationship between these two variables ( $p < 0.001$ ). This means that with the satisfaction of body image, the level of satisfaction with marital life also increases.

**Conclusion** The most important findings of this study included no correlation between women's negative perceptions of their bodies and dissatisfaction with sexual life with a tendency to cosmetic surgery on the genital area. Therefore, it is necessary to understand the factors influencing this decision.

**Keywords** Body image, Genital surgery, Female, Sexual life, Satisfaction

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## Introduction

In recent years, due to the increasing sensitivity of women to their own bodies, the demand for FGCS has increased [1]. In 2018, the American Society of Cosmetic Surgeons reported that female genital cosmetic surgery was among the fastest growing procedures with a 53% growth in 5 years [2]. Iran is also considered one of the countries with a high ranking in the beauty operations in the world [3]. Female Genital Surgery (FGCS) is performed with the aim of changes in anatomy of genitalia to improve sexual function. This surgical procedure usually entails a reduction in the size, and an enhancing of the shape of the labia minora, the labia majora, or both. During labiaplasty, one or both sets of labia may be reshaped, shortened, made thinner or corrected to achieve the same size and symmetry [4]. Reduction of the labia minora is the most commonly performed surgery. However, in the Zambian culture, larger labia minora is more desirable in terms of cosmetic feature [5–7]. In most cases, this surgery has a cosmetic aspect [4]. Investing in appearance, more social approval, better appearance based on created sensitivities, gaining fame and differences in cultural values in developed and developing countries are some of the factors led to a tendency towards FGCS surgery [8, 9]. Further attention to organs has become a concern for women in line with changes in society's culture to the extent that women are seeking cosmetic surgery to become more beautiful [10]. For example, in one prospective study, of 50 women who underwent labia plastic surgery, over half of patients experienced tugging during intercourse, and over half felt less attractive to their partner, and noted a negative impact on self-esteem and intimacy [11]. The result of studies showed that this surgery could be improve the Female Sexual Function [12]. But studies show that psychological consequences, like Post-Traumatic Stress Disorder (PTSD) and affective disorders are the some type of this surgeries complication [13]. According to these complications, women should have sufficient knowledge and information about the surgical procedure and no extreme cosmetic surgery should be performed considering its advantages and disadvantages. Because most clients have very little information about the normal genital tract and most of their knowledge is based on exciting videos and images. This is because most women referred for surgery have very little information about the normal genitalia and most of their knowledge is based on exciting videos and images and advertising [12, 14]. Also, a cross-sectional study based on the knowledge and attitude of 11,000 physicians, including informing and increasing awareness through e-mail and seminars, showed that most physicians who manage patients' requests for FGCS need to have more information on this issue. Women should speak to a counselor before a genital cosmetic procedure. They need

to be questioned and consulted in terms of anxiety, difficulty in communicating and imagining their appearance. The necessity to recognize the factors influencing the demand for this surgery in Iranian women with special and different religious and social features from other societies raises the need for this research to use its results for women empowerment [15]. The aim of this study was to find the relation between Body Image and Satisfaction with Sexual Life or marital satisfaction of FGCS Volunteers in reproductive age women in Shiraz.

## Materials and methods

The present study was a descriptive-analytical cross-sectional study. The study population consisted of women willing to undergo genital cosmetic surgery at three health and medical centers in Shiraz. Based on the objectives of the study, previous studies and the opinion of the consultant and taking into account the error of 0.05 and the test power of 80%, the required sample size of 160 people was estimated. Random sampling conducted among those referring to the relevant centers during the sampling period. It was performed based on convenience purposive sampling by taking into account the conditions of study inclusion. 160 qualified women were selected out of the registered individuals who referring to medical centers willing to undergo the genital surgery participate in the study. The study inclusion criteria included the age group of 18–48 years and individuals engaging in sexual activity and exclusion criteria were the women who refused to participate in our study. The sampling process was difficult because most cases refused to participate in the study due to privacy and personal concerns. Another issue was that only three health and treatment centers were studied in Shiraz, within six months from the start of the study. Participants were assured that they would be anonymous, that they could leave the interview at any time and that they could refuse to answer questions. After obtaining the written consent from those who wished to participate in the study, they were asked to first complete the researcher-made handwritten demographic information questionnaire and then the SWBI and Enrich Marital Satisfaction Questionnaires in 40–60 min. After extracting the data from the questionnaires and analyzing them with spss24 software, the research hypotheses were examined using Pearson statistical methods of correlation coefficient and one-sample t-test.

## Data collection tools

### Demographic information questionnaire

The researcher-made questionnaire is for the purpose of examining the Background information (Marital status, age, level of education, spouse's level of education, place of residence, occupation, economic status, history of

cosmetic surgery, number of abortions, number of deliveries, number of children).

#### Questionnaire of satisfaction with body image (SWBI)

The Satisfaction with Body Image questionnaire was introduced by Souto & Garcia. in 2002. this questionnaire has 22 items and examines a person's satisfaction or dissatisfaction with his or her body. It is rated based on a five-point Likert (from **always** to **never**) scoring 1 to 5, respectively and questions 1-2-4-8 are scored in reverse.

**Table 1** Demographic and fertility characteristics of women who are willing to undergo cosmetic surgery on the female genitalia

		Number	Percent
Marital status	Married	154	96.3
	Divorced	4	2.5
	Deceased spouse	2	1.3
Education	High school	21	13.1
	Diploma	34	21.3
	Associate Degree	16	10
	Bachelor's degree and higher	89	55.6
Spouse education	High school	23	14.4
	Diploma	41	25.6
	Associate Degree	19	11.9
	Bachelor's degree and higher	77	48.1
Residence	Urban	147	91.9
	Rural	13	8.1
Employment status	Housewife	99	61.9
	Employed	61	38.1
Income	< 500,000 Tomans	58	36.3
	500,000–1,500,000 Tomans	42	26.3
	> 1,500,000 Tomans	60	37.5
History of cosmetic surgery	Yes	47	29.4
	No	113	70.6
Pregnancy	0	38	23.75
	1	58	36.25
	2	33	20.6
	3	20	12.5
	4	7	4.37
	5 ≥	4	2.5
Delivery	0	50	31.25
	1	62	38.75
	2	30	18.75
	3	11	6.87
	4 ≥	7	4.37
Abortion	0	127	79.37
	1	23	14.37
	2	10	6.25
Number of children	No children	48	30
	1	64	40
	2	30	18.75
	3	12	7.5
	4 ≥	5	3.1

According to this analytical method, the obtained scores are collected and judged based on the sum of the scores. The minimum and maximum possible scores will be 22 and 110, respectively. Scores between 22 and 44 indicate a low dissatisfaction with body image, scores between 44 and 66 indicates a moderate dissatisfaction with body image and scores above 66 indicates high dissatisfaction with the body [16]. The reliability of the Persian version was calculated by Taheri Torbati et al. (2012), with the internal consistency method, and Cronbach's alpha was 0.91 [17].

#### ENRICH marital satisfaction questionnaire

The Enrich Marital Satisfaction Questionnaire consists of 12 scales: A contract response, Sexual Satisfaction, Personality Issues, Conflict resolution, Financial management, Leisure activities, Sexual relations, Marriage and children, Family and friends, The egalitarianism roles and Religious orientation. This tool with 5 items (likert-type scale) is considered where any **one** of them scored from one to five points. The scores obtained from 47 questions are added together and a raw score is obtained. This score is sufficient to convert it to a standard score and to interpret the situation of marital satisfaction. In Zarean et al. study, the Cronbach's alpha coefficient was 0.89 for the questionnaire. A good reliability of this questionnaire has been also reported [18].

#### Results

Of the total of 160 respondents participating in this study, 154 were married, average age of  $30.83 \pm 5.48$  and average marriage age of  $22.37 \pm 3.32$  were willing to undergo vaginoplasty. 38.8% of women with one experience of delivery had the highest percentage of pregnancies compared to other women (Table 1). Based on the results of the one-sample t-test, the average SWBI to be FGCS volunteer was 3.85 in the sample group with a STD. Error Mean of 95% which is higher than the standard score considered for it [3] (Table 1).

Table 2 examines the correlation between some demographic variables and body image and satisfaction. This table showed that there was no significant relationship between them.

Therefore, the final result of the test shows that women who want to undergo cosmetic surgery for their female genitalia are satisfied with their physical appearance. The marital satisfaction score of those who are FGCS volunteers, with a standard deviation of 0.78, is 3.65 which is higher than the standard score considered for it [3] (Table 3). It should be noted that in order to obtain the marital satisfaction score in women willing to undergo cosmetic surgery on the female genitalia, 47 standard questions were combined and their mean was obtained and tested using a one-sample test. Using Pearson

**Table 2** The correlation between demographic information with body image and satisfaction

Variable		Body Image Mean $\pm$ SD	Satisfaction Mean $\pm$ SD
Marital status	Married	3.58 $\pm$ 0.70	3.66 $\pm$ 0.91
	Divorced	3.61 $\pm$ 0.46	3.50 $\pm$ 0.86
	Deceased spouse	3.20 $\pm$ 0.03	3.11 $\pm$ 0.33
P-value		0.07	0.80
Education	High school	3.52 $\pm$ 0.80	3.52 $\pm$ 1.13
	Diploma	3.59 $\pm$ 0.61	3.67 $\pm$ 0.87
	Associate Degree	3.93 $\pm$ 0.59	3.63 $\pm$ 0.94
	Bachelor's degree and higher	3.52 $\pm$ 0.70	3.67 $\pm$ 0.86
P-value		0.66	0.35
Spouse education	High School	3.48 $\pm$ 0.68	3.66 $\pm$ 0.97
	Diploma	3.66 $\pm$ 0.66	3.52 $\pm$ 0.97
	Associate Degree	3.65 $\pm$ 0.64	3.26 $\pm$ 0.86
	Bachelor's degree and higher	3.55 $\pm$ 0.73	3.71 $\pm$ 0.86
P-value		0.65	0.33
Residence	Urban	3.58 $\pm$ 0.7	3.63 $\pm$ 0.89
	Rural	3.56 $\pm$ 0.62	3.82 $\pm$ 1.03
P-value		0.75	0.70
Employment status	Housewife	3.62 $\pm$ 0.67	3.66 $\pm$ 0.90
	Employed	3.51 $\pm$ 0.72	3.62 $\pm$ 0.91
P-value		0.20	0.68
Income	< 500,000 Tomans	3.57 $\pm$ 0.59	3.56 $\pm$ 0.91
	500,000–1,500,000 Tomans	3.46 $\pm$ 0.67	3.69 $\pm$ 0.94
	> 1,500,000 Tomans	3.66 $\pm$ 0.79	3.70 $\pm$ 0.76
P-value		0.51	0.58
History of cosmetic surgery	Yes	3.59 $\pm$ 0.76	3.58 $\pm$ 0.89
	No	3.57 $\pm$ 0.66	3.67 $\pm$ 0.91
P-value		0.87	0.46

**Table 3** Determination of body image, marital satisfaction, and sexual satisfaction score in women willing to undergo cosmetic genital surgery

variable	mean	Standard deviation	Standard deviation	T	P
Body image	3.58	0.05	3	12.4	0.001 <
Marital satisfaction	3.65	0.07	3	10.48	0.001 <
Sexual satisfaction	3.5	0.5	3	10.87	0.001 <

**Table 4** The correlation between body image with satisfaction of marital life of women willing to undergo cosmetic surgery on the female genitalia

Confidence level	R	Index
Body image	0.31	0.001 <

correlation coefficient, there was a significant relationship between satisfaction with sexual life and satisfaction with marital life ( $p < 0.001$ ). The test of the correlation coefficient between body image and satisfaction with women's marital life showed that there was a significant

relationship between these two variables. More precisely, it can be said that the correlation between body image and women's marital satisfaction is equal to 0.31 ( $p < 0.001$ ). This means that with body image satisfaction, the level of satisfaction with married life also increases (Table 4).

## Discussion

The present study is cross-sectional performed in Iran to find a relationship between genital cosmetic surgery, body image satisfaction and sexual satisfaction as well as relationship between body image and the level of satisfaction with marital life. The results of this study showed that with the satisfaction of body image, the level of satisfaction with marital life also increases. Women interested in FGCS had less body parts satisfaction compared with those not willing to undergo genital surgery [19]. Goodman's study, showed that dissatisfaction with the body led to a negative self-image and a tendency to do so, and after surgery, people had a better image of their appearance ( $P < 0.001$ ). A study by Veale also investigated 70 women who were willing to labiaplasty and 55 women who were unwilling to undergo the surgery. This study indicated that women seeking labiaplasty were no different from women in terms of anxiety and depression control but they expressed dissatisfaction with genital appearance, quality of life and body image [20]. Perhaps the inconsistency of the present study with these studies suggests that women in today's society have become idealistic and, despite their satisfaction with the body and good sexual relationship, are still looking for ways to be perfect. The study also found that those willing to undergo genital surgery had a higher sex satisfaction score than the standard score. The correlation results also showed a direct relationship between body image and sexual life satisfaction. Afshari's study in Iran showed similar results and there was a direct relationship between body image and sexual desire ( $P = 0.022$ ), pain ( $P = 0.001$ ), sexual arousal ( $P < 0.005$ ), sexual orgasm (001).  $P = 0$  and sexual satisfaction ( $P < 0.005$ ) while concern about weight, physical condition and sexual attraction during sexual activity were the main causes of sexual dissatisfaction [21]. In a case-control study by Ekrami in Iran to examine the difference between body image among 163 women willing to undergo genital surgery and women unwilling to do so, the body image score was 237.2 in the case group and 241.7 in the control group. It shows dissatisfaction in women unwilling to undergo surgery. In the mentioned study, women were more concerned about their husbands' reactions and said that the appearance of their genitals had led to a decrease in romantic relationships with their husbands [22]. However, Komarnicky study considers the image of genital appearance to be more preferable than physical appearance for sexual

satisfaction and considers sexual appearance as the cause of sexual dissatisfaction, though at the beginning of sexual intercourse the physical appearance of women will encourage men to have a relationship [23]. Stuart's cross-sectional study attributed the cosmetic surgeries of genital to psycho-social factors resulting from dissatisfaction with body appearance. Among these factors influencing body appearance dissatisfaction were interpersonal sensitivity, age, depression and low self-esteem among women [24].

Veale study showed that improvements on the Genital Appearance Satisfaction after labiaplasty could improve sexual function [25]. Dosch's study is inconsistent with the results of the present study, suggesting that a satisfactory relationship has a protective effect on body dissatisfaction and does not require a woman's efforts to maintain the relationship through such surgeries [26]. On the other hand, Barbara's study also points out that in some cases, even after vaginal cosmetic surgery, the problems related to orgasm and the use of devices for sexual arousal continue. She further emphasizes non-surgical interventions, and psychological counseling has been strongly recommended by her before FGCS because in many cases, the hidden points of a person's personality and the problem of socially affected women have been observed. Therefore, today in many cultures, there is a tendency to undergo this surgery and only one third of women have stated sexual motivation for this surgery [27]. This study is somewhat similar to the present study in some points. Although women in Iranian culture had the necessary satisfaction with their body image and subsequently had sexual satisfaction, they still have an incentive to undergo FGCS, which may be due to individual obsessions and the influence of sexual ideals. In terms of investigation of demographic information in this study, the mean age of the individuals was consistent with the results of Ekrami study ( $31.6 \pm 6.8$ ). Contrary to the present study, however, the level of education of those willing to undergo FGCS was diploma and they had two children while in our study, 77% had a bachelor's degree or higher and 58% had only one child. In both studies, a greater tendency for this surgery reported among housewives [28]. In Goodman's study, the mean age of the women was  $32.74 \pm 10.14$  and 62.5% of them had university education, the results of which were somewhat similar to our study [29]. higher levels of education and fewer children in women who are willing to undergo FGCS, despite their body satisfaction, can indicate that women are entering a new era of independence. Despite the satisfaction of their sexual appearance and function, and regardless of the pressures of gender inequality, women are now trying to compete with females with the same gender and overcome the idealism that pervades their culture and society.

Medical marketing advertising has played an important role in female genital cosmetic surgery. Marketing by internet promotes the surgeries, and health care providers play an important role in educating women about their genital anatomy and helping them to understand their individual changes [30–32]. Health care providers should inform women who want to perform genital cosmetic surgery just to improve sexual function about the differences of external genitalia and the complications of genital surgery, and it is better to ask about the causes of sexual disorders before deciding to perform surgeries. There is limited information available in this field due to the little research that has been conducted in this area. Therefore, due to the importance of this issue and its effects on women's physical and mental health, a further study in this field is necessary.

### Strength

This study has determined the Body Image and Satisfaction with Sexual Life of Female Genital Surgery (FGCS) Volunteers in Reproductive Age Women in Shiraz. Considering the lack of studies on measuring the relationship between body image and marital satisfaction, this study was the first study in this field from Shiraz, Iran. Therefore, it seems that sexual satisfaction will be considered as a factor affecting marital satisfaction.

### Conclusion

According to the results of this study, women who are willing to undergo FGCS have a higher body image score and there is a significant positive relationship between body image and sexual relationship satisfaction. The most important findings of this study included no correlation between women's negative perceptions of their bodies and dissatisfaction with sexual life with a tendency to cosmetic surgery on the genital area. Therefore, it is necessary to understand the factors influencing this decision. Satisfaction with body image increases satisfaction with marital life. It is recommended that healthcare professionals should identify women at risk and use interventional strategies to increase their sexual life without unnecessary surgery. So, this research should be used as a base for interventional studies. In addition, further studies with a larger sample size and in different cultural are also suggested.

### Research limitations

The results showed that there was a significant positive relationship between body image and the desire to undergo FGCS and also between body image and sexual relationship satisfaction. However, the results cannot be generalized to all women because this is a limited-scale study and includes only women referring to three Health and Medical Centers in Shiraz willing to undergo genital



cosmetic surgery. It is recommended that a similar study be conducted with a larger sample size in different groups of women and different cultures.

#### Abbreviations

FGCS Female Genital Surgery  
SWBI Satisfaction with Body Image

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#### Author contributions

All authors were involved in the study conception and drafting the manuscript (S.D, F.B, F.R, S.Z.J, Z.Y), and Zahra Yazdanpanahi & Setareh Derakhshanpour were involved in writing and revising the manuscript. All authors have read and approved the final version of the manuscript (S.D, F.B, F.R, S.Z.J, Z.Y).

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#### Data availability

The datasets analyzed during the current study are not publicly available due to the confidentiality of participants' data and the difficulty of organizing the raw data to be suitable for publication; however, they are available from the corresponding author on reasonable request.

#### Declarations

##### Ethics approval and consent to participate

This study with the code (IR.SUMS.REC.1396.S674) has been approved by the Ethics Committee of Shiraz University of Medical Sciences, Iran. This research based on Helsinki ethical standards that promote and ensure respect for all human subjects and protect their rights about understanding the Objectives of the study, methods, procedures, protect their privacy, confidentiality of their personal information and their right to withdraw at any stage of the research. After that, the subjects who voluntarily filled the informed consent form, were included in the study and asked to complete the relevant questionnaires. Finally, the result of the study, will be available to the public.

##### Competing interests

The authors declare no competing interests.

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