







DOI: 10.4274/jarem.galenos.2022.29591

J Acad Res Med 2022;12(2):49-54

A New Questionnaire for Aesthetic Gynecology: A Self-appraisal Questionnaire for Female Genital Cosmetic Procedure Demand (Q-FGCP)

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Cite this article as: Herkiloğlu D, Şahin S, Kabaca C, Önal C, Hazine B, Eroğlu M. A New Questionnaire for Aesthetic Gynecology: A Self-appraisal Questionnaire for Female Genital Cosmetic Procedure Demand (Q-FGCP). J Acad Res Med 2022;12(2):49-54

ABSTRACT

Objective: Today, demand for genital cosmetic procedures is increasing among women. However, despite the rapid increase in popularity of these procedures, research questionnaires to determine whether there is a real need for genital aesthetic procedures for patients are still limited. The objective of this study is to develop a self-assessment questionnaire for female genital cosmetic procedures, to use this questionnaire for genital appearance satisfaction within the general population and to evaluate the correlation between total item score and demand.

Methods: The questionnaire was conducted on 100 women who were thought to reflect the general population who presented to the Gynecology and Obstetrics clinics of our tertiary hospital. The questionnaire, which consisted of 11 items, was prepared to screen the women who needed cosmetic genital procedures. The first 10 items included factor analysis regarding aesthetic appearance of the genital organs (items 1-8) and its impact on sexual pleasure (items 9 and 10). Item 11 questioned how much participants needed a cosmetic gynecologic procedure.

Results: A strong need for genital aesthetic procedures was observed in 41% of the participants. When demographic variables were analyzed in terms of the desire for cosmetic procedures; only the first 10 questions were statistically significantly related to the total score. It was shown that a total score >19 was an important factor for women desiring to undergo genital cosmetic procedures (odds ratio: 3.9, confidence interval: 1.7-9.2, p=0.011).

Conclusion: This scoring system will be helpful in determining whether there is a real need for genital aesthetic procedures in the general population, and whether patients with an actual need for genital aesthetic procedures can be directed with this scoring since perception of women with regards to vaginal cosmetic procedures can differ from that of professionals.

Keywords: Aesthetic gynecology, aesthetic vaginal plastic surgery, questionnaire, genital cosmetics

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Presented in: This article was presented as an oral presentation at the XII. Turkish German Gynecologic Congress between April 27 and May 1, 2018.

***The language editor of this article was Kamuran Özlem Üzer.**

Received Date/Geliş Tarihi: 28.06.2021 **Accepted Date/Kabul Tarihi:** 04.04.2022



INTRODUCTION

Recently, female plastic/cosmetic genital procedures have increasingly become popular among women (1). There are a series of genital procedures such as vaginoplasty, labiaplasty, clitoral hood reduction, labia majora augmentation/reduction hymenoplasty and G-spot amplification (2). Among these procedures, the number of labiaplasty operations rose to 12,756 in 2018 from 8,341 in 2014 by an increase of 53% only over four years (3,4). However, despite this rapid dramatic increase in demand for these procedures, research questionnaires to determine whether there is an actual need for such aesthetic procedures are still limited. The primary goals of female genital aesthetics/vaginal cosmetic procedures are to improve patient satisfaction and quality of life (QoL) (5).

The satisfaction with the genital appearance of women is associated with overall genital appearance, sexual esteem, and sexual satisfaction (6). Women who are satisfied with their body image report to have confidence with their sexual life, more sexual activity, and orgasm more often (7). A positive body image has been strongly correlated with sexual functioning and satisfaction, while a negative body image has been associated with a need for physical attraction (7). A person's high respect to her/his body refers to satisfaction of this person from personal and interpersonal relations, and it can help in estimating sexual satisfaction (8). It is known that the perceived body image levels widely affect clinical scenarios, but this association is often overlooked or is not noticed by clinicians. Women increasingly think that the appearance of their genitalia is crucial, and more and more women are interested in their genital appearance possibly by the impact of media (9). It has been argued that women with low sexual satisfaction can benefit from existing treatment methods that target certain regions of their body (8).

The need for genital aesthetic procedures by the patient is determined by specially designed and approved questionnaires. These questionnaires provide the measurement of the need for a clinical intervention to determine health status and the image regarding QoL from patients' perspective (10). Such questionnaire applications will possibly improve evidence-based implementation, will be helpful for potential improvements in the development of surgical methods and will facilitate the decision-making process for both patients and surgeons and make it more effective (11,12).

The objective of this study was to develop a self-assessment questionnaire for those desiring female genital cosmetic procedures (Q-FGCP), to use this questionnaire for satisfaction with genital appearance within the general population and to evaluate the correlation between total item score and demand.

METHODS

The questionnaire was conducted on 100 women who were thought to reflect the general population who presented to the Gynecology and Obstetrics clinics of our tertiary hospital.

Informed consents were obtained before applying the questionnaires. An illustration of female genital organs with anatomic markings was given to the subjects who responded to the questionnaire. The questionnaire, which consisted of 11 items, was prepared to screen the women needing cosmetic genital procedures (Appendix). The first 10 items included factor analysis regarding aesthetic appearance of the genital organs (items 1-8) and the impact of aesthetics on sexual pleasure (items 9 and 10). Each question was scored between 0 and 3 points for the first 10 items. Zero point was defined as adequate satisfaction related to genital organ appearance and sexual satisfaction. One point was evaluated as normal related to genital organ appearance and sexual satisfaction whereas, 2 and 3 points were graded as dissatisfaction related to genital organ appearance and sexual satisfaction.

Item 11 questioned how much participants needed a cosmetic gynecologic procedure. Women were asked to evaluate the degree of their desire between 0 and 3 points. Zero point was accepted as no desire, while 3 points was graded as a very strong desire. The scores of 2 and 3 were assessed as a strong need for female cosmetic procedures. One point was assessed as a mild need.

The study was approved by the Zeynep Kamil Women and Children's Diseases Training and Research Hospital Ethics Committee (decision no: 33, date: 10.02.2017) in accordance with the requirements of the Declaration of Helsinki.

Statistical Analysis

Statistical analysis of the data obtained from the study was performed using SPSS version 25.0 (IBM, SPSS, Chicago, IL, USA) statistical package software. Descriptive data were expressed as frequency and percentage. The optimal cut-off value for desire score for vaginal aesthetic procedure was determined using receiving operating characteristics (ROC) analysis by calculating the areas under the ROC curve. Risk coefficient for categorical variable (such as a total desire score for aesthetic procedure ≤ 19 and >19 points) was evaluated using logistic regression analysis and expressed as "odds ratio (OR)". The correlation between continuous variables was tested using the Spearman's correlation analysis. The variable used in the correlation analysis was the score for desire for vaginal aesthetic procedure that was a continuous variable. The results were evaluated at 95% confidence interval (CI). A p-value below 0.05 was considered statistically significant.

RESULTS

Ages of the participants varied between 19 and 53 years. Educational level of the participants was high school degree or lower. While 55 (55%) of the participants had normal vaginal delivery, 12 (12%) had cesarean sections and 33 (33%) were nulliparous. Score analysis of the item 11 is shown in (Table 1). The correlation analysis was calculated between the total 10-item score and the score of the item 11. A strong need for genital/vaginal aesthetics procedures was observed in 41% of the participants.

When demographic variables were analyzed in terms of the desire for cosmetic procedures, a statistically significant correlation was found only with the total score of the first 10 questions ($p=0.007$) (Table 2). No statistically significant correlation was found with age, weight, height, body mass index, duration of marriage, gravida, parity and abortus. ROC analysis revealed that a total score >19 was an important factor for women desiring to undergo genital cosmetic procedures (OR: 3.9, CI: 1.7-9.2, $p=0.011$) (Table 3). This questionnaire seems to be and will be a valuable screening tool to determine the need for cosmetic gynecology procedures among women presenting to gynecology outpatient clinics (Figure 1).

DISCUSSION

Regarding genital morphology, it is possible for individuals who are not even interested in the appearance of sexual organs to create a "normal" genital concept. The term "normality" and establishment of the "normal" can play a role in the determination of how much satisfaction women derive from their own physical image. If the sources to which women refer include bias or if these sources are contrary to certain morphological features and "standards", the possibility of dissatisfaction with the appearance of sexual organs is higher among women, and this causes an increase in demand for genital aesthetic procedures. With the Q-FGCP questionnaire, we aimed to create awareness of genital appearance and demonstrated the real need of individuals for

surgery. We found with Q-FGCP that 41% of the participants had a strong desire for genital aesthetic procedures.

Recently, Yurteri-Kaplan et al. (13) evaluated the perception of women regarding their vulvas and whether this perception affected their desire for genital aesthetic procedures. Majority of the 354 participants argued that the appearance of their vulvas was important. Both 44-year-old women and those aged >44 years showed anatomy sources to their physicians for obtaining information about vulvar and labial appearance. However, significant portion of younger women used pornography as a source of information (13). Therefore, increased usability of pornographic material in media and the Internet influence the attitudes of women regarding the appearance of the genitalia and sensation of personal satisfaction. As a result of the mentioned study, Yurteri-Kaplan et al. (13) concluded that the age of a woman had no effect on the perception of a normal vulva, that majority of women perceived their vulvas as normal and were satisfied with their appearance, but older women were more interested in cosmetic vulvar surgery. We believe that the results of that study support our theory and thus, a weak-to-moderate negative correlation should be expected between physical appearance of women and demand for genital aesthetic procedures.

In another study from Netherlands (4), when demands of the women desiring cosmetic surgery were examined, the reason was the request to regain the appearance of the prior younger vulvar. During menopause, genital prolapsus and estrogen insufficiency can alter the appearance of the vulva. Therefore, the restoration of previous anatomy and appearance can be a source of demand for cosmetic vulvar surgery instead of a perception of a distorted vulvar.

Most women in the Western culture perceive a normal vulva

Table 1. Number of patients with the score analysis of the 11th item

11 th item score	Number of patients	
0	51	51.0%
1	8	8.0%
2	37	37.0%
3	4	4.0%
Need for genital cosmetic procedures	Number of patients	
Little or no need	59	59.0%
Strong need	41	41.0%

Table 2. The relationship between the desire for aesthetic procedures and demographic variability

Correlation analysis	r	p-value
Total score	0.267	0.007
Age	-0.061	0.548
Height	0.010	0.919
Weight	0.078	0.440
BMI	0.047	0.645
Duration of marriage	0.067	0.557
Gravidity	0.014	0.891
Parity	0.012	0.904
Abortus	-0.040	0.693

BMI: body mass index

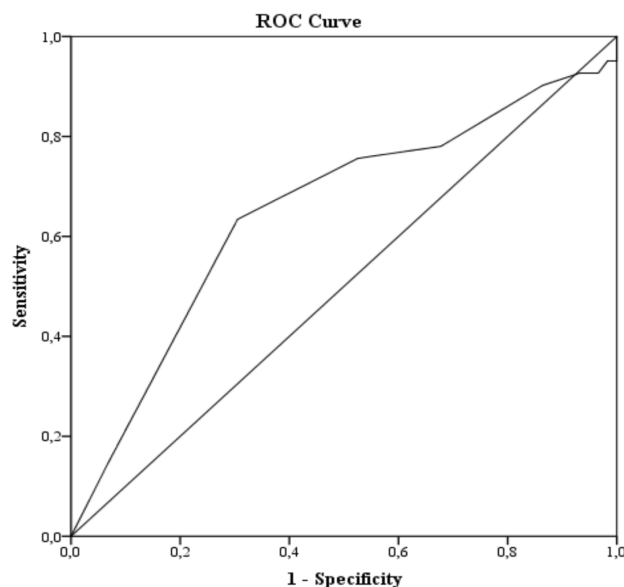


Figure 1. Vaginal aesthetic requirement
ROC: receiving operating characteristics

Table 3. Eleventh item score and vaginal aesthetic requirements

11 th item score (vaginal aesthetic requirement)		No need (0+1)	Strong desire (2+3)	AUC (SE)	Odds ratio (%95 CI)	p-value
Total score	≤19	41 (69.5)**	15 (36.6)	0.650 (0.058)	3.9 (1.7-9.2)	0.011
	>19	18 (30.5)	26 (63.4)*			

**specificity, *sensitivity, SE: standard error, AUC: area under the curve, CI: confidence interval

with the following features: symmetrical labia majora and labia minora with a clitoral hood (5). According to the cosmetic data from the United States of America, there may be regional differences in the perception of the vulva, and demand for these procedures can be higher among the regions (3). As the results of ethnic origin, regional, social needs and demands vary, this situation also applies to our country. Given these results, further studies are necessary to generalize these results to a wider population (14). The motivation of women for requesting cosmetic vulvar surgery should be investigated when they are admitted for these procedures. Since healthcare workers play a critical role in providing patients with medical education, based on the unrepresentative concept of women variation in morphology, women reporting concerns about their physical image should be informed through images or tools explaining the normal anatomy. Physicians should be aware that perceptions can be influenced by a distorted perception of what is normal or a demand for regaining the previous anatomy because of postnatal genital prolapsus or estrogen insufficiency. As physicians, we must train our patients about the variations in vulvar anatomy and potential risks of such procedures.

Recently, the rate of women requesting elective surgery is increasing, and these women seem to be significantly influenced by the media (15). Schick et al. (16) reported a shifting in the ideals of genital appearance over 50 years and concluded that this perception promoted an important physical image dissatisfaction among women. In a study by Laan et al. (17), effects and self-awareness of women graduated from college were investigated by showing them images of a natural vulva. The authors observed that exposure to the natural vulva images affected genital self-image positively (17). Hummel et al. (14) reported that cognitive-behavioral therapy was effective in sexual dysfunction and physical image-related procedures were effective among victims of breast cancer. Q-FGCP has the potential for using the questionnaire in such approaches before performing elective female cosmetic procedures. Physical body image, dyspareunia and sexual function can be affected by infertility, pregnancy, gestational diabetes mellitus, and endometriosis, which are among the most common causes of presentation to gynecology outpatient clinics (18,19). It would be an interesting experience to observe the changes in self-image and sexual functioning level during and after the treatment of these disorders in obstetrics and gynecology clinics.

Study Limitations

This questionnaire should have been applied to more people since there may be geographical, traditional and expected differences. Hence, that would have created a truly random sample of people answering our questions for the survey/questionnaire.

CONCLUSION

There is no uniform definition for "abnormal" labial size and genital appearance. Most sexual medicine specialists think that physical self-image is an important determinant in the demand for genital aesthetic procedures among women. Many specialists advise that these women should be referred to a consultation with a psychiatrist or a psychologist before being admitted for genital aesthetic procedures. A scoring system questionnaire can be used to determine whether individuals in general population need genital/vaginal aesthetic procedures. Since perception of "normal" appearance can differ among women, only patients with an actual need for these procedures can be directed to aesthetic procedures.

Ethics Committee Approval: The study was approved by the Zeynep Kamil Women and Children's Diseases Training and Research Hospital Ethics Committee (decision no: 33, date: 10.02.2017) in accordance with the requirements of the Declaration of Helsinki.

Informed Consent: Informed consents were obtained before applying the questionnaires.

Peer-review: Externally and internally peer-reviewed.

Author Contributions: Surgical and Medical Practices - D.H., B.H.; Concept - S.Ş., M.E.; Design - C.K.; Data Collection and/or Processing - B.H., C.Ö.; Analysis and/or Interpretation - C.K., S.Ş.; Literature Search - C.Ö., M.E.; Writing - D.H.

Conflict of Interest: The authors have no conflict of interest to declare.

Financial Disclosure: The authors declared that this study has received no financial support.

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Appendix. Questionnaire for Female Genital Cosmetic Procedures (Q-FGCP)**QUESTIONNAIRE FOR FEMALE GENITAL COSMETIC PROCEDURES (Q-FGCP)**

NAME/SURNAME: DATE:

AGE: SINGLE/MARRIED (DURATION):

FILE NO:

HEIGHT/WEIGHT:

GRAVIDA/PARITY/ABORTUS:

MODE OF DELIVERY (IF ANY):

PREVIOUS OPERATION(S):

COMORBIDITY:

EDUCATION/PROFESSION:**1- Do you like the appearance of your sexual organ?**

- 1) Very much
- 2) Normal
- 3) Little
- 4) Very little

2- Do you think that the size of your labia majora is adequate?

- 1) Very adequate
- 2) Normal
- 3) Large
- 4) Very large

3- Is the appearance of your both labia majora symmetrical?

- 1) Very symmetrical
- 2) Normal
- 3) Little symmetrical
- 4) Not symmetrical

4- Do you think that the size of your labia majora is adequate?

- 0) Very adequate
- 1) Normal
- 2) Large
- 3) Very large

5- Is the appearance of both labia minora symmetrical?

- 0) Very symmetrical
- 1) Normal
- 2) Little symmetrical
- 3) Not symmetrical

6- Is the size of the hairy area and fatty portion above the labia majora adequate for you?

- 1) Very adequate
- 2) Normal
- 3) Large
- 4) Very large

7- Is the size of the folding above the clitoris adequate for you?

- 1) Very adequate
- 2) Normal
- 3) Large
- 4) Very large

8- Do you like the darkness of your sexual area?

- 1) Very much
- 2) Normal
- 3) Not much
- 4) Don't like

9- Are you satisfied with the width of your vagina?

- 1) Very much
- 2) Normal
- 3) Wide
- 4) Too wide

10- Does adequate wetting occur during intercourse?

- 1) Very well
- 2) Normal
- 3) Not sufficient
- 4) Never sufficient

11- Are you considering rejuvenation and restoration procedures for your genitalia?

- 1) No
- 2) May be
- 3) Yes
- 4) Definitely Yes