

This is a provisional PDF only. Copyedited and fully formatted version will be made available soon.



P O L I S H G Y N E C O L O G Y

GINEKOLOGIA POLSKA

ORGAN POLSKIEGO TOWARZYSTWA GINEKOLOGICZNEGO
THE OFFICIAL JOURNAL OF THE POLISH GYNECOLOGICAL SOCIETY

ISSN: 0017-0011

e-ISSN: 2543-6767

The impact of labiaplasty on sexuality

Authors: Fatih Sahin, Veli Mihmanli

DOI: 10.5603/gpl.94975

Article type: Research paper

Submitted: 2023-04-03

Accepted: 2023-10-19

Published online: 2023-12-08

This article has been peer reviewed and published immediately upon acceptance.
It is an open access article, which means that it can be downloaded, printed, and distributed freely,
provided the work is properly cited.

Articles in "Ginekologia Polska" are listed in PubMed.

The impact of labiaplasty on sexuality

Fatih Sahin, Veli Mihmanli

*Obstetric and Gynecology Department, Prof. Dr. Cemil Tascioglu City Hospital, Istanbul,
Türkiye*

Corresponding author:

Fatih Sahin

*Prof. Dr. Cemil Tascioglu City Hospital, Obstetric and Gynecology Department, Istanbul,
Türkiye*

e-mail: fatih_sahin67@hotmail.com

ABSTRACT

Objectives: Hypertrophy of the labia minora and majora, or a prominent clitoral hood, are the primary reasons why women, particularly those seeking cosmetic gynecologists, may experience limitations in their social environments. At the same time, modern trends have made labiaplasty popular in recent years. This study investigated the effect of labiaplasty on women's genital self-perception and sexual functions.

Material and methods: The composite reduction labiaplasty technique was performed on 33 women aged 18–50 with Grades 2–4 labia minora hypertrophy. The exclusion criteria included menopausal and sexually inactive women, as well as women with vulvar disorders, a history of vaginal or labial surgery, other gynecological disorders, psychological disorders, and malignancies. The Female Sexual Function Index (FSFI) and Female Genital Self-Image Scale (FGSIS) questionnaires were administered to the study subjects before and three months after their surgery, during their follow-up appointments.

Results: The mean age of the subjects was 30.73 ± 3.94 years. Their mean parity was 1.12 ± 0.82 . Almost 70% of them had a university degree. Their most common reason for desiring labiaplasty was aesthetic concerns (48.48%). Their total FGSIS scores were 11.85 ± 1.35

preoperatively and 24.48 ± 1.66 postoperatively, and their total FSFI scores were 13.29 ± 1.68 preoperatively and 24.48 ± 1.66 postoperatively.

Conclusions: Labiaplasty surgery is a safe surgical procedure. It has a positive effect on women's genital self-image and sexual functions.

Keywords: labiaplasty; labia minora; genital self-image

INTRODUCTION

Women's identity and self-esteem can be intimately related to their self-perceived appearance of their genitalia, particularly when they begin a relationship. The modern trend of the shaving of pubic hair makes minor labial irregularities more conspicuous and can make women more self-conscious in this area [1]. The idea of beautifying the labia has become popular with the increased use of social media. According to the 2017 statistics of the American Society of Plastic Surgeons, demand for labiaplasty increased by 217.2% from 2012 to 2017. Although there is no aesthetic ideal for female genitalia, they should basically include symmetric labia that do not protrude beyond the labia majora when a woman is standing, and a clitoral hood without excessive folds [2].

Hypertrophy of the labia minora and majora or a prominent clitoral hood that causes limitations in women's social environments is primarily why they seek labiaplasty, aside from their desire to follow the trend.

Of the many surgical procedures for labiaplasty, two commonly used procedures are the trim method described by Hodgkinson (1984) and the wedge resection method pioneered by Alter [3]. Cosmetic gynecologists who are planning labiaplasty, after listening to the patient's expectations, should also consider reducing the clitoral hood, as it can cause the formation of a clitoral mound or an unfavorable appearance after the labiaplasty. The technique known as *composite reduction labiaplasty* guarantees a harmonious reduction and tightening of all sections of the labia minora, with particular attention to the clitoral hood area. Moreover, this method effectively corrects clitoral protrusion. Concerns about diminished sexual sensation or ability to experience sexual arousal after labiaplasty are unfounded. In fact, about 35% of patients reported an increase in their ability to experience sexual arousal after the procedure [4].

In this study, we aimed to measure changes in the sexual behavior and the genital self-image of women after labiaplasty.

MATERIAL AND METHODS

This single-center, prospective cross-sectional study was ethically approved by the Istanbul Prof. Dr. Cemil Taşcıoğlu City Hospital Clinical Research Ethics Committee on June 28, 2022 (approval number: 333). Written permission was also obtained from the institutions where the research was conducted, and the participants' informed consent was obtained. This study was conducted in accordance with the Principles of the Declaration of Helsinki.

This observational prospective study was conducted in a tertiary center between 2022 June–October. The subjects of this study were 33 sexually active women aged 18–50 years who were admitted to the İstanbul Prof. Dr. Cemil Tascioglu City Hospital gynecology unit with asymmetry and labia minora hypertrophy, specifically, Grades 2–4 labium minus hypertrophy, and all of whom desired labiaplasty. The subjects were classified as Grades I–IV according to Franco's classification based on the protrusion of their labia minora from their labia majora, as follows: Grade I, less than 2 cm; Grade II, 2–4 cm; Grade III, 4–6 cm; and Grade IV, more than 6 cm [5]. The exclusion criteria for the study included menopausal and sexually inactive women, as well as women with vulvar disorders, a history of vaginal or labial surgery, other gynecological disorders, psychological disorders, and malignancies. Composite reduction labiaplasty was performed on them as follows: excess tissue along the internal and external aspects of the labium minus was removed in an S-shaped line, after which the approximately 2- to 3-cm-long cranial pedicle flap, which was perceived as the caudal extension of the clitoral hood, was cut. Additionally, a crescent-shaped skin segment below the clitoris and a rectangular skin segment with a central point above the clitoral hood were excised. The wound margins were joined to achieve a balanced reduction and tightening of the labia minora, and to correct the protruding tip of the clitoris [6]. The appearance of the preoperative labial hypertrophy and the appearance after the composite reduction labiaplasty are shown in Figure 1a and 1b, respectively. The surgeries were performed by two surgeons who specialized in cosmetic gynecology. The subjects were discharged on the same day, with follow-up appointments scheduled at 7 days, 1 month, and 3, 6, and 12 months after the procedure. During these appointments, the Female Sexual Function Index (FSFI) test and the Female Genital Self-Image Scale (FGSIS) questionnaires were administered to the subjects.

These tests were validated and standardized to minimize bias. The Turkish version of the 19-question FSFI questionnaire, which is widely accepted in Turkey and abroad, was administered to each subject to assess various aspects of their sexual function (i.e., their sexual desire, arousal, lubrication, orgasmic function, general satisfaction, and sexual pain) [7]. Then, the culturally adapted and validated Turkish version of the FGSIS questionnaire was administered to assess each subject's feelings and beliefs about their genitals using seven questions with a four-point response scale (4: *strongly agree*, 3: *agree*, 2: *disagree*, and 1: *strongly disagree*). Thus, the response to each question was scored 7–28. All the scores were summed, and the higher the total scores were, the more positive the subject's genital self-image was [8].

To mitigate bias, all the eligible patients within the designated period were included in the study group; and as no patient withdrawal occurred, withdrawal bias was eliminated. The researchers remained blind to the test results, which were promptly forwarded to the statistics team.

Statistical analyses were performed using the Number Cruncher Statistical Systems (NCSS) 2007 Statistical Software (Salt Lake City, UT, USA) package program. The data were evaluated using descriptive statistical methods (i.e., the mean and the standard deviation); the distribution of the variables was examined using the Shapiro-Wilk normality test; the variables that showed a normal distribution before and after the operation were compared using the unpaired t test; and the relationships between the variables were determined using the Pearson correlation test. The results were evaluated at the significance level of $p < 0.05$.

RESULTS

The mean age of the subjects was 30.73 ± 3.94 . Their mean parity was 1.12 ± 0.82 . Almost 70% of them were university graduates. Their most common reason for undergoing labiaplasty was aesthetic concerns (48.48%). Their demographic data are summarized in Table 1.

The Cronbach's alpha value for the FGSIS was 0.928. For the FSFI, the Cronbach's alpha value for the sexual desire subscale was 0.803; for sexual arousal, 0.860; for lubrication, 0.858; for orgasm, 0.791; for satisfaction, 0.820; for pain or discomfort, 0.778; and for the total score, 0.896. All the Cronbach's alpha values were sufficient. The FGSIS and FSFI scores of the subjects after the labiaplasty were significantly higher than before the labiaplasty ($p = 0.0001$). The results are summarized in Table 2, Figure 2 and 3.

DISCUSSION

Labiaplasty is performed to resolve an anatomical variation that causes aesthetic and functional difficulties for many women. The idea that most women who desire labiaplasty have a psychological problem, such as depression, anxiety, or body dysmorphic disorder, has been debunked [9]. Additionally, pornography has been found to have no significant influence on a patient's decision to undergo labiaplasty. On the contrary, physical symptomatology is the dominant motivating factor [10].

With the increasing attention to labiaplasty in various media and online forums, demand for it is growing. Healthcare professionals are now debating how to manage such demand. Currently, the desire for labiaplasty is driven more by appearance than functionality. In a survey on 50 women's desire for labiaplasty, 50% of them attributed such desire to pain during sexual intercourse, and 40%, to discomfort in their inner labia when they were wearing a swimsuit [11]. In terms of appearance, however, almost all of them felt shy about the condition (as even health professionals today endorse the perceptions of the "perfect vagina" and the "perfect labia"), and more than half felt that it made them less attractive to their partners, limited their clothing choices, and negatively affected their self-confidence and capacity for intimacy [12]. Since these results show that the nature of patients' desire for labiaplasty is often psychological, counseling and education may help reduce the demand for labiaplasty [13]. However, it is not clear whether pre-surgery evaluation and counseling by a psychiatrist or a psychologist are effective in reducing low genital self-confidence. Moreover, evidence of the results of different labiaplasty techniques and patient satisfaction with them is insufficient because past studies on these covered only a small number of patients. Thus, more research is needed to understand why women turn to labiaplasty (e.g., due to the influence of aesthetic standards, media, environmental factors, and those who had undergone the operation) and whether conservative treatments (such as counseling) are effective. Additionally, a systematic evaluation of the indications, the surgical and patient-reported outcomes, and the long-term results of labiaplasty is necessary to assess its safety and effectiveness [14]. In addition, understanding the impact of cultural trends, especially how cultural influences affect labiaplasty motivation, is important. For example, a study in China found that most women desired labiaplasty for functional reasons, and only a few were influenced by social media and their sexual partners [15].

Furthermore, there is a lack of scales in the literature that allow for easy assessment of women's sexual and genital self-image regardless of differences in norms between societies. Such assessment is currently influenced by cultural taboos in terms of geography and by the evaluation of such topics on a global scale. For example, a multicenter study that focused only on invasive methods revealed that Polish women were less aware of similar female cosmetic genital surgeries than women in other countries, and thus, these operations were less commonly performed in Poland [16]. Changes in societal views on sexuality have been brought about by women's increased use of social media and the recent emphasis on visual aesthetics worldwide. Women's satisfaction with their genital appearance is closely related to their genital image. A study conducted with 461 women showed that the FGSIS questionnaire exhibited strong psychometric properties for assessing women's genital image [17].

Correction of the labia and the clitoral hood has always been of interest to women in terms of their sexual life and orgasm. Our study showed improved body image and sexual satisfaction of women after labiaplasty. The composite reduction labiaplasty technique also proved to be reliable and capable of preventing the formation of a clitoral mound after surgery, unlike the conventional labiaplasty technique. In a similar study, a positive effect was also observed on the sexual functions of women who had undergone labiaplasty [18]. Another study that surveyed partners of women who had labiaplasty regarding their perceptions of their partner's body and their sexual satisfaction after their partner's labiaplasty revealed that these partners' sexual satisfaction increased and their partners' sexual function improved [19]. In similar surgical procedures, such as clitoral hood reduction, excessive sensitivity or decreased sensitivity in the region was not observed [20].

The results of this study were limited by its small patient cohort and moderate follow-up duration. Moreover, all the subjects were heterosexual; lesbians were not evaluated. Further research is also required on women who had labiaplasty solely for aesthetic reasons and had no related sexual dysfunction.

CONCLUSIONS

Labiaplasty surgery is a safe surgical procedure. It has a positive effect on women's genital self-image and sexual function. In the coming years, the expected continually increasing

interest in labiaplasty and other genital cosmetic surgeries should enable us to make more informed comments on whether such interest is due to functional or environmental factors.

Article information and declarations

Funding

This research did not receive any grant from funding agencies in the public, commercial, and not-for-profit sectors.

Conflict of interest

All the authors declare no conflict of interest.

REFERENCES

1. Willis RN, Wong CS, Pai A. Labiaplasty Minora Reduction. StatPearls Publishing, Treasure Island 2022.
2. Alter GJ. Management of the mons pubis and labia majora in the massive weight loss patient. *Aesthet Surg J.* 2009; 29(5): 432–442, doi: [10.1016/j.asj.2009.08.015](https://doi.org/10.1016/j.asj.2009.08.015), indexed in Pubmed: [19825476](https://pubmed.ncbi.nlm.nih.gov/19825476/).
3. Alter GJ. Aesthetic labia minora and clitoral hood reduction using extended central wedge resection. *Plast Reconstr Surg.* 2008; 122(6): 1780–1789, doi: [10.1097/PRS.0b013e31818a9b25](https://doi.org/10.1097/PRS.0b013e31818a9b25), indexed in Pubmed: [19050531](https://pubmed.ncbi.nlm.nih.gov/19050531/).
4. Gress S. Composite reduction labiaplasty. *Aesthetic Plast Surg.* 2013; 37(4): 674–683, doi: [10.1007/s00266-013-0149-6](https://doi.org/10.1007/s00266-013-0149-6), indexed in Pubmed: [23728471](https://pubmed.ncbi.nlm.nih.gov/23728471/).
5. Franco T, Franco D. Hipertrofia de Ninfas. *J Brasileiro Ginecol.* 1993; 103(5): 163–168.
6. Zhou Yu, Li Q, Li S, et al. Trilobal methods for composite reduction labiaplasty. *Aesthetic Plast Surg.* 2022; 46(3): 1472–1480, doi: [10.1007/s00266-022-02841-7](https://doi.org/10.1007/s00266-022-02841-7), indexed in Pubmed: [35303122](https://pubmed.ncbi.nlm.nih.gov/35303122/).
7. Rosen R, Brown C, Heiman J, et al. The Female Sexual Function Index (FSFI): a multidimensional self-report instrument for the assessment of female sexual function. *J*

- Sex Marital Ther. 2000; 26(2): 191–208, doi: [10.1080/009262300278597](https://doi.org/10.1080/009262300278597), indexed in Pubmed: [10782451](https://pubmed.ncbi.nlm.nih.gov/10782451/).
8. Herbenick D, Reece M. Development and validation of the female genital self-image scale. *J Sex Med.* 2010; 7(5): 1822–1830, doi: [10.1111/j.1743-6109.2010.01728.x](https://doi.org/10.1111/j.1743-6109.2010.01728.x), indexed in Pubmed: [20233278](https://pubmed.ncbi.nlm.nih.gov/20233278/).
 9. Veale D, Eshkeviri E, Ellison N, et al. Psychological characteristics and motivation of women seeking labiaplasty. *Psychol Med.* 2014; 44(3): 555–566, doi: [10.1017/S0033291713001025](https://doi.org/10.1017/S0033291713001025), indexed in Pubmed: [23659496](https://pubmed.ncbi.nlm.nih.gov/23659496/).
 10. Sorice-Virk S, Li AY, Canales FL, et al. The role of pornography, physical symptoms, and appearance in labiaplasty interest. *Aesthet Surg J.* 2020; 40(8): 876–883, doi: [10.1093/asj/sjz254](https://doi.org/10.1093/asj/sjz254), indexed in Pubmed: [31556940](https://pubmed.ncbi.nlm.nih.gov/31556940/).
 11. Sorice SC, Li AY, Canales FL, et al. Why women request labiaplasty. *Plast Reconstr Surg.* 2017; 139(4): 856–863, doi: [10.1097/PRS.0000000000003181](https://doi.org/10.1097/PRS.0000000000003181), indexed in Pubmed: [28350660](https://pubmed.ncbi.nlm.nih.gov/28350660/).
 12. Cosmetic gynecology and the elusive quest for the "perfect" vagina. *Obstet Gynecol.* 2012; 119(6): 1083–1084, doi: [10.1097/AOG.0b013e31825833f5](https://doi.org/10.1097/AOG.0b013e31825833f5), indexed in Pubmed: [22617570](https://pubmed.ncbi.nlm.nih.gov/22617570/).
 13. Lowenstein L, Salonia A, Shechter A, et al. Physicians' attitude toward female genital plastic surgery: a multinational survey. *J Sex Med.* 2014; 11(1): 33–39, doi: [10.1111/jsm.12254](https://doi.org/10.1111/jsm.12254), indexed in Pubmed: [23981666](https://pubmed.ncbi.nlm.nih.gov/23981666/).
 14. Özer M, Mortimore I, Jansma EP, et al. Labiaplasty: motivation, techniques, and ethics. *Nat Rev Urol.* 2018; 15(3): 175–189, doi: [10.1038/nrurol.2018.1](https://doi.org/10.1038/nrurol.2018.1), indexed in Pubmed: [29405204](https://pubmed.ncbi.nlm.nih.gov/29405204/).
 15. Qiang S, Li FY, Zhou Yu, et al. Exploring the motivations for pursuing operative labiaplasty in Chinese patients. *J Obstet Gynaecol.* 2023; 43(1): 2204963, doi: [10.1080/01443615.2023.2204963](https://doi.org/10.1080/01443615.2023.2204963), indexed in Pubmed: [37140097](https://pubmed.ncbi.nlm.nih.gov/37140097/).

16. Paul M, Barwijuk M, Jurkiewicz A, et al. Invasive aesthetic gynecology trends in Poland between 2010 and 2016: A multicenter experience. *J Plast Reconstr Aesthet Surg*. 2018; 71(9): 1362–1380, doi: [10.1016/j.bjps.2018.05.039](https://doi.org/10.1016/j.bjps.2018.05.039), indexed in Pubmed: [29941362](https://pubmed.ncbi.nlm.nih.gov/29941362/).
17. Ellibes Kaya A, Yassa M, Dogan O, et al. The female genital self-image scale (FGSIS): cross-cultural adaptation and validation of psychometric properties within a turkish population. *Int Urogynecol J*. 2019; 30(1): 89–99, doi: [10.1007/s00192-018-3688-1](https://doi.org/10.1007/s00192-018-3688-1), indexed in Pubmed: [29961112](https://pubmed.ncbi.nlm.nih.gov/29961112/).
18. Turini T, Weck Roxo AC, Serra-Guimarães F, et al. The impact of labiaplasty on sexuality. *Plast Reconstr Surg*. 2018; 141(1): 87–92, doi: [10.1097/PRS.0000000000003921](https://doi.org/10.1097/PRS.0000000000003921), indexed in Pubmed: [29280868](https://pubmed.ncbi.nlm.nih.gov/29280868/).
19. Eftekhar T, Hajibabaei M, Veisi F, et al. Body image, sexual function, and sexual satisfaction among couples before and after gynecologic cosmetic surgery. *J Family Reprod Health*. 2021; 15(4): 252–257, doi: [10.18502/jfrh.v15i4.7892](https://doi.org/10.18502/jfrh.v15i4.7892), indexed in Pubmed: [35340795](https://pubmed.ncbi.nlm.nih.gov/35340795/).
20. Placik OJ, Arkins JP. A prospective evaluation of female external genitalia sensitivity to pressure following labia minora reduction and clitoral hood reduction. *Plast Reconstr Surg*. 2015; 136(4): 442e–452e, doi: [10.1097/PRS.0000000000001573](https://doi.org/10.1097/PRS.0000000000001573), indexed in Pubmed: [26397263](https://pubmed.ncbi.nlm.nih.gov/26397263/).

Table 1. Demographic data of the subjects

		Mean ± SD	
Age		30.73 ± 3.94	
Parity		1.12 ± 0.82	
		1 (1–2)	
		n	%
Educational attainment	Elementary school	2	6.06
	High school	8	24.24

	University	23	69.70
Complaint	Aesthetic concerns	16	48.48
	Dyspareunia	3	9.09
	Emotional discomfort	4	12.12
	Reduced sexual pleasure	4	12.12
	Poor hygiene	6	18.18

SD — standard deviation

Table 2. Preoperative and postoperative FGSIS and FSFI total scores

		Before Surgery	After Surgery	p*
FGSIS total score		11.85 ± 1.35	24.48 ± 1.66	0.0001
FSFI	Desire	2.64 ± 0.45	4.62 ± 0.68	0.0001
	Arousal	2.27 ± 0.43	3.85 ± 0.93	0.0001
	Lubrication	2.32 ± 0.46	3.65 ± 0.82	0.0001
	Orgasm	2.29 ± 0.44	3.76 ± 0.96	0.0001
	Satisfaction	2.13 ± 0.65	3.33 ± 1.12	0.0001
	Pain	1.64 ± 0.72	0.87 ± 0.64	0.0001
	FSFI total score	13.29 ± 1.68	20.08 ± 3.02	0.0001

*Unpaired t test

FSFI — Female Sexual Function Index; FGSIS — Female Genital Self-Image Scale



A



B

Figure 1. (a) Preoperative Grade IV labia minora of a 25-year-old nulliparous subject and (b) the same area after the composite reduction labiaplasty. The subject’s written consent to the use of these photographs was obtained

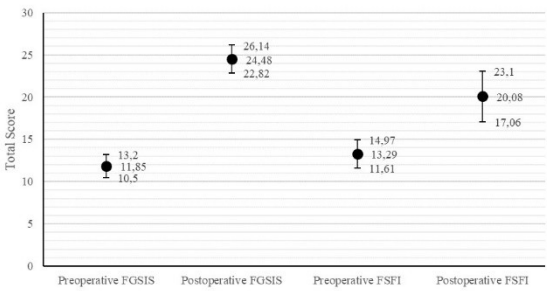


Figure 2. Preoperative-postoperative FGSIS and FSFI total scores

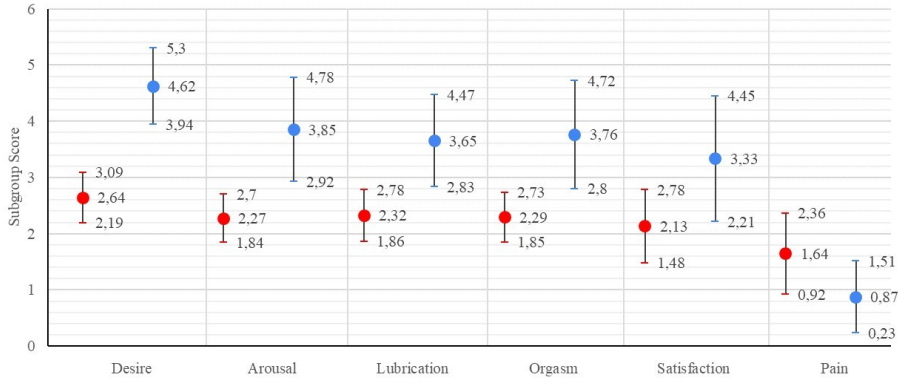


Figure 3. FSFI subgroups before and after the operation

●: Preoperative Score ●: Postoperative Score