

Does Educational Level Affect Vulvar Perception?

 Aşkı ELLİBEŞ KAYA,^a
 Ozan DOĞAN^b

^aDepartment of Obstetrics and Gynecology,
Düzce University Health Practice and
Research Hospital,
Düzce

^bDepartment of Obstetrics and Gynecology,
Health Sciences University
Şişli Hamidiye Etfal Training and
Research Hospital,
İstanbul

Received: 06.06.2018

Received in revised form: 10.09.2018

Accepted: 10.09.2018

Available online: 25.10.2018

Correspondence:

Ozan DOĞAN

Health Sciences University

Şişli Hamidiye Etfal Training and

Research Hospital,

Department of Obstetrics and Gynecology,

İstanbul, TURKEY

ozandogan02@hotmail.com

ABSTRACT Objective: The purpose of this study was to reveal whether educational status level affects vulvar perception. **Material and Methods:** The participants were separated into three groups according to their educational status, with the first Group consisting of participants who were primary school graduates, the second Group those who were middle school/high school graduates, and the third Group included those who had studied at the post-graduate or doctoral level. A total of 17 questions about genital perception were posed using a questionnaire. **Results:** Among the groups, no differences were observed in terms of satisfaction with the genital area ($p=0.293$). The satisfaction rates and aesthetic desires of the individuals who had the highest level and the lowest level of education were similar; however, it was observed that the middle group found the image of their genital area less normal ($p=0.026$), and it was determined that more of the participants in this group planned to have aesthetic surgery than those in the other groups ($p\leq 0.001$). In Group 2, of the participants, 23.6% stated that they would like to undergo aesthetic surgery if they could financially afford it, while this rate was 6.6% and 8.9% in Groups 1 and 3, respectively ($p=0.007$). **Conclusion:** Vulvar perception is higher in both low and high levels of awareness. The participants having a middle-level education might have been using the media in a wrong way and thus had difficulties in obtaining accurate and reliable information.

Keywords: Appearance; cosmetic surgery; education; vulva; vulvar perception; genital perception; media exposure

Sexual health is one of the most important indicators of an individual's quality of life. The term "being healthy" requires that the individual is healthy in terms of body, spirit, and mind. It is known that psychological factors play an important role in the emergence of sexual dysfunction in women and thus affect their quality of life. The psychological factors that affect sexual life include body image, self-confidence, the quality of the relationship with the partner, and the level of emotional stress, anxiety, depression and other psychological disorders.¹ It is known that a negative body image diminishes sexual experiences and increases the avoidance of sexual relations.^{2,3} The near-perfect images of women, including genital images, in the media, cause them to be anxious about their own images.^{4,5} As a result of this, the perception of being perfect in terms of physical appearance has snowballed like an avalanche, as seen in cases in gynecology practices as well as other medical branches.⁶

Beauty is relative and the "ideal vulva" differs among societies and cultures. Then, what is a normal or ideal vulva?⁷ Although the answer to this question is still under discussion, the true answer lies in what an individual expects and perceives. It is also known that some women even with normal gen-

ital dimensions want to undergo surgical procedures. The reasons for genital perception disorders aside from functional concerns have well been investigated in the literature.⁸ It has been reported that although age does not affect normal vulvar perception, with an advancing age, the interest in vulvar surgery increases. Moreover, as media exposure has increased, vulvar dissatisfaction has also increased with an increased interest in surgery.^{4,9}

Another factor affecting genital perception might be the level of one's education. Educational level affects human relations, working conditions, income levels, methods of acquiring information, and stress levels. The 2016 data of the Turkish Statistical Institute indicated that poverty rates decrease as the educational status increases. In this respect, it was reported that 26.2% of those who were illiterate and 1.7% of those who graduated from higher educational institutions were poor.¹⁰ The genital perception reduces with the increasing stress in women who struggle with financial hardships, and in contrast, it might grow otherwise.

As the educational level and financial status increase, it becomes easier to read, investigate, and learn the ways of obtaining information. It was shown in previous studies that vulvar perception may be changed by presenting visual materials to women.¹¹ The aim was to determine whether the educational status of women affects their vulvar perception and which methods they use to get information about vulva.

MATERIAL AND METHODS

The study included 238 participants, consisting of the cleaning staff, secretaries, nurses, doctors, academic staff, and their relatives working at a university hospital between December 2017 and March 2018. The participants were asked 17 questions related to demographic characteristics and genital perception.

SAMPLE

Women who were 18 years of age or above, healthy, sexually active/inactive and who were hospital employees or friends/relatives of hospital

employees were included in the study. The participants were all literate and volunteered to take part in the study. No maximum age limit was defined in the study. Those having sexual dysfunction, chronic vaginitis, chronic pelvic pain, endometriosis, pelvic organ prolapse for which surgery was recommended, a history of pelvic surgery or complaints of palpable swelling, who were illiterate, whose mother tongue was not Turkish and pregnant women were excluded from the study. The healthcare personnel engaged in vaginal examinations might have vulvar variety and have different normal vulvar perception, thus those working in gynecology and obstetrics outpatient and surgery units were excluded from the study.

The participants were separated into three groups according to their educational status, with the first Group consisting of literate primary school graduates (n=76), the second Group of middle school/high school graduates (n=72), and the third Group of women who were university graduates or who had post-graduate or doctorate degrees (n=90). This grouping was made considering the hypothesis that being a university graduate would change awareness. In order to preserve their privacy, the questions were asked on an individual basis by an experienced gynecologist in a room where they were alone.

QUESTIONNAIRE

The participants were asked questions about their age, relationship status, number of partners, sexual orientation, parity, type of delivery, history of episiotomy, educational status, income level, smoking and alcohol use, and genital perception. Besides this, other questions about grooming habits and frequency, if they shape ever pubic hairs, how often they inspect the genital area, genital discomfort during sports or sex, genital knowledge, methods of obtaining genital information, genital or another aesthetic history, which operation they would like to undergo if they would have an opportunity for genital surgery, preference of dark or light-medium during sexual intercourse, and methods of acquiring sexual information, were also

asked. Some questions enquired whether their vulvar images were normal or not, whether they were satisfied with their vulvar images or not, whether their spouses were satisfied with their vulvar images or not, and whether or not they would have a better sex life if they had genital surgery. The answers were received as “*I agree*”, “*I am undecided*”, and “*I disagree*”.

The questionnaire was a modified version of the one administered by Yurteri-Kaplan et al.⁴

STATISTICS

In order to ensure that participants would be able to understand the questionnaire, a preliminary trial was carried out with a group of 30 subjects and the results were used for a power analysis. It was determined that 4.8% of the participants who were university graduates or having higher degrees agreed with the idea of having genital surgery. This rate increased to 20.2% in the participants who were having a high school educational level or lower. Therefore, the required minimum sampling range was computed as 72 individuals in each group in order to achieve a statistical significance with the greatest difference of about 0.15 units between groups at 80% power and 5% type I error probability. The participants included in the preliminary questionnaire were not included in the final analysis.

One way ANOVA was used to compare the groups in terms of the continuous variables and Tukey’s HSD post-hoc test was used to determine the sub-groups that showed significant differences. The relations between the categorical variables were examined with Pearson’s chi-square or Fisher’s exact test depending on the expected value rule. All statistical analyses were made using the SPSS v.22 package program, with a significance level taken as <0.05.

ETHICAL APPROVAL

Informed consent forms were obtained from all participants in the trial. The study was approved by the hospital ethics committee and carried out in accordance with the Helsinki Declaration.

RESULTS

The demographic data of the participants are given in (Table 1). The mean age of the participants (mean \pm SD) was 34.8 \pm 8.3 years and the mean BMI (mean \pm SD) was 24.6 \pm 4.4. In addition, 15.5% of the participants were single and/or had partners, 83.6% were married, 0.8% were divorced and 6.3% had more than one partner. In terms of sexual orientation, 96.6% of the participants were heterosexual, 2.5% were bisexual and 0.8% were lesbian. Regarding the menopausal status, 94.5% were in the premenopausal period and 5.5% were postmenopausal. When the type of delivery was considered, 63.5% had vaginal deliveries, 32.5% caesarian, and 4% both types. An episiotomy was performed in 59.5% of the participants who gave birth. Of them, 64.7% were smokers and 35.2% were non-smokers.

TABLE 1: Demographics.

n=238 mean \pm SD, median, min-max	
Age (mean \pm SD)	34.8 \pm 8.3
BMI (mean \pm SD)	24.6 \pm 4.4
Parity (median, min-max)	2, 0-9
Marital status (n, %)	
Single/Partner	37, 15.5%
Married	199, 83.6%
Divorced	2, 0.8%
Partner count (n, %)	
One	223, 93.7%
More than one	15, 6.3%
Sexual orientation (n, %)	
Heterosexual	230, 96.6%
Bisexual	6, 2.5%
Lesbian	2, 0.8%
Menopausal status (n, %)	
Premenopausal	225, 94.5%
Postmenopausal	13, 5.5%
Delivery method (n, %)	
Vaginal	127, 63.5%
Section	65, 32.5%
Vaginal + section	8, 4%
Smoking (n, %)	
No	154, 64.7%
Yes	84, 35.2%

When the participants were separated into two groups on the basis of age as below and above 40 years, the analysis of the questions on genital perception showed no difference between the age variable and the answers given to the question “*Is the image of your vulva normal?*” and “*Are you satisfied with your vulva?*” were similar in both the age groups ($p=0.06, 0.08$). Moreover, there were no differences in terms of the desire to have genital aesthetic surgery among the groups ($p=0.959$).

The results of the answers to the question about vulvar perception are given in Table 2. An examination of the responses about the frequency of genital inspection indicated that 33% of the participants did not make any inspections, while 42% of them did so at least once every month. Half of the participants who never made genital inspections were found in Group 1. It was also determined that 40% of those who made one inspection per month were in Group 3. A significant difference was determined among the groups in terms of frequency of genital inspection Group 1 vs. Group 2 or Group 1 vs. Group 1+2 ($p<0.001$).

No difference was found among the groups in terms of the satisfaction with their genital area ($p=0.293$). Regarding the question, if their vulvar image was normal or not, the middle school/high school educational level group indicated their genital images to be less normal ($p=0.026$). Group 2 participants were also found to consider cosmetic vulvar surgery more often than the other groups ($p\leq 0.001$). If there were no financial restraints, 23.6% of the participants in Group 2 stated that they would like to have genital aesthetic surgery. This rate was 6.6% and 8.9% in Groups 1 and 2, respectively ($p=0.007$). Furthermore, it was determined that the participants in Group 2 thought that the frequency of intercourse would increase after surgery; however, this result was not statistically significant ($p=0.475$). No differences were noted among the groups in terms of vulvar perception and having or not an episiotomy ($p=0.06, p=0.104$).

Although no difference was seen among the groups in terms of grooming frequency ($p=0.07$), in

Group 3, more participants used laser hair removal method ($p<0.001$) (Table 2).

It was observed that 17% of the participants marked a choice indicating the operation they would prefer and the surgery types they wanted were labiaplasty (7.2%), vaginal contraction (3%), clitoral hoodoplasty (4%), vaginal whitening (3.4%), and all surgery types (1.7%).

No differences were found among the groups in terms of the answers given to the question “*Would you be more satisfied if your genital image were in the form you desired?*” ($p=0.241$). The answers to the question “*Would the frequency of your intercourse increase if you have surgery?*” were similar ($p=0.475$). No differences were determined among the groups in terms of the answer given to the question “*If your genital image was in the form you wanted, would your partner be more satisfied?*” and to the question “*Is your partner satisfied with your genital image?*” ($p=0.123, p=0.120$; respectively).

The participants were asked about the methods they have used to acquire information about the genital area. In Group 3, it was the Internet and the media. Obtaining information from a friend/partner was more common in Group 1 ($p<0.001$). The use of smartphones was clearly less in Group 1 when compared with Groups 2 and 3 ($p<0.001$) and the Internet access via smartphone was found to be significantly less in Group 1 compared with the other groups ($p<0.001$).

A comparison of income levels in the groups indicated that, in Group 3, the income level was 10,000 TL or more in 22% cases, whereas this rate was 0 in Group 1. It was found that 76.3% of the participants in Group 1 had an income of 2500 TL or less, while this rate was 8.8% in Group 3. The difference between the groups in terms of income levels was statistically significant ($p<0.001$).

No differences were determined among the groups according to the functional factors such as difficulty during intercourse and discomfort while participating in sports ($p=0.115$). The rate of those who preferred intercourse in the dark

TABLE 2: Questions on perception of vulvar appearance.

	Group 1 (n=76)	Group 2 (n=72)	Group 3 (n=90)	p
Frequency of inspecting your vulva				
<i>Never (n=80, 33.6%)</i>	38 (50%)	27 (37.5%)	15 (16.7%)	<0.001
<i>Once a year (n=24, 10.1%)</i>	8 (10.5%)	11 (15.2%)	5 (5.5%)	
<i>Once /a few times a year (n=36, 15.1%)</i>	6 (7.9%)	6 (8.3%)	24 (26.7%)	
<i>Once a month (n=59, 24.8%)</i>	8 (10.5%)	14 (19.4%)	37 (41.1%)	
<i>Once a week (n = 20, 8.4%)</i>	8 (10.5%)	6 (8.3%)	6 (6.7%)	
<i>A few times a week (n =19, 8%)</i>	8 (10.5%)	8 (11.1%)	3 (3.3%)	
Frequency of Grooming				
<i>Never (n = 4, 1.7%)</i>	2 (2.6%)	2 (2.8%)	0	0.070
<i>Once a year (n =10, 4.2%)</i>	2 (2.6%)	4 (5.6%)	4 (4.4%)	
<i>Once/ a few times in a year (n = 18, 7.6%)</i>	4 (5.3%)	2 (2.8%)	12 (13.3%)	
<i>Once a month (n = 82, 34.2%)</i>	28 (36.8%)	30 (41.7%)	24 (26.7%)	
<i>A few times a month (n = 44, 18.5%)</i>	10 (13.2%)	12 (16.7%)	22 (24.4%)	
<i>Once a week (n =54, 22.7%)</i>	20 (26.3%)	12 (16.7%)	2 (24.4%)	
<i>A few times a week (n = 26, 10.9%)</i>	10 (13.2%)	10 (13.9%)	6 (6.7%)	
Method of Grooming				
<i>Wax (n = 72, 30.3%)</i>	26 (34.2%)	24 (33.3%)	22 (24.4%)	<0.001
<i>Razor (n = 62, 26.1%)</i>	24 (31.6%)	22 (30.6%)	16 (17.8%)	
<i>Laser hair reduction (n=50, 21%)</i>	4 (5.3%)	10 (13.9%)	36 (40%)	
<i>Depilatory cream (n=8, 3.4%)</i>	2 (2.6%)	2 (2.8%)	4 (4.4%)	
<i>More than one (n =10, 4.2%)</i>	4 (5.3%)	0	6 (6.7%)	
<i>Other (n = 36, 15.1%)</i>	16 (21.1%)	14 (19.4%)	6 (6.7%)	
Level of Grooming				
<i>Removal of all hair</i>	100%	94.4%	95.8%	0.150
<i>Removal of a part of the hair</i>	0%	5.6%	4.4%	
Vulva Appears "Normal"				
<i>Agree (n =198, 83.2%)</i>	68 (89.5%)	54 (75%)	76 (84.4%)	0.020
<i>Not-sure (n = 25, 10.5%)</i>	4 (5.3%)	9 (12.5%)	12 (13.3%)	
<i>Disagree (n =15, 6.3%)</i>	4 (5.3%)	9 (12.5%)	2 (2.2%)	
Satisfaction with the Appearance of Vulva				
<i>Agree (n =206, 86.6%)</i>	70 (92.1%)	60 (83.3%)	76 (84.4%)	0.293
<i>Not-sure (n =14, 5.9%)</i>	2 (2.6%)	4 (5.6%)	8 (8.9%)	
<i>Disagree (n =18, 7.6%)</i>	4 (5.3%)	8 (11.1%)	6 (6.7%)	
Consider cosmetic vulvar surgery				
<i>Agree (n =28, 11.8%)</i>	4 (5.3%)	16 (22.2%)	8 (8.9%)	<0.001
<i>Not-sure (n = 8, 3.4%)</i>	0	2 (2.8%)	6 (6.7%)	
<i>Disagree (n = 202, 84.9%)</i>	72 (94.7%)	54 (75%)	76 (84.4%)	
Type of Vulvar Surgery considered				
<i>Labiaplasty (n =17, 7.2%)</i>	1 (1.4%)	10 (13.9%)	6 (6.7%)	0.293
<i>Clitoral Hood Reduction (n=4, 1.7%)</i>	0	0	4 (4.4%)	
<i>Vaginoplasty/Tightening (n =7, 3%)</i>	1 (1.4%)	2 (2.8%)	4 (4.4%)	
<i>Vagina bleaching (n =8, 3.4%)</i>	0	4 (5.6%)	4 (4.4%)	
<i>All of them (n =4, 1.7%)</i>	2 (2.7%)	0	2 (2.2%)	
Consider Cosmetic Surgery -regardless of cost-				
<i>Agree (n =30, 12.6%)</i>	5 (6.6%)	17 (23.6%)	8 (8.9%)	0.007
<i>Not-sure (n =14, 5.9%)</i>	3 (3.9%)	3 (4.2%)	8 (8.9%)	
<i>Disagree (n =194, 81.5%)</i>	68 (89.5%)	52 (72.2%)	74 (82.2%)	devami...→

TABLO 2: devamı...

Group 1 (n=76)	Group 2 (n=72)	Group 3 (n=90)	p	
Would it increase the frequency of sexual intercourse if you had surgery?				
Agree (n=22, 9.2%)	4 (5.3%)	10 (13.9%)	8 (8.9%)	0.475
Not-sure (n=24, 10.1%)	8 (10.5%)	6 (8.3%)	10 (11.1%)	
Disagree (n=192, 80.7%)	64 (84.2%)	56 (77.8%)	72 (80%)	
Functional discomfort				
Agree (n =34, 14.3%)	16 (21.1%)	8 (11.1%)	10 (11.1%)	0.115
Not-sure (n =12, 5%)	4 (5.3%)	6 (8.3%)	2 (2.2%)	
Disagree (n =192, 80.7%)	56 (73.7%)	58 (80.6%)	78 (86.7%)	
Sex in a dark room				
Agree (n =55, 23.1%)	24 (31.6%)	23 (31.9%)	8 (8.9%)	<0.001
Not-sure (n =34, 14.3%)	6 (7.9%)	4 (5.6%)	24 (26.7%)	
Disagree (n =149, 62.6%)	46 (60.5%)	45 (62.5%)	58 (64.4%)	
Sources of information used to learning about vulvar appearance				
Internet/TV; media (n=156, 65.5%)	34 (44.8%)	50 (69.4%)	72 (80%)	<0.001
Books (n=11, 4.6%)	4 (5.3%)	2 (2.8%)	5 (5.6%)	
Pornographic magazines (n= 4, 1.7%)	0	2 (2.8%)	2 (2.2%)	
Doctor (n=11, 4.6%)	2 (2.6%)	4 (5.6%)	5 (5.6%)	
My partner/ friends (n=56, 23.5%)	36 (47.4%)	14 (19.4%)	6 (6.7%)	
Partner satisfaction with the appearance of vulva				
Agree (n =192, 80.7%)	68 (89.5%)	54 (75%)	70 (77.8%)	0.123
Not-sure (n =24, 10.1%)	6 (7.9%)	8 (11.1%)	10 (11.1%)	
Disagree (n =22, 9.2%)	2 (2.6%)	10 (13.9%)	10 (11.1%)	
Would it increase your partner's satisfaction if you had surgery?				
Agree (n =30, 12.6%)	4 (5.3%)	14 (19.4%)	12 (13.3%)	0.120
Not-sure (n =30, 12.6%)	12 (15.8%)	8 (11.1%)	10 (11.1%)	
Disagree (n =178, 74.8%)	60 (78.9%)	50 (69.4%)	68 (75.6%)	
Smartphone usage				
Yes (n =207, 87)	56 (73.7%)	69 (95.8%)	82 (91.1%)	<0.001
No (n =31, 13)	20 (26.3%)	3 (4.2%)	8 (8.9%)	
Internet usage with smartphone				
Yes (n =192, 80.7%)	47 (61.8%)	66 (91.7%)	79 (87.8%)	<0.001
No (n =46, 19.3%)	29 (38.2%)	6 (8.3%)	11 (12.2%)	

was lower in Group 3 than in the other groups ($p < 0.001$).

DISCUSSION

The significance of this study lies in the fact that this topic had never been investigated in Turkey before and the study population included participants from every income level, age, and educational status. The purpose of choosing the participants from the different demographic characteristics of working women was that the factors that could affect perception like self-confidence

and time allocated for oneself are equal for all participants. The participants working in gynecology, surgery, and similar departments that might affect their genital perception were not included in the study. Thus, the participants having any other source of acquiring information on the vulvar perception that could cause a bias were excluded. The intention to exclude the effect of economic status, which is a complicating factor for aesthetic surgery, was met by using the question "If you had the financial opportunity, would you think of surgery?" The occupation, education level and income status

of the partners were not questioned. This might have been a limitation of the present study.

Although there are many scales for evaluating the genital perception, a questionnaire validated in Turkish was not available when we planned to execute the study. Recently, a genital perception questionnaire has been validated in Turkish.¹² The Female Genital Self-Image Scale (FGSIS) is a 7-item questionnaire, easy to apply, and reflects female genital perceptions.¹³ This scale is planned to be used in future studies. Another limitation of the study might have been the use of a questionnaire that was not validated for its reliability.

The questionnaire was a modified version based on the questionnaires administered by Yurteri-Kaplan et al. As talking about sexuality is taboo in this country, some questions were modified into a form appropriate to the Turkish culture and a question pool was created by adding a few more questions.⁴ This questionnaire was not developed for the purpose of using it in future studies. The present study focused on the perception of genital functional satisfaction and satisfaction with the outer appearance. For this reason, specific questionnaires may be developed for the participants who think of having genital aesthetic surgery only for a better appearance. Since there were no validated questionnaires that could be used for these purposes, creating a comprehensive questionnaire and establishing its validity is a topic for further studies.

It was observed in studies conducted on the vulvar perception that the age of women does not affect their normal vulvar perception.^{4,5} It was determined that the interest in genital aesthetic surgery increases with an increasing age.⁴ In this study, no relation was detected between age and vulvar perception nor were any differences found between age and the desire for aesthetic surgery. Parity does not affect genital perception.¹⁴ In this study, no relations were found between genital perception and parity or episiotomy.

In a previous study, the questionnaire population was chosen from hospital employees who were not healthcare staff and high vulvar satisfaction and

perceptions were observed. This situation was associated with the lower genital inspection levels of the participants, and as a result, the awareness levels were low. It was determined that the women who were exposed to the media evaluated their vulvar images as more normal and were more satisfied with the appearance of their vulva; however, despite the high satisfaction levels, it was also determined that they more frequently considered genital surgery, which is a contradiction. This contradiction was associated with the use of the media, increased liberal thinking and the proliferation of cosmetic enhancement due to the influence of the media.⁹ In this study, the group with the highest educational status was exposed to the media at the highest level, and the difference was detected between this group and Group 1, which had the lowest exposure levels to the media in terms of vulvar perception. No differences were detected among the groups in terms of vulvar satisfaction. The satisfaction rates and aesthetic desires of the individuals who had the highest and the lowest educational levels were similar. This finding was interpreted to determine whether that vulvar perception increases with an increasing level of awareness. It is interesting that the participants with middle-level educational status found their vulvar images to be normal at a low rate and considered aesthetic surgery more frequently. Approximately 20% of the participants in this group obtained information from partners and friends. It is possible that the 70% participants in this group having an access to media might have not used it in an appropriate manner and had difficulty in obtaining accurate information. Perception management may be carried out in a correct manner by obtaining information from reliable sources by using the media in the right way and by obtaining accurate images.¹¹

It was determined in the abovementioned study that 23.5% of the participants in the group that had middle-level educational status never made genital inspections and 36% made more than once per month.⁹ In another study, the rate of the participants who stated that they never made any inspections was below 10%.⁴ In the present study,

on the other hand, 33% of the participants stated that they never carried out any inspections and 42% of them stated they did it more than once in a month. The fact that the rate of those never making any inspections was higher in this study compared to those reported by others might be associated with the structure of the society. The frequency of inspections increases as the educational status increases. The rate of inspection might increase due to grooming habits. The rate of not grooming was nearly zero in the present study. The majority of the grooming methods require that a person does it herself and thus sees the genital area. It is possible that the self-inspection rates might have increased due to this reason.

In a previous study, an answer was sought for the question “*What is a normal vulva?*”, and it was reported that the normal concept for genital dimensions fell within a very wide range.¹⁵ It is possible that the images to which an individual is exposed by the media are mostly in the form of “*the ideal vulva*” and that the individual might think that her own vulva is abnormal.⁷ It is possible that the woman whose vulvar perception is impaired does not like herself, and might want to have surgery. This explains why even healthy women desire labiaplasty.¹⁶ It is known that low genital self-image scores result in an increased desire for genital surgery.¹⁷ However, in this study, no relation was detected between media exposure and direct genital perception. Using the media in an appropriate manner and education were considered to have effects in this area.

In a previous study, questions were posed to participants to determine their perceptions of labia minora (LM) and it was determined that nearly all of the participants had sufficient information on LM reduction. The participants stated that they learned about this via the media and 7% of them stated that they considered having LM reduction. This finding was associated with the influence of the media.⁵ In the same study, it was reported that the satisfaction with the LM was greater in the group who were all university graduates, and the intention of having LM reduction was low. Based on these findings, it is possible to conclude that as

the educational status increases; an individual uses the information obtained from the media in an appropriate manner and tends to obtain “genuine” information. It is possible that women with high educational status are not deceived by the false impression created through the media. The rates of considering surgery were similar to those reported in the literature. The group that was exposed to the media at the highest level was the group in which the participants were having a university or higher degree, and the desire for aesthetic surgery was lower compared with those who were having an educational status of a high school or lower.

As for the methods used for acquiring genital knowledge, nearly one-fourth of the participants said that they got genital information from their partners, which is a surprising observation. It was observed that nearly half of these women were the ones with low educational status. In a society where the Internet access rate is very high, informative media were not being used in a proper manner. Obtaining information from the partner instead of using the endless information source at hand was proportional with the educational status. Smartphones are ubiquitous and the ability to access the Internet with the help of smartphones is high. This situation was associated with the fact that the study population was of working women and the requirements of the present age. Although the study population had media access with smartphones at hand, this method of acquiring knowledge on sexuality was used less, when compared with other studies.¹⁸ This might be attributed to the fact that the Turkish society is of a closed nature and sexuality is still a taboo subject.

In a previous study conducted in America, the incidence of grooming was 83.8% and the incidence of never grooming was 16.2%. It was reported that a high educational level and being Caucasian increased the percentage of grooming the genital area. Cultural differences largely influence grooming habits.¹⁹ Grooming is considered as a hygiene habit in Turkish society. The number of those who stated that they did not groom was close

to zero. Since it involves the whole society, this factor was not affected by education.

Issues affecting the decision of individuals to undergo labiaplasty include sexual, functional, appearance-related, and psychological factors, where appearance ranks first among these factors. In a previous study, it was reported that women who considered labiaplasty and who were less satisfied with their vulvar appearances had been more exposed to graphic vulvar images in the media and advertisements and that these images had become more internalized.¹⁸ When the educational status was considered, no differences were detected among the groups who had labiaplasty and the groups who did not in terms of educational status.

The genital perceptions in women are not well studied and is deferred to evaluate mostly in polyclinic settings. Obstetricians and gynecologists are the first doctors, women prefer to consult for genital area complaints.²⁰ There is no specialty sub-branch for sexual dysfunction in Turkey. The obstetricians and gynecologists who work under very busy schedules in the present situation cannot allocate adequate patient time for sexual perception and functional disorders. There are many factors that affect genital perception.^{16,18} If there is no functional distress or morphological disorder, the appearance will most probably be defined as normal and there will be no need of surgery. The media exposure and variations in genital perception must be discussed. Time must be allocated for women to express themselves on the topic of genital perception. Moreover, they must be assured that they can articulate their concerns with open-ended questions because doctors can make important contributions toward changing women's sexual perception in a positive way.²⁰ The sources to obtain correct information must be presented. The individual's self-education can facilitate this situation. The duty of doctors is to carry out one-to-one patient interviews, seminars, and social re-

sponsibility projects to inform women. The number of sexual health outpatient units, which are at present very few, must be increased.

CONCLUSION

Those with a high educational status exhibited increased awareness and increased genital perception; however, in the opposite situation, in those with low educational status, the genital perception was high but the awareness was low. The genital perception in the group that had a moderate educational status was lower when compared with the other groups, and the desire to have surgery was high. This result was associated with an inability to obtain accurate and reliable information. The influence of the media on genital perception is inevitable. Therefore, patients must be informed about the sources where accurate images and information can be found.

Source of Finance

During this study, no financial or spiritual support was received neither from any pharmaceutical company that has a direct connection with the research subject, nor from a company that provides or produces medical instruments and materials which may negatively affect the evaluation process of this study.

Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: Aşkı Ellibeş Kaya, Ozan Doğan; **Design:** Aşkı Ellibeş Kaya, Ozan Doğan; **Control/Supervision:** Aşkı Ellibeş Kaya; **Data Collection and/or Processing:** Aşkı Ellibeş Kaya, Ozan Doğan; **Analysis and/or Interpretation:** Aşkı Ellibeş Kaya; **Literature Review:** Aşkı Ellibeş Kaya, Ozan Doğan; **Writing the Article:** Aşkı Ellibeş Kaya; **References and Fundings:** Aşkı Ellibeş Kaya, Ozan Doğan; **Materials:** Aşkı Ellibeş Kaya.

REFERENCES

- Mitchell KR, Mercer CH, Ploubidis GB, Jones KG, Datta J, Field N, et al. Sexual function in Britain: findings from the Third National Survey of Sexual Attitudes and Lifestyles (Natsal-3). *Lancet* 2013;382(9907):1817-29.
- La Rocque CL, Cioe J. An evaluation of the relationship between body image and sexual avoidance. *J Sex Res* 2010;48(4):397-408.
- Faith MS, Schare ML. The role of body image in sexually avoidant behavior. *Arch Sex Behav* 1993;22(4):345-56.
- Yurteri-Kaplan LA, Antosh DD, Sokol AI, Park AJ, Gutman RE, Kingsberg SA, et al. Interest in cosmetic vulvar surgery and perception of vulvar appearance. *Am J Obstet Gynecol* 2012;207(5):428.e1-7.
- Koning M, Zeijlman IA, Bouman TK, van der Lei B. Female attitudes regarding labia minora appearance and reduction with consideration of media influence. *Aesthet Surg J* 2009; 29(1):65-71.
- Hamori CA. Aesthetic surgery of the female genitalia: labiaplasty and beyond. *Plast Reconstr Surg* 2014;134(4):661-73.
- Clerico C, Lari A, Mojallal A, Boucher F. Erratum to: anatomy and aesthetics of the labia minora: the ideal vulva? *Aesthetic Plast Surg* 2017;41(3):720.
- Crouch NS, Deans R, Michala L, Liao LM, Creighton SM. Clinical characteristics of well women seeking labial reduction surgery: a prospective study. *BJOG* 2011;118(12):1507-10.
- Truong C, Amaya S, Yazdany T. Women's perception of their vulvar appearance in a predominantly low-income, minority population. *Female Pelvic Med Reconstr Surg* 2017;23(6): 417-9.
- Gelir ve Yaşam Koşulları Araştırması. Yayın No: 24579. Türk İstatistik Kurumu; 2016.
- Sharp G, Tiggemann M. Educating women about normal female genital appearance variation. *Body Image* 2016;16:70-8.
- Ellibes Kaya A, Yassa M, Dogan O, Basbug A, Pulatoglu C, Caliskan E. The female genital self-image scale (FGSIS): cross cultural adaptation and validation of psychometric properties within a Turkish population. *Int Urogynecol J* 2018 Jun 30. Doi: 10.1007/s00192-018-3688-1. [Epub ahead of print].
- Herbenick D, Reece M. Development and validation of the female genital self-image scale. *J Sex Med* 2010;7(5):1822-30.
- Lykkebo AW, Drue HC, Lam JUH, Guldborg R. The size of labia minora and perception of genital appearance: a cross-sectional study. *J Low Genit Tract Dis* 2017;21(3):198-203.
- Lloyd J, Crouch NS, Minto CL, Liao LM, Creighton SM. Female genital appearance: "normality" unfolds. *BJOG* 2005;112(5):643-6.
- Moran C, Lee C. What's normal? Influencing women's perceptions of normal genitalia: an experiment involving exposure to modified and nonmodified images. *BJOG* 2014;121(6):761-6.
- Smith NK, Butler S, Wagner B, Collazo E, Caltabiano L, Herbenick D. Genital self-image and considerations of elective genital surgery. *J Sex Marital Ther* 2017;43(2):169-84.
- Sharp G, Tiggemann M, Mattiske J. Factors that influence the decision to undergo labiaplasty: media, relationships, and psychological well-being. *Aesthetic Surg J* 2016; 36(4):469-78.
- Rowen TS, Gaiher TW, Awad MA, Osterberg EC, Shindel AW, Breyer BN. Pubic hair grooming prevalence and motivation among women in the United States. *JAMA Dermatol* 2016;152(10):1106-13.
- Yulevitch A, Czamanski-Cohen J, Segal D, Ben-Zion I, Kushnir T. The vagina dialogues: genital self-image and communication with physicians about sexual dysfunction and dissatisfaction among Jewish patients in a women's health clinic in southern Israel. *J Sex Med* 2013;10(12):3059-68.