



UvA-DARE (Digital Academic Repository)

"What motivates her": motivations for considering labial reduction surgery as recounted on women's online communities and surgeons' websites

Zwier, S.

DOI

[10.1002/sm2.20](https://doi.org/10.1002/sm2.20)

Publication date

2014

Document Version

Final published version

Published in

Sexual Medicine

[Link to publication](#)

Citation for published version (APA):

Zwier, S. (2014). "What motivates her": motivations for considering labial reduction surgery as recounted on women's online communities and surgeons' websites. *Sexual Medicine*, 2(1), 16-23. <https://doi.org/10.1002/sm2.20>

General rights

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: <https://uba.uva.nl/en/contact>, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.

UvA-DARE is a service provided by the library of the University of Amsterdam (<https://dare.uva.nl>)

ORIGINAL RESEARCH—WOMEN'S SEXUAL HEALTH

“What Motivates Her”: Motivations for Considering Labial Reduction Surgery as Recounted on Women's Online Communities and Surgeons' Websites

Sandra Zwier, PhD

Amsterdam School of Communication Research ASCoR, University of Amsterdam, Amsterdam, The Netherlands

DOI: 10.1002/sm2.20

ABSTRACT

Introduction. Increasing numbers of women are seeking labial reduction surgery. We studied the motivations for considering labial reduction surgery as recounted on women's online communities and surgery provider's websites.

Aims. The study analyzed motivations for considering labial reduction surgery expressed by women on online communities, looked at the role of the women's age and nationality, compared findings with motivations indicated on the websites of an international sample of surgery providers, and identified similarities to and differences from what is known from extant studies.

Methods. Quantitative content analysis of the posts of 78 American, British, and Dutch women on online communities, and 40 international surgery providers' websites about labial reduction surgery was conducted.

Main Outcome Measures. Main outcome measures concerned the incidence and prominence of different motivational categories (functional/emotional and discomfort/enhancement related). Differences in motivations as a function of age, national background, and women's vs. surgeons' stated motivations were tested.

Results. Emotional discomfort regarding self-appearance and social and sexual relationships was found to be the most frequent and most prominent motivation for considering labial reduction surgery on women's online communities, regardless of age and national background. Functional discomfort and desired emotional enhancement ranked second. Very few age or national differences were found. The surgeons' websites recognized functional discomfort more and elaborated upon emotional issues in sexual relationships less than members of the online communities.

Conclusions. Feelings of emotional and psychosexual distress in addition to functional distress are a highly prevalent motivation among women considering labial reduction surgery. Emotional distress appears to be greater and more freely emphasized when women communicate on online communities, while functional issues appear to receive greater notice on surgery provider's websites. Zwier S. “What motivates her”: Motivations for considering labial reduction surgery as recounted on women's online communities and surgeons' websites. *Sex Med* 2014;2:16–23.

Key Words. Labiaplasty; Female Genital Cosmetic Surgery; Online Communities; Surgeons Websites

Introduction

“I hate mine, hate, hate HATE it! It’s like a tongue sticking out for heavens sake!” “What if they told everyone in school ‘yeah, she’s pretty but there’s something wrong down there.’ ” “I’d like to cut them off.”¹

This article is about women’s motivations for considering a surgical reduction of their labia, or labiaplasty (labioplasty). The focus will be on a reduction of the labia minora through surgical procedures rather than on other forms of female genital cosmetic surgery, such as surgery of the labia majora or clitoral hood.² There is broad consensus that female genital surgery for a reduction in the size of the labia minora has risen sharply in recent years [1,2], and sociocultural explanations and implications are broadly discussed [3–8]. Our study aim was to provide further empirical evidence on the question about what motivates individual women to consider this very intimate form of surgery. The study is based on two original data sources. The first is a quantitative content analysis of motivations for considering labial reduction surgery as shared by 78 American, British, and Dutch members of women’s online communities in recent years. The motivations for considering labial reduction surgery that the women gave in this anonymous, nonclinical context were systematically coded and analyzed to identify recurrent patterns. The second data source is a content analysis of motivations for considering labial reduction surgery given on 40 surgery providers’ websites, allowing comparisons between women’s online communities and surgery providers’ websites.

The extant knowledge of individual women’s motivations for considering labial reduction surgery is based almost exclusively on reviews of the medical records or surveys of surgery providers’ patients (for reviews: [9–11]). A critically confounding factor of the findings obtained in this clinical context however is that women may not reveal all of their motivations in this context [9,12]. There are at least two reasons for this. First, because surgery providers function as gatekeepers in women’s admission to labial reduction surgery,

and a woman may not be accepted for the surgery if the doctor believes she is psychologically unstable or under third-party influence [13]. In addition, women in most Western countries are denied insurance coverage unless the doctor can confirm that the procedure is for purely functional reasons [14]. In fact, every community we analyzed for the present research included women seeking advice from other women about the right prompters to say to the doctor to warrant surgery and coverage. Second, issues related to the genitals are an extremely sensitive topic that the majority of women would find awkward talking about, including during the medical encounter [15–17]. Indeed, many members of the women’s online communities expressed intense fears of having to talk about and undergo a medical examination of their labia with a doctor. Both these factors may seriously complicate the interpretation of motivations for labial surgery as recounted in patient–provider communication.

One study that reported interviews with women about their motivations for considering labial reduction surgery that were conducted outside a direct clinical context [12] identified feelings of “imperfection” and issues in sexual relationships as the primary motivations. With six interviewees, however, the study was exploratory in nature.

Aims

The present study extends upon the extant research by: (i) analyzing motivations for considering labial reduction surgery expressed by a larger international group of women in an anonymous, nonclinical context; (ii) studying the role of women’s age and national background; (iii) analyzing motivations for considering labial reduction surgery indicated on an international sample of surgery providers’ websites; (iv) comparing the motivations of members of women’s online communities with the motivations presented on surgery providers’ websites; and (v) identifying similarities to and differences from what is known from clinical research about why women choose to undergo this controversial surgical procedure. The study was primarily guided by the following hypotheses:

H1: Women’s online communities will express more emotional than functional discomfort motivations for considering labial reduction surgery.

H2: Women’s online communities will reflect more emotional and less functional motivations

¹These are literal quotes from contributions to online communities about labia reduction surgery (first quote from: <http://www.cosmopolitan.co.uk/community/forums/thread/1406999>, second quote from http://www.experienceproject.com/group_stories.php?g=106234, third quote [translated from Dutch] from: <http://www.medischforum.nl/onderwerp/9915/0/>).

²Surgical procedures are reviewed in many of the cited articles [10,11,21–26].

Table 1 Details of online communities in the sample

Forum name	Thread topic name	Nationality	Oldest/latest post	n sample
Medisch Forum*	“Schaamlip correctie”	Dutch	May 2007–March 2013	28
Cosmopolitan†	“Labia reduction?”	British	May 2008–Feb. 2013	25
The Fabulous Vagina‡	“Labia reduction surgery experience”	American	July 2005–Feb. 2012	10
Experience Project§	“I had labiaplasty”	American	Feb. 2009–March 2013	15

*<http://www.medischforum.nl/onderwerp/9915/0/>

†<http://www.cosmopolitan.co.uk/community/forums/thread/1406999>

‡<http://www.network54.com/Forum/287637/thread/1120209987/last-1329620198/Labia+reduction+surgery+experience>

§http://www.experienceproject.com/group_stories.php?g=106234

for considering labial reduction surgery than surgery providers' websites.

Method

This study was based on the posts of 78 members of online communities about labial reduction surgery and on 40 websites of providers of such surgery. Both the online communities and the websites were sampled via a Google search using the search terms “labia reduction,” “labia correction,” “labiaplasty,” and their literal Dutch translations. Four online communities that contained recent threads about labia reduction surgery (one from the Netherlands, two from the United States, and one from the United Kingdom)³ were selected. Details about these online communities are presented in Table 1. Only female community members who referred to a reduction of the labia minora (as opposed to other genital surgeries) and shared their personal motivations (as opposed to members giving a moral opinion or only asking other women questions) were sampled. The final sample consisted of 78 women: 28 from the Dutch, 25 from the American, and 25 from the British online communities. Not all women mentioned their age, but of those who did, the youngest member indicated that her age was 12 years and the oldest was 61 years; the mean was 21.5 years (standard deviation [SD] = 9.6).⁴

The sample of surgery providers' websites consisted of 40 English or Dutch language websites from Australia, Canada, Ireland, the Netherlands,

New Zealand, South Africa, the United Kingdom, and the United States. Only providers offering clients an actual surgical reduction of the labia minora were sampled (as opposed to online platforms, sites that provided only information, or sites for health care professionals). Nearly all providers also offered a range of other cosmetic surgeries, such as mammoplasty (breast augmentation) or blepharoplasty (eyelid surgery), and sometimes also other forms of cosmetic genital surgery, such as vaginoplasty (vagina tightening) or clitoral hood reduction. Eleven websites (28%) also showed “before and after” labiaplasty pictures. Twenty-three websites (57.5%) gave price indications for labial reduction surgery, varying from €795 (£703/US\$825) to €3,500 (£2,983/US\$4,579), with an average of €1,581 (£1,348/US\$2,068).

The unit of analysis for the online communities was the individual member, and for surgery providers, it was the web page(s) on labial reduction surgery.⁵ Each motivation for considering labial reduction surgery mentioned in the member's posts or on the provider's website was coded as belonging to categories of emotional vs. functional discomfort and discomfort vs. enhancement-related motivations. Functional (or “medical”) vs. emotional (sometimes also “aesthetic” or “psychological”) motivations are commonly used denominators in categorizing motivations for female genital surgery and for cosmetic surgery in general [9–11]. The discomfort vs. enhancement (or “treatment/enhancement”) distinction refers to motivations grounded in the cure of a perceived disease or disability vs. those that are grounded in the improvement of a regular condition [18]. An overview of the categories, including examples, is presented in Tables 2 and 3.

³Two online communities from the United States were sampled in order to have comparable numbers of members across nationalities.

⁴The sample's average age is probably somewhat higher because the age of younger girls often played a role in their considerations (parents' reactions, clinical admission, etc.), so that age was presumably mentioned more often by younger than by older members.

⁵The content analysis concerned those pages that discussed the surgical reduction of the labia minora, thereby omitting surgical procedures involving other parts of the female genital area.

Table 2 Incidence and prominence of motivations for labial reduction surgery on online communities*

Motivations	Incidence % [CI]	Prominence M (SD)
Emotional discomfort	71.0 [61.0–81.0]	52.0 (40.5)
Self (feeling “freakish,” self-loathing)	48.8 [37.6–59.9] ^a	18.3 (25.8) ^a
Social (shame, fear of ridicule)	38.8 [27.8–49.7] ^{ab}	15.0 (23.8) ^{ab}
Sexual relations (fear negative partner reaction)	37.5 [26.7–48.3] ^{ab}	15.8 (26.4) ^{ab}
Emotional enhancement	32.5 [22.0–43.0]	14.4 (25.2)
Private area (normal, likable appearance)	28.8 [18.6–38.9] ^b	11.6 (23.3) ^{abc}
Sexual relations (more enjoyment)	11.3 [4.2–18.3] ^{cd}	2.8 (9.7) ^d
Functional discomfort	52.5 [41.3–63.7]	31.1 (36.8)
Private area (tight clothing, hygiene)	27.5 [17.5–37.5] ^b	10.7 (21.0) ^{abc}
Sexual relations (pain during intercourse)	21.3 [12.1–30.4] ^{bc}	8.1 (20.0) ^{bc}
Exercise (soreness when cycling, dancing)	21.3 [12.1–30.4] ^{bc}	7.2 (17.0) ^c
Functional enhancement (no rubbing, better hygiene)	7.5 [1.6–13.4]^d	2.5 (12.3)^d

*Different superscripts within the column “Incidence” mark significant differences at the $P < 0.05$ level between the incidences of the different motivations on the online communities. Different superscripts in the column “Prominence” similarly mark significant differences at the $P < 0.05$ level between the different motivations, but now in the motivations’ prominence on the online communities. Bold numbers are the main categories of motivations. CI = confidence interval; M = mean; SD = standard deviation

Table 3 Incidence and prominence of motivations for labial reduction surgery on online communities vs. surgeons’ websites[†]

Motivations	Incidence		Prominence	
	Online communities % [CI]	Surgeons’ websites % [CI]	Online communities M (SD)	Surgeons’ websites M (SD)
Emotional discomfort	71.0 [61.0–81.0]	98.0 [92.0–100]***	52.0 (40.5)	38.6 (23.8)*
Self	48.8 [37.6–59.9]	65.0 [49.6–80.5]	18.3 (25.8)	12.8 (16.9)
Social	38.8 [27.8–49.7]	72.5 [58.0–87.0]***	15.0 (23.8)	21.5 (22.5)
Sexual relations	37.5 [26.7–48.3]	15.0 [3.4–26.6]*	15.8 (26.4)	2.0 (5.1)***
Emotional enhancement	32.5 [22.0–43.0]	37.5 [21.8–53.2]	14.4 (25.2)	11.0 (17.4)
Private area	28.8 [18.6–38.9]	35.0 [19.6–50.5]	11.6 (23.3)	8.3 (13.6)
Sexual relations	11.3 [4.2–18.3]	17.5 [5.2–29.8]	2.8 (9.7)	2.7 (6.5)
Functional discomfort	52.5 [41.3–63.7]	90.0 [80.3–99.7]***	31.1 (36.8)	47.1 (24.8)*
Private area	27.5 [17.5–37.5]	82.5 [70.2–94.8]***	10.7 (21.0)	20.5 (13.1)**
Sexual relations	21.3 [12.1–30.4]	15.0 [3.4–26.6]	8.1 (20.0)	2.1 (5.4)
Exercise	21.3 [12.1–30.4]	65.0 [49.6–80.5]***	7.2 (17.0)	13.4 (11.4)*
Functional enhancement	7.5 [1.6–13.4]	20.0 [7.0–33.0]*	2.5 (12.3)	3.3 (7.1)

[†]Asterisks mark significant differences between the online communities vs. surgeon’s websites concerning the incidence and occurrence of motivations, whereby *** $P < 0.001$, ** $P < 0.01$, and * $P < 0.05$. CI = confidence interval; M = mean; SD = standard deviation

Main Outcome Measures

Two indices were calculated on the basis of the content analysis coding, namely “incidence” and “prominence” of motivation categories. “Incidence” reflects whether a motivation category occurred at all in the individual online community member’s posts/on the provider’s website (coded 0 for “no” and 1 for “yes”). “Prominence” reflects the extent to which motivations from other categories were also mentioned by the same member/website. It was calculated by the incidence measure of the motivation, divided by the sum of all motivation categories mentioned by the same member/website. This measure could vary between 0 (the motivation category was not mentioned) and 1 (the motivation was the only one mentioned by the member or on the website).

Statistical Analysis

Employing IBM SPSS Statistics 22 software (IBM Corporation, Armonk, NY, USA), paired sample t -tests verified whether prominence and incidence of the motivations differed within online communities and within surgery providers’ websites. Differences across online communities and surgery providers’ websites on the prominence and incidence of motivations were tested with analyses of variance (ANOVAS).⁶

⁶Because one of the measures (“incidence”) is a dichotomous variable, violating some assumptions for the conduct of ANOVA, we also estimated the effects with logistic regressions and Fisher’s exact tests and this yielded the same substantive results. We present the ANOVA results in order to enhance comparability across analyses.

Results

Women's Online Communities

Of the international group of women in the anonymous context of the online communities, 42.5% mentioned only emotional motivations for considering labial reduction surgery, 41.2% mentioned a combination of emotional and functional issues, and 16.3% mentioned only functional motivations.

The average incidence and prominence of motivations for considering labial reduction surgery on the online communities is given in Table 2. As can be seen, the motivation mentioned most often and most prominently by the online community members concerned feelings of emotional discomfort regarding the appearance of their labia. This motivation was mentioned by more than 70% of the online community members and accounted for an average of more than half of the different motivations mentioned by individual members. Within this category of emotional discomfort, issues that focus primarily on the self (such as self-loathing and feeling "freakish") were mentioned by nearly half of the members and concerned nearly one in five of all the different motivations mentioned.

We conducted paired sample *t*-tests to verify if the prominence or incidence of the different motivations were statistically different from one another. The superscripts in Table 2 signal significant differences at the $P < 0.05$ level. As indicated by the superscript "a" that is jointly carried by all three categories of emotional discomfort, emotional discomfort was mentioned significantly more often and prominently than any of the other motivations, including functional motivations. This is in alignment with Hypothesis 1. Further, within the category of emotional discomfort, issues that were self-focused were mentioned equally often and prominently as emotional issues with a more social focus (e.g., embarrassment, fear of ridicule) or sexual focus (e.g., fear of rejection by the sexual partner). The joint superscript "b" in Table 2 further shows that the second largest and most prominent group of motivations, significantly lower than emotional discomfort, consisted of a combination of issues, namely functional discomfort and the real or anticipated emotional self-enhancement brought about by the surgery. A third group of motivations, carrying superscript "c," concerned the functional discomfort experienced particularly in sexual relationships and during exercise. A final

group of motivations, carrying superscript "d," involved the reduced functional discomfort that could be achieved through the surgery. As can be seen in Table 2, however, the incidence and particularly the prominence of this latter group of motivations among the other motivations mentioned by a member were minor.

The Role of Age and Nationality

We divided the 46 online community members who had mentioned their age into three age groups: younger than 16 years of age ($n = 11$), 16–23 years of age ($n = 25$), and 24 years of age or older ($n = 10$). Differences in motivations for considering labial reduction surgery between age groups were examined, employing ANOVAs with incidence and prominence of motivations, respectively, as the dependent variable and age group (younger than 16 years vs. 16–23 years vs. 24 years or older) as independent variable.⁷ No significant differences in the motivations between age groups were found, with the exception of functional discomfort in sexual relationships, $F(2,43) = 4.23$, $P < 0.05$, $\eta^2 = 0.16$. Post hoc Scheffe tests showed that this motivation was more prevalent among women 24 years of age or older ($X = 50.0\%$, $SD = 52.7$) than among the 16–23 years age group ($X = 12\%$, $SD = 33.2$) or girls younger than 16 years of age ($X = 9.1\%$, $SD = 30.2$). No other significant differences between age groups were found on issues of functional or emotional discomfort.⁸ Further, ANOVAs with the online community's national origin (American vs. British vs. Dutch) as independent variable, and incidence and prominence of the motivations as dependent variables showed no significant differences in motivations between the American, British, and Dutch members of women's online communities.

Women's Online Communities vs. Providers' Websites

Table 3 presents the similarities to and differences from the motivations for considering labial reduction surgery mentioned by members of the women's online communities vs. those given on

⁷See Footnote 6.

⁸Because group sizes were small, ANOVAs with two age groups based on a median split (younger vs. older than 22 years of age) were also conducted. These generated identical results: No significant differences between age groups occurred, except functional discomfort in sexual relationships. This motivation was mentioned more often by the group older than 22 years of age ($X = 35.0$, $SD = 48.9$) than by the younger age group ($X = 7.7$, $SD = 27.2$), $F(1,44) = 5.80$, $P < 0.05$.

the surgery providers' websites. Differences were again identified on the basis of ANOVAs with incidence and prominence of motivations as the respective dependent variables and online source (online community vs. surgery provider's website) as the independent variable.⁹ Contrary to Hypotheses 2, it was found that although feelings of emotional discomfort were the most frequently mentioned motivation among the members of the online communities across nationalities and age groups, this motivation was mentioned even more often on the surgery providers' websites ($F(1,118) = 12.49, P < 0.001, \eta^2 = 0.10$). In alignment with Hypothesis 2, however, this motivation accounted for a marginally significantly larger share of the different motivations mentioned on the online communities than it did on the surgery providers' websites ($F(1,118) = 3.69, P < 0.06, \eta^2 = 0.03$). Thus, although the surgery providers' websites mentioned emotional discomfort issues more often than online community members did, the latter tended to talk about this motivation somewhat more prominently. Further, within the category of emotional discomfort motivations, issues with sexual relationships were mentioned more often ($F(1,118) = 6.70, P < 0.05, \eta^2 = 0.05$) and more prominent ($F(1,116) = 10.65, P < 0.001, \eta^2 = 0.08$) on the online communities than on the surgeons' websites. Emotional issues with a social focus were recognized significantly more often on the surgeons' websites than by the members of the online communities ($F(1,118) = 13.29, P < 0.001, \eta^2 = 0.10$).

A second group of differences between online communities and surgeons' websites concerns motivations for considering labial reduction surgery that are related to functional discomfort. Except for the functional discomfort in sexual relationships, which showed no differences, this motivation was mentioned significantly more often on the surgeons' websites than on the online communities ($F(1,118) = 18.79, P < 0.001, \eta^2 = 0.14$). It also accounted for a larger share of all motivations mentioned on the surgeons' websites than it did on the online communities ($F(1,16) = 6.16, P < 0.05, \eta^2 = 0.05$). Finally, the surgeons' websites mentioned the functional enhancement that could be achieved through the surgery significantly more often than community members did ($F(1,18) = 4.11, P < 0.05, \eta^2 = 0.04$).

⁹See Footnote 6.

Conclusions

The present research findings shed new light on why women consider undergoing labia reduction surgery. Extant research so far was almost exclusively conducted in a clinical context, where women aim to be accepted for the surgery and may feel awkward talking about sensitive emotional issues. Motivations recounted in the anonymous, unsolicited context of online communities are less confined by these restrictions. This is not to suggest, however, that motivations recounted on online communities are necessarily more "real." First, this is because we cannot automatically assume that the accounts of women who participate in online communities about labial reduction surgery are representative of all women considering labial reduction surgery. Second, just as the clinical context shapes the accounts given by women, online accounts can also be assumed to be shaped by the opportunities and constraints provided by the immediate online context [19,20]. Within these constraints, our findings lead to a number of conclusions that will be addressed below.

First, emotional discomfort with the appearance of the labia, such as feeling "freakish" and ashamed, was highly prevalent on the online communities, with 42.5% of members mentioning only this motivation for considering labia reduction surgery. The intensity of the emotion was also often very high, as illustrated by the quotes from the online communities given earlier. We know of two clinical studies that have also divided patients into those who indicated emotional/aesthetic concerns alone, those who indicated functional concerns alone, and those who indicated both. The first of these, Alter [21], reports that 13.3% of patients indicated aesthetic concerns alone, while Miklos and Moore [22] report 37%. This suggests that mentioning emotional reasons as the single motivation is more prevalent on online communities than in clinical encounters. Further, emotional discomfort was mentioned as one of the motivations by 70% of community members, regardless of age and nationality. Some clinical studies, such as Goodman et al. [23], have reported lower percentages of around 55% of women indicating emotional/aesthetic concerns as at least one of their motivations. Other clinical studies, however, have reported higher percentages of up to 100% [24–26]. This would suggest that when women can indicate additional reasons in the clinical encounter, emotional reasons are actually mentioned at least as often as on online communities.

Some functional complaints were mentioned by more than half of the members of the online communities. Interestingly, however, these were mentioned by 75–100% of clients in clinical contexts [21–26]. Particularly, functional interference with exercise, sexual intercourse, and tight-fitting clothes was reported by more than half of the women in a series of clinical studies [21–26], while each of these issues was mentioned by less than 30% of the members of the women's online communities.

A second way in which our findings shed new light on the research to date concerns the role of age and nationality. Functional discomfort in sexual relationships was a more prevalent motivation among the older age group, which can probably be explained by age- and parity-related changes in female physiology of the genitals [27]. Apart from that, motivations for considering labial reduction surgery were remarkably similar across nationalities and age. We thereby hasten to emphasize that the women in our sample came from Western countries, as female genital surgery can obviously have a very different meaning across cultural and religious contexts [28,29].

The media in general, and surgery providers' websites in particular, have been fiercely criticized for inciting negative associations with larger labia and encouraging women to seek labia reduction surgery [3,7,30,31]. The third way in which our findings shed new light on the extant knowledge is that provider's websites recounted an on average equal share of emotional and functional motivations. Furthermore, the less controversial motivation of functional discomfort was mentioned on providers' websites more regularly and more prominently than by the members of the online communities. Providers' websites also seemed on average to be more reserved in emphasizing emotional issues and particularly sexual relationships as motivations for considering labial reduction surgery than the members of the women's online communities. It should be emphasized that our study obviously cannot disprove or confirm claims that surgeons' websites can impact upon the perceptions and actions of women with larger labia, and to our knowledge, such effect studies do not exist in this area. Extant media effects research, however, rarely supports direct, one-to-one relationships between media content exposure and audience reactions [32,33]. All in all, our findings suggest that the content of surgery providers' websites likely cannot fully explain the high prevalence

of emotional discomfort among women considering labial reduction surgery.

Critical scholars on female genital cosmetic surgery have coined the term "pudendal disgust" to label strong negative associations with the female genitals [2,7,28,29]. Reluctance to talk about this sensitive emotional issue, as well as fear to not be accepted for the surgery and the desire to obtain health insurance coverage, may drive women to emphasize the functional aspects in the clinical encounter more. Our research, however, has provided new, quantitative evidence across nationalities and age groups that such feelings of "pudendal self-loathing" are a highly prevalent force among women considering labial reduction surgery.

The Internet without a doubt is a very important, if not the most important, site where the lay public finds and exchanges information about cosmetic surgery [34,35]. The present study has analyzed the online contents available to women seeking labial reduction. Awareness of significant patterns in these materials, scrutinized by so many clients before ever setting foot into a practitioner's office, could potentially assist surgery providers in client communication.

Corresponding Author: Sandra Zwier, PhD, ASCoR, University of Amsterdam, Kloveniersburgwal 48, Amsterdam 1012 CX, The Netherlands. Tel: +31-20-525-5094; Fax: +31-20-525-3681; E-mail: s.m.zwier@uva.nl

Conflict of Interest: The author reports no conflict of interest.

References

- 1 Rao N, Aparajita, Sharma N. Current trends in female genital cosmetic surgery. *Apollo Med* 2012;9:219–23.
- 2 Tiefer L. Female genital cosmetic surgery: Freakish or inevitable? Analysis from medical marketing, bioethics, and feminist theory. *Fem Psychol* 2008;18:466–79.
- 3 Braun V. In search of (better) female sexual pleasure: Female genital "cosmetic" surgery. *Sexualities* 2005;8:407–24.
- 4 Fitzpatrick M. Brazilian bikini wax and the designer vagina. *Br J Gen Pract* 2007;57:1005.
- 5 Goodman MP, Bachmann G, Johnson C, Fourcroy JL, Goldstein A, Sklar S. Controversies in sexual medicine: Is elective vulvar plastic surgery ever warranted, and what screening should be conducted preoperatively? *J Sex Med* 2007;4:269–76.
- 6 Liao LM, Creighton SM. Requests for cosmetic genitoplasty: How should healthcare providers respond? *BMJ* 2007;334:1090–2.
- 7 Braun V. Selling the "perfect" vagina. In: Heyes CJ, Jones M, eds. *Cosmetic surgery: A feminist primer*. Farnham: Ashgate Publishing Limited; 2009:133–49.
- 8 Plowman TM. The perfect vagina. *Reprod Health Matters* 2010;18:111–4.

- 9 Braun V. Female genital cosmetic surgery: A critical review of current knowledge and contemporary debates. *J Womens Health* 2010;19:1393–407.
- 10 Goodman MP. Female genital cosmetic and plastic surgery: A review. *J Sex Med* 2011;8:1813–25.
- 11 Liao LM, Michala L, Creighton SM. Labial surgery for well women: A review of the literature. *BJOG* 2010;117:20–5.
- 12 Bramwell R, Morland C, Garden AS. Expectations and experience of labial reduction: A qualitative study. *BJOG* 2007;114:1493–9.
- 13 Paarlberg KM, Weijenborg PTM. Request for operative reduction of the labia minora: A proposal for a practical guideline for gynecologists. *J Psychosom Obstet Gynaecol* 2008;29:230–4.
- 14 Gimlin D. Accounting for cosmetic surgery in the USA and Great Britain: A cross-cultural analysis of women's narratives. *Body Soc* 2007;31:41–60.
- 15 Lazare A. Shame and humiliation in the medical encounter. *Arch Intern Med* 1987;147:1653–8.
- 16 Read S, King M, Watson J. Sexual dysfunction in primary medical care: Prevalence, characteristics and detection by the general practitioner. *J Public Health* 1997;19:387–91.
- 17 Yannikerem E, Ozdemir M, Bingol H, Tatar A, Karadeniz G. Women's attitudes and expectations regarding gynaecological examination. *Midwifery* 2009;25:500–8.
- 18 Daniels N. Normal functioning and the treatment-enhancement distinction. *Camb Q Healthc Ethics* 2000;3:309–22.
- 19 Walther JB. Selected self-presentation in computer-mediated communication: Hyperpersonal dimensions of technology, language and cognition. *Comput Human Behav* 2007;23:2538–57.
- 20 Suler J. The online disinhibition effect. *Cyberpsychol Behav* 2004;7:321–6.
- 21 Alter GJ. Aesthetic labia minora and clitoral hood reduction using extended central wedge resection. *Plast Reconstr Surg* 2008;122:1780–9.
- 22 Miklos JR, Moore RD. Labiaplasty of the labia minora: Patients' indications for pursuing surgery. *J Sex Med* 2008;5:1492–5.
- 23 Goodman MP, Placik OJ, Benson RH III, Miklos JR, Moore RD, Jason RA, Matlock DL, Simopoulos AF, Stern BH, Stanton RA, Kolb SE, Gonzalez F. A large multicenter outcome study of female genital plastic surgery. *J Sex Med* 2010;7:165–77.
- 24 Maas SM, Haage JJ. Functional and aesthetic labia minora reduction. *Plast Reconstr Surg* 2000;105:1453–6.
- 25 Munhoz AM, Filassi JR, Ricci MD, et al. Aesthetic labia minora reduction with inferior wedge resection and superior pedicle flap reconstruction. *Plast Reconstr Surg* 2006;118:1237–47.
- 26 Rouzier R, Louis-Sylvestre C, Paniel BJ, Haddad B. Hypertrophy of labia minora: Experience with 163 reductions. *Am J Obstet Gynecol* 2000;182:35–40.
- 27 Van Lunsen RHW, Laan E. Genital vascular responsiveness and sexual feelings in midlife women: Psychophysiological, brain and genital imaging studies. *Menopause* 2004;11:741–8.
- 28 Little CM. Female genital circumcision: Medical and cultural considerations. *J Cult Divers* 2003;10:30–4.
- 29 Raveenthiran V. Surgery of the hymen: From myth to modernization. *Indian J Surg* 2009;71:224–6.
- 30 Liao LM, Taghinejadi N, Creighton SM. An analysis of the content and clinical implications of online advertisements for female genital cosmetic surgery. *BMJ Open* 2012;2:e001908. doi: 10.1136/bmjopen-2012-001908.
- 31 Renganathan A, Cartwright R, Cardozo L. Gynecological cosmetic surgery. *Expert Rev Obstet Gynecol* 2009;4:101–4.
- 32 Bryant J, Zillmann D. Media effects: Advances in theory and research. Mahwah: Lawrence Erlbaum Associates; 2002.
- 33 Neuman WR, Guggenheim L. The evolution of media effects theory: A six-stage model of cumulative research. *Commun Theory* 2011;21:169–96.
- 34 Camp MC, Wong WW, Mussman JL, Gupta SC. The battle for hearts and minds: Who is communicating most effectively with the market place? *Aesthet Surg J* 2010;30:614–7.
- 35 Walden JL, Panagopoulos G, Shrader SW. Contemporary decision making and perceptions in patients undergoing cosmetic breast augmentation. *Aesthet Surg J* 2010;30:395–403.