The Journal of Sex Research

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/hjsr20

Gayzing Women's Bodies: Criticisms of Labia Depend on the Gender and Sexual Orientation of Perceivers

Flora Oswald, Cory L. Pedersen & Jes L. Matsick

To cite this article: Flora Oswald, Cory L. Pedersen & Jes L. Matsick (2022): Gayzing Women's Bodies: Criticisms of Labia Depend on the Gender and Sexual Orientation of Perceivers, The Journal of Sex Research, DOI: 10.1080/00224499.2022.2112647

To link to this article: https://doi.org/10.1080/00224499.2022.2112647

THE JOURNAL OF SEX RESEARCH
https://doi.org/10.1080/00224499.2022.2112647

Gayzing Women's Bodies: Criticisms of Labia Depend on the Gender and Sexual Orientation of Perceivers

Flora Oswald [a,b], Cory L. Pedersen [c], and Jes L. Matsick [a,b]

[a]Department of Psychology, Pennsylvania State University; [b]Department of Women's, Gender, and Sexuality Studies, Pennsylvania State University; [c]Department of Psychology, Kwantlen Polytechnic University

ABSTRACT

The heterosexual male gaze is often credited with producing bodily anxieties among women, yet empirical and popular cultural evidence suggest gay men have especially negative views toward women's bodies, particularly women's genitalia. Across two studies (N = 6,129; M_{age} = 27.58; 2,047 women, 4,082 men) we conducted secondary analyses of existing datasets to test the hypotheses that gay men would evaluate labia more negatively than heterosexual men, and that lesbian women would evaluate labia more positively than heterosexual women. We conducted fixed-effects mini meta-analyses to estimate summary effect sizes for perceptions of normalcy and fit with societal ideals; we additionally assessed an outcome of disgust in Study 2. We found support for our hypotheses: For normalcy and societal ideal, we found small summary effects such that gay men evaluated labia more negatively than heterosexual men, and medium summary effects such that lesbian women evaluated labia more positively than heterosexual women. Gay men also rated labia as more disgusting than any other demographic group, and lesbian women rated the stimuli as less disgusting than heterosexual women, supporting our hypotheses. The current findings suggest a pressing need to acknowledge and incorporate gay men's perceptions of women's bodies into literatures on misogyny, objectification, and body image more generally.

"Gay men touch a vagina for the first time" is one of numerous YouTube videos in a popular series documenting queer people doing purportedly heterosexual activities for the first time. The video, posted to YouTube in 2016, has over 34 million views, and many commenters espouse the value of the videos as tools for anti-misogyny education (see Williscroft-Ferris, 2016). However, the responses of the men in the video to touching a vagina – which ranged from curiosity, to disgust, to characterizations of the vagina as dangerous – echo broader cultural representations of women's genitals which are, both historically and contemporarily, steeped with misogyny (Braun & Wilkinson, 2001; Nurka, 2019; Williscroft-Ferris, 2016). Broader obfuscation of gay men's roles in perpetuating misogyny, particularly body-based forms of misogyny (Faye, 2015; Thornton, 2016), is reflected in the rationalization of these men's misogynistic reactions to the woman's genitals as somehow an anti-misogyny educational tool due to their queer orientations (Williscroft-Ferris, 2016). Though gay men's objectification of other men has been widely noted in the academic literature (e.g., Szymanski et al., 2019; Wood, 2004), gay men's gaze toward women's bodies has rarely been examined (cf., Kozak et al., 2009).

In the current set of studies, we drew upon literatures of gay men's misogyny and intergroup relations more broadly to theorize that in addition to gender, sexual orientation may play a significant role in how perceivers evaluate women's bodies (i.e., women's genitals). Across two studies with primarily North American samples, including student samples from Canada,[1] we conducted secondary analyses of existing datasets to test the hypothesis that gay men evaluate labia more negatively, and lesbian women evaluate labia more positively, than their heterosexual counterparts. We first review the broader sociocultural contexts surrounding labia and the evaluation thereof, and then review research on perceptions and evaluations of labia in light of perceiver gender and sexual orientation.

Sociocultural Perceptions of Female Genitalia

Women's bodies are subject to constant cultural evaluation, and Western cultural structures of gender inequality make women's genitalia subject to particular scrutiny (Nurka, 2019). Dominant Western cultural discourses cast women's genitalia as abnormal, dirty, deficient, deviant, and pathological (e.g., Nurka, 2019; see Oswald et al., 2022), and researchers have identified several persistent negative cultural representations of the vagina, including the notion of the vagina as inferior to the penis, disgusting, and dangerous (Braun & Wilkinson, 2001). This longstanding cultural disgust for women's genitals (Nurka & Jones, 2013) contributes to strict

CONTACT Flora Oswald feo5020@psu.edu Department of Psychology, The Pennsylvania State University, 527 Moore Building, University Park, PA 16801

All studies were approved by an institutional ethics review board prior to data collection.

[1]Given ethics committee requirements, the surveys for both Study 1 and Study 2 were anonymous, with all potentially identifying participant information disabled. Thus, information regarding participant acquisition across studies is unknown.

Supplemental data for this article can be accessed online at https://doi.org/10.1080/00224499.2022.2112647.

genital appearance ideals for women (Braun, 2019; Crouch, 2019; Gunter, 2019; Jones & Nurka, 2015; Nurka, 2019). For example, in contemporary Western cultures, light-colored, symmetrical, and hairless vulvas are considered the ideal (Braun, 2019; Jones & Nurka, 2015). Furthermore, small labia are considered most attractive and ideal whereas larger, protruding labia are perceived as less desirable (Braun, 2019; Crouch, 2019; Gunter, 2019; Jones & Nurka, 2015; Mazloomdoost et al., 2015; Nurka & Jones, 2013). Narrow Western beauty ideals which insist upon the superiority of small labia encourage both the normalization of labiaplasty as well as the pathologisation of normal labia that do not meet the sociocultural ideal (Braun, 2009, 2010, 2019; Crouch, 2019).

Increasingly, women in Western countries are seeking genital cosmetic surgery to align their bodies with sociocultural ideals (Chibnall et al., 2019; Clerico et al., 2017). Labiaplasty – removing portions of the labia minora with the aim of rendering them minimally visible beneath the labia majora (Jones & Nurka, 2015; Sharp et al., 2016) – is among the most commonly sought forms of female genital cosmetic surgery in the United States and, in 2020, was globally the 16th most common plastic surgery procedure overall (International Society for Aesthetic Plastic Surgery, 2020). Most women pursue labiaplasty for aesthetic reasons (Crouch et al., 2011; Goodman et al., 2010; Veale et al., 2014), which has raised concern regarding the stigmatization of naturally diverse labial appearances and the corresponding perpetuation of narrow labial ideals (Braun, 2019; see also Skoda et al., 2021).

The perpetuation of labial appearance ideals is primarily thought to occur through the male gaze, whether in interpersonal interactions or in heterosexual male-oriented media and pornographic representations (e.g., Braun, 2005; Gunter, 2019; Sharp et al., 2015). The male gaze occurs when a viewer "encounters the female form presented for the sole purpose of viewing" (Kozak et al., 2009, p. 225; see also Mulvey, 1989). Viewers – typically, though not exclusively, understood to be heterosexual men – enjoy power over the targets of their gaze, while those being viewed are subject to objectification and the negative psychosocial outcomes thereof (e.g., body shame and anxiety; Calogero, 2004). Men are thus often assuming the role of the evaluator or the *gazer*, in contrast to women who are positioned as those being evaluated and gazed upon through a (heterosexual) male-oriented lens. As a result, men's gaze toward women's genitals has important implications for shaping labial ideals and women's psychosocial outcomes related to striving for, or rejecting, these ideals. Put simply, men's perceptions of labia could inform the labia that women aspire to obtain.

Men's Evaluation of Female Genitalia

Though negative sociocultural conceptualizations of female genitalia are broadly attributed to gender inequality and the male gaze, empirical evidence is mixed on whether men, at an individual level, endorse strict appearance ideals for female genitalia. For example, in a study of evaluations of pre-and post-labiaplasty images, Skoda et al. (2021) found that men perceived preoperative (i.e., naturally variable) labia as more consistent with societal ideals than did women; further, this study found that men and women often did not differ in their evaluations of labia, though both had overall negative evaluations. This study did not report the geographic or cultural location of their participants, though some of the sample was recruited through a Canadian university; cultural context may play an important role in evaluations of female genital appearance, as preferences and ideals differ by culture (e.g., labial elongation is perceived positively in certain Mozambique cultures; see Martínez Pérez et al., 2015).

Some evidence suggests that heterosexual men voice appreciation of the natural diversity of labial appearance (e.g., Herbenick & Schick, 2011), though other findings suggest that, when men do evaluate labia negatively, their reported dislikes center on labial appearance (and particularly on disliking large or protruding labia; Mullinax et al., 2015). Indeed, most men in one American sample found smaller labia more attractive than larger labia (Mazloomdoost et al., 2015), and men generally endorse negative perceptions of labia across both pre- and post-operative stimuli (Oswald et al., 2022). Notably, prior studies tend to overlook potential predictors of heterogeneity in perceptions among men. We theorize differences in evaluations of labia among men, specifically along the axis of sexual orientation.

The Gay Male Gaze

Gay men are typically not charged with reproducing misogynistic ideologies to the same degree as their heterosexual counterparts, largely because this prejudice toward women is deeply embedded in gendered, heterosexual roles (Johnson & Samdahl, 2005; see also Richardson-Self, 2019). Further, stereotypes position gay men as friendly, nice, and feminine (e.g., Kite & Deaux, 1987; Kranz et al., 2017) – attributes which position them as similar to women (Kite & Deaux, 1987). This similarity is recruited in theorizing gay men's purportedly diminished misogyny; some have theorized that because gay men – like women – are stigmatized by discourses of anti-femininity, they share a common experience of oppression (e.g., Coston & Kimmel, 2012) and thus should be allied in the fight against heteropatriarchy (Harnois, 2017).

However, popular culture is rife with anecdotal evidence for gay men's disgust with women's bodies, and women's genitalia in particular (e.g., Cheves, n.d.; Faye, 2015; Thornton, 2016; Williscroft-Ferris, 2016). These reactions are underscored by broader currents of gay male misogyny and antifemininity. Evidence suggests that gay and heterosexual men endorse similar levels of gender prejudice and objectification of women, are similarly invested in maintaining systems of male privilege, and oppose social equality for women at equal rates (Johnson & Samdahl, 2005; Kozak et al., 2009). Further, some gay men endorse negative perceptions of femininity itself – whether attached to women or not – and may engage in derogation of femininity to distance themselves from stereotypes which position gay men as feminine and thus as lesser (e.g., Hale & Ojeda, 2018; Hoskin, 2019). This form of anti-femininity, or regulation and systematic devaluation of femininity, has negative consequences for gay men and women alike (Hoskin, 2019); while misogyny specifically targets women, anti-

femininity targets expressions of femininity which can accompany, and indeed are stereotypically associated with, gay men (Hoskin, 2019).

Gay men's misogyny and rejection of femininity may be expressed particularly harshly toward women (e.g., in the form of explicit disgust at women's bodies) because gay men do not depend on relationships with women in the same way that heterosexual men do. That is, heterosexual men may temper hostile sexist attitudes with ideologies proffering the necessity of romantic and sexual partnerships with women (e.g., benevolent sexism; Glick & Fiske, 1996), but gay men do not share this reliance on women and may thus be free to express more hostile misogyny, like explicit disgust with women (Cultice & Rudman, under review).

That gay men's reactions to women's bodies often entail expressions of disgust (e.g., Cheves, n.d.; Faye, 2015; Thornton, 2016; Williscroft-Ferris, 2016) is particularly poignant given the role of disgust in intergroup relations, and particularly in prejudice toward gay men. Feelings of disgust, including sexual disgust (Tybur et al., 2013), are thought to serve an evolutionary aversion function by creating boundary demarcations such that people mark and avoid stimuli they perceive as disgusting; feelings of disgust toward other people are therefore highly consequential for social interaction (Hodson et al., 2014). Sex-related disgust produces avoidance of sexuality-related stimuli generally (Borg & De Jong, 2012; Van Overveld et al., 2013), while interpersonal disgust helps to maintain outgroup boundaries and reinforce social hierarchies (Hodson et al., 2014). Intergroup disgust is linked to prejudice and discrimination (Hodson et al., 2014). For example, a recent meta-analysis provided summary evidence of a strong positive association between feelings of disgust and negative attitudes toward gay men (Kiss et al., 2020). It is evident that not only is disgust linked to prejudice, but that disgust can be linked to sexuality and is linked to the prejudice and oppression that gay men themselves experience. For gay men, expressing disgust toward women and women's bodies may function to maintain their own gendered privilege (see also Johnson & Samdahl, 2005). Thus, though previous literature has theorized the heterosexual male gaze as the source of negative perceptions of labia, we suggest that the *gay male gaze* likely also confers negative evaluations and outcomes for women.

In sum, the male gaze is theorized to shape perceptions of women's genitalia, and this gaze is often attributed specifically to heterosexual men. However, we posit that gay men may enact this gaze to a degree similar to or greater than that of their heterosexual counterparts. Moving beyond heteronormative understandings of the male gaze and gaining a firmer understanding of how perceptions and evaluations of women's bodies are shaped by varying cultural forces has the potential to provide insight into novel social locations of misogyny which can then be targeted by interventions with the goal of improving psychosocial outcomes for women. Indeed, negative evaluations of labia appear to have significant consequences for women's well-being (e.g., Braun, 2019; Herbenick & Schick, 2011) and are thus an appropriate target for anti-misogyny intervention.

Women's Evaluations of Female Genitalia

Cisgender women in Western countries report persistent negative evaluations of their genitalia (e.g., Berman & Windecker, 2008; Braun & Wilkinson, 2001; Fahs, 2014). Negative self-evaluations are linked to problematic consequences for women's well-being, including feelings of abnormality (Braun, 2019), as well as decreased gynecological healthcare use, low sexual self-esteem, and hindered sexual satisfaction and pleasure (see Herbenick & Schick, 2011). Women's negative self-evaluations of their genitalia are theorized as resulting from the internalization of narrow labial ideals perpetuated by limited diversity in media portrayals of labia and the medicalization of labial diversity (Braun, 2009, 2010, 2019; Crouch, 2019; Herbenick & Reece, 2010; Sharp et al., 2016). Indeed, as reviewed above, critical understandings of labiaplasty and other forms of genital cutting (see Boddy, 2016) are rooted in reference to the male gaze. Labiaplasty seeking, then, can be viewed as seeking to appease this male gaze, though theorists are careful to note women's autonomy in bodily practices (see Braun, 2010 for a review of the debate around autonomy and female genital cosmetic surgery).

Lending support to the notion that the heterosexual male gaze contributes to internalized negative evaluations of labia – and, relatedly, to seeking labiaplasty – is the finding that lesbian women tend to have higher levels of genital satisfaction relative to their heterosexual counterparts (Jones & Nurka, 2015). Lesbian women tend also to have slightly higher levels of overall body satisfaction than heterosexual women, and report lower concerns about femininity and attractiveness on average (see Kruk et al., 2021; Morrison et al., 2004), a pattern theorized to result from lesbian women's heightened distance from the male gaze and, for some lesbian women, rejection of hetero-feminine appearance ideals (e.g., Brown, 1987; Fredrickson & Roberts, 1997; but also see Heffernan, 1996; Oswald & Matsick, 2020). Lesbian women's heightened genital satisfaction could also result from this distancing from the heterosexual male gaze. That is, if the heterosexual male gaze promotes narrow labial appearance ideals, it is likely that women with greater distance from this gaze would experience heightened genital appearance satisfaction, and correspondingly may be less likely to seek surgical alteration to their labia.[2]

Women's desire to appease, or to reject, the male gaze may inform their perceptions not only of their own genitalia, but also of labia more broadly. Indeed, Skoda et al. (2021) found that, in their mostly heterosexual sample, women were often more critical toward labial appearances than either men or non-binary individuals. This finding can be attributed to the internalization of negative cultural perceptions of labia, leading women who internalize these perceptions to evaluate all labia – not just their own – in contrast to the narrow ideal. Rejection of these norms may similarly extend to evaluations of all labia, such that women who reject labial ideals evaluate a wider variety of labial appearances more positively. Thus, we theorized that lesbian women – who appear to have greater distance from the male gaze and reject hetero-feminine appearance

[2]We are unaware of any data on rates of labiaplasty seeking by sexual orientation which could confirm this.

ideals at a heightened rate relative to their heterosexual counterparts (e.g., Brown, 1987; Fredrickson & Roberts, 1997) – would evaluate labia more positively than would heterosexual women.

The Current Studies

In the current set of studies, we examined sexual orientation and gender differences in labial perceptions and evaluations. Given gay men's endorsement of sexist and misogynistic ideologies (e.g., Cowie et al., 2019; Cultice & Rudman, under review; Hale & Ojeda, 2018), and their particularly explicit disgust with women's genitalia (e.g., Cheves, n.d.; Williscroft-Ferris, 2016), we hypothesized (H1) that gay men would evaluate labia more negatively than would heterosexual men. Further, given lesbian women's generally more positive self-evaluations of labia, suggesting lesser internalization of labial ideals (Jones & Nurka, 2015), we hypothesized the opposite pattern for women, such that (H2) lesbian women would evaluate labia more positively than would heterosexual women.

Though we used existing datasets for analysis (Oswald et al., 2022; Skoda et al., 2021), we conducted novel analyses not analyzed or presented elsewhere (i.e., of sexual orientation) and have excluded outcome measures from these existing datasets which are not relevant to the current research questions. Both Skoda et al. and Oswald et al. included a measure of "personal ideal" – that is, the degree to which individuals evaluated labial stimuli as approximating their own ideal for genital appearances. We dropped this outcome from consideration in the current analyses, given it is unclear whether gay men have any concept of such a "personal ideal." We retained outcomes that are not contingent on an individual's experiences or partner preferences, including perceptions of labial normalcy and perceptions of how well stimuli reflect a societal ideal for labia, and in Study 2, we also examined an outcome of disgust.

Study 1

Study 1's data were drawn from a larger dataset examining perceptions of pre- and post-labiaplasty images. We tested the hypothesis (H1) that gay men would evaluate labia more negatively – as lower in normalcy (H1a) and as less societally ideal (H1b) – than would heterosexual men. Further, we tested the hypothesis (H2) that lesbian women would evaluate labia more positively than would heterosexual women; specifically, as higher in normalcy (H2a) and as more societally ideal (H2b). We did not have specific hypotheses about time effects[3] or interactions of gender/sexual orientation and time effects between pre- and post-labiaplasty images but leveraged this information in the stimulus set to provide a more in-depth examination of gender/sexual orientation effects. To avoid reducing the information available, we thus report on these effects as well as our primary hypotheses.

[3]Primary effects of time (pre vs. post-labiaplasty) were established in Skoda et al. (2021), and the subset of the original sample which constitutes the current sample was included in the analyses establishing these effects. Thus, we did not hypothesize, aim to replicate, or interpret these effects in the current paper as they have already been established with the current sample.

Method

Participants

We recruited participants of any gender or sexual orientation identity aged 16 years or older from the research participant pool of a sizable Western Canadian university and through online sampling (e.g., Reddit, Facebook, Twitter, etc.). The study was presented as an assessment of opinions about the appearance of female genitalia. Student participants earned course credit in selected psychology classes; community participants were not compensated for participation. The initial sample included 6,201 participants. We removed those who failed to meet a 70% survey completion cutoff (n = 1,680) and 8 participants on suspicion of trolling. For the purposes of this investigation, we included only participants who identified within the gender binary, and who self-identified as either heterosexual or gay/lesbian.[4] We recognize the limitations of this approach, but given the low number of nonbinary individuals in the sample who identified as either heterosexual or gay/lesbian (n = 10 and n = 13, respectively), and given our hypotheses rest upon the gender binary and discrete sexual identities based upon that binary, we opted to exclude nonbinary participants as well as those with sexual orientation identities other than heterosexual or lesbian/gay. These exclusions resulted in a final sample of 3,304 participants ranging in age from 16 to 80 years (M_{age} = 27.58; SD_{age} = 10.24). Of these, 2,057 (62%) participants identified as heterosexual men, 1,036 (31%) identified as heterosexual women, 83 (3%) as gay men, and 128 (4%) as lesbian women.

A between-groups ANOVA revealed significant differences in age, $F(3, 3300) = 26.71$, $p < .001$, $\eta^2 = .24$, with heterosexual men significantly older (M = 28.72; SD = 10.91) than heterosexual women (M = 26.09; SD = 8.71), lesbian women (M = 24.56; SD = 9.27), and gay men (M = 22.59; SD = 6.80). We found no age differences between gay men and lesbian women, or between heterosexual women and lesbian women. All other pairwise comparisons were statistically significant ($p < .05$). Chi-square tests of association indicated significant sexual orientation and gender identity (SOGI) grouping differences in highest level of completed education, χ^2 (9, N = 3304) = 87.25, $p < .01$, ethnicity, χ^2 (12, N = 3304) = 179.59, $p < .01$, and relationship status, χ^2 (3, N = 3304) = 42.58, $p < .001$. See Table 1 in online supplemental materials for detailed demographic information.

Stimuli

As reported by Skoda et al. (2021), the stimuli included 16 close-up, before-and-after images of 8 vulvas (one preoperative and one postoperative image of each) obtained from the web pages of cosmetic surgery clinics specializing in labiaplasty (see Figure 1 in online supplemental materials). All images selected were White to control for any racial preferences or differing standards among participants and because the cosmetic sites consulted had primarily White images available. All vulvas

[4]Participants in both Study 1 and 2 could identify their sexual orientation from a number of choices, including straight/heterosexual, gay, lesbian, and bisexual, or could specify another option not included in the above list.

Table 1. Simple effects analyses: Study 1.

	Pre-operative Rating *M (SE)*	Post-operative Rating *M (SE)*
	Normalcy	
Heterosexual Men	3.32 (.02)$_a$	3.74 (.01)$_a$
Heterosexual Women	3.07 (.03)$_b$	3.58 (.02)$_b$
Gay Men	3.04 (.09)$_b$	3.66 (.07)$_{ab}$
Lesbian Women	3.59 (.08)$_c$	3.89 (.05)$_c$
	Societal Ideal	
Heterosexual Men	2.85 (.01)$_a$	3.49 (.01)$_a$
Heterosexual Women	2.50 (.02)$_b$	3.33 (.02)$_b$
Gay Men	2.60 (.07)$_{bc}$	3.47 (.06)$_a$
Lesbian Women	2.73 (.06)$_c$	3.56 (.05)$_a$

Normalcy and societal ideal range = 1–5. Within columns, differing subscripts indicate statistically significant differences across SOGI groups ($p < .05$). All pairwise comparisons at the imagery level of analysis were significant ($p < .001$).

were hair-free in both preoperative and postoperative images to control for grooming preferences, as well as to better highlight the distinct appearance of labia. We were careful to select images without extraneous visuals that might otherwise detract attention from the labia (e.g., genitalia with razor burn, ingrown hairs, or skin abrasions). The 16 images were informally evaluated by a team of 5 independent human sexuality researchers to confirm they matched the selection criteria.

Measures

Demographics

Participants provided information about their age, gender, ethnic background, sexual orientation, relationship status, and education level.

Vulva Rating Scale

For each image, participants responded to the following three questions: 1) "How normal does this vulva look?," 2) "How well does this vulva represent your own personal 'ideal' in terms of appearance?" and 3) "How well does this vulva represent the societal 'ideal' in terms of appearance?"[5] Participants responded to each question on a 5-point Likert scale ranging from 1 *(very abnormal/very poorly)* to 5 *(very normal/excellent)*, where higher scores indicated more positive perceptions of the image. We collapsed ratings across stimuli into preoperative and postoperative averages for perceived normality and consistency with the societal ideal. Skoda et al. (2021) indicated strong internal consistency (α = .92 for preoperative normalcy, .88 for preoperative societal ideal, .81 for postoperative normalcy, and .80 for postoperative societal ideal). In the present study, internal consistency was .92 for preoperative normalcy, .88 for preoperative societal ideal, .81 for postoperative normalcy, and .78 for postoperative societal ideal.

[5]Only items regarding perceived normalcy (question 1) and societal ideal (question 3) were analyzed for the purposes of this study. We did not examine the question of personal ideal (question 2) given that this question may be influenced by attraction (or lack thereof) to women's genitals; for example, it is unclear whether a gay man would hold a personal ideal for the appearance of women's genitalia. We return to this point in the General Discussion.

Design and Procedure

We collected data between January and June 2019. Participants completed an online survey hosted via the survey software Qualtrics. Participants first completed the demographic questionnaire and were then shown the series of images. Each participant reviewed all 16 images in random order, with one image on screen at a time. The rating questions were displayed below each image so that participants could respond with that specific vulva in mind. This procedure was repeated until participants had viewed all 16 images. Participants were unaware that the 16 images actually depicted 8 preoperative and 8 postoperative vulvas until they received debriefing at the completion of the survey.

Results

Study 1 employed two separate two-way mixed ANOVAs to compare the effect of SOGI grouping status (between-groups; heterosexual men; heterosexual women, gay men, lesbian women) on perceptions of normalcy and societal ideal of preoperative and postoperative labial images (within-groups).

Normalcy

We found significant main effects of time, $F(1, 3300) = 411.15$, $p < .001$, $\eta p^2 = .11$, and SOGI grouping, $F(3, 3300) = 31.55$, $p < .001$, $\eta p^2 = .03$ on perceptions of labial normalcy. These effects were qualified by a significant higher order interaction, $F(3, 3300) = 9.23$, $p < .001$, $\eta p^2 = .01$. Table 1 shows simple effects analyses (see Field, 2018; Howell, 2010) and reports standard errors for all means. All four SOGI groups rated the postoperative labial images as more normal than their preoperative counterparts ($p < .001$).

In testing our primary hypotheses, we found support for H1a only at the preoperative time point, such that gay men ($M = 3.04$; $SE = .09$) evaluated labia as significantly less normal than did heterosexual men ($M = 3.32$; $SE = .02$), $p < .001$. Postoperative evaluations did not differ significantly ($p > .05$). We found support for H2a across both time points; lesbian women evaluated both preoperative ($M = 3.59$; $SE = .06$) and postoperative ($M = 3.89$; $SE = .05$) labia as more normal than heterosexual women ($M_{preoperative} = 3.07$; $M_{postoperative} = 3.58$, p's $< .001$).

Societal Ideal

We also found significant main effects of time, $F(1, 3300) = 1512.54$, $p < .001$, $\eta p^2 = .31$, and SOGI grouping, $F(3, 3300) = 53.54$, $p < .001$, $\eta p^2 = .05$ on perceptions of labia as representing the societal ideal. These main effects were qualified by a significant interaction, $F(3, 3300) = 27.77$, $p < .001$, $\eta p^2 = .03$. Simple effects analyses of the interaction indicated that all pairwise comparisons at the imagery level were significant ($p < .001$); all SOGI groups rated the postoperative labial images as more societally ideal than their preoperative counterparts (see Table 1).

In testing our primary hypotheses, we found partial support for H1b; gay men evaluated preoperative ($M = 2.60$; $SE = .07$),

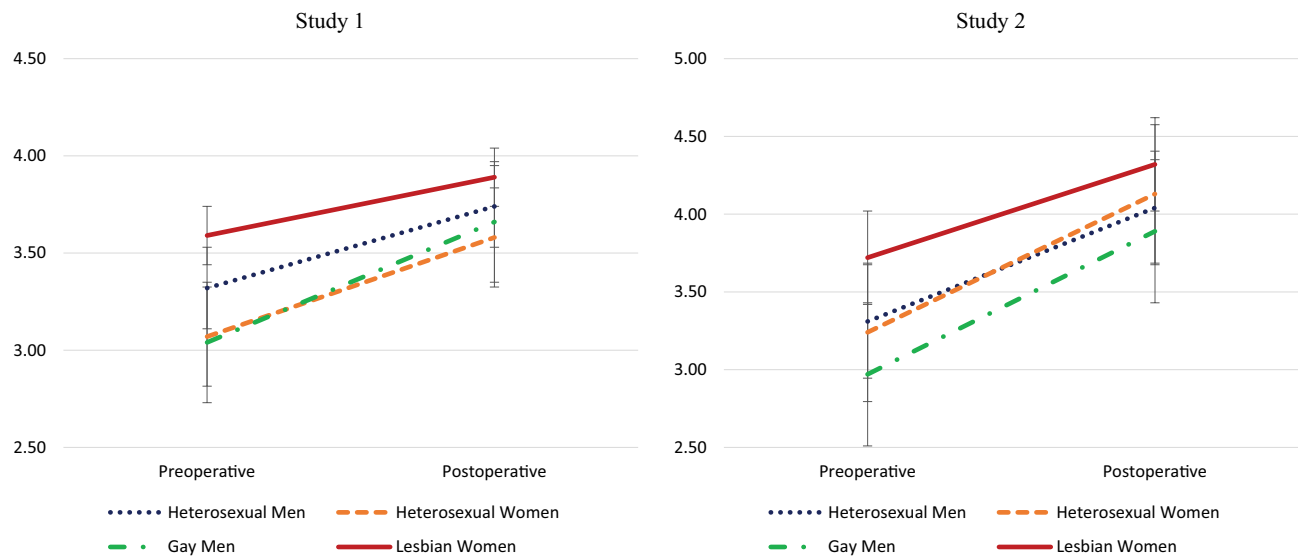

Figure 1. Simple effects analyses for normalcy in Study 1 and Study 2. Normalcy and societal ideal range = 1–5. All pairwise comparisons at the imagery level of analysis were significant in both studies ($p < .001$). Standard error bars are shown.

but not postoperative ($M = 3.47$; $SE = .06$) labia as less societally ideal than did their heterosexual counterparts ($M_{preoperative} = 2.85$, $p = .001$; $M_{postoperative} = 3.49$, $p = .718$). We found support for H2b across time. Lesbian women evaluated both preoperative images ($M = 2.73$; $SE = .06$) and postoperative images ($M = 3.56$; $SE = .05$) as more societally ideal than heterosexual women ($M_{preoperative} = 2.50$, $p < .001$; $M_{postoperative} = 3.33$, $p < .001$).

Study 1 Discussion

Overall, we found partial support for our H1, and support for H2. Gay men evaluated preoperative labia more negatively than their heterosexual counterparts, but this effect did not hold for postoperative images; gay and heterosexual men did not differ in their evaluations of the normalcy or fit with societal ideal of postoperative labia. Our hypothesis that gay men would evaluate labia more negatively – as lower in normalcy and as less societally ideal – than heterosexual men was thus supported only for preoperative labia. Our hypothesis that lesbian women would evaluate labia more positively than heterosexual women was supported across both pre- and postoperative images.

Taken together, these findings suggest that gay men may be particularly attuned to labial ideals or unwilling to accept deviation from these ideals. This could be attributed to lesser exposure to diverse labia among gay men; that is, gay men may be less likely to see labia through outlets other than media, which tends to portray only idealized genitalia (Braun, 2009, 2010, 2019; Crouch, 2019; Herbenick & Reece, 2010; Sharp et al., 2016).

With regard to the exposure hypothesis, we concede that heightened perceptions of normalcy may be related to greater exposure to labial diversity among heterosexual men and lesbian women. This is supported by existing research suggesting that heterosexual women have few opportunities to view unaltered labia (e.g., Crouch, 2019; Herbenick & Schick, 2011); however, it is unclear if heterosexual men and lesbian women would have significantly greater opportunity to do so. Though it is possible that exposure to the labia of sexual partners may provide an array of genital diversity, this explanation relies upon the notion that these individuals have a number of sexual partners with diverse labial appearances, such that they can extract this information on labial diversity. Further, it could be posited that these effects may arise from heightened exposure to pornography focusing on women's genitalia; however, pornographic displays of labia are heavily restricted in diversity (e.g., Braun, 2005; Liao & Creighton, 2007).

As we theorize, an alternative explanation may be that gay men are disgusted by women's genitalia – particularly those that deviate from narrow labial ideals. In Study 2, we aimed to test this hypothesis by assessing perceptions of labia as disgusting.

Study 2

The data analyzed in Study 2 were drawn from a larger dataset examining perceptions of labia by race. We used these data to replicate our findings from Study 1 with a more diverse set of stimuli and extend our findings with additional outcomes. In Study 1, we controlled the race of the stimuli such that all stimuli were White labia; in Study 2, we included both White and Black labia stimuli. Additionally, we added a disgust measure to our outcomes. We again tested the hypotheses (H1) that gay men would evaluate labia more negatively than would heterosexual men, and (H2) that lesbian women would evaluate labia more positively than would heterosexual women. Novel to Study 2, we hypothesized (H1c) that gay men would evaluate labia as more disgusting than heterosexual men, and that (H2c) lesbian women would evaluate labia as less disgusting than their heterosexual counterparts.

Method

Participants

Participant recruitment strategy and inclusion criteria were identical to those used in Study 1. The initial sample comprised

5,944 participants; we excluded 555 for failing to complete any of the dependent measures, and 1038 for failing to meet a 70% survey completion rate.[6] As in Study 1, only participants who identified within the gender binary – and who identified their sexual orientation as either heterosexual or gay/lesbian – were included in analyses, resulting in a final sample of 2,825 participants ranging in age from 16 to 82 years (M_{age} = 27.59; SD_{age} = 9.43). Of these, 1,880 (67%) participants identified as heterosexual men, 741 (26%) identified as heterosexual women, 62 (2%) as gay men, and 142 (5%) as lesbian women. Table 1 in the online supplemental materials provides demographic information for this sample.

A between-groups ANOVA revealed significant differences in age, $F(3, 2821) = 9.66$, $p < .001$, $\eta^2 = .24$, with heterosexual men (M = 28.01; SD = 9.92) and heterosexual women (M = 27.38: SD = 8.51) significantly older than gay men (M = 23.34; SD = 6.79) and lesbian women (M = 24.85; SD = 7.22). We found no age differences between heterosexual men and women, or between gay men and lesbian women. Chi-square tests of association indicated significant SOGI grouping differences in highest level of completed education, χ^2 (9, N = 2826) = 58.74, $p < .01$, ethnicity, χ^2 (12, N = 2826) = 44.67, $p < .01$, and relationship status, χ^2 (3, N = 2826) = 53.12, $p < .001$[7] (see Table 1 in online supplemental materials).

Stimuli

The stimuli consisted of 12 before-and-after images of 6 vulvas (3 Black and 3 White) that had undergone a labiaplasty procedure. We obtained images from the web pages of cosmetic surgery clinics specializing in labiaplasty (see Figure 1 in online supplemental materials); images were labeled by race/ethnicity on the webpage. Selection criteria for images were the same as in Study 1. Two independent human sexuality researchers – also involved in the selection criteria from Study 1 – informally evaluated these 12 images to ensure they matched the selection criteria.

Measures

Demographics

As in Study 1, participants responded to a demographic questionnaire.

Vulva Rating Scale

Participants responded to Study 1's questions about normality, personal ideal,[8] and societal ideal, with a fourth question: "How disgusting do you find this vulva?" Participants responded to the first three questions on a 5-point Likert scale ranging from 1 *(very abnormal/very poorly)* to 5 *(very normal/excellent)*, where higher scores indicated more positive perceptions of the image. The third question was rated on a 5-point Likert scale ranging from 0 *(not at all disgusting)* to 4 *(very disgusting)*, where higher scores indicated less favorable perceptions of the image. We collapsed ratings across stimuli into preoperative and postoperative averages, where higher scores indicated greater endorsement of each construct. Cronbach's alphas were very strong, indicating α = .94 for preoperative normalcy, .91 for preoperative societal ideal, .95 for preoperative disgust, .80 for postoperative normalcy, .81 for postoperative societal ideal, and .89 for postoperative disgust.

Design and Procedure

We collected data between January and June of 2021. We recruited participants to complete an anonymous online survey through the software Qualtrics. The study was presented as an assessment of opinions about the appearance of female genitalia. After providing informed consent, participants responded to the demographic questionnaire and saw the images in random order. Specifically, the 6 preoperative and 6 postoperative images were presented onscreen, one-at-a-time in random order, with each rating question displayed beneath each image to facilitate responding with that specific vulva in mind. Participants were unaware that the 12 images depicted only 6 vulvas (one pre-operative and one post-operative image of each) until they completed the survey and were provided information in the debriefing form.

Results

Study 2 employed a similar analysis plan to Study 1. Two separate two-way mixed ANOVAs compared the effect of SOGI status (between-groups) on perceptions of normalcy and societal ideal of preoperative and postoperative labial images (within-groups). A third two-way mixed ANOVA explored the effect of SOGI status (between-groups) on perceptions of disgust (within-groups).

Normalcy

We found significant main effects in perceptions of labial normalcy between imagery conditions, $F(1, 5620) = 1143.10$, $p < .001$, $\eta p^2 = .17$, and across SOGI groups, $F(3, 5620) = 24.78$, $p < .001$, $\eta p^2 = .01$. These effects were qualified by a significant higher order interaction, $F(3, 5620) = 20.10$, $p < .001$, $\eta p^2 = .01$. Table 2 shows simple effects analyses and reports standard errors for all means. All four SOGI groups rated the postoperative labial images as more normal than their preoperative counterparts ($p < .001$).

We found support for H1a across time points. Gay men evaluated both preoperative (M = 2.97; SE = .09) and postoperative (M = 3.89; SE = .06) labial images as less normal than their heterosexual counterparts ($M_{preoperative}$ = 3.31, $p < .001$; $M_{postoperative}$ = 4.04, p = .017). Further, supporting H2a, lesbian women evaluated both preoperative (M = 3.72; SE = .06) and postoperative (M = 4.32; SE = .04) labial images as more normal than their heterosexual counterparts ($M_{preoperative}$ = 3.24, $p < .001$; $M_{postoperative}$ = 4.13, $p < .001$). Figure 1 compares Study 1 and Study 2 effects for normalcy.

Societal Ideal

We found significant main effects of time, $F(1, 5620) = 3703.58$, $p < .001$, $\eta p^2 = .40$, and SOGI grouping, $F(3, 5620) = 16.65$,

[6]Missing data were replaced on dependent measures using multiple imputation procedures; no more than 2% of data was replaced for any item (Garson, 2019).

[7]Demographic variables were recoded (collapsed across education, ethnicity, and relationship status) to satisfy statistical assumptions of chi-square in Study 2. Recoding was consistent with that described in Study 1.

[8]As in Study 1, perceptions of personal ideal were omitted from analyses.

Table 2. Simple effects analyses Study 2.

	Pre-operative Rating *M (SE)*	Post-operative Rating *M (SE)*
	Normalcy	
Heterosexual Men	3.31 (.02)$_a$	4.04 (.01)$_a$
Heterosexual Women	3.24 (.03)$_b$	4.13 (.02)$_b$
Gay Men	2.97 (.09)$_c$	3.89 (.06)$_c$
Lesbian Women	3.72 (.06)$_d$	4.32 (.04)$_d$
	Societal Ideal	
Heterosexual Men	2.69 (.01)$_a$	3.73 (.01)$_a$
Heterosexual Women	2.40 (.02)$_b$	3.89 (.02)$_b$
Gay Men	2.32 (.07)$_b$	3.68 (.06)$_a$
Lesbian Women	2.70 (.05)$_a$	4.08 (.04)$_c$
	Disgust	
Heterosexual Men	0.65 (.02)$_a$	0.28 (.01)$_a$
Heterosexual Women	0.88 (.02)$_b$	0.39 (.01)$_b$
Gay Men	1.50 (.08)$_c$	0.98 (.05)$_c$
Lesbian Women	0.44 (.05)$_d$	0.18 (.03)$_d$

Normalcy and societal ideal range = 1–5. Disgust range = 0–4. Within columns, differing subscripts indicate statistically significant differences across SOGI groups ($p < .01$). All pairwise comparisons at the imagery level of analysis were significant ($p < .001$).

$p < .001$, $\eta p^2 = .01$ on perceptions of labia as representing the societal ideal. The interaction effect was also significant, $F(3, 5620) = 121.39$, $p < .001$, $\eta p^2 = .06$. All groups evaluated the postoperative labia as more societally ideal relative to the preoperative labia ($p < .001$).

We found partial support for H1b; gay men evaluated preoperative ($M = 2.32$; $SE = .07$), but not postoperative ($M = 3.68$; SE = .06), labia as less societally ideal than did their heterosexual counterparts ($M_{preoperative} = 2.69$, $p < .001$; $M_{postoperative} = 3.73$, $p = .361$). We found support for H2b across time. Lesbian women evaluated both preoperative images ($M = 2.70$; $SE = .05$) and postoperative images ($M = 4.08$; $SE = .04$) as more societally ideal than heterosexual women ($M_{preoperative} = 2.40$, $p < .001$; $M_{postoperative} = 3.89$, $p < .001$). Table 2 illustrates the simple effect results, and Figure 2 compares Study 1 and Study 2 effects.

Disgust

Finally, we found significant main effects in perceptions of labial disgust across time, $F(1, 5624) = 530.62$, $p < .001$, $\eta p^2 = .09$, and SOGI groups, $F(3, 5624) = 76.39$, $p < .001$, $\eta p^2 = .04$; there was also a significant interaction, $F(3, 5624) = 18.89$, $p < .001$, $\eta p^2 = .01$. All groups evaluated the preoperative labia as more disgusting than the postoperative labia ($p < .001$).

We found support for H1c across time; gay men evaluated both preoperative ($M = 1.50$; $SE = .08$) and postoperative ($M = 0.98$; $SE = .05$) images as more disgusting than did heterosexual men ($M_{preoperative} = 0.65$, $p < .001$; $M_{postoperative} = 0.28$, $p < .001$). Supporting H2c, we found that lesbian women evaluated both preoperative ($M = 0.44$; $SE = .05$) and postoperative ($M = 0.18$; $SE = .03$) images as less disgusting than did heterosexual women ($M_{preoperative} = 0.88$, $p < .001$; $M_{postoperative} = 0.39$, $p < .001$). Figure 3 displays these effects.

Study 2 Discussion

We again found partial support for our hypotheses, replicating most effects from Study 1 in a novel and more diverse stimulus set. Across both pre- and postoperative labia, gay men evaluated labia as significantly less normal than did heterosexual men, and lesbian women evaluated labia as significantly more normal than did heterosexual women. In terms of the perceived societal ideal, we found our expected pattern of results for preoperative labia, such that gay men perceived labia as less societally ideal, and lesbian women perceived labia as more societally ideal, than their heterosexual counterparts. For postoperative labia, however, we found no differences between gay and heterosexual men on the societal ideal outcome, though our hypothesis for women was still supported. Finally, we found that gay men rated both pre- and postoperative labia as significantly more disgusting than did heterosexual men, and that lesbian women

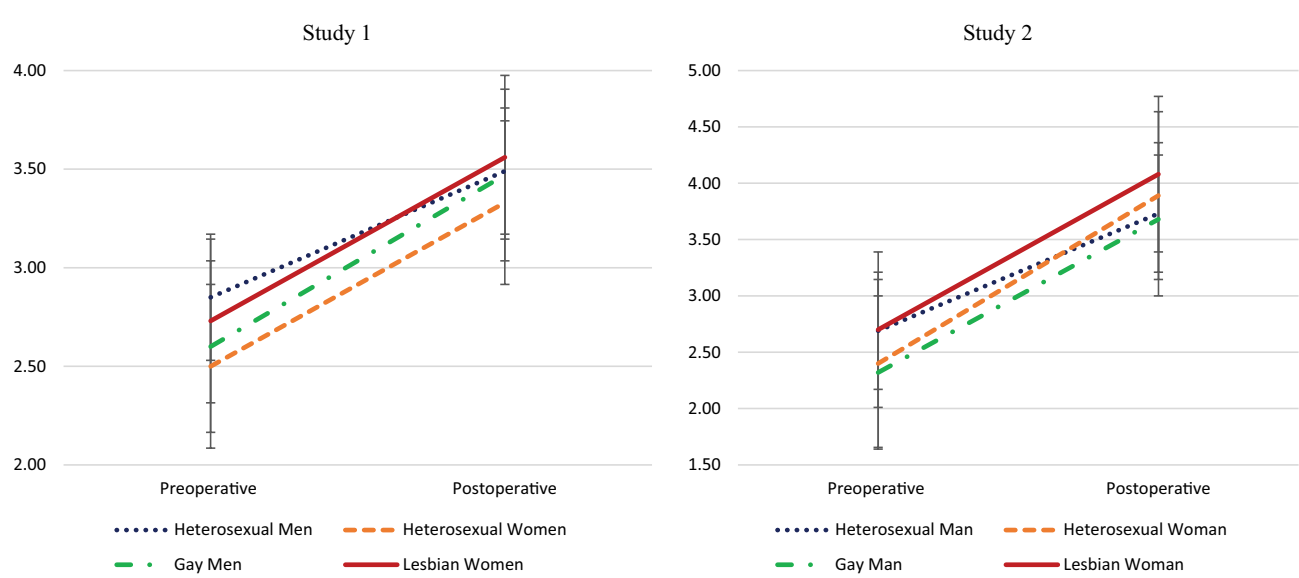

Figure 2. Simple effects analyses for societally ideal in Study 1 and Study 2. Normalcy and societal ideal range = 1–5. All pairwise comparisons at the imagery level of analysis were significant in both studies ($p < .001$). Standard error bars are shown.

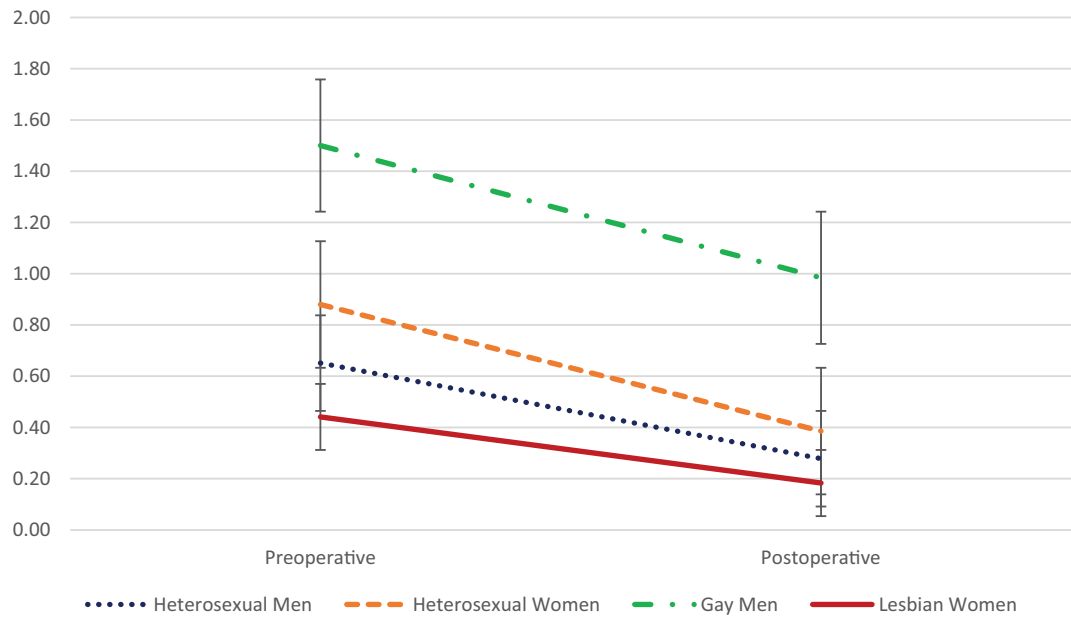

Figure 3. Simple effects analyses for disgust in Study 2. Disgust range = 0–4. All pairwise comparisons at the imagery level of analysis were significant ($p < .001$). Standard error bars are shown.

rated both pre- and post-operative labia as significantly less disgusting than did heterosexual women.

Our overarching hypothesis (H1) that gay men would evaluate labia more negatively than heterosexual men was thus supported, with the exception of our findings pertaining to the societal ideal outcome on postoperative labia. Our overarching hypothesis (H2) that lesbian women would evaluate labia more positively than heterosexual women was supported across both pre- and postoperative images.

Summary Meta-Analysis

To summarize the magnitude of the effect size across studies, and to leverage the statistical power afforded by meta-analytic approaches to best understand the current effects, we conducted mini meta-analyses on our observed effects for normalcy and societal ideal, respectively.[9] We use the term mini meta-analysis to refer to a meta-analysis of studies within a single manuscript, as opposed to a more traditional meta-analysis of data from multiple publications (see Goh et al., 2016). Conducting a mini meta-analysis of studies within a single manuscript improves statistical power (relative to analysis within a single study) and therefore can assist in detecting smaller effects. Additionally, a mini meta-analysis provides an estimate of the summary effect size across studies, improving the accuracy of the estimate and lowering cognitive burden for readers by integrating the results of all studies into one summary finding (Goh et al., 2016).

Given our primary hypotheses pertained to specific within-gender differences, we conducted independent mini meta-analyses for men and for women in our sample, as well as separate analyses for our multiple outcomes; we note the dependency between our two relatively similar outcomes of normalcy and societal ideal (see Goh et al., 2016). We used a fixed effects approach in which the mean effect size was weighted by sample size, given the methodological homogeneity between our studies as well as our goal of summarizing the current effects (see Goh et al., 2016; Hedges & Vevea, 1998). We averaged effect sizes (Cohen's d) across time (pre- versus post-labiaplasty) both because time effects were not of primary interest, and to manage dependency of effects (see Borenstein et al., 2009; Goh et al., 2016). Thus, we report summary estimates for normalcy and societal ideal which represent group differences across time.

For men, across our two studies we found robust support for our hypotheses for normalcy ($d = 0.25$, $Z = 2.94$, $p = .002$, 95% CI [0.08, 0.41]) and societal ideal ($d = 0.25$, $Z = 2.90$, $p = .002$, 95% CI [0.08, 0.41]). We found small summary effects supporting H1, indicating that heterosexual men consistently demonstrated more positive evaluations of labia than did gay men. For women, across our two studies we found robust support for H2 for normalcy ($d = 0.46$, $Z = 6.91$, $p < .001$, 95% CI [0.33, 0.56]) and societal ideal ($d = 0.35$, $Z = 5.32$, $p < .001$, 95% CI [0.22, 0.48]). We found medium summary effects indicating that lesbian women consistently demonstrated more positive evaluations of labia than did heterosexual women.

General Discussion

Across two studies and summary fixed-effects meta-analyses, we tested the hypotheses that gay men would evaluate labia more negatively than heterosexual men, and that lesbian women would evaluate labia more positively than heterosexual women. We conducted novel secondary analyses on existing datasets to test these hypotheses. We found robust support for both hypotheses: Gay men evaluated labia more negatively than heterosexual men, and lesbian women evaluated labia

[9]We could not conduct a meta-analysis of results for disgust as those data were only assessed in a single study (Study 2).

more positively than heterosexual women, across two studies with differing stimuli, and across a variety of outcome measures. The magnitude of these effects was unexpectedly larger for our comparisons between sexual orientation groups among women than for our comparisons among men.

Gay and Heterosexual Men's Evaluations of Labia

Our findings align with our theorizing that gay men are more harsh evaluators of women's genitalia than heterosexual men, and demonstrate novel empirical evidence of gay men's disgust with women's genitalia. Though gay men's ratings tended to be around or above the scale midpoint and thus not explicitly negative, they were significantly more negative than heterosexual men's ratings, particularly for pre-operative images. These results are consistent with recent literature indicating gay men's endorsement of misogynistic ideologies (e.g., Cultice & Rudman, under review), and indicate gay men as underacknowledged reinforcers of narrow appearance ideals for women. The notion that gay men endorse appearance ideals among women is alluded to in existing work on friendships between gay men and heterosexual women, in which gay men position heterosexual women within gay social networks as "fag hags" – a label defined by the woman's perceived failure to meet feminine norms of thinness and attractiveness (Moon, 1995).

Drawing upon the notion that gay men and women share social networks, the current findings suggest a pressing need to acknowledge and incorporate gay men's perceptions of women's bodies into literatures on misogyny, objectification, and body image more generally. The notion of gay men as evaluators of and commentators on women's bodies has not been directly interrogated in the literature, despite anecdotal evidence suggesting gay men's disgust toward women's bodies (e.g., Cheves, n.d.; Faye, 2015; Thornton, 2016; Williscroft-Ferris, 2016). It is possible that gay men's evaluations of women's bodies may be particularly pernicious given the social closeness of gay men to women. Gay men and women share similar social experiences (e.g., marginalization) and may assume a sense of allyship (e.g., Baldor, 2019; Cultice & Rudman, under review). This closeness may render gay men's negative evaluations particularly harmful to women; existing literature suggests that discrimination from presumed or perceived allies can be particularly harmful (e.g., McKinnon, 2017).

Lesbian and Heterosexual Women's Evaluations of Labia

As hypothesized, our findings among women demonstrated a converse sexual orientation pattern, such that lesbian women evaluated labia more positively overall than heterosexual women. Our findings could be taken as indicative that lesbian women have internalized labial ideals to a lesser degree than their heterosexual counterparts (see Jones & Nurka, 2015); heterosexual women overall endorsed negative evaluations of labia relative to most other groups, including heterosexual men, which is consistent with the notion that heterosexual women have internalized narrow labial ideals (Braun, 2009, 2010, 2019; Crouch, 2019; Herbenick & Reece, 2010; Sharp et al., 2016). Indeed, the differences noted herein between lesbian and heterosexual women call into question the prominent notion that women of all sexual orientations are equally vulnerable to the consequences of heterofeminine appearance norms (e.g., Huxley et al., 2014). Further, the current work calls into question the underlying notion that the heteronormative male gaze drives these ideals.

Key Findings and Potential Intervention Strategies

Overall, we found robust support for the hypotheses that gay men would evaluate labia more negatively than heterosexual men, and that lesbian women would evaluate labia more positively than heterosexual women. Our results also indicated that mean labia ratings generally were around the scale midpoint or slightly higher, and standard deviations relatively low, suggesting that the majority of participants perceived the stimuli as relatively normal, somewhat ideal, and not necessarily disgusting. However, as we discuss further below, there were important demographic differences in these ratings by participant gender and sexual orientation.

That overall perceptions of labia were neither particularly positive nor negative is somewhat encouraging given the strong cultural history of negative evaluations of labia (Nurka & Jones, 2013). We hope that these findings may represent a shifting tide in perceptions of labia. In line with Skoda et al. (2021), we believe that heightened opportunities for exposure to the natural variability in labial appearance may contribute to fostering more positive perceptions of labia and of bodily diversity generally. In fact, if exposure to idealized imagery (e.g., in media or pornography) does play a role in establishing narrow labial ideals, exposure to natural diversity – for example, in sex education programs – may provide a potential area to intervene upon these constricting norms and their consequences (see also Skoda et al., 2021).

Similarities and Differences: Further Theorizing

Though not hypothesized, we note that heterosexual men and lesbian women tended to cluster together in responses, as did heterosexual women and gay men. That is, heterosexual men and lesbian women tended to have similar means for most outcomes, as did heterosexual women and gay men. This clustering lends itself to important alternative explanations of our findings. For example, it is suggestive of attraction as an explanatory framework; heterosexual men and lesbian women share features of attraction to women. We find our theoretical explanation for these results to be more compelling than an attraction or exposure framework for a number of reasons.

With regard to attraction, we specifically selected outcomes not contingent on attraction to labia; in fact, perceptions of normalcy and of fit with societal ideals specifically rely on judgments of norms (i.e., norms of labial normalcy and of accepted societal ideals) rather than on personal judgments. Indeed, our theorizing focuses on endorsement of these norms, and as a corollary, on evaluations of women's bodies as not fitting within these norms. Further, though our disgust outcome focuses on a more personal evaluation, we do not believe disgust and attraction to be necessary opposites; we posit that

disgust and attraction may coexist. For example, some men attracted to women report being disgusted by and ambivalent toward women's genitals (e.g., Roberts et al., 1996; see also Braun & Wilkinson, 2003). Further, though this attraction framing would suggest women being aroused by men's genitalia, some women report disgust upon viewing images of men's genitals (e.g., Oswald et al., 2020; Ringrose et al., 2021).

It therefore seems that our measure of disgust is not simply capturing the inverse of attraction. Literature on sexual disgust suggests that sexual *arousal* and disgust are oppositional (e.g., Zsok et al., 2017); however, we find it unlikely that participants were aroused by the disembodied images we presented here. In fact, the literature on sexual disgust also indicates that sexual stimuli encountered out of context – such as disembodied labia – are perceived to hold high disgust qualities (Rozin et al., 1995). We remain open to the possibility that this disembodiment may differentially contribute to negative perceptions of labia, as groups other than gay men may have more information from which to "fill in" the missing context. It would be useful to explicitly assess the role of exposure to genitalia in contributing to evaluations. For example, future research could assess sexual experience with women and exposure to pornographic or explicit images of women's genitalia as potential predictors of evaluations, which would help to parse the potential contributions of exposure.

Given the current findings, we conclude that the observed clustering lends itself to strong theoretical implications for research examining gender differences. Our findings suggest the importance of adopting somewhat of an intersectional perspective when assessing individual differences (i.e., looking within groups and considering the complex constellation of advantage and/or disadvantage based on group membership). Specifically, our work suggests the utility of examining sexual orientation differences, above and beyond gender differences. By examining sexual orientation differences *within* gender, we uncovered a novel pattern of findings obscured by previous work examining gender differences within this paradigm (Oswald et al., 2022; Skoda et al., 2021). Further, though we theorized and examined differences (by sexual orientation) in the current work, we identified both the expected differences as well as unexpected similarities (by gender), though we note that we did not statistically test for these similarities but rather acknowledged them post hoc based on visual assessment. It would be fruitful for current work to examine gender *similarities* in tandem with, or instead of, focusing on group differences. Integrating Bayesian frameworks for similarity testing may be particularly beneficial for feminist work aiming to contextualize demographic comparisons in broader systems (see Matsick et al., 2021).

Limitations and Future Directions

The present work is subject to the limitations of the underlying data upon which we conducted secondary analyses. A primary limitation of the present work is selection bias. The sensitive topic and graphic nature of the stimuli in the current study may have turned potential participants away due to discomfort with the topic of interest; indeed, volunteer bias is a noted issue in sexuality research (Dawson et al., 2019; Wiederman, 1999). The nature of this bias may have impacted the effects observed in the present study, as our self-selected sample – who knowingly chose to view and evaluate labia – may have had more positive perceptions of labia than a random sample (e.g., in a population-based study; see also Oswald et al., 2022; Skoda et al., 2021). Future research on labial perceptions would benefit substantially from the use of random, representative samples.

Further, the stimuli we used likely represent extremes given the context from which they were drawn; surgeons may portray labia to be maximally non-ideal in pre-operative images and maximally ideal in post-operative images in order to generate positive perceptions of their surgical interventions. Though this differentiation was central to the earlier publications from which the current data were drawn (Oswald et al., 2020; Skoda et al., 2021), in the current context, it would be useful to utilize images representing the natural diversity of labial appearances.

Additionally, we acknowledge that our gay and lesbian samples were relatively small and homogenous, and thus not necessarily representative of sexual minority populations at large. Though our meta-analytic approach provides greater statistical power to our conclusions, we maintain that inferences drawn from this sample should not be generalized to other sexual minority populations (e.g., bisexual or pansexual people). Further, our sample overall was predominantly White and relatively young, constraining generalization of our results to more racially, ethnically, and age diverse samples, who may differ in their internalized norms for labia given cultural and generational differences in these norms.

The present findings, and the findings of the prior work from which our data were drawn (Oswald et al., 2022; Skoda et al., 2021), indicate that post-operative labia are generally perceived as more normal and ideal, and as less disgusting, than pre-operative labia. Though these time effects were not the focus of the current set of studies, we find it important to note here that these positive evaluations of post-operative labia do not reflect an inherent superiority of these medically altered genitalia. These effects likely reflect the ideals of the Western sociocultural context from which our data was primarily drawn, and we do not seek to reinforce these sociocultural ideals. Rather, we examine these ideals in reference to their potential harms, particularly in the context of prejudice toward women.

With regard to prejudice toward women, it is important to note that we do not empirically address here how disgust – particularly gay men's disgust – toward women's genitalia is enacted in prejudiced behavior. This remains an open empirical question; for example, one could test whether individual differences in labial disgust among gay men predict prejudiced attitudes toward women, or whether priming gay men with images of "disgusting" labia influences their subsequent behavior toward women. Based on the current findings, we do not claim that disgust is inherently a prejudiced experience; rather, we theorize that this disgust is likely to be linked to prejudice. We ground this argument in existing evidence indicating links between disgust responses and prejudiced behavior (e.g., Kiss et al., 2020).

Disliking of certain genitalia may be associated with people's sexual preferences; we do not aim to change or influence individuals' reactions to certain genitalia and we discourage others from interpreting these conclusions in that light. Instead, we propose that reactions to labia could be linked to broader sexist ideals, and that connection – between negative reactions to labia and sexism – is an issue of empirical and theoretical interest to studying sexism. We do not suggest that all gay men at all times are disgusted by labia and therefore inherently prejudiced toward women, but rather that perceptions of labia as disgusting may be linked to a broader and often overlooked pattern of misogyny among gay men.

Conclusion

Across two studies we tested the hypotheses that gay men would evaluate labia more negatively than heterosexual men, and that lesbian women would evaluate labia more positively than heterosexual women. We conducted fixed-effects mini meta-analyses to estimate summary effect sizes across studies for two outcomes: perceptions of labial normalcy and fit with societal ideals. In Study 2, we additionally assessed an outcome of disgust. We found support for our hypotheses: for both normalcy and societal ideal, we found small effects such that gay men evaluated labia more negatively than heterosexual men, and medium effects such that lesbian women evaluated labia more positively than heterosexual women. These effects were robust across two studies with differing stimuli. The effect for disgust, only assessed in Study 2, also supported our hypotheses: Gay men rated our labial stimuli as more disgusting than any other demographic group, and lesbian women rated the stimuli as less disgusting than did heterosexual women. Our findings align with recent literature suggesting gay men's endorsement of sexist and misogynistic attitudes. Given the underlooked nature of gay men's hostility toward women, we suggest that the current work necessitates reexamination of claims that appearance norms for women are uniformly upheld by the heterosexual male gaze, and call for greater attention to the dynamics between gay men and women, particularly regarding the outcomes of these dynamics for women's well-being.

Disclosure Statement

No potential conflict of interest was reported by the authors.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

ORCID

Flora Oswald http://orcid.org/0000-0003-1491-1860
Cory L. Pedersen http://orcid.org/0000-0002-9769-3207
Jes L. Matsick http://orcid.org/0000-0003-4368-3211

References

Baldor, T. (2019). No girls allowed?: Fluctuating boundaries between gay men and straight women in gay public space. *Ethnography*, *20*(4), 419–442. https://doi.org/10.1177/1466138118758112

Berman, L., & Windecker, M. A. (2008). The relationship between women's genital self-image and female sexual function: A national survey. *Current Sexual Health Reports*, *5*(4), 199–207. https://doi.org/10.1007/s11930-008-0035-4

Boddy, J. (2016). The normal and the aberrant in female genital cutting: Shifting paradigms. *HAU: Journal of Ethnographic Theory*, *6*(2), 41–69. https://doi.org/10.14318/hau6.2.008

Borenstein, M., Hedges, L., Higgens, J., & Rothstein, H. (2009). *Introduction to meta-analysis*. Wiley.

Borg, C., & De Jong, P. J. (2012). Feelings of disgust and disgust-induced avoidance weaken following induced sexual arousal in women. *PLoS One*, *7*(9), e44111. https://doi.org/10.1371/journal.pone.0044111

Braun, V. (2005). In search of (better) sexual pleasure: Female genital 'cosmetic' surgery. *Sexualities*, *8*(4), 407–424. https://doi.org/10.1177/1363460705056625

Braun, V. (2009). Selling the "perfect" vulva. In C. J. Heyes & M. R. Jones (Eds.), *Cosmetic surgery: A feminist primer* (pp. 133–149). Ashgate.

Braun, V. (2010). Female genital cosmetic surgery: A critical review of current knowledge and contemporary debates. *Journal of Women's Health*, *19*(7), 1393–1407. https://doi.org/10.1089/jwh.2009.1728

Braun, V. (2019). Selling a perfect vulva? Selling a "normal" vulva! In S. M. Creighton & L. M. Liao (Eds.), *Female genital cosmetic surgery: Solution to what problem?* (pp. 23–32). Cambridge University Press.

Braun, V., & Wilkinson, S. (2001). Socio-cultural representations of the vagina. *Journal of Reproductive and Infant Psychology*, *19*(1), 17–32. https://doi.org/10.1080/02646830020032374

Braun, V., & Wilkinson, S. (2003). Liability or asset? Women talk about the vagina. *Psychology of Women Section Review*, *5*(2), 28–42.

Brown, L. S. (1987). Lesbians, weight, and eating: New analyses and perspectives. In Boston Lesbian Psychologies Collective (Ed.), *Lesbian psychologies: Explorations and challenges* (pp. 294–310). University of Illinois Press.

Calogero, R. M. (2004). A test of objectification theory: The effect of the male gaze on appearance concerns in college women. *Psychology of Women Quarterly*, *28*(1), 16–21. https://doi.org/10.1111/j.1471-6402.2004.00118.x

Cheves, A. (n.d.). *15 signs you're a gay misogynist*. Advocate. https://www.advocate.com/politics/2016/12/08/15-signs-youre-gay-misogynist#media-gallery-media-1

Chibnall, K., McDonald, K., & Kirkman, M. (2019). Pathologising diversity: Medical websites offering female genital cosmetic surgery in Australia. *Culture, Health, & Sexuality*, *22*(1), 1–17. https://doi.org/10.1080/13691058.2019.1574029

Clerico, C., Lari, A., Mojallal, A., & Boucher, F. (2017). Anatomy and aesthetics of the labia minora: The ideal vulva? *Aesthetic Plastic Surgery*, *41*(3), 714–719. https://doi.org/10.1007/s00266-017-0831-1

Coston, B. M., & Kimmel, M. (2012). Seeing privilege where it isn't: Marginalized masculinities and the intersectionality of privilege. *Journal of Social Issues*, *68*(1), 97–111. https://doi.org/10.1111/j.1540-4560.2011.01738.x

Cowie, L. J., Greaves, L. M., & Sibley, C. G. (2019). Sexuality and sexism: Differences in ambivalent sexism across gender and sexual identity. *Personality and Individual Differences*, *148*, 85–89. https://doi.org/10.1016/j.paid.2019.05.023

Crouch, N. S. (2019). Female genital anatomy. In S. M. Creighton & L. M. Liao (Eds.), *Female genital cosmetic surgery: Solution to what problem?* (pp. 23–32). Cambridge University Press.

Crouch, N. S., Deans, R., Michala, L., Liao, L. M., & Creighton, S. (2011). Clinical characteristics of well women seeking labial reduction surgery: A prospective study. *BJOG: An International Journal of Obstetrics and Gynaecology*, *118*(12), 1507–1510. https://doi.org/10.1111/j.1471-0528.2011.03088.x

Cultice, R., & Rudman, L. A. (under review). *Are gay men less sexist than straight men?*

Dawson, S. J., Huberman, J. S., Bouchard, K. N., McInnis, M. K., Pukall, C. F., & Chivers, M. L. (2019). Effects of individual difference variables, gender, and exclusivity of sexual attraction on volunteer bias in sexuality research. *Archives of Sexual Behavior*, *48*(8), 2403–2417. https://doi.org/10.1007/s10508-019-1451-4

Fahs, B. (2014). Genital panics: Constructing the vagina in women's qualitative narratives about pubic hair, menstrual sex, and vaginal self-image. *Body Image*, *11*(3), 210–218. https://doi.org/10.1016/j.bodyim.2014.03.002

Faye, S. (2015, November 11). *The gay men who hate women*. VICE. https://www.vice.com/en/article/jpyz8k/the-gay-men-who-hate-women

Field, A. (2018). *Discovering statistics using IBM SPSS statistics* (5th ed.). Sage.

Fredrickson, B. L., & Roberts, T. A. (1997). Objectification theory: Toward understanding women's lived experiences and mental health risks. *Psychology of Women Quarterly*, *21*(2), 173–206. https://doi.org/10.1111/j.1471-6402.1997.tb00108.x

Garson, G. D. (2019). *Missing values analysis and data imputation*. Statistical Associates Publishers.

Glick, P., & Fiske, S. T. (1996). The Ambivalent Sexism Inventory: Differentiating hostile and benevolent sexism. *Journal of Personality and Social Psychology*, *70*(3), 491–512. https://doi.org/10.1037/0022-3514.70.3.491

Goh, J. X., Hall, J. A., & Rosenthal, R. (2016). Mini meta-analysis of your own studies: Some arguments on why and a primer on how. *Social and Personality Psychology Compass*, *10*(10), 535–549. https://doi.org/10.1111/spc3.12267

Goodman, M. P., Placik, O. J., Benson, R. H., Miklos, J. R., Moore, R. D., Jason, R. A., Matlock, D. L., Simopolous, A. F., Stern, B. H., Stanton, R. A., Kolb, S. E., & Gonzalez, F. (2010). A large multicenter outcome study of female genital plastic surgery. *The Journal of Sexual Medicine*, *7*(4), 1565–1577. https://doi.org/10.1111/j.1743-6109.2011.02254.x

Gunter, J. (2019). *The vagina bible: The vulva and the vagina: Separating the myth from the medicine*. Citadel Press.

Hale, S. E., & Ojeda, T. (2018). Acceptable femininity? Gay male misogyny and the policing of queer femininities. *European Journal of Women's Studies*, *25*(3), 310–324. https://doi.org/10.1177/1350506818764762

Harnois, C. E. (2017). Intersectional masculinities and gendered political consciousness: How do race, ethnicity and sexuality shape men's awareness of gender inequality and support for gender activism? *Sex Roles*, *77*(3), 141–154. https://doi.org/10.1007/s11199-016-0702-2

Hedges, L. V., & Vevea, J. L. (1998). Fixed-and random-effects models in meta-analysis. *Psychological Methods*, *3*(4), 486–504. https://doi.org/10.1037/1082-989X.3.4.486

Heffernan, K. (1996). Eating disorders and weight concern among lesbians. *International Journal of Eating Disorders*, *19*(2), 127–138. https://doi.org/10.1002/(SICI)1098-108X(199603)19:2<127::AID-EAT3>3.0.CO;2-P

Herbenick, D., & Reece, M. (2010). Outcomes assessment: Development and validation of the Female Genital Self-Image Scale. *The Journal of Sexual Medicine*, *7*(5), 1822–1830. https://doi.org/10.1111/j.1743-6109.2010.01728.x

Herbenick, D., & Schick, V. (2011). *Read my lips: A complete guide to the vagina and vulva*. Rowman & Littlefield Publishers.

Hodson, G., Kteily, N., & Hoffarth, M. (2014). Of filthy pigs and subhuman mongrels: Dehumanization, disgust, and intergroup prejudice. *TPM: Testing, Psychometrics, Methodology in Applied Psychology*, *21*(3), 267–284. https://doi.org/10.4473/TPM21.3.3

Hoskin, R. A. (2019). Femmephobia: The role of anti-femininity and gender policing in LGBTQ+ people's experiences of discrimination. *Sex Roles*, *81*(11), 686–703. https://doi.org/10.1007/s11199-019-01021-3

Howell, D. C. (2010). *Statistical methods for psychology* (7th ed.). Cengage.

Huxley, C. J., Clarke, V., & Halliwell, E. (2014). A qualitative exploration of whether lesbian and bisexual women are 'protected' from sociocultural pressure to be thin. *Journal of Health Psychology*, *19*(2), 273–284. https://doi.org/10.1177/1359105312468496

International Society for Aesthetic Plastic Surgery. (2020). *ISAPS international survey on aesthetic/cosmetic procedures performed in 2020*. https://www.isaps.org/wp-content/uploads/2022/01/ISAPS-Global-Survey_2020.pdf

Johnson, C. W., & Samdahl, D. M. (2005). "The night they took over": Misogyny in a country-western gay bar. *Leisure Sciences*, *27*(4), 331–348. https://doi.org/10.1080/01490400590962443

Jones, B., & Nurka, C. (2015). Labiaplasty and pornography: A preliminary investigation. *Porn Studies*, *2*(1), 62–75. https://doi.org/10.1080/23268743.2014.984940

Kiss, M. J., Morrison, M. A., & Morrison, T. G. (2020). A meta-analytic review of the association between disgust and prejudice toward gay men. *Journal of Homosexuality*, *67*(5), 674–696. https://doi.org/10.1080/00918369.2018.1553349

Kite, M. E., & Deaux, K. (1987). Gender belief systems: Homosexuality and the implicit inversion theory. *Psychology of Women Quarterly*, *11*(1), 83–96. https://doi.org/10.1111/j.1471-6402.1987.tb00776.x

Kozak, M., Frankenhauser, H., & Roberts, T.-A. (2009). Objects of desire: Objectification as a function of male sexual orientation. *Psychology of Men & Masculinity*, *10*(3), 225–230. https://doi.org/10.1037/a0016257

Kranz, D., Pröbstle, K., & Evidis, A. (2017). Are all the nice guys gay? The impact of sociability and competence on the social perception of male sexual orientation. *Psychology of Men & Masculinity*, *18*(1), 32–39. https://doi.org/10.1037/men0000034

Kruk, M., Matsick, J. L., & Wardecker, B. M. (2021). Femininity concerns and feelings about menstruation cessation among lesbian, bisexual, and heterosexual women: Implications for menopause. *Journal of Women's Health*, *30*(12), 1751–1760. https://doi.org/10.1089/jwh.2020.8757

Liao, L. M., & Creighton, S. M. (2007). Requests for cosmetic genitoplasty: How should healthcare providers respond? *BMJ*, *334*(7603), 1090–1092. https://doi.org/10.1136/bmj.39206.422269.BE

Martínez Pérez, G., Mariano, E., & Bagnol, B. (2015). Perceptions of men on puxa-puxa, or labia minora elongation, in Tete, Mozambique. *The Journal of Sex Research*, *52*(6), 700–709. https://doi.org/10.1080/00224499.2014.949612

Matsick, J. L., Kruk, M., Oswald, F., & Palmer, L. (2021). Bridging feminist psychology and open science: Feminist tools and shared values inform best practices for science reform. *Psychology of Women Quarterly*, *45*(4), 412–429. https://doi.org/10.1177/03616843211026564

Mazloomdoost, D., Crisp, C. C., Westermann, L. B., Benbouajili, J. M., Kleeman, S. D., & Pauls, R. N. (2015). Survey of male perceptions regarding the vulva. *American Journal of Obstetrics and Gynecology*, *213*(5), e7319. https://doi.org/10.1016/j.ajog.2015.05.063

McKinnon, R. (2017). Allies behaving badly: Gaslighting as epistemic injustice. In I. J. Kidd, J. Medina, & G. Pohlhaus (Eds.), *The Routledge handbook of epistemic injustice* (pp. 167–174). Routledge.

Moon, D. (1995). Insult and inclusion: The term fag hag and gay male "community." *Social Forces*, *74*(2), 487–510. https://doi.org/10.1093/sf/74.2.487

Morrison, M. A., Morrison, T. G., & Sager, C. L. (2004). Does body satisfaction differ between gay men and lesbian women and heterosexual men and women? A meta-analytic review. *Body Image*, *1*(2), 127–138. https://doi.org/10.1016/j.bodyim.2004.01.002

Mullinax, M., Herbenick, D., Schick, V., Sanders, S. A., & Reece, M. (2015). In their own words: A qualitative content analysis of women's and men's preferences for women's genitals. *Sex Education*, *15*(4), 421–436. https://doi.org/10.1080/14681811.2015.1031884

Mulvey, L. (1989). Visual pleasure and narrative cinema. In *Visual and other pleasures* (pp. 14–26). Palgrave Macmillan.

Nurka, C. (2019). The colonial race sciences. In *Female genital cosmetic surgery* (pp. 83–124). Palgrave Macmillan.

Nurka, C., & Jones, B. (2013). Labiaplasty, race and the colonial imagination. *Australian Feminist Studies*, *28*(78), 417–442. https://doi.org/10.1080/08164649.2013.868332

Oswald, F., Lopes, A., Skoda, K., Hesse, C. L., & Pedersen, C. L. (2020). I'll show you mine so you'll show me yours: Motivations and personality variables in photographic exhibitionism. *The Journal of Sex Research*, *57*(5), 597–609. https://doi.org/10.1080/00224499.2019.1639036

Oswald, F., & Matsick, J. L. (2020). Examining responses to women's same-sex performativity: Perceptions of sexual orientation and implications for bisexual prejudice. *Journal of Bisexuality*, *20*(4), 417–455. https://doi.org/10.1080/15299716.2020.1820420

Oswald, F., Walton, K. A., Khera, D., Champion, A., & Pedersen, C. L. (2022). Evaluations of Black and White female genitalia by labiaplasty status: A pre-registered contextualization, replication, and extension of findings on labial perceptions. *The Journal of Sex Research*, (Advance online publication). https://doi.org/10.1080/00224499.2022.2050667

Richardson-Self, L. (2019). Cis-hetero-misogyny online. *Ethical Theory and Moral Practice*, *22*(3), 573–587. https://doi.org/10.1007/s10677-019-10019-5

Ringrose, J., Regehr, K., & Whitehead, S. (2021). Teen girls' experiences negotiating the ubiquitous dick pic: Sexual double standards and the normalization of image based sexual harassment. *Sex Roles*, *85*(9), 558–576. https://doi.org/10.1007/s11199-021-01236-3

Roberts, C., Kippax, S., Spongberg, M., & Crawford, J. (1996). Going down': Oral sex, imaginary bodies and HIV. *Body & Society*, *2*(3), 107–124. https://doi.org/10.1177/1357034X96002003006

Rozin, P., Nemeroff, C., Horowitz, M., Gordon, B., & Voet, W. (1995). The borders of the self: Contamination sensitivity and potency of the body apertures and other body parts. *Journal of Research in Personality*, *29*(3), 318–340. https://doi.org/10.1006/jrpe.1995.1019

Sharp, G., Tiggemann, M., & Mattiske, J. (2015). Predictors of consideration of labiaplasty: An extension of the tripartite influence model of beauty ideals. *Psychology of Women Quarterly*, *39*(2), 182–193. https://doi.org/10.1177/0361684314549949

Sharp, G., Tiggemann, M., & Mattiske, J. (2016). Factors that influence the decision to undergo labiaplasty: Media, relationships, and psychological well-being. *Aesthetic Surgery Journal*, *36*(4), 469–478. https://doi.org/10.1093/asj/sjv270

Skoda, K., Oswald, F., Shorter, L., & Pedersen, C. L. (2021). Perceptions of female genitalia following labiaplasty. *The Journal of Sex Research*, *58*(7), 943–950. https://doi.org/10.1080/00224499.2020.1808563

Szymanski, D. M., Mikorski, R., & Dunn, T. L. (2019). Predictors of sexual minority men's sexual objectification of other men. *Journal of Social and Personal Relationships*, *36*(11–12), 3631–3650. https://doi.org/10.1177/0265407519832669

Thornton, K. J. (2016, February 2). *Vaginas aren't gross, but here's my theory about why some gay men say they are*. Huffpost. https://www.huffpost.com/entry/vaginas-arent-gross_b_6298116

Tybur, J. M., Lieberman, D., Kurzban, R., & DeScioli, P. (2013). Disgust: Evolved function and structure. *Psychological Review*, *120*(1), 65–84. https://doi.org/10.1037/a0030778

van Overveld, M., de Jong, P. J., Peters, M. L., van Lankveld, J., Melles, R., & ter Kuile, M. M. (2013). The Sexual Disgust Questionnaire: A psychometric study and a first exploration in patients with sexual dysfunctions. *The Journal of Sexual Medicine*, *10*(2), 396–407. https://doi.org/10.1111/j.1743-6109.2012.02979.x

Veale, D., Eshkevari, E., Ellison, N., Costa, A., Robinson, D., Kavouni, A., & Cardozo, L. (2014). Psychological characteristics and motivation of women seeking labiaplasty. *Psychological Medicine*, *44*(3), 555–566. https://doi.org/10.1017/S0033291713001025

Wiederman, M. W. (1999). Volunteer bias in sexuality research using college student participants. *The Journal of Sex Research*, *36*(1), 59–66. https://doi.org/10.1080/00224499909551968

Williscroft-Ferris, L. (2016, January 21). *Misogyny is alive and well in the gay community – just look at 'Gay men touch vaginas for the first time!'* Independent. https://www.independent.co.uk/voices/misogyny-is-alive-and-well-in-the-gay-community-just-look-at-gay-men-touch-vagina-for-the-first-time-a6825866.html

Wood, M. J. (2004). The gay male gaze: Body image disturbance and gender oppression among gay men. *Journal of Gay & Lesbian Social Services*, *17*(2), 43–62. https://doi.org/10.1300/J041v17n02_03

Zsok, F., Fleischman, D. S., Borg, C., & Morrison, E. (2017). Disgust trumps lust: Women's disgust and attraction towards men is unaffected by sexual arousal. *Evolutionary Psychological Science*, *3*(4), 353–363. https://doi.org/10.1007/s40806-017-0106-8