The Relationship Between Same-Sex Sexual Experience, Sexual Distress, and Female Sexual Dysfunction

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ABSTRACT

Introduction. There is little research estimating the occurrence of female sexual dysfunction (FSD) in women with same-sex sexual experience and none incorporating a key feature of standardized DSM-IV diagnoses—sexual distress.

Aim. To investigate the prevalence of FSD in women with and without same-sex sexual experience and whether any effects of same-sex sexual experience on women’s sexual functioning are moderated by frequency and type of sexual activity.

Methods. The sample consisted of 5,998 female individuals aged 18–49 years. Prevalence of FSD was assessed by the Female Sexual Function Index and an abbreviated version of the Female Sexual Distress Scale. Measurement of frequency and variation in sexual activity was conducted using a modified version of the Derogatis Sexual Functioning Inventory. Lifetime same-sex experience was assessed with a single question.

Main Outcome Measures. Prevalence estimates of FSD. Odds ratios (ORs) with 95% confidence intervals (CIs) for the subsample-specific, mediating role of frequency and mode of sexual activities on FSD.

Results. Women with same-sex sexual experience (13.6%) engaged significantly more in all sexual activities ($P < 0.01$) compared with women without such experience. They further reported significantly more desire ($Z = 3.1, P < 0.05$) and satisfaction problems ($z = 10.6, P < 0.001$). When controlling patterns of sexual activities no significant effect of same-sex sexual experience on desire could be detected (OR 1.1, CI 95% 0.9–1.2, $P > 0.1$), whereas the significant association between same-sex sexual experience and sexual dissatisfaction remained (OR 1.28, CI 95% 1.1–1.6, $P < 0.05$). Sexual distress was significantly more prevalent in women with same-sex sexual experience (23%) compared with their counterparts (19%).

Conclusions. Same-sex sexual experience is related, both directly and indirectly, to FSD. Testing of the mediating factors underlying this association may offer important clues into the etiology of FSD in general. The results further highlight the need to consider sexual distress as a multidimensional concept.


Key Words. Female Sexual Dysfunction; Sexual Orientation; Same-Sex Sexual Experience; Sexual Distress; FSFI; Sexual Function in Nonheterosexually Experienced Women

Background

Literature on sexual function and dysfunction in nonheterosexually experienced (and attracted) women is inadequate and ambiguous. Most of the sexual medical research in nonheterosexual women has focused on inhibited sexual desire, frequency of sexual contact, and sexual satisfaction [1–3]. Moreover, the literature tends to conflate same-sex attractions, experiences, and nonheterosexual identities (e.g., “lesbian”) into one “sexual orientation” construct (or uses same-sex
coupling as indicative of same-sex sexuality), which may not capture the heterogeneity of “nonheterosexuality” observed in women. Here, we will briefly review this literature but would point out to readers that while this literature appears to take the term “sexual orientation” at face value, the trait appears to be determined in many different ways. For our purposes, we choose to measure nonheterosexual experience without making the assumption that this variable determines sexual orientation in any way (e.g., as “lesbian”).

In terms of frequency of sexual activities, current comparative research provides mixed evidence of lower rates of sexual activity in same-sex couples as compared with opposite-sex couples, but also suggests that less frequent engagement in sexual activity may not necessarily be indicative of dysfunction [4–7]. Findings from the Adult Couple study, for example, showed much similarity between sexual satisfaction of lesbian and heterosexual women in relationships, with 68% of both lesbians and heterosexual wives being classified as satisfied with their sex life [4]. As a potential explanation for the lower frequency of sexual activities in female same-sex couples, Blumstein and Schwartz suggested that women have difficulties in taking the lead or feel uncomfortable in the role as sexual initiators. Nichols on the other hand, proposed the phenomenon of gender socialization, which can lead women to feel repressed and ignore sexual feelings—an impact that is magnified in female same-sex relationships [8].

The little research directly comparing sexual functioning in lesbian-identified women and heterosexual-identified women, apart from low libido, shows no evidence for higher rates of female sexual dysfunction (FSD) in the nonheterosexual women. While Laumann et al. [9], and Matthews et al. [10] did not find a higher risk for sexual function disturbances among women in same-sex relationships than among women in opposite-sex relationships, Nichols and colleagues found fewer sexual problems, including less difficulty reaching orgasm, fewer problems lubricating, less pain, and less sexual guilt among lesbian women compared with heterosexual participants [11, 12]. Similarly, Breyer et al. [13] used the Female Sexual Function Index (FSFI) to find that the risk for any sexual dysfunction was more common in heterosexual (51%) and bisexual women (45%), compared with lesbian-identified women (29%).

However, all previous studies failed to incorporate standardized Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) diagnosis of FSD [9–12]. In 1994, “marked distress or interpersonal difficulty” was added to the criteria sets for all the sexual dysfunctions in the DSM-IV to differentiate dysfunction from a normal variant of functioning [14]. According to this, significant personal distress in relation to one’s sexual problem is regarded a primary diagnostic criterion in the diagnosis of FSD. Failing to assess FSD-related personal distress produces estimates of FSD that are widely agreed to be inflated [15]. The ambiguity of the results demonstrates the need for future research to use uniform, clinical definitions of FSD and more accurate assessment instruments in order to allow accurate comparison of sexual functioning in women with heterosexual and nonheterosexual attractions, experiences, and identities.

Furthermore, it is feasible to assume that not only frequencies but also types of sexual activities differ between women with and without same-sex experience. For example, exclusively heterosexual women might engage in vaginal intercourse more often than their nonheterosexual counterparts. In other words, differences in FSD prevalence might not be directly influenced by the same-sex interest but rather by the different patterns of sexual activities. This assumption is further supported by the findings of a recent study conducted by our research group that found types and frequency and types of sexual activity to mediate the effects of sexual orientation on ejaculatory dysfunction in men [16]. With the observation that there is a decoupling between sexual experiences and activities, attractions and identities has been borne out by a landmark population-level study by Dunne et al. who reported that approximately 64% of men and 67% of women, self-identified as “heterosexual,” reported at least one occasion of same-sex sexual experience (defined as sexual excitement or genital contact) [17]. Similarly, approximately 46% of men and 69% of women who self-identified as “heterosexual” reported at least one occasion of same-sex sexual attraction. Thus, for purposes of our study, we focus on measuring the construct of “nonheterosexual experience” in our population of women and do not tie this to sexual orientation.

**Aim**

The aim of the present study was to test, for the first time, the association between nonheterosexual experience and FSD by estimating the prevalence of FSD with inclusion of sexual distress as a diagnostic criterion using validated measures. Previous research has indicated that women who
engage in same-sex sexual activities differ from exclusively heterosexual women in frequency and types of sexual activities. We therefore decided to further test whether any effects of same-sex experience on women’s sexual functioning were moderated by frequency and types of sexual activities.

Methods
Data were available for 5,998 individuals who were a subset from the Genetics of Sex and Aggression (GSA) sample. The GSA sample consists of two data sweeps, which were carried out in 2005 and 2006, respectively. The first data collection targeted 33–43-year-old twins. Questionnaires were sent to these individuals followed by a reminder letter, and later a new questionnaire, which was returned by 2,267 females, resulting in a response rate of 45% (for more information on the sample acquisition, see reference [18]). The second data collection targeted twins aged 18–33 years and their >18-year-old siblings. There was no overlap between the two data collections. A total of 23,577 individuals, 7,680 of them female twins and 3,983 female siblings, were contacted by post and asked if they would be interested in completing a sexuality-related questionnaire. Participants who consented to participate were given the option of completing the questionnaire by post or online through a secure webpage. A total of 6,601 females responded to the survey. The response rates were 56.2% for the female twins (N = 4,425) and 54.6% for the female siblings (N = 2,176); of these, 6.4% (N = 428) had incomplete data. When the data collections were combined, a total response rate of 52.9% (N = 8,868) was achieved. Females with more than 5 of the 19 items in the FSFI and/or more than two items of the Female Sexual Distress Scale (FSDS) missing were dropped from the sample [18]. To maximize the number of individuals for analyses—in cases where participants had answered less than 5 of the 19 items in the FSFI and/or less than 2 items of the FSDS—missing values were imputed with item-specific means of the nonmissing values, separately calculated for four different age groups.

For both data collections, the participants’ addresses were obtained from the Finnish population registry. In the information sent to the participants, the voluntary and anonymous nature of the participation was explained. The research plan for the first data collection was approved by the Ethics Committee of the Department of Psychology at Abo Akademi University and for the second data collection by the Ethics Committee of the Abo Akademi University.

Measures
FSD
The multidimensional, 19-item Female Sexual Function Index (FSFI) was used to investigate problems with sexual functioning during the past 4 weeks [19]. The self-report questionnaire measures six dimensions of female sexual functioning: desire, arousal, lubrication, orgasm, satisfaction, and pain. In addition, a diagnostic cutoff score (26.55) for potential classification of total FSD, allowing differentiation of women with and without sexual dysfunction was developed, using means of standard receiver operating characteristic curves [20]. Response options were on a Likert-type scale ranging from 1 to 5 for items 1, 2, 15, and 16. For all other items, the range was from 0 to 5 with the supplementary option “no sexual activity.” More details on response options, domain score computation, and domain factor weights can be found in Rosen et al. [19]. The instrument has been previously validated in this twin sample and shown to have excellent psychometric properties [18]. Low scores on the FSFI indicate more problems with sexual functioning and high scores indicate fewer problems.

Sexual Distress
To investigate the presence of sexual distress, a shortened version of the self-report questionnaire FSDS was used [21]. In the present study, the respondents were asked to fill in 7 of the original 12 items, all beginning with the same preamble: How often did you, during the last 30 days, feel: (i) distressed about your sex life; (ii) guilty about sexual difficulties; (iii) stressed about sex; (iv) sexually inadequate; (v) regrets about your sexuality; (vi) embarrassed about sexual problems; and (vii) dissatisfied with your sex life? Response options are on a 5-point scale, ranging from “never” (0) to “always” (4), with a higher score indicating increased sexual distress. A cutoff score of 13 was used to classify women into “distressed” and “not distressed.” The psychometric properties of the original, 12-item instrument have been evaluated and replicated in several clinical trials [21,22].

Frequency of Sexual Activity
We measured frequency and variation in sexual activity using a modified version of Section III (Drive) from the Derogatis Sexual Functioning Inventory (DSFI) [23,24]. The DSFI measures
constructs believed to be fundamental to successful sexual functioning (e.g., drive, body image, sexual satisfaction) with 10 substantive dimensions. The dimension “Drive” reflects a composite summary measure of libidinal erotic interests expressed in five behavioral domains of sexual intercourse, masturbation, kissing and petting, sexual fantasy, and ideal frequency of intercourse. In our modified version, we made the following changes: (i) dividing the intercourse item into vaginal intercourse and anal intercourse; (ii) adding oral sex as an item to the inventory; and (iii) specifying the masturbation item as referring to masturbation. Individuals were asked how frequently they engaged in each type of behavior using a 9-point scale ranging from 0 (no engagement) to 8 (at least four times a day).

Number of Partners
A number of sexual partners were assessed with the following two questions: “In the last year, with how many different partners have you had a sexual relationship?” and “In the last 5 years, with how many different partners have you had a sexual relationship?” Participants were instructed to reply with the corresponding numeric value.

Steady Sexual Relationship Status
Relationship status was assessed with the following yes–no question: “Do you have a steady sexual partner?”

Same-Sex Sexual Behavior
Same-sex sexual behavior was determined using the following yes–no question: “Have you ever engaged in sexual activity with another woman?”

Duration of Relationship
Relationship duration was assessed with the question: “For how long have you been together with your current partner?” Response options were on a 6-point scale, ranging from 1 (less than a month) to 6 (over 10 years).

Statistical Analysis
Data normality was evaluated through the Kolmogorov–Smirnov test. Non-normal distributed variables were subject to either logarithmic or square-root transformation. To investigate the association between same-sex experience and FSD, we used the item measuring any same-sex sexual behavior to predict sexual problems on the various domains using univariate and multivariate linear regression analysis. Prevalence rates of FSD reported in this study were based on the discrimination between functional and dysfunctional women according to the FSFI cutoff score of 26.55—with inclusion of reported sexual distress [19]. The creation of the domain specific cutoff scores was conducted using receiver operating curve (ROC) based on the cutoff value for total FSD (26.55)—an approach that has been used before in other studies for creation of sample-specific FSFI cutoff scores [19,20]. ROC produces a range of possible cut-points and indicates the optimal thresholds from a diagnostic test result, i.e., the best sensitivity to 1-specificity trade-off. All tests were two-tailed. Age and duration of relationship were used as covariates in all regression analyses. Unpaired t-tests were used to compare variable means in women with and without same-sex sexual experience. All statistical analyses were conducted using STATA software (StataCorp LP, StataCorp. 2007; Stata Statistical Software: Release 10. College Station, TX, USA). Dependence between the twins was accounted for by using the cluster function in STATA, which is a form of conditional regression.

Results
Of the 5,998 women who responded to the item inquiring whether they had ever been sexually involved with another woman, 814 (13.6%) gave an affirmative response, and 5,184 women (86.4%) reported that they had no same-sex sexual experience. Same-sex experience was weakly, albeit significantly, correlated with age ($r_{\text{Pearson}} = -0.04$, $P < 0.01$), indicating that women with same-sex experience were likely to be younger than exclusively heterosexual women. A total of 4,010 heterosexual women (78.7%) and 645 (80.3%) non-heterosexual women reported being in a steady relationship at the time of this survey. Women with same-sex sexual experience reported having engaged in sexual activities with more partners in the last year ($M = 2.1$, standard deviation [SD] = 2.9 vs. $M = 1.4$, SD = 1.7) and the last 5 years ($M = 3.4$, SD = 6.9 vs. $M = 2.1$, SD = 2.9) than did exclusively heterosexual women. Both differences were significant ($t = 10.06$, $P < 0.001$ and $t = 11.72$, $P < 0.001$). Consistent with this finding, women with same-sex experience reported a shorter relationship duration compared with exclusively heterosexual women ($r_{\text{Pearson}} = -0.11$, $P < 0.001$).

The frequencies of different types of sexual activities—including kissing, fantasies, masturbation, oral sex, vaginal sex, and anal sex—in non-heterosexual and heterosexual women and the effects of same-sex sexual experience on these six
Variables are reported in Table 1. The frequencies for all sexual activities differed significantly between exclusively heterosexual participants and participants who had engaged in same-sex sexual activities, with the latter significantly engaging more frequently in all sexual activities (*P* < 0.001 for all activities apart from vaginal sex, where *P* < 0.01). These effects persisted when looking solely at women in long-term relationships (>4 years).

Exploration of the effects of same-sex sexual experience on women’s sexual functioning found that individuals with same-sex sexual experience reported significantly more desire (*Z* = 3.1, *P* > 0.05) and satisfaction problems (*z* = 10.6, *P* < 0.001) compared with those who had no such experience (Table 2). The groups did not differ in reports of arousal, lubrication, orgasm, or sexual pain. Sexual dissatisfaction was the most common sexual complaint for nonheterosexual women (17.1%), whereas orgasm problems were the most prevalent complaint in heterosexual women (9.1%). The lowest prevalence in both groups was found for sexual pain (5.9% vs. 5.7%).

Overall, sexual distress (with or without a concomitant problem) was present in every fifth heterosexual woman (19.0%), whereas almost every fourth nonheterosexual woman reported sexual distress (23.0%). Similar to epidemiologic studies in heterosexual women, not every individual categorized as “dysfunctional” felt distressed about her low sexual function (Figure 1). Of nonheterosexual women suffering from lubrication problems, for example, only 26.7% felt distressed, whereas also 15.2% of nonheterosexual women classified as having “normal” lubrication levels felt sexual distress. The highest proportion of nonheterosexual women feeling distressed about their sexual problem was for sexual satisfaction (39.6%), whereas only 16.4% of nonheterosexual women felt sexual distress. Altogether, nonheterosexual women seemed more distressed about their sexual problems, reporting higher percentages of distress related to desire (*P* = 0.01), arousal (*P* = 0.03), and satisfaction (*P* = 0.04) problems (Figure 1).

To investigate whether the effect of same-sex sexual experience on FSD was direct or indirect (i.e., through mediation of differences in modes and frequency of different sexual activities), we recalculated the effect of same-sex sexual experience on FSD, controlling for effects of frequency

### Table 1

<table>
<thead>
<tr>
<th>Frequency of sexual activity</th>
<th>Heterosexual</th>
<th>Nonheterosexual</th>
<th>OR</th>
<th>CI 95%</th>
<th><em>P</em></th>
<th><em>r</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Kissing</td>
<td>6.5</td>
<td>6.9</td>
<td>1.13</td>
<td>1.05–1.232</td>
<td>**</td>
<td>0.10</td>
</tr>
<tr>
<td>Fantasies</td>
<td>2.4</td>
<td>3.1</td>
<td>1.23</td>
<td>1.17–1.29</td>
<td>**</td>
<td>0.15</td>
</tr>
<tr>
<td>Masturbation</td>
<td>1.6</td>
<td>2.4</td>
<td>1.35</td>
<td>1.28–1.42</td>
<td>**</td>
<td>0.18</td>
</tr>
<tr>
<td>Oral sex</td>
<td>2.2</td>
<td>2.9</td>
<td>1.29</td>
<td>1.23–1.37</td>
<td>**</td>
<td>0.16</td>
</tr>
<tr>
<td>Vaginal sex</td>
<td>3.7</td>
<td>4.1</td>
<td>1.12</td>
<td>1.03–1.22</td>
<td>*</td>
<td>0.10</td>
</tr>
<tr>
<td>Anal sex</td>
<td>0.3</td>
<td>0.6</td>
<td>1.56</td>
<td>1.42–1.72</td>
<td>**</td>
<td>0.16</td>
</tr>
</tbody>
</table>

Frequency of sexual activity was measured using a Likert-type variable ranging from 0 to 8, with higher numbers indicating higher frequencies.

* *P* < 0.01

** *P* < 0.001

OR = odds ratio; CI = confidence interval

### Table 2

<table>
<thead>
<tr>
<th></th>
<th>Nonheterosexual women (N = 814)</th>
<th>Heterosexual women (N = 5,184)</th>
<th><em>Z</em></th>
<th><em>P</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Desire</td>
<td>9.9% (81)</td>
<td>6.9% (362)</td>
<td>3.05</td>
<td>*</td>
</tr>
<tr>
<td>Arousal</td>
<td>6.5% (53)</td>
<td>6.5% (338)</td>
<td>0.0</td>
<td>n.s.</td>
</tr>
<tr>
<td>Lubrication</td>
<td>6.4% (52)</td>
<td>6.7% (346)</td>
<td>−0.31</td>
<td>n.s.</td>
</tr>
<tr>
<td>Orgasm</td>
<td>8.4% (68)</td>
<td>7.7% (399)</td>
<td>0.69</td>
<td>n.s.</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>17.1% (139)</td>
<td>6.4% (329)</td>
<td>10.55</td>
<td>**</td>
</tr>
<tr>
<td>Pain</td>
<td>5.9% (48)</td>
<td>5.7% (293)</td>
<td>0.22</td>
<td>n.s.</td>
</tr>
</tbody>
</table>

Classification of women with and without FSD was based on the proposed cutoff score of FSD of 26.55 with inclusion of sexual distress.

* *P* < 0.05

** *P* < 0.001

n.s. = not significant
of sexual activities. When controlling for these variables, no remaining significant effect of same-sex sexual experience on desire could be detected (OR 1.1, CI 95% 0.9–1.2, \( P = 0.12 \)), whereas the significant association between same-sex experience and sexual dissatisfaction persisted (OR 1.28, CI 95% 1.1–1.6, \( P = 0.014 \)).

**Discussion**

In the present study, we found nonheterosexual experience (ever have engaged in) to be associated with significantly lower levels of sexual desire and sexual satisfaction. Although nonheterosexually experienced women also reported more orgasm and pain problems compared with their heterosexually experienced counterparts, these differences in prevalence did not reach statistical significance. While the effects of same-sex sexual experience on sexual desire disappeared when controlling for frequency and type of sexual activity, same-sex sexual experience seemed to directly affect women’s sexual satisfaction, without mediation through type and frequency of sexual activity. Previous research has indicated that women who have same-sex encounters differ significantly from exclusively heterosexual women in frequency and types of sexual activities, although the evidence remains mixed in terms of direction and magnitude of these differences [4–7]. In accordance with Coleman et al.’s study, we found that nonheterosexually identified women engaged in sexual activities more frequently than did heterosexually identified women, independent of type of these activities (including kissing, masturbation, oral sex, anal sex, and vaginal sex) [2]. Despite a higher frequency of engaging in sexual activities, nonheterosexual women still reported being less sexually satisfied, suggesting that sexual satisfaction is unrelated to the periodicity of sexual activities but possibly associated with other factors. Indeed, research has consistently indicated an association between sexual satisfaction and relationship satisfaction, love, and commitment [4,25].

In a longitudinal study conducted by Sprecher, those participants who were most sexually satisfied were those who tended to report high levels of relationship satisfaction, love, and commitment—in married, otherwise committed, and dating couples [25]. Numerous studies have demonstrated a role for interpersonal variables on sexual satisfaction in nonclinical populations and have noted significant links between women’s sexual satisfaction and physical health [26], general well-being and happiness [27,28], relationship stability [25,29], communication [30], and body image [31].

Although any effects of nonheterosexual experience on sexual satisfaction were not mediated by differences in the frequency of engaging in activities in our study, it is likely that other factors may explain our group differences in terms of sexual satisfaction. One potential cause for the disparity might be the level of distress or concern over a sexual problem. King et al. found that women who reported greater distress over a sexual problem also reported greater sexual dissatisfaction [32]. In our study, nonheterosexually experienced women considerably reported more personal distress related to their levels of sexual functioning compared with heterosexually experienced women. Consideration of personal distress related to sexual problems in the diagnosis of FSD—and its larger presence in those with nonheterosexual

![Figure 1](image.png)
experience—could also explain our contrasting prevalence findings compared with previous epidemiologic research. Earlier studies have consistently indicated that women who engage in same-sex activities report equivalent or fewer sexual problems compared with women engaging in heterosexual activities [9–13], whereas in our study, women with nonheterosexual experience reported more sexual problems related to desire, orgasm, satisfaction, and pain. Inclusion of sexual distress in the formulation of FSD diagnosis further offers an explanation for the ambiguous finding of nonheterosexual experience being associated with greater complaints regarding sexual desire despite reporting higher frequency of sexual activities. A closer look at the percentages reveals that according to the FSFI, 56% of women with heterosexual experience compared with 53% of nonheterosexually experienced women report low libido. When additionally taking into account sexual distress (12.7% in heterosexual vs. 16.4% in nonheterosexually experienced women), the prevalence drastically changes (9.9% vs. 6.9%).

Several hypotheses could explain our findings of greater personal distress related to sexual problems in same-sex experienced women compared with heterosexual women. First, women who report any nonheterosexual experience (compared with women without any same-sex experiences) may imbue more psychological meaning and important to their sexual lives and consider it to be more central to their definitions of subjective quality of life. This assumption is somewhat supported by previous literature reporting differences in frequency of sexual behavior in lesbian-identified women compared with heterosexual women [9–13]. Similarly, women who did not live with their sexual partners reported more sexual behavior compared with their heterosexual counterparts [33].

As mentioned in the introduction, our study does not directly address the issues of “sexual orientation-related differences” but rather focused on nonheterosexual experience. Because of the unavailability of the data, we were not able to assess the effects of a woman’s subjective perception of other aspects of core sexuality, such as sexual and romantic attractions that were related to sexual functioning, but used a simple categorization relying on sexual experiences with the other sex yes/no. Therefore, the results of this study should not be extrapolated to individuals who identify as nonheterosexual based on their patterns of attraction, independent from actual experience. Also, the consequences and limitations of using a lifetime measure to assess same-sex experiences should be considered. It is possible that the majority of the sexual encounters in the nonheterosexual group may have been female–male ones that is somehow supported by the indication of higher frequencies of vaginal intercourse in nonheterosexual women compared with strictly heterosexual women. As a consequence, we might be dealing with a group of more sexually adventurous women, who have more sexual partners and more varied sex. Indeed, third variables such as openness to
experience or other personality traits may mediate some of the associations observed in our study. To our knowledge, no study has so far investigated the association between same-sex sexual experience or attraction and personality traits, although one study reported an association between more novelty-seeking personality and the tendency to complete sex-related questionnaires [39]. However, such data were not available for our study, but shedding light on the possible relationship between same-sex sexual experience and personality is a vital venue for further research. In other words, our study results cannot be generalized to “exclusively homosexual” women but can certainly be applied to nonheterosexual women with more noncategorical patterns of sexual experience.

A further limitation of the study is the lack of information about the women’s menopausal status. However, considering their age, it is reasonable to assume that the majority were premenopausal. Similarly, we were not able to control for the effect of other previously reported common confounders on FSD, such as medical and psychological conditions. As sexual function is dynamic and changes throughout the lifespan, the generalization of the present results to other age groups could be limited. Other limitations were the time period during which the women reported their sexual functioning. For those being singles, a time period of 4 weeks may negatively affect the results. However, as only females who reported some sexual activity during that time period were included in the analysis, the effect of being single was minimized. In addition, the FSFI has been shown to be an instrument with good reliability and validity [19,20].

The present sample has been shown to be comparable with other representative samples of the Finnish population [18] with respect to important sexuality-related characteristics, such as mean age at first sexual intercourse [40] and rates of sexual abuse [41]; hence, the generalizability of the results should not be limited only to twins.

**Conclusion**

In summary, there is an empirically demonstrable association between nonheterosexual experience and self-reported sexual dysfunction in women. Although nonheterosexual experience appeared to affect women’s desire levels indirectly through mediation of types and frequency of sexual activity, no such mediation could be found for sexual satisfaction. Future studies should consider investigating the association between multiple measures of sexuality (such as sexual and romantic attractions) and sexual satisfaction more thoroughly and cofactor in “third variables” (such as personality measures) that may mediate any associations. Our results further highlight the need to consider sexual distress as a multidimensional concept resulting from multiple predictive factors and indicators. A better understanding of this multifaceted nature of sexual distress would also allow for better-targeted interventions and the reformulation of FSD as a psychiatric diagnosis.

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**Conflict of Interest:** None.

**Statement of Authorship**

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(c) **Analysis and Interpretation of Data**
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(b) **Revising It for Intellectual Content**
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**Category 3**

(a) **Final Approval of the Completed Article**
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**References**
