Associations of desire for change in sexual life amongst female medical students in North America

Alan W. Shindel, MD‡, Benjamin N. Breyer, MD, MAS*, and James F. Smith, MD, MS*,†
‡Department of Urology, University of California, Davis, Sacramento, CA, USA
*Department of Urology University of California, San Francisco, San Francisco, CA, USA
†Department of Obstetrics, Gynecology, and Reproductive Sciences, University of California, San Francisco, San Francisco, CA, USA

Abstract

We analyzed associations of dissatisfaction with sexual life and desire for change in female medical students. Students enrolled in medical schools in North America between February and July 2008 were invited to participate in an internet based survey of sexual function. The principle outcome measure was a single item question on sexual life satisfaction and desire for change. Women who reported dissatisfaction and desire for change were classified as “sexually bothered”. The survey also assessed ethnodemographic factors, student status, sexual history, and depressive symptoms. Respondents completed the Female Sexual Function Index (FSFI) and the Index of Sex Life (ISL). Descriptive statistics, ANOVA, and multivariable logistic regression were utilized to analyze responses. There were 661 non-virgin female subjects with data adequate for analysis. Whereas 281 (43%) of these met criteria for High Risk of Female Sexual Dysfunction (HRFSD) based on FSFI scoring, just 173 (26%) reported sexual bother. Among women with HRFSD, 126 (45%) reported sexual bother; in women without HRFSD, 362 (95%) were not sexually bothered. Interference in sexual life from tiredness and stress were associated with sexual bother. Progressively better scores on the FSFI-desire, orgasm, and satisfaction domains were significantly associated with lower odds of sexual bother. Few women in this cohort with FSFI score >26.55 reported sexual bother. Women with FSFI less than 26.55 had greater odds of sexual bother but this criterion alone was not pathognomonic for sexual concerns. Issues of sexual desire and orgasm appear to play a more important role than lubrication, arousal, and sexual pain issues in this population.

Keywords

Female Sexual Function; Female Sexual Dysfunction; Sexual Distress; Depression; Medical Students; Female

Introduction

Despite the importance of sexual expression to the vast majority of people, it has been reported that some women are not particularly bothered by even substantial physiological perturbations in their sexual function.1 This lack of bother may be secondary to: a lack of
interest in sexuality; adaptation in sexual practices/expectations to compensate for perceived or real sexual dysfunctions/limitations/preferences; or other factors. Distress is a key component in the diagnosis of clinically relevant sexual problems according to the American Psychiatric Association. A condition that influences sexual functionality cannot be construed as a problem in need of clinical intervention if the individual is not experiencing emotional, mental, or relationship bother referable to the condition. Hence, desire for change is an important factor in determining the scope of a sexual or other health problem.

A number of validated scales have been developed to quantify and measure sexual function in women for research purposes. Most widely utilized among these is the Female Sexual Function Index (FSFI), a 19 item validated questionnaire for the assessment of six domains of female sexual function (desire, arousal, lubrication, orgasm, satisfaction, and pain). The FSFI has been shown to help identify women at risk for sexual dysfunction; however, it does not explicitly assess the more nebulous but clinically important concept of sexual distress/bother. Complementary scales such as the Female Sexual Distress Scale (FSDS) and the Index of Sexual Life (ISL) have been developed to directly assess subjective bother from sexual problems. There is evidence that the FSFI captures data that are distinct but related to findings from instruments such as the ISL and FSDS; ergo, there is a rationale for multidimensional assessment of sexuality using a variety of instruments and measures.

Since the 1960s there has been little attention to sexual life satisfaction and sexual practices in this North American medical students. Medical students are generally a young, highly educated, and healthy population of individuals; as sexual problems are negatively associated with these demographic characteristics it might be assumed that the prevalence of physiological sexual problems in medical students would be low. However, recent publications on sexuality in North American medical students have suggested a high prevalence of sexual concerns in these individuals relative to normative population data. Sexual problems in medical students are of interest as a quality of life measure for the individual student but may also have ramifications for how students address sexuality in the clinical context. Furthermore, there is some evidence that female medical students may experience sexual problems more frequently than their male peers.

**AIMS**

Our group recently completed an analysis of sexuality and sexual practice in North American medical students. In this sub-set analysis, we investigate subjective assessment of desire for change in sexual life (henceforth referred to as "sexual bother" as shorthand) and its relationship to ethnodemographic factors and scores on validated instruments for the assessment of sexual function. We hypothesized that personal and relationship variables, evidence of depression and/or anxiety on validated psychometric questionnaires, and lower scores on validated instruments for the assessment of human sexuality would predict sexual bother. However, we also hypothesized that some individuals with relatively poor scores on validated instruments would not endorse bother related to their sexual functionality and that other individuals with high functionality scores might still endorse sexual dissatisfaction.

**Methods**

Medical students in North America were invited to participate in an internet-based survey. Invitations were extended via postings on the American Medical Student Association (AMSA) list-serves, the Student-Doctor Network (www.studentdoctor.net), and a news story posted at Medscape (www.medscape.com/viewarticle/574229). The survey was posted at QuestionPro.com and was available from February 22, 2008 until July 31, 2008. Approval for this study was granted by the Committee for Human Research (CHR) at our institution.
Implied consent was assumed by subject participation in, and completion of, the survey instrument. Our CHR deemed this methodology for consent as adequate and compliant with relevant ethical and legal standards. Only one response per IP address was permitted so as to limit the potential for repeated submissions by a single individual.

The primary outcome measure was a single item question: “Which of the following statements best summarizes your feelings about your sexual function at this time?” Subjects could select just one response; options included 1) “I am satisfied with my sexual function and would not change anything”, 2) “I am mostly satisfied with my sexual function but there are things I would like to change”, 3) “I am dissatisfied with my sexual function but I don’t want to change anything at this time”, 4) “I am dissatisfied with my sexual function and there are things I would like to change”, 5) “I have a sexual problem or dysfunction and would like to do something about it”, and 6) “Sexual function and dysfunction are not issues for me”. Subjects who selected response “4” or “5” (endorsing a problem and desire for change) were considered to have “sexual bother” on subsequent analyses. Subjects who had not engaged in partnered sexual activity were not included in subsequent analyses.

The survey also consisted of a questionnaire that assessed age, ethnicity, relationship status, maternity, medical school location, year in medical school, and several other demographic characteristics. A sexuality survey was appended which assessed variables such as sexual orientation, age at first partnered sexual activity (if any), number of lifetime sexual partners, recent (past 6 months) sexual partners and past participation (yes/no) in specific sexual activities (masturbation, oral sex [giving and receiving], vaginal sex, anal sex [insertive and receptive], bondage/restraint [giving and receiving], sexual sadism, and sexual masochism). To assess psychological morbidity in the study population, subjects completed the Center for Epidemiological Studies Depression Scale (CES-D), a 20 item instrument designed to assess presence and severity of depressive symptoms. A score of 16 or greater on the CES-D was taken as evidence of significant depressive symptoms.13

Subjects completed the FSFI for assessment of sexual function.4 A total score of 26.55 or less on the FSFI (score range 2–36) has been utilized as a cut-off value for “high risk” of female sexual dysfunction (HRFSD).14 In this validation study women with a diagnosed sexual dysfunction were compared to women without sexual dysfunction. The cut-off of 26.55 correctly classified 88% of the sexually functional women and 70% of the sexually dysfunctional women and was the optimal cut-point per their analyses.14

Subjects who were in relationships were asked to complete the Index of Sex Life (ISL), an 11 item validated instrument for the assessment of three domains including sexual drive, sexual life satisfaction, and general life satisfaction in women.6 The ISL also assesses disruption of sexual life from stress, tiredness, disease, and gynecological problems. The ISL was initially developed to assess sexual life and response to treatment in women whose partners had ED; however, the specific questions pertain to sexual and emotional variables relevant to her relationship with her partner and were therefore deemed of interest for this research.6

The sexuality specific instruments were developed and validated for use in subjects engaging in heterosexual coitus within the past 4 weeks. Subtle modifications to instructions and wording were made so as to maximize their applicability to subjects whose primary means of sexual expression is not heterosexual coitus (i.e. subjects in same sex relationships as well as heterosexual/bisexual subjects who engage in non-coital partnered sexual activity). These changes consisted primarily of 1) removing gender specific terms for the subject’s partner and replacing them with gender neutral pronouns/nouns and 2) expanding the scope of what constitutes “sexual intercourse” as “vaginal intercourse and/or stimulation...
of the genitalia with hands or mouth in the intent of producing orgasm (not as part of foreplay)” for the FSFI. A version of the FSFI similar to ours has been previously validated for use in lesbian women,\textsuperscript{15} we therefore deemed this instrument most appropriate for conducting a study in women of diverse sexual orientations.

Descriptive statistics were used to characterize the study population. Independent samples t-test and ANOVA were used to assess differences for continuous variables, while Chi squared tests were used for categorical variables. Levene’s test for unequal variance was used to ascertain differences in variance between comparison groups. The unequal variance t-test was used when variance was found to be unequal between groups. We report Odds Ratios (ORs) and their 95% confidence intervals to estimate the association between subject characteristics and sexual distress. Multivariable logistic regression models for sexual bother were developed with \textit{a-priori} selected predictor variables including gender, race, year in school, ethnicity, marital status, sexual orientation, sexual frequency, number of sexual partners in the last 6 months, and HRFSD. A second multivariable analysis was conducted examining individual domain scores for the FSFI and ISL; this was intended to ascertain which specific aspects of sexual function were most clearly associated with odds of sexual bother in this population. For these domain specific analyses, we selected a change of \(\frac{1}{2}\) of a standard deviation from the mean for each domain as a clinically significant unit of change for bivariable and multivariable analysis.\textsuperscript{16} Subjects who had not ever had partnered sexual activity (virgins), had not had sexual activity within the past 4 weeks, and/or those that did not have complete data for all of the above were excluded from all analyses. Statistical significance was set at \(p<0.05\) and all tests were 2-sided. STATA 10 (Statacorp, College Station, TX, USA) was used for all analysis.

RESULTS

There were a total of 661 non-virgin female respondents who provided a valid response to the primary outcome measure question; all of these had been with a sexual partner within the prior 6 months. Response to the primary outcome variable is presented in table 1; 173 (26\%) women reported sexual bother and 281 (43\%) reported HRFSD per FSFI results. Sexual bother was more prevalent in women with depressive symptoms, a single partner in the past 6 months, lower sexual frequency, HRFSD, and interference in sexual life from tiredness or stress \((p<0.001\) for all). Mean score for the individual domains of both the FSFI and ISL, stratified by sexual bother, are presented in table 2. All mean FSFI and ISL domain scores were significantly lower in women who reported sexual bother \((p<0.001)\).

On bivariable analysis, depressive symptoms and interference in sexual life from tiredness and/or stress were associated with significantly increased odds of sexual bother. HRFSD was associated with markedly increased odds of sexual bother \((\text{OR} 24.74, 95\% \text{ CI} 14.58–41.97, \text{table 3})\). There was a trend towards greater odds of sexual bother in third year students and bisexual women but these were not statistically significant. Asian race, having 2 or more partners in the past 6 months, and sexual frequency \(>6\) times per month were associated with decreased odds of sexual bother. Higher scores for the FSFI desire, orgasm, and satisfaction domains were associated with lower odds of sexual bother \((p<0.001, 0.01,\) and \(<0.001,\) respectively). None of the sexual practices surveyed were associated with significant differences in prevalence of sexual bother.

After multivariable adjustment, HRFSD, bisexual orientation, and interference in sexual life from stress were significantly associated with greater odds of sexual bother \((\text{table 4})\). Asian race and sexual frequency of 11 or more times per month were associated with lower odds of sexual bother in this analysis.
Our second multivariable analysis of the association between individual FSFI/ISL domains and sexual bother is presented in table 5. Higher score on the Desire, Orgasm, and Satisfaction domains remained associated with lower odds of sexual bother (table 5a) after adjustment. These relationships held after inclusion of the “ISL interference in sexual life” questions (table 5b). After inclusion of the ISL sub-domains, only the FSFI desire and satisfaction domains remained significantly associated with odds of sexual bother (table 5c). Interestingly, higher (i.e. better) scores on the ISL sexual life satisfaction domain were associated with lower odds of sexual bother but higher general life satisfaction scores were associated with greater odds of sexual bother. This was a reversal from the bivariable analysis, in which lower general life satisfaction was associated with greater odds of sexual bother. The sexual drive domain of the ISL did not show a relationship with sexual bother, in distinction with what was observed with the FSFI-desire domain.

Discussion

In this study of female medical students, nearly a quarter reported a desire for change in their sexual lives. This one quarter figure is similar to what has been reported (24–27%) in other series of women in the general population. The rate of women at risk for sexual dysfunction in our study (43%) is also similar to prior results. It is clear from these data and our own that there is an important distinction and difference in prevalence between sexual dysfunction (perturbation in some aspect(s) of sexual response) and sexual bother/desire for change.

In the Prevalence of Female Sexual Problems Associated with Distress and Determinants of Treatment Seeking (PRESIDE) study, women aged 20–29 (the cohort most similar to our own) had an 8% prevalence of sexual problems associated with distress; problems of desire, arousal, and orgasmic function occurred in 6%, 4%, and 3% of this population, respectively. In PRESIDE sexual problems were diagnosed in women who answered “rarely” or “never” to questions pertaining to sexual desire, arousal, and orgasm that were derived from the Changes in Sexual Function Questionnaire; sexually related distress was diagnosed based on a score of 15 or greater on the FSDS. It is interesting that the prevalence of both sexual problems and sexual distress in our study of mostly young women was similar to what has been reported for women in general (including much older women) from the PRESIDE study and others. This suggests that the burden of sexual problems in young medical students is similar to what is observed in older women. However, a direct comparison between data from the current study and those from the PRESIDE study is not possible given the highly select sample studied here.

Bancroft et al. have previously reported that emotional well-being and relationship to the partner are stronger predictors of sexual distress in women than measures such as arousal, lubrication, and orgasmic function. In the youngest age cohort (twenties from Bancroft’s study, “impaired physical response” was associated with relationship distress but not with the woman’s sense of her own sexuality. One might speculate that it is problems in the relationship and/or poor communication about sexual desires that cause much sexual distress in this group. Our data do not dispute this finding but it is clear that other factors (desire and orgasmic function) are also important determinants of sexual satisfaction for young women.

Perturbations of sexual desire have been reported as the most common sexual concern in women 18–29, the age group most similar to our population. Perturbations of sexual desire have been reported as the most common sexual concern in women 18–29, the age group most similar to our population. It is clear from our data that there are important differences between the ISL-sex drive (derived from response to questions on frequency of wish for sex and attempts at sexual activity) and the FSFI-desire (derived from questions on how often desire was felt and self-rating of personal sexual desire) domains. Of greater interest, however, is the reversal of the negative association...
between sexual bother and ISL general life satisfaction domain after multivariable adjustment. There is no easy explanation for this finding and the possibility of Type 1 error exists. However, in the validation study of the ISL it was found that the general life satisfaction domain did not correlate with the other two ISL domains. Moreover, sexual problems/bother do not always associate with treatment seeking behavior nor with personal distress, particularly in women. It is obvious that the relationship between sexual satisfaction and general life satisfaction is not a simple direct association in women.

It is intriguing that women with 2 or more partners in the preceding 6 months from our study had lower odds of sexual bother. We speculate that these women may have more sexually liberal beliefs and therefore may be less conflicted/distressed by sexuality. Alternatively, some of these participants might be women who had recently started a new relationship or were not in a relationship; either of these states might lead to lower odds of sexual bother related to a “honeymoon phase” or a lack of stress related to maintaining a serious sexual relationship during medical training, respectively.

Our findings with respect to lower prevalence of sexual bother in Asian subjects and higher prevalence in bisexual subjects are interesting. In a population of women seeking care at a military medical facility, Nusbaum et al reported that women of Asian descent were less likely than Caucasian women to report sexual dissatisfaction on a broad number of sexuality issues or a high number of sexual concerns; however, higher levels of education were associated with greater odds of sexual concern in Asian women from this study. We also noted higher prevalence of bother in bisexual subjects. Mental and physical problems are more frequently endorsed by bisexual women compared to their lesbian counterparts and our data suggest that this might well extend to sexual problems as well.

Limitations of this study include a lack of subject interview data; in the absence of formalized evaluation and explanation of the survey instruments themselves it is difficult to be certain how subjects may have interpreted certain questions. It is also difficult to ascertain chronicity based on our one-time inquiry. Our single item question to classify sexual bother status was not validated; this may limit the conclusions that can be derived from our dataset. We chose to make a number of response options to the “bother” question available to our subjects but collapsed “bother” responses into two categories for analysis; our intent was to simplify the analysis and reduce the likelihood of type I error from numerous comparisons. Our version of the FSFI was subtly different from the previously validated versions of the FSFI used in heterosexual women and in lesbian women; this was deemed necessary so as to capture uniform data from a diverse population but may compromise internal validity to some extent. Furthermore, medical students who participate in an uncompensated internet based sexuality survey may not be representative of the general population of medical students; some may provide spurious and/or inaccurate data.

Despite these shortcomings, our data are of value in its broad quantitative and qualitative assessment of a variety of sexuality related issues in a population that has not been the focus of thorough investigation on sexual distress/bother. Sexual function is obviously of importance to many of the subjects of this study. In a female medical student with sexual concerns, the nature of the sexual problem and the preferable means to remediate them (education, facilitation of communication in intimate relationships, time management, medical assessment/treatment, etc.) will be dependent on highly individual factors for each woman. The psychological and temporal rigors of medical school suggest that time and stress management are likely to be key factors in addressing sexual concerns for many women in this population.
Conclusions

Low score on the FSFI is fairly specific for the determination of sexual bother in this population. Sexual bother in young female students may be related to sexual dysfunctions (most likely issues of desires or orgasm) or other issues. Given the variety of factors associated with sexual bother in these women, a holistic approach to the assessment of sexual function is important to optimize outcomes.

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Table 1
Demographic, Educational, and Sexual Characteristics and their Relationship with Female Sexual Bother (N=661) *

| Race          | No Sexual Bother | Sexual Bother | P-Value |
|---------------|------------------|---------------|---------|
| White         | 359              | 138           | 0.12    |
| Hispanic      | 31               | 11            |         |
| Black         | 8                | 5             |         |
| Asian         | 57               | 9             |         |
| Other         | 33               | 10            |         |

| Year in school | No Sexual Bother | Sexual Bother | P-Value |
|----------------|------------------|---------------|---------|
| 1              | 123              | 37            | 0.26    |
| 2              | 148              | 54            |         |
| 3              | 109              | 51            |         |
| 4              | 91               | 24            |         |

| Have children  | No Sexual Bother | Sexual Bother | P-Value |
|----------------|------------------|---------------|---------|
| No children    | 34               | 11            | 0.79    |
| Yes            | 322              | 88            |         |

| Sexual orientation | No Sexual Bother | Sexual Bother | P-Value |
|--------------------|------------------|---------------|---------|
| Heterosexual       | 441              | 150           |         |
| Homosexual         | 25               | 9             | 0.20    |
| Bisexual           | 22               | 14            |         |

| Married or in a domestic partnership | No Sexual Bother | Sexual Bother | P-Value |
|--------------------------------------|------------------|---------------|---------|
| Yes                                  | 222              | 88            | 0.22    |
| No                                   | 441              | 150           |         |

| Significant depressive symptoms (CESD ≥16) | No Sexual Bother | Sexual Bother | P-Value |
|-------------------------------------------|------------------|---------------|---------|
| Yes                                       | 185              | 100           | <0.001  |
| No                                        | 441              | 150           |         |

| Partners in last 6 months | No Sexual Bother | Sexual Bother | P-Value |
|----------------------------|------------------|---------------|---------|
| 1                          | 424              | 166           | 0.21    |
| 2+                         | 64               | 6             | <0.001  |

| Sexual frequency in last month (percentile) | No Sexual Bother | Sexual Bother | P-Value |
|--------------------------------------------|------------------|---------------|---------|
| 0–2 (<25%)                                 | 64               | 47            | 0.23    |
| 3–5 (25%–50%)                              | 116              | 56            |         |
| 6–10 (50%–75%)                             | 166              | 49            | <0.001  |
| 11+ (>75%)                                 | 142              | 21            |         |

| High risk of female sexual dysfunction | No Sexual Bother | Sexual Bother | P-Value |
|---------------------------------------|------------------|---------------|---------|
| No (FSFI > 26.55)                     | 362              | 18            | <0.001  |
| Yes (FSFI ≤ 26.55)                    | 126              | 155           |         |

| Number reporting interference in sexual life from specific causes (ISL question 1, number of subjects answering “yes” for each variable) | No Sexual Bother | Sexual Bother | P-Value |
|---------------------------------------------------------------------------------------------------------------------------------|------------------|---------------|---------|
| Tiredness                                                           | 355              | 150           | <0.001  |
| Stress                                                              | 307              | 151           | <0.001  |
|                          | No Sexual Bother | Sexual Bother | P-Value |
|--------------------------|------------------|---------------|---------|
| Disease                  | 26               | 14            | 0.19    |
| Gynecological problem    | 71               | 33            | 0.016   |
| Partner Unavailable      | 162              | 43            | 0.04    |

*Includes non-virgin female medical students in a sexual relationship who had 1 or more partners in the past 6 months (N=888) with complete answers for all characteristics in this table (N=722) and FSD/ISL scores (N=661).
### Table 2

Relationship between FSFI Sub-scales, ISL sub-scales and Sexual Bother

|                  | No Sexual Bother |                  | Sexual Bother |                  | Range | Mean Difference | P Value* |
|------------------|------------------|------------------|---------------|------------------|-------|----------------|----------|
|                  | Mean  | SD   | Mean  | SD   |       |               |          |
| FSFI             |       |      |       |      |       |               |          |
| Total            | 28.4  | 5.5  | 19.9  | 5.7  | 2–36  | 8.50           | <0.001   |
| Desire           | 3.9   | 1.1  | 2.7   | 1.0  | 1.2–6 | 1.20           | <0.001   |
| Arousal          | 4.8   | 1.2  | 3.1   | 1.2  | 0–6   | 1.63           | <0.001   |
| Lubrication **   | 5.2   | 1.2  | 3.8   | 1.6  | 0–6   | 1.34           | <0.001   |
| Orgasm **        | 4.6   | 1.4  | 3.0   | 1.7  | 0–6   | 1.62           | <0.001   |
| Satisfaction     | 4.9   | 1.1  | 3.1   | 1.2  | 0.8–6 | 1.72           | <0.001   |
| Pain **          | 5.1   | 1.3  | 4.1   | 1.7  | 0–6   | 0.98           | <0.001   |
| ISL              |       |      |       |      |       |               |          |
| Total            | 38.8  | 6.9  | 27.6  | 7.0  | 5–50  | 11.14          | <0.001   |
| Sex life satisfaction | 23.7 | 4.0  | 16.9  | 4.2  | 3–30  | 6.83           | <0.001   |
| Sex drive        | 6.8   | 2.5  | 4.5   | 2.5  | 0–10  | 2.27           | <0.001   |
| General life satisfaction ** | 8.1   | 1.5  | 7.1   | 1.8  | 2–10  | 0.99           | <0.001   |

* Independent samples t-test comparison between each sexual scale/sub-scale and sexual bother

** Unequal variances by Levene test <0.05. P value computed using t-test of unequal variance.
Table 3

Bivariable analysis of factors associated with female sexual bother*

|                                | OR   | 95% CI  | P-value |
|--------------------------------|------|---------|---------|
| **Age (1 year increase)**      | 1.02 | 0.97    | 1.06    | 0.53 |
| **Race**                       |      |         |         |      |
| White                          | 1.00 | ref     | ref     |      |
| Hispanic                       | 0.92 | 0.45    | 1.89    | 0.83 |
| Black                          | 1.63 | 0.52    | 5.06    | 0.40 |
| Asian                          | 0.41 | 0.20    | 0.85    | 0.02 |
| Other                          | 0.79 | 0.38    | 1.64    | 0.53 |
| **Year in school**             |      |         |         |      |
| 1                              | 1.00 | ref     | ref     |      |
| 2                              | 1.21 | 0.75    | 1.96    | 0.43 |
| 3                              | 1.56 | 0.95    | 2.55    | 0.08 |
| 4                              | 0.88 | 0.49    | 1.57    | 0.66 |
| **Research Year**              | 1.37 | 0.53    | 3.55    | 0.52 |
| **Have children**              |      |         |         |      |
| 0.91                           | 0.45 | 1.83    | 0.79    |      |
| **Sexual orientation**         |      |         |         |      |
| Heterosexual                   | 1.00 | ref     | ref     |      |
| Homosexual                     | 1.06 | 0.48    | 2.32    | 0.89 |
| Bisexual                       | 1.87 | 0.93    | 3.75    | 0.08 |
| **Married or domestic partnership** |      |         |         |      |
| 1.24                           | 0.88 | 1.76    | 0.22    |      |
| **Depressive symptoms (CESD ≥16)** | 2.24 | 1.58    | 3.19    | <0.001|
| **2+ partners in last 6 months** | 0.24 | 0.10    | 0.56    | 0.001 |
| 0–2 (<25%)                     | 1.00 | ref     | ref     |      |
| 3–5 (25%–50%)                  | 0.66 | 0.40    | 1.08    | 0.10 |
| 6–10 (50%–75%)                 | 0.40 | 0.25    | 0.66    | <0.001|
| 11+ (>75%)                     | 0.20 | 0.11    | 0.36    | <0.001|
| **High risk of female sexual dysfunction** |      |         |         |      |
| No (FSFI > 26.55)              | 1.00 | ref     | ref     |      |
| Yes (FSFI ≤26.55)              | 24.74| 14.58   | 41.97   | <0.001|
| **Number reporting interference in sexual life from specific causes (ISL)** |      |         |         |      |
| Tiredness                      | 2.44 | 1.51    | 3.96    | <0.001|
| Stress                         | 4.05 | 2.50    | 6.56    | <0.001|
| Disease                        | 1.56 | 0.80    | 3.07    | 0.19 |
| **FSFI domain score (per 0.5 SD higher score)** |      |         |         |      |
| Desire                         | 0.65 | 0.56    | 0.75    | <0.001|
|                  | OR   | 95% CI     | P-value |
|------------------|------|------------|---------|
| Arousal          | 1.00 | 0.72 - 1.37| 0.98    |
| Lubrication      | 0.99 | 0.77 - 1.27| 0.92    |
| Orgasm           | 0.77 | 0.63 - 0.94| 0.01    |
| Satisfaction     | 0.54 | 0.45 - 0.64| <0.001  |
| Pain             | 1.03 | 0.84 - 1.26| 0.78    |
## Table 4
Multivariable analysis of social, psychological and sexual characteristics and HRFSD\(^a\) associated with sexual bother\(^b\)

|                         | OR   | 95% CI | P-value |
|-------------------------|------|--------|---------|
| HRFSD                   | 22.88| 12.68  | 41.29   | <.001  |
| Race                    |      |        |         |        |
| White                   | 1.00 | ref    | ref     |        |
| Hispanic                | 1.22 | 0.47   | 3.18    | 0.68   |
| Black                   | 1.20 | 0.25   | 5.76    | 0.82   |
| Asian                   | 0.26 | 0.11   | 0.61    | 0.002  |
| Other                   | 0.78 | 0.31   | 1.94    | 0.59   |
| Sexual orientation      |      |        |         |        |
| Heterosexual            | 1.00 | ref    | ref     |        |
| Homosexual              | 2.06 | 0.70   | 6.07    | 0.19   |
| Bisexual                | 3.66 | 1.32   | 10.13   | 0.01   |
| Significant depressive symptoms (CESD ≥ 16) |      |        |         |        |
| 2 or more partners in last 6 months | 1.26 | 0.80   | 1.99    | 0.31   |
| 0.40                    | 0.14 | 1.16   | 0.09    |        |
| Sexual frequency in last month (percentile) |      |        |         |        |
| 0–2 (<25%)              | 1.00 | ref    | ref     |        |
| 3–5 (25%–50%)           | 1.16 | 0.62   | 2.18    | 0.65   |
| 6–10 (50%–75%)          | 0.77 | 0.41   | 1.45    | 0.42   |
| 11+ (>75%)              | 0.48 | 0.23   | 0.99    | 0.05   |
| Tiredness               | 1.51 | 0.78   | 2.92    | 0.22   |
| Stress                  | 2.14 | 1.11   | 4.10    | 0.02   |
| Disease                 | 0.85 | 0.33   | 2.18    | 0.74   |
| Gynecological problems  | 1.47 | 0.79   | 2.73    | 0.23   |

\(^a\)Adjusted for age, race, year in school, prior children, sexual orientation, significant depressive symptoms, marital status, number of sexual partners, and frequency of sexual activity. All factors not listed were not statistically significant \(p < 0.05\)
Table 5
Multivariable analysis of FSFI and ISL domains associated with sexual bother

| A. FSFI Domains ** | OR   | 95% CI | P-value |
|--------------------|------|--------|---------|
| Desire             | 0.63 | 0.53   | 0.74    |
| Arousal            | 0.94 | 0.67   | 1.33    |
| Lubrication        | 0.91 | 0.70   | 1.19    |
| Orgasm             | 0.80 | 0.64   | 1.00    |
| Satisfaction       | 0.49 | 0.40   | 0.60    |
| Pain               | 1.12 | 0.90   | 1.39    |

FSFI domain score (per 0.5 SD higher score)

| B. FSFI Domains, ISL Interference ** | OR   | 95% CI | P-value |
|-------------------------------------|------|--------|---------|
| Desire                             | 0.67 | 0.57   | 0.80    |
| Arousal                            | 0.92 | 0.64   | 1.30    |
| Lubrication                        | 0.88 | 0.67   | 1.16    |
| Orgasm                             | 0.77 | 0.61   | 0.96    |
| Satisfaction                       | 0.50 | 0.40   | 0.61    |
| Pain                               | 1.16 | 0.91   | 1.46    |
| Tiredness                          | 1.82 | 0.88   | 3.75    |
| Stress                             | 1.63 | 0.80   | 3.34    |
| Disease                            | 0.92 | 0.34   | 2.51    |
| Gynecological problem              | 1.68 | 0.85   | 3.29    |

Interference in sexual life from… (ISL)

| C. FSFI, ISL Domains ** | OR   | 95% CI | P-value |
|-------------------------|------|--------|---------|
| Desire                  | 0.67 | 0.55   | 0.83    |
| Arousal                 | 1.18 | 0.79   | 1.75    |
| Lubrication             | 0.82 | 0.60   | 1.10    |
| Orgasm                  | 1.04 | 0.81   | 1.33    |
| Satisfaction            | 0.72 | 0.56   | 0.93    |
| Pain                    | 1.06 | 0.83   | 1.35    |
| Sex life satisfaction   | 0.32 | 0.23   | 0.45    |
| Sex drive               | 1.06 | 0.85   | 1.33    |
| General life            | 1.51 | 1.23   | 1.87    |

ISL (per 0.5 SD change)
**Adjusted for age, race, year in school, prior children, sexual orientation, significant depressive symptoms, marital status, number of sexual partners, and frequency of sexual activity.**