

Sexual dysfunction, distress, and care-seeking among females during the preconception period

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BACKGROUND: Despite the high prevalence of female sexual dysfunction in population-based studies and the importance of sexual functioning for mixed-sex couples attempting conception, little is known about female sexual function in the preconception period.

OBJECTIVE: This descriptive study aimed to assess the prevalence of female sexual dysfunction, distress, and pain with intercourse in a preconception population of pregnancy planners. The study also explored the extent to which participants discussed their sex lives with a healthcare provider during a preconception visit.

STUDY DESIGN: We used data from Pregnancy Study Online, a web-based preconception cohort study (August 2020–October 2022). Eligible participants identified as female and were aged 21 to 45 years, residents of the United States or Canada, attempting pregnancy, and not using fertility treatments at cohort entry. At enrollment, participants completed a detailed baseline questionnaire. Thirty days after enrollment, participants were invited to complete an optional questionnaire about sexual function. Our study included 1120 participants who responded to the sexual function questionnaire within 1 year of completing their baseline questionnaire. We assessed sexual dysfunction using the 6-item Female Sexual Function Index, and sexual distress using the Female Sexual Distress Scale, which assess sexual function and distress in the previous 4 weeks, respectively. We also asked participants whether they had discussed their plans to conceive with a healthcare provider, and if so, whether they discussed their sex lives. If not, we collected information on perceived barriers.

RESULTS: Twenty-five percent of the sample met criteria for female sexual dysfunction, whereas 12.2% met the criteria for sexual distress; 8% of our sample reported both sexual dysfunction and sexual distress. Thirty percent reported at least some pain with intercourse in the past 4 weeks. Although over 80% of the sample reported discussing their conception plans with a healthcare provider, 70% of these participants did not discuss their sex lives. The most commonly reported reasons for not discussing their sex life with a provider was not experiencing a sexual health issue, the provider not asking, feeling nervous/uncomfortable/ashamed, and feeling it was not relevant to becoming pregnant or inappropriate to discuss. The percentage of participants who reported discussing their sex lives varied across provider type, with those seeing midwives having the highest percentage (39%), followed by nurse practitioners (36%) and obstetrician-gynecologists (34%).

CONCLUSION: Sexual dysfunction, distress, and painful intercourse are prevalent in the preconception period, but participants frequently did not discuss their sex lives when discussing plans to conceive. The provider not asking was a commonly reported barrier. Providers may consider raising the issue of sexual functioning at the time of a preconception visit to better support patients who may be dealing with a sexual function issue while attempting pregnancy. These findings may not generalize beyond a primarily non-Hispanic White, highly educated, and high-income population.

Key words: help-seeking behaviors, preconception care, sexual dysfunction, sexual health

Introduction

Female sexual dysfunction (FSD) describes a heterogeneous group of conditions characterized by clinically relevant impairment in the ability to partake in or enjoy sexual activity, accompanied by personal distress.¹ FSD has many manifestations, including low sexual arousal/desire, trouble orgasming, or pain.¹ Sexual satisfaction and well-being are associated with higher quality of life,^{2e4} and conversely, sexual dysfunction is bidirectionally related to

mental health,⁵ relationship satisfaction,⁶ and overall life satisfaction.⁷

Research suggests that FSD is common. A national probability sample of US women aged 18 to 59 years reported a prevalence of 43%,⁸ whereas a meta-analysis of 95 observational studies reported a prevalence of 40.9% for premenopausal women.⁹ Research has investigated the relationship between reproductive milestones and FSD, including pregnancy,¹⁰ infertility,¹¹ and menopause.^{12e14} However, the prevalence of FSD in the preconception period remains largely uncharacterized, despite the importance of sexual intercourse for mixed-sex couples attempting conception without fertility treatment. Given the high prevalence of FSD in population-wide studies and that both patients and healthcare providers report barriers to discussing sexual

function,^{15e18} it is plausible that FSD may be a common but largely unaddressed problem among pregnancy planners.

We evaluated the prevalence of FSD and sexual distress in a population of female pregnancy planners. We additionally assessed whether participants discussed sexual health concerns with a healthcare provider, and if not, what were the barriers to this conversation.

Methods

We used data from Pregnancy Study Online (PRESTO), an ongoing web-based prospective cohort study (detailed methodology described elsewhere¹⁹). PRESTO enrolls self-identified female participants planning pregnancy who are aged 21 to 45 years, residents of the United States and Canada, not using fertility treatments or contraception, and

At a Glance

Why was this study conducted?

Despite the high prevalence of female sexual dysfunction in the general population and the salience of sexual dysfunction to pregnancy attempts, little is known about the prevalence of female sexual dysfunction in the preconception period.

Key findings

In a population of female pregnancy planners, the prevalence of sexual dysfunction accompanied by distress was 8%, and 30.6% reported pain during sex in the past 4 weeks. Despite this, few participants discussed their sex lives with healthcare providers during preconception counseling visits.

What does this add to what is known?

Female sexual function issues are prevalent in the preconception period among pregnancy planners but are not often discussed during preconception visits.

in a relationship with a male partner aged 2:21 years. There is no restriction on pregnancy attempt time at enrollment. Recruitment occurs via online advertising, posted flyers, and word of mouth. Participants complete online questionnaires at enrollment and every 8 weeks until the report of a pregnancy or 12 months, whichever comes first. Participants who report a pregnancy are followed up with additional surveys.

An optional supplemental survey about sexual health was added to the study protocol in March 2021. This survey, referred to hereafter as the Sexual Health Questionnaire (SHQ), asks about participants' sexual health, feelings about their sex life, and related medical conditions. At launch, we invited all PRESTO participants with an active email address on file (N=14,788) to complete the SHQ. Participants who enrolled in PRESTO after SHQ launch (N=2143) received an email inviting them to complete the SHQ 30 days after enrollment, although they could complete it at any time. As of October 2022, 3624 participants had completed the SHQ, with a completion rate of 59.2% for those invited prospectively. The SHQ was completed at a single time point.

To reduce the risk of sexual function being influenced by unobserved pregnancy or fertility treatment initiation occurring after 12 months of follow-up, we excluded participants who completed

the SHQ >1 year after the completion of their baseline questionnaire. We additionally excluded participants who reported pregnancy or the initiation of fertility treatment before completion of the SHQ (details are shown in Figure 1). The final sample size was 1120 participants who enrolled in PRESTO between August 2020 and October 2022. The median time between enrollment and completion of the SHQ was 30 days (range: 0-353). The study protocol was approved by the Boston University Medical Campus Institutional Review Board, and participants provided informed consent online.

Assessment of sexual dysfunction and distress

Participants answered the 6-item Female Sexual Function Index (FSFI-6) scale, a clinically validated abridged version of the full 19-question Female Sexual Function Index, an instrument designed to identify FSD by asking about sexual experiences in the past 4 weeks.²⁰ Responses were collected via Likert scale ranging from 1 (lowest function) to 5 (highest function) and summed. The cutoff for sexual dysfunction was a score ≥ 19 , which in a validation study estimated a sensitivity of 0.93 and specificity of 0.94 against clinically validated FSD.²⁰ To increase the sensitivity of the measure for clinically relevant FSD not because of a transient issue, we asked participants if

they had experienced an infection that caused vaginal pain in the previous 4 weeks. We reclassified those who reported an infection and had sexual dysfunction as not having sexual dysfunction (N=14; 1.3%).

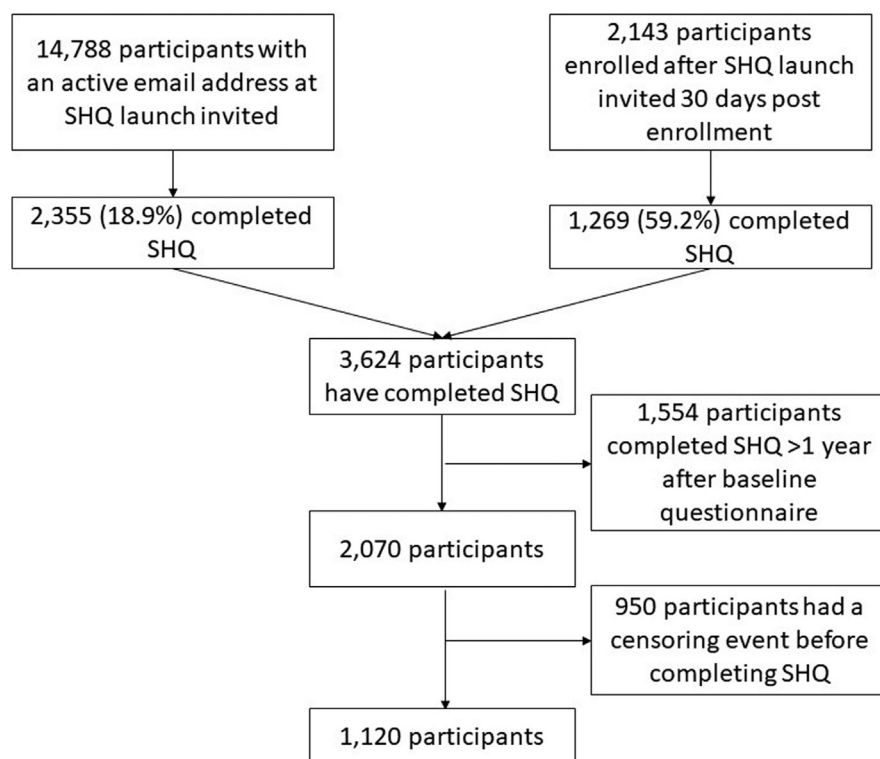
We assessed sexual distress using the Female Sexual Distress Scale (FSDS),²¹ which included 12 questions assessing participants' feelings about their sex lives in the past 4 weeks. Participants responded using a Likert scale that ranged from "never" (assigned a value of 0) to "always" (value of 4). We summed responses and used a score ≥ 20 as the cutoff for clinically relevant sexual distress, which in a pilot validation study yielded a sensitivity of 0.84 and specificity of 1.00 against clinically validated sexual dysfunction.²¹ We additionally created a variable that combined sexual dysfunction and sexual distress, in which we categorized participants as having both dysfunction and distress, only dysfunction, only distress, or neither.

To study the prevalence of pain with intercourse, we used a single question from the FSFI-6: "Over the past 4 weeks, how often did you experience discomfort or pain during vaginal penetration (intercourse)?" Response options included: "Did not attempt vaginal penetration," "Almost never or never," "A few times," "Sometimes," "Most times," or "Almost always or always." We excluded participants who did not attempt vaginal penetration from pain analyses (N=426). We categorized those who reported that they experienced pain "A few times" or more frequently as having pain with intercourse. As described above, we reclassified participants who reported the presence of a vaginal infection that caused pain as not having pain with intercourse (N=430; 2.8%). We additionally calculated the percentage of participants reporting any pain who also reported distress.

Assessment of chronic conditions

The SHQ asked participants if they currently had chronic health conditions potentially related to sexual functioning, including: "vulvodynia (chronic pain of the vulva/vagina lasting 3 months or longer with no known cause),"

FIGURE 1
Cohort creation from PRESTO, 2020e2022



Flowchart depicting creation of analytical cohort. The SHQ is an optional supplemental survey included in the PRESTO protocol.

“vaginismus (involuntary tightness of the vagina that occurs during penetration and can interfere with intercourse),” “chronic pain condition, such as fibromyalgia (chronic muscle pain) or chronic back pain,” “chronic fatigue syndrome (prolonged fatigue that interferes with your ability to carry out ordinary daily activities),” or “interstitial cystitis (also called irritable bladder syndrome).”

Participants could respond “Yes, diagnosed by a healthcare provider” (diagnosed), “I think so, but not diagnosed by a healthcare provider” (suspected), and “No.” We considered any affirmative answer (ie, diagnosed or suspected) a positive response. For sensitivity analysis, we considered only a diagnosis as a positive response. Participants also reported on the baseline questionnaire if they had ever been

diagnosed with endometriosis, polycystic ovarian syndrome (PCOS), or uterine fibroids. We combined these conditions into 2 composite variables: chronic pelvic conditions (vulvodynia, vaginismus, interstitial cystitis, fibroids, endometriosis, and PCOS) and chronic fatigue/pain conditions (chronic fatigue syndrome and chronic pain). The 2 participants who reported “lichen sclerosis” in an open-ended text box at the end of the SHQ were included in the chronic pelvic condition group.

Assessment of care-seeking for sexual health issues

Participants responded to the question “Did you ever discuss your plans to conceive with a healthcare provider, either as a part of a specific preconception counseling visit or during a visit for another reason?” Those who responded

“Yes, at one visit” or “Yes, at multiple visits” were classified as having had a preconception discussion. Those who reported a preconception discussion were asked what type of provider they saw for the visit (they could select multiple provider types) and whether they discussed their sex life “including any issues with pain, arousal, desire, etc.” Those who answered “yes” to discussing their sex life were asked whether they or their provider initiated the conversation, whereas those who answered “no” were asked why not (they could select multiple reasons and/or provide an open-ended text response).

Analyses

We calculated baseline characteristics, including the prevalence of chronic pelvic conditions and chronic pain/fatigue conditions as defined above, for the whole cohort and stratified by sexual dysfunction, sexual distress, and pain with intercourse. We assessed the prevalence of sexual dysfunction, sexual distress, the combined variable, and pain with intercourse for the whole sample and stratified by months of pregnancy attempts at the time of SHQ completion (≤3, 4–6, 7–9, 10–12, and >12 months).

We descriptively evaluated the prevalence of preconception discussions with a healthcare provider, how often participants reported discussing their sex lives during these discussions, and whether participants or their providers raised the topic for the whole sample and stratified by provider type. For those who did not discuss their sex lives, we reported the frequency of categorized reasons and reviewed open-ended text responses for commonalities, although limited data (ie, short responses lacking context) precluded formal qualitative analysis.

Results

Baseline characteristics for the sample (N=1120) are displayed in Table 1. Most of the sample was aged 25 to 34 years, married, and nulliparous. Over 80% of participants had at least a college degree, and over half of the participants reported an annual household income of at least

TABLE 1

Characteristics of the sample by sexual dysfunction, distress, and any pain with intercourse in the previous 4 weeks

Characteristics	Full sample (N=1120)	Sexual dysfunction		Sexual distress		Any pain with intercourse	
		Yes (N=280)	No (N=825)	Yes (N=135)	No (N=968)	Yes (N=334)	No (N=758)
Age, y	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
<25	53 (4.7)	17 (6.5)	37 (4.5)	11 (8.2)	42 (4.3)	21 (6.3)	31 (4.1)
25-29	320 (28.6)	61 (23.2)	253 (30.7)	39 (28.9)	279 (28.8)	101 (30.2)	210 (27.7)
30-34	515 (46.0)	117 (44.5)	377 (45.7)	60 (44.4)	444 (45.9)	154 (46.1)	355 (46.8)
35-39	214 (19.1)	64 (24.3)	144 (17.5)	25 (18.5)	185 (19.1)	55 (16.5)	147 (19.4)
≥40	18 (1.6)	4 (1.5)	14 (1.7)	0 (0)	18 (1.9)	3 (0.9)	15 (2.0)
Married							
Yes	951 (85.9)	244 (87.1)	698 (84.6)	115 (85.2)	825 (85.2)	290 (86.8)	640 (84.4)
No	169 (15.1)	36 (12.9)	127 (15.4)	20 (14.8)	143 (14.8)	44 (13.2)	118 (15.6)
Relationship length (y)							
<5	402 (35.9)	81 (28.9)	315 (38.2)	38 (28.2)	359 (37.1)	103 (30.8)	291 (38.4)
5-9	478 (42.7)	126 (45.0)	344 (41.7)	59 (43.7)	410 (42.4)	148 (44.3)	318 (42.0)
≥10	240 (21.4)	73 (26.1)	166 (20.1)	38 (28.2)	199 (20.6)	83 (24.9)	149 (19.7)
Intercourse frequency							
≤1/mo	46 (4.1)	23 (8.2)	23 (2.8)	11 (8.2)	35 (3.6)	14 (4.2)	26 (3.4)
2-3 times/mo	240 (21.4)	85 (30.4)	151 (18.3)	50 (37.0)	186 (19.2)	80 (24.0)	148 (19.5)
1 time/wk	251 (22.4)	60 (21.4)	186 (22.6)	33 (24.4)	213 (22.0)	79 (23.7)	171 (22.6)
2-3 times/wk	477 (42.6)	95 (33.9)	376 (45.6)	36 (26.7)	434 (44.8)	134 (40.1)	336 (44.3)
≥4 times/wk	106 (9.5)	17 (6.1)	89 (10.8)	5 (3.7)	100 (10.3)	27 (8.1)	77 (10.2)
Parous							
Yes	354 (31.6)	96 (34.2)	251 (30.4)	47 (34.8)	299 (30.9)	109 (32.6)	232 (30.6)
No	766 (68.4)	184 (65.7)	574 (69.6)	88 (65.2)	669 (69.1)	225 (67.4)	526 (69.4)
Have you ever tried to get pregnant for > 12 mo?							
Yes	189 (16.9)	66 (23.6)	121 (14.7)	35 (25.9)	151 (15.6)	61 (18.3)	116 (15.3)
No	563 (50.3)	129 (46.1)	424 (51.4)	63 (46.7)	491 (50.7)	154 (46.1)	396 (52.2)
Never tried to get pregnant before	368 (32.9)	85 (30.4)	280 (33.9)	37 (27.4)	326 (33.7)	119 (35.6)	246 (32.5)
Education							
High school or less	29 (2.6)	12 (4.3)	17 (2.1)	8 (5.9)	20 (2.1)	10 (3.0)	17 (2.2)
Some college	175 (15.6)	40 (14.3)	130 (15.8)	32 (23.7)	138 (14.3)	51 (15.3)	117 (15.4)
College degree	348 (31.1)	95 (33.9)	250 (30.3)	40 (29.6)	304 (31.4)	106 (31.7)	237 (31.3)
Beyond college	568 (50.7)	133 (47.5)	428 (51.9)	55 (40.7)	506 (52.3)	167 (50.0)	387 (51.1)
Household income, USD							
<50,000	133 (12.2)	44 (15.9)	87 (10.8)	29 (22.0)	101 (10.7)	46 (14.1)	81 (11.0)
50,000-99,999	321 (29.3)	79 (28.5)	239 (29.8)	52 (39.4)	267 (28.2)	85 (26.0)	227 (30.7)
100,000-124,999	205 (18.7)	47 (17.0)	157 (19.6)	23 (17.4)	181 (19.1)	65 (19.9)	135 (18.3)
≥125,000	138 (12.6)	36 (13.0)	98 (12.2)	11 (8.3)	124 (13.1)	44 (13.5)	88 (11.9)

TABLE 1

Characteristics of the sample by sexual dysfunction, distress, and any pain with intercourse in the previous 4 weeks
(continued)

Characteristics	Full sample (N=41120)	Sexual dysfunction		Sexual distress		Any pain with intercourse	
		Yes (N=4280)	No (N=4825)	Yes (N=4135)	No (N=4968)	Yes (N=4334)	No (N=4758)
2:150,000	286 (27.2)	71 (25.6)	222 (27.7)	17 (12.9)	274 (28.9)	87 (26.6)	208 (28.2)
Missing	26	3	22	3	21	7	19
Region of residence							
Northeast US	193 (17.2)	54 (19.3)	138 (16.7)	23 (17.0)	168 (17.4)	54 (16.2)	132 (17.4)
South US	260 (23.2)	67 (23.9)	188 (22.8)	35 (25.9)	221 (22.8)	81 (24.3)	176 (23.2)
Midwest US	259 (23.1)	59 (21.1)	195 (23.6)	26 (19.3)	229 (23.7)	83 (24.9)	171 (22.6)
West US	208 (18.6)	48 (17.1)	160 (19.4)	19 (14.1)	188 (19.4)	56 (17.8)	147 (19.4)
Other US	2 (0.2)	0 (0)	2 (0.2)	1 (0.7)	1 (0.1)	1 (0.3)	1 (0.1)
Canada	198 (17.7)	52 (18.6)	142 (17.2)	21 (23.0)	161 (16.6)	59 (17.7)	131 (17.3)
Ever diagnosed with depression							
Yes	329 (29.4)	95 (33.9)	230 (27.9)	55 (40.7)	271 (28.0)	106 (31.7)	210 (27.7)
No	791 (70.6)	185 (66.1)	595 (72.1)	80 (59.3)	697 (72.0)	228 (68.3)	548 (72.3)
Ever diagnosed with anxiety							
Yes	350 (32.1)	104 (37.1)	249 (30.2)	52 (38.5)	301 (31.1)	116 (34.7)	231 (30.5)
No	761 (68.0)	176 (62.7)	560 (70.4)	83 (61.5)	667 (68.9)	218 (65.3)	527 (69.5)
Ever diagnosed with posttraumatic stress disorder							
Yes	81 (7.2)	25 (8.9)	56 (6.8)	18 (13.3)	62 (6.4)	27 (8.1)	51 (6.7)
No	1039 (92.8)	255 (91.1)	769 (93.2)	117 (87.7)	906 (93.6)	307 (91.9)	707 (93.3)
History of sexually transmitted infection							
Yes	157 (14.0)	43 (15.4)	113 (13.7)	19 (14.1)	135 (14.0)	46 (13.8)	107 (14.1)
No	963 (86.0)	237 (84.6)	712 (86.3)	116 (85.9)	833 (86.1)	288 (86.2)	651 (85.8)
Chronic pelvic condition ^a							
Yes	242 (21.9)	90 (32.5)	150 (18.2)	55 (40.7)	185 (19.2)	111 (33.7)	125 (16.7)
No	861 (78.1)	187 (67.5)	673 (81.8)	80 (59.3)	781 (80.9)	218 (66.3)	622 (83.3)
Missing	17	3	2		2	5	11
Chronic pain/fatigue ^b							
Yes	130 (11.8)	44 (15.9)	85 (10.3)	34 (25.2)	96 (9.9)	55 (16.8)	68 (9.1)
No	972 (88.2)	233 (84.1)	738 (89.7)	101 (75.8)	871 (90.1)	273 (83.2)	679 (90.9)
Missing	18	3	2		1	6	11
Currently doing something to improve chances of pregnancy							
Yes	895 (79.9)	212 (80.6)	659 (79.9)	114 (84.4)	766 (79.1)	270 (80.8)	605 (79.8)
No	225 (20.1)	51 (19.4)	166 (20.1)	21 (15.6)	202 (20.9)	64 (19.2)	153 (20.2)

(continued)

Characteristics	Full sample (N¼1120)	Sexual dysfunction		Sexual distress		Any pain with intercourse	
		Yes (N¼4280)	No (N¼4825)	Yes (N¼4135)	No (N¼4968)	Yes (N¼4334)	No (N¼4758)
Racial/ethnic group							
Hispanic/Latina/Latinx	81 (7.2)	24 (9.1)	58 (7.0)	12 (8.9)	69 (7.1)	25 (7.5)	54 (7.1)
Mixed race, non-Hispanic	43 (3.8)	5 (1.9)	37 (4.5)	8 (5.9)	35 (3.6)	9 (2.7)	34 (4.5)
Black, non-Hispanic	22 (2.0)	2 (0.8)	18 (2.2)	4 (3.0)	16 (1.7)	14 (4.2)	7 (0.9)
Asian/Pacific Islander, non-Hispanic	23 (2.1)	4 (1.5)	19 (2.3)	3 (2.2)	20 (2.1)	10 (3.0)	13 (1.7)
American Indian/Alaskan Native, non-Hispanic	1 (0.1)	0 (0)	1 (0.1)	1 (0.7)	0 (0)	1 (0.3)	0 (0)
White, non-Hispanic	939 (83.8)	226 (85.9)	683 (82.8)	107 (79.3)	817 (84.4)	271 (81.1)	643 (84.8)
Other race, non-Hispanic/missing race	11 (1.0)	2 (0.8)	9 (1.1)	0 (0)	11 (1.1)	4 (1.2)	7 (0.9)
Pregnancy attempt time at study entry, mo							
≤1	498 (44.5)	99 (37.6)	389 (47.2)	40 (29.6)	454 (46.9)	155 (46.4)	335 (44.2)
2e3	201 (18.0)	46 (17.5)	149 (18.1)	24 (17.8)	174 (18.0)	58 (17.4)	142 (18.7)
4e6	165 (14.7)	36 (13.7)	121 (14.7)	22 (16.3)	138 (14.3)	53 (15.9)	108 (14.3)
6e11	126 (11.3)	40 (15.2)	83 (10.1)	22 (16.3)	103 (10.6)	33 (9.9)	87 (11.5)
2:12	130 (11.6)	42 (16.0)	83 (10.1)	27 (20.0)	99 (10.2)	35 (10.5)	86 (11.4)
Time between study enrollment and completion of SHQ, mo							
<1	451 (40.3)	87 (33.1)	348 (42.2)	49 (36.3)	400 (41.3)	138 (41.3)	304 (40.1)
1e3	372 (33.2)	84 (31.9)	277 (33.6)	47 (34.8)	316 (32.6)	107 (32.0)	261 (34.4)
>3e6	157 (14.0)	48 (18.3)	109 (13.2)	19 (14.1)	138 (14.3)	46 (13.7)	105 (13.9)
>6	140 (12.5)	44 (16.7)	91 (11.0)	20 (14.8)	114 (11.8)	43 (12.9)	88 (11.6)

SHQ, Sexual Health Questionnaire.

^a Includes vulvodynia, vaginismus, interstitial cystitis, lichen sclerosus, fibroids, endometriosis, and polycystic ovary syndrome; ^b Includes chronic pain conditions and chronic fatigue syndrome.

\$100,000. Over 80% of the sample identified as non-Hispanic White. At study entry, participants reported a mean of 5.2 and median of 2.0 months of pregnancy attempts (range: 0e82.0), with the majority (73%) reporting <6 months (Supplemental Figure).

Sexual dysfunction and distress

Twenty-five percent (n¼4280) of the sample met criteria for FSD, whereas 12.2% (n¼135) met criteria for sexual distress. When we examined sexual dysfunction and distress together, 8.5%

(n¼493) reported experiencing both sexual dysfunction and distress, 16.7% (n¼184) reported experiencing dysfunction only, 3.7% (n¼41) reported experiencing distress only, and 71.1% (n¼783) reported neither dysfunction nor distress. Thirty percent of the sample (n¼334) reported that they had experienced discomfort or pain during vaginal penetration at least a few times in the past 4 weeks, but of these, only 20.0% (n¼67) reported distress.

In stratified analyses of baseline characteristics by sexual function

variables, those with FSD and sexual distress were more likely to have lower income and education levels. Those with a history of infertility, depression, anxiety, and posttraumatic stress disorder were more likely to report sexual health issues than those with no such history. Twenty-two percent of the sample (n¼242) reported a chronic pelvic condition, whereas 11.8% (n¼130) reported chronic fatigue and/or pain. Sexual health issues were more common among those who reported chronic pelvic conditions and chronic fatigue and/or pain.

TABLE 2

Sexual dysfunction and distress stratified by months of pregnancy attempts at completion of the Sexual Health Questionnaire

Condition	≤3 mo (N=497)	4–6 mo (N=4202)	7–9 mo (N=4130)	10–12 mo (N=492)	>12 mo (N=4199)
Sexual dysfunction					
Yes	106 (21.5)	40 (20.3)	39 (30.2)	34 (37.4)	61 (31.4)
No	388 (78.5)	157 (79.7)	90 (69.8)	57 (62.7)	133 (68.6)
Missing	3	5	1	1	5
Sexual distress					
Yes	44 (8.9)	20 (10.1)	20 (15.5)	17 (18.9)	34 (17.5)
No	448 (91.1)	178 (89.9)	109 (84.5)	73 (81.1)	160 (82.5)
Missing	5	4	1	2	5
Any pain during sex in the past 4 wk					
Yes	157 (31.9)	55 (27.8)	42 (33.3)	22 (24.4)	58 (31.2)
No	335 (68.1)	143 (72.2)	84 (66.7)	68 (75.6)	128 (68.8)
Missing	5	4	4	2	13
Sexual dysfunction and distress					
Both	30 (6.1)	11 (5.6)	15 (11.6)	13 (14.4)	24 (12.4)
Dysfunction only	74 (15.0)	29 (14.7)	24 (18.6)	20 (22.2)	37 (19.2)
Distress only	14 (2.9)	9 (4.6)	5 (3.9)	4 (4.4)	9 (4.7)
Neither	374 (76.0)	148 (75.1)	85 (65.9)	53 (58.9)	123 (63.7)
Missing	5	5	1	2	6

Bond. Sexual dysfunction in the preconception period. Am J Obstet Gynecol 2023.

Among only diagnosed participants, the prevalence of both conditions was lower, but the risk of sexual health issues was similarly higher among those who reported the conditions compared with those who did not (Supplemental Table). When we stratified by pregnancy attempt time, we observed that the prevalence of sexual dysfunction, sexual distress, and the combined measure of sexual dysfunction and distress all increased with increasing months of pregnancy attempt (Table 2). The prevalence of any pain with intercourse remained relatively constant.

Healthcare seeking

Most participants (917; 83.2%) reported discussing their plans to conceive with a healthcare provider (47.1% at a single visit and 36.1% over multiple visits). Of these, 637 (69.5%) reported not discussing their sex life with their provider. Among the 280 (30.5%) who did, 146

(52.1%) reported raising the topic themselves, whereas 109 (38.9%) reported that their healthcare provider raised the topic (8.9% did not remember).

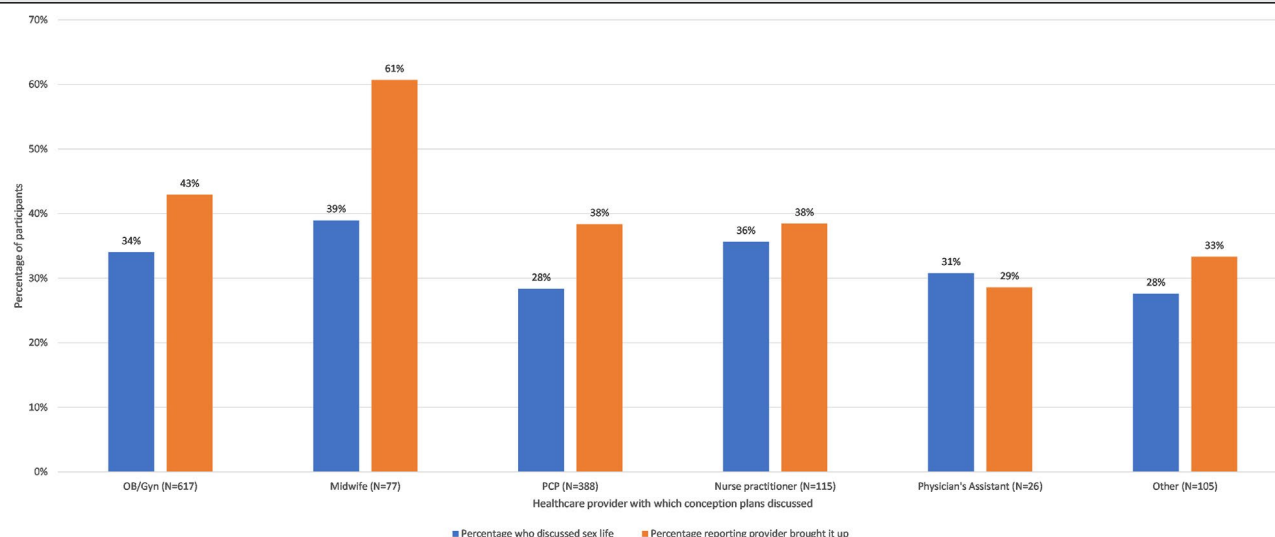
Discussion of participant sex lives varied by provider type (Figure 2). Sixty percent of participants who discussed their plans to conceive with a midwife, regardless of other providers seen, reported that their provider raised the topic of their sex lives, as opposed to 43% of participants who had discussed with an obstetrician-gynecologist (OB/GYN) and 38% of participants who had discussed with a primary care physician (PCP).

The number of participants reporting each reason for not discussing their sex life is displayed in Figure 3. Independent of any other reasons, over half of those who did not discuss their sex lives with their provider stated that their provider did not ask (n=4336). Almost 60% of

participants (N=4370) reported that they did not discuss their sex lives with their provider because they had no sexual health issue. The next most frequent reasons were that the participant did not feel it was relevant to becoming pregnant and the participant felt uncomfortable.

Nineteen participants provided responses in the open-ended text boxes for reasons they did not discuss their sex lives with their provider. As noted previously, because of limited data, we did not conduct a formal qualitative analysis. However, we observed a few commonalities across these responses: (1) painful sex is normal, (2) issues were discussed at a different visit, and (3) previous negative experience with provider. One participant who considered pain during sex to be normal said, "I thought it was normal to have pain during sex and was just because of the position or angle; turns out I actually have uterine fibroids! I didn't know that at the time of the first

FIGURE 2
Discussions of sex life during preconception visits, by provider type



Percentage of participants reporting discussing their sex lives with providers, and percentage reporting that the provider initiated the conversation, stratified by provider type. Participants responded “yes” or “no” to the following question: “Did you discuss your sex life (including any issues with pain, arousal desire, etc.) with your healthcare provider at any of these visits in which you discussed your plans to conceive?” Participants who reported discussing conception plans with multiple provider types are repeated. The sample sizes for the orange columns are smaller than listed because only those who reported that they talked about their sex life with a provider responded to the question “Who brought it up?”

OB/GYN, obstetrician/gynecologist; PCP, primary care physician.

visit.” Such comments suggest a need for providers to inquire about painful intercourse because it may indicate underlying health issues.

Other participants mentioned discussing these issues at a different visit. One participant stated, “My regular PCP was out on maternity leave, so I saw a different provider who I don’t know; she didn’t ask and I didn’t like her, so I didn’t want to talk about it with her, but I have discussed it with my regular PCP.” This comment demonstrates an opportunity for providers to inquire about sexual health given that patients may not be inclined to initiate the conversation, and highlights the importance of patient-provider relationships.

Some participants mentioned having had negative experiences with providers in the past as a reason for not discussing their sexual health with their provider. One participant wrote, “[My] previous OB/GYN made me feel uncomfortable and laughed at me in the past,” again highlighting the importance of

patient-provider communication and relationships.

Comment Principal findings

Our findings suggest that sexual dysfunction, distress, and painful intercourse are prevalent in the preconception period in a population of female-identified pregnancy planners with a range of pregnancy attempt times. Dysfunction and distress increased with longer pregnancy attempt time. However, most participants did not discuss their sex lives with their healthcare provider when discussing plans to conceive. Their provider not asking about it was one of the most reported reasons for not discussing their sex lives.

Results in the context of what is known

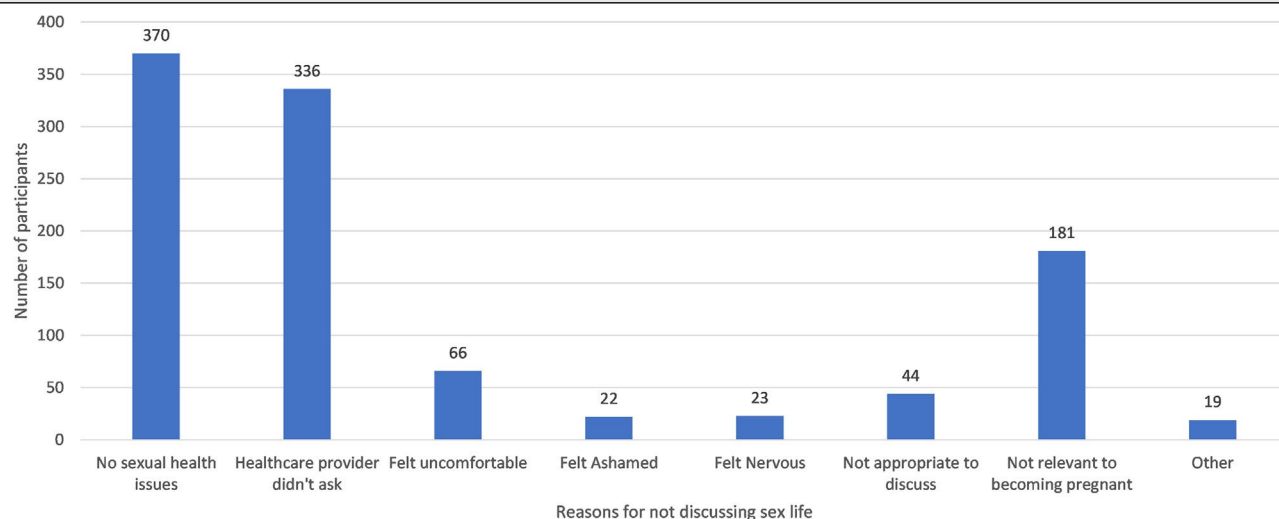
The prevalence of FSD in our study is lower than that found in other population-based studies, which frequently report a prevalence >40%.^{8,16} This difference may result from the

use of different scales to measure FSD, the fact that our cohort is premenopausal (ie, menopause is associated with vulvovaginal atrophy and sexual dysfunction),²² or the fact that our sample has relatively higher socioeconomic status, which is associated with a lower risk of FSD.²³ Nonetheless, over 30% of our cohort reported at least some pain with intercourse in the past 4 weeks, and 8% met the threshold for both FSD and distress, which would be the most conservative estimate of the prevalence of clinically relevant FSD.

We also found that the prevalence of FSD and sexual distress increased with pregnancy attempt time. This finding is aligned with previous research that has demonstrated that women with infertility have a higher prevalence of FSD,^{11,24} yet our findings suggest that sexual dysfunction can occur before the clinical threshold for infertility (ie, 12 months). Like previous research,^{25e27} we also found that FSD was more

FIGURE 3

Reasons that participants did not discuss sexual health with a provider (N = 637)



Count of participants endorsing reasons for not discussing their sex lives at a visit in which pregnancy attempts were discussed. Participants who reported discussing their plans to conceive with a healthcare provider but not discussing their sex life responded to the question “Why Not?” and could check all that apply.

common among participants with other comorbidities, including depression, anxiety, chronic pain/fatigue, and pelvic comorbidities. Taken together, these findings suggest that sexual function should be considered when individuals with these conditions attempt pregnancy, and further, that continued discussions of sexual function should occur for those who experience prolonged pregnancy attempts or infertility.

Our findings align with other studies reporting that women do not discuss their sexual health concerns, even long-standing ones, with their healthcare providers.^{17,28,32} Barriers to discussing sexual health with providers include a lack of confidence in a medical solution, fear of stigma, a feeling that sexual issues are not a medical problem, and embarrassment.^{17,30} In a study of pregnant women, almost half reported concerns about sexual activity in pregnancy, but 71% did not discuss these concerns with a doctor, despite feeling that they should be discussed.¹⁸ We additionally found that most participants who reported painful intercourse did not report concurrent distress. This could suggest a normalization of sexual pain, which may

contribute to participants not discussing their sexual health with providers.

Our results replicate other findings that feelings of embarrassment or shame are important barriers to healthcare seeking for sexual health issues,^{17,18,30} but suggest a potential role of providers not asking about sexual health. Indeed, among PRESTO participants who reported discussing their sex life, most brought the topic up themselves. Our findings also suggest that previous negative experiences with unsupportive providers can influence a patient's desire to discuss health issues; providers should be cognizant of their role in providing an encouraging and supportive space for patients.

Strengths and limitations

We conducted this analysis within a large, geographically diverse cohort, and used clinically validated measures for FSD and sexual distress. Nonetheless, our study has important limitations. Despite the validation of the FSFI-6 against diagnosed FSD,²⁰ it does not include a marker of distress, which is required for a clinical diagnosis.¹ Indeed, when we combined the FSD and the

FSDS, the prevalence of FSD and distress was lower than that of FSD alone. Thus, the combined measure is likely more clinically relevant, although it has not been validated. Further, we lacked information on the duration of sexual function issues and details about the nature of reported pain with intercourse.

Cohort members identified primarily as non-Hispanic White, had relatively high levels of education and income, and were pregnancy planners. Moreover, participants who identified as Hispanic were less likely to complete the SHQ than participants who identified as other racial and ethnic groups.³³ Thus, generalizability to other populations, particularly Hispanic populations, may be limited. We also did not obtain details about preconception discussions with providers, so there is likely heterogeneity in the types of visits during which participants discussed their conception plans, which may have influenced participants' interest or ability to discuss their sex lives. Despite the relatively high response rate, it is possible that participants who completed the SHQ were more likely to have sexual function issues. We have previously demonstrated

that SHQ completion does not seem to be related to many clinical factors associated with sexual function,³³ but we cannot comment on the sexual function of nonrespondents to the SHQ.

Conclusions

Our findings suggest that sexual dysfunction, distress, and pain are prevalent in the preconception period, but patients often do not raise their concerns with their healthcare providers when discussing conception plans. Sexual dysfunction, distress, and pain are associated with reduced quality of life and mental health, and may make attempting conception an unpleasant experience. Healthcare providers should consider integrating a discussion of sexual health into routine preconception counseling. ■

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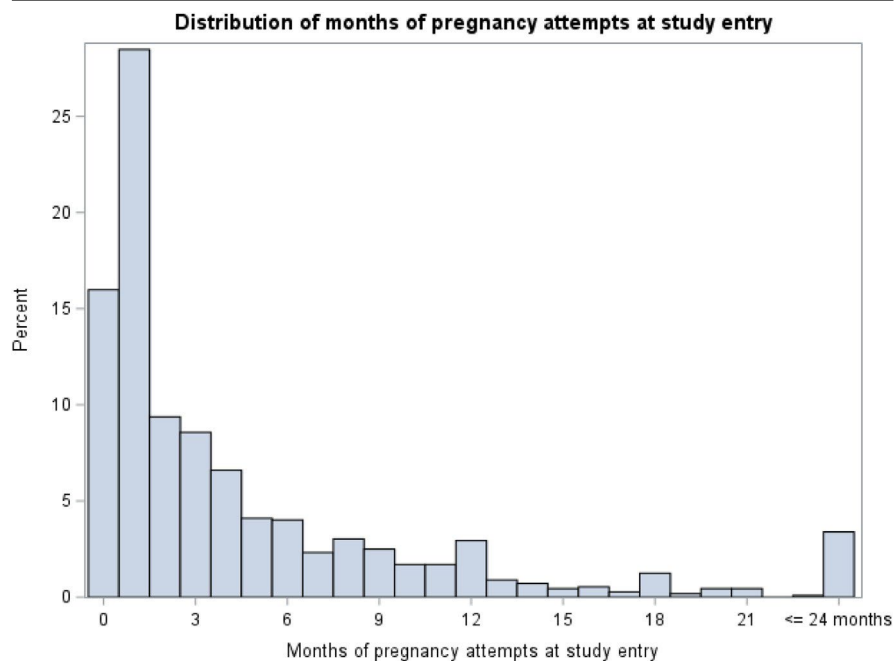
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SUPPLEMENTAL FIGURE

Histogram of months of pregnancy attempt time at study entry



SUPPLEMENTAL TABLE

Prevalence of sexual health issues by chronic pelvic condition or chronic pain/fatigue syndrome among those with diagnosed, not suspected, conditions

Condition	Full sample (N¼1120)	Sexual dysfunction		Sexual distress		Any pain with intercourse	
		Yes (N¼263)	No (N¼825)	Yes (N¼125)	No (N¼931)	Yes (N¼318)	No (N¼758)
Chronic pelvic condition ^a							
Yes	195 (17.7)	62 (22.4)	131 (15.9)	38 (28.2)	155 (16.1)	79 (24.0)	113 (15.1)
No	908 (82.3)	215 (77.6)	692 (84.1)	97 (71.9)	811 (84.0)	250 (76.0)	634 (84.9)
Missing	17	3	2		2	5	11
Chronic pain/fatigue ^b							
Yes	71 (6.4)	21 (7.6)	49 (6.0)	20 (14.8)	51 (5.3)	29 (8.8)	40 (5.4)
No	1031 (93.6)	256 (92.4)	774 (94.1)	115 (85.9)	916 (94.7)	299 (91.2)	707 (94.7)
Missing	18	3	2		1	6	11

^a Includes vulvodynia, vaginismus, interstitial cystitis, lichen sclerosus, fibroids, endometriosis, and polycystic ovary syndrome. Participants must have reported being diagnosed by a healthcare provider; ^b Includes chronic pain conditions and chronic fatigue syndrome. Participants must have reported being diagnosed by a healthcare provider.