

Sexual Function in Pregnancy in a Nigerian Population: A Prospective Longitudinal Study

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ABSTRACT

Background: Studies are abound from low- and middle-income countries (LMICs) on postpartum sexual dysfunction but very limited in pregnancy. The data will help clinicians in providing women with evidence-based information and counseling in these regards. **Aim:** To determine the effects of different trimesters of pregnancy on sexual functions and the possible risk factors for sexual dysfunction in pregnancy. **Patients and Methods:** The study was longitudinal in design, and study population consisted of 270 pregnant women attending antenatal care at the two largest tertiary hospitals in Enugu, Nigeria. The recruitment was in the first trimester, and each recruited participant served as her own control. Interviews were conducted at specific times in the three trimesters, and data regarding sexual functions were obtained using validated questionnaires. Analysis of variance (ANOVA) was performed to compare the mean total and domain female sexual function index (FSFI) scores between the three trimesters, and Bonferroni's test for significant association between any two trimesters as may be applicable. The risk factors were determined via multivariate logistic regression analysis. A *P* value ≤ 0.05 was considered statistically significant. **Results:** The FSFI means total score decreased as pregnancy advanced. It was significantly lower in second trimester (T2) than in first trimester (T1) ($P < 0.001$), and significantly lower in third trimester (T3) than T1 ($P < 0.001$), but no difference between T3 and T2 ($P = 0.759$). Similarly, the mean frequency of coitus per week declined across the trimesters; lower in T2 than T1 (2.2 ± 0.7 vs. 2.4 ± 0.6 ; $P < 0.01$), and lower in T3 than T1, but no difference between T3 and T2. The overall rate of sexual dysfunction was 50.7% and the risk factors age ≥ 35 years (AdjOR: 1.4; 95%CI: 1.1–1.9; *P*: 0.01), multiparity (AdjOR: 1.7; 95%CI: 1.2–2.5; *P*: 0.013) and a previous history of cesarean section (AdjOR: 2.1; 95%CI: 1.7–2.6; *P*: 0.004). **Conclusion:** Sexual function declines as pregnancy advances and the rate of sexual dysfunction is high in Enugu, Nigeria. Obstetricians are encouraged to discuss sexual health issues during antenatal care services and make more efforts towards reducing the modifying obstetric risk factors.

KEYWORDS: Nigeria, pregnancy, sexual function

INTRODUCTION

Pregnancy is a potential risk factor for sexual dysfunction.^[1] While studies are abound on postpartum incidence of sexual dysfunction, they are very limited during pregnancy, especially in low- and middle-income countries (LMICs). For instance, recent studies observed that childbirth has a significant impact


on female sexual function (FSF), but did not determine the possible effects of pregnancy on this maternal morbidity.^[1-3] Pregnancy could influence sexual function

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because of its potential to cause weakness, nausea, vomiting, heartburn, psychological symptoms, and other physiological changes in pregnancy.^[1,3] When sexual dysfunction occurs in pregnancy, it could cause marital disharmony and psychological distress that could promote sexual infidelity on the spouse part. Despite the above possible effects of pregnancy on sexual health, this issue is rarely discussed during antenatal care services probably because of limited sound data in this regard.^[4] Interestingly, there are positive opinions that conversation on this topic between the women and their obstetric caregivers during antenatal visits could improve sexual function and decrease the emotional and psychosocial distress commonly associated with sexual dysfunction.^[4] Furthermore, the available information on the effects of pregnancy on sexual function is heterogeneous and controversial.^[5-7] While some observed a decrease in sexual function as pregnancy advanced, others could not establish any significant difference.^[5,6]

A study on the effects of pregnancy on sexual function will help provide evidence-based information on the variations across the trimesters and the possible risk factors. Such information will guide the clinicians in women counseling during antenatal care services. This study is therefore aimed to determine the effects of different trimesters of pregnancy on sexual function, and the risk factors of sexual dysfunction among pregnant women in Enugu, Nigeria.

PATIENTS AND METHODS

The study was carried out at the University of Nigeria Teaching Hospital (UNTH) Ituku-Ozalla and Enugu State University Teaching Hospital (ESUTH) Parklane between January 2021 and June 2022.

Prior to commencement of the study, ethical clearance was obtained from the institutional review boards (IRB) of the UNTH, Ituku-Ozalla, Enugu (application reference no: NHREC/05/01/2008B-FWA00002458-IRB00002323). A written informed consent was also obtained from each participant before enrollment into the study.

The study was longitudinal in design, and the study population consisted of pregnant women attending antenatal care at the two study centers. All pregnant women booking for antenatal care in the first trimester (T1) in the two study centers were eligible for the study. However, women with multiple gestations or severe medical disorders and comorbidities were excluded from the study. Also, women who were incontinent of urine or feces at recruitment were excluded. The eligible participants were consecutively

recruited by the authors and research assistants as they came for the antenatal booking until the desired sample size was achieved. Using a sexual dysfunction rate in pregnancy of 81% obtained from a previous related study,^[8] at 95% confidence interval and 5% sampling error (precision), the calculated minimum sample size (n) was 236. However, considering a possible 10% attrition rate, 270 women were recruited for the study.

The recruitment was in the T1 at 13 weeks gestation or less, and at the booking clinic. Each recruited participant was followed up by the authors and research assistants to the second trimester (T2) and third trimester (T3). At recruitment, the baseline socio-demographic data of the participants were taken. The sexual functions of the participants at booking (T1) were obtained using the validated female sexual function index (FSFI).^[9]

The questionnaires were self-administered and contained a cover page explaining the study's purpose and some definitions to assist the participants in answering the questions. Participants who were not proficient in English were assisted by the research assistants. Following the booking, the participants were generally followed up in line with the two hospitals' (traditional) protocol of antenatal care visits—monthly till 28 weeks gestation, fortnightly till 36 weeks gestation, and then weekly till delivery. During the T2 between 20 and 24 weeks, and in the T3 between 36 and 38 weeks, interviews were repeated to obtain data on the participants' sexual functions using the same validated questionnaires.

In order to minimize loss to follow-up, participants' phone numbers and home addresses were collected with their consent. They were constantly reminded by the authors and the research assistants to ensure they attended the scheduled antenatal visits. The research assistants consisted of five obstetrics and gynecology residents selected from each of the five units of the department of the hospitals to cover the five working days of the week for the various units, so that follow-up became easier.

The study's validated questionnaire

Female sexual function index (FSFI)—“This is a validated instrument for the assessment of sexual function that consists of 19 questions [Appendix]. The questions are scored for domains of desire, arousal, lubrication, orgasm, satisfaction, and pain; higher scores reflect a better sexual function (maximum score, 36). The scores range between 2 and 36. Higher scores indicated better sexual function. The individual domain scores = sum of scores of domain items x domain factor. Total score = sum of all domain scores.”^[11] Sexual dysfunction was suggested by a total FSFI score of less than 26.5.^[7,10]

The primary outcome measures were the mean FSFI total score and domain score of the women in the various trimesters of pregnancy in each of the trimesters. The secondary outcome measures were the risk factors for sexual dysfunction in pregnancy.

Data analysis was done using the statistical package for social sciences (SPSS) version 26 for Windows. The analysis was done separately for mean FSFI total scores, and mean FSFI domain scores, and then compared between the three trimesters using the ANOVA. A Bonferroni's pairwise comparison with Student's *t*-test was also performed to test for any significant association between any two trimesters as may be applicable. Proportions were compared using Chi square or Fisher's exact tests as appropriate, and risk factors were determined via multivariate logistic regression analysis. A *P* value ≤ 0.05 was considered statistically significant.

RESULTS

Study flow and participants basic characteristics

A total of 270 women were eligible for the study; however, twenty were not enrolled due to the study's exclusion criteria ($n = 13$) and refusal to

give consent ($n = 7$). Of the 250 women enrolled, 223 (93.2%) concluded the study while 27 (6.8%) were lost to follow-up—eleven (11) after recruitment but before administration of T2 questionnaires, and 16 before administration of T3 questionnaires. Of the 223 participants that completed all the three series of questionnaires, 26.9% were nullipara ($n = 60$), 64.1% ($n = 143$) were multipara, and 10% ($n = 20$) were grandmultipara. The mean age of the participants was 30.7 ± 2.4 (range 18–45) years, while the mean gestational age at recruitment was 11.3 ± 1.8 (range: 8–13) weeks. Details of the baseline characteristics of the participants including age, parity, educational level, and gestational age at recruitment were shown in Table 1.

Sexual functions of the participants

The mean FSFI total scores were 27.61 ± 3.5 , 24.25 ± 3.1 , and 24.16 ± 3.1 in T1, T2, and T3, respectively. A Bonferroni's pairwise comparison showed a statistically significant decline in T2 ($P < 0.001$) and T3 ($P < 0.001$). Details were shown in Table 2. While the T1 mean FSFI total scores (27.61 ± 3.5) suggested normal sexual function (total FSFI score ≥ 26.5), the T2 and T3 scores suggested sexual dysfunction (24.25 ± 3.1 and 24.16 ± 3.1 , respectively).

Table 3 shows the mean FSFI domain and total scores at the various trimesters of pregnancy. Apart from desire and lubrication, all other domain scores (arousal, orgasm, satisfaction, and pain) were significantly reduced in T2 and T3 ($P < 0.05$). There was no difference in any FSFI domain scores between T2 and T3 ($P < 0.05$). Details were shown in Tables 4 and 5.

Regarding the frequency of coitus, there was a significant decline in the mean frequency per week in the T2 and T3 when compared to T1: (2.2 ± 0.7 vs. 2.4 ± 0.6 ; $P < 0.01$) and (2.1 ± 0.5 vs. 2.4 ± 0.6 ; $P < 0.001$), respectively. There was no significant difference between T3 and T2 (2.1 ± 0.5 vs. 2.2 ± 0.7 ; $P = 0.08$).

Predictors of sexual dysfunction in pregnancy

The overall rate of sexual dysfunction among the participants was 50.7% ($n = 113$). Following univariate analyses, the following factors were significantly associated with the development of sexual dysfunction: age ≥ 35 years ($P = 0.007$), married status ($P = 0.042$), less than tertiary education ($P = 0.035$), low social class ($P = 0.014$), multiparity ($P = 0.006$), BMI ≥ 30 ($P = 0.024$), breast feeding in index pregnancy ($P = 0.034$), history of early pregnancy complications ($P = 0.017$), and a previous history of cesarean section ($P < 0.001$). However, following a multivariate logistic regression, age ≥ 35 years (AdjOR:

Table 1: Sociodemographic characteristics of the study participants

Variable	Variable subgroup	Number	Percentage
Age	<20	11	4.9
	20–29	114	51.1
	30–39	83	37.2
	40–49	15	6.7
Marital Status	Single	7	3.1
	Married	214	96
	Divorced	2	0.9
Education	Primary education	19	8.5
	Secondary education	57	25.6
	Tertiary education	147	65.9
Social class	Low	110	49.3
	High	113	50.7
Parity	0	60	26.9
	1–4	143	64.1
	≥ 5	20	9.0

Table 2: Comparison of female sexual function index (FSFI) total scores at various trimesters of pregnancy*

First trimester ($n=223$)	Second trimester ($n=223$)	Third trimester ($n=223$)	<i>P</i>
27.61±3.5	24.25±3.1	24.16±3.1	<0.001
27.61±3.5	24.25±3.1	-	<0.001
27.61±3.5	-	24.16±3.1	<0.001
	24.25±3.1	24.16±3.1	0.759

*One-way ANOVA test

Table 3: Female sexual function index (FSFI) domain and total scores at various trimesters of pregnancy*

Domain	First trimester (n=223) Mean±2SD	Second trimester (n=223) Mean±2SD	Third trimester (n=223) Mean±2SD	P
Desire	5.3±1.5	5.2±1.5	5.2±1.6	0.811
Arousal	5.1±1.5	4.1±1.3	4.1±1.4	<0.001
Lubrication	4.5±1.7	4.4±1.6	4.4±1.5	0.852
Orgasm	4.0±1.1	3.7±1.4	3.7±1.3	<0.001
Satisfaction	4.3±1.2	3.0±1.7	3.0±1.5	<0.001
Pains	4.4±1.3	3.9±1.6	3.8±1.4	<0.001
Total score	27.6±3.5	24.3±3.1	24.2±3.1	<0.001

*One-way ANOVA test, SD=Standard deviation

Table 4: Female sexual function index (FSFI) domain scores significantly affected by pregnancy*

Domain	First trimester (n=223) Mean±2SD	Second trimester (n=223) Mean±2SD	Third trimester (n=223) Mean±2SD	P
Arousal	5.1±1.5	4.1±1.3	4.1±1.4	<0.001
	5.1±1.5	4.1±1.3	-	
	5.1±1.5	-	4.1±1.4	
Orgasm	4.0±1.1	4.1±1.3	4.1±1.4	<0.001
	4.0±1.1	3.7±1.4	3.7±1.3	
	4.0±1.1	3.7±1.4	-	
Satisfaction	4.3±1.2	3.7±1.4	3.7±1.3	<0.001
	4.3±1.2	3.7±1.4	3.7±1.3	
	4.0±1.1	-	3.7±1.3	
Pains	4.4±1.3	3.7±1.4	3.7±1.3	<0.001
	4.4±1.3	3.0±1.7	3.0±1.5	
	4.4±1.3	4.3±1.2	-	
		4.3±1.2	3.0±1.5	<0.001
		4.3±1.2	3.0±1.5	
		-	3.8±1.4	
		3.9±1.6	3.8±1.4	
		3.9±1.6	3.8±1.4	
		-	3.8±1.4	
		3.9±1.6	3.8±1.4	

*t-test, SD=Standard deviation

Table 5: Female sexual function index (FSFI) domain scores not significantly affected by pregnancy*

Domain	First trimester (n=223) Mean±2SD	Second trimester (n=223) Mean±2SD	Third trimester (n=223) Mean±2SD	P
Desire	5.3±1.5	5.2±1.5	5.2±1.6	0.811
	5.3±1.5	5.2±1.5	-	
	5.3±1.5	-	5.2±1.6	
Lubrication	4.5±1.7	5.2±1.5	5.2±1.6	0.852
	4.5±1.7	4.4±1.6	4.4±1.5	
	4.5±1.7	4.4±1.6	-	
		-	4.4±1.5	
		4.4±1.6	4.4±1.5	

*t-test, SD=Standard deviation

1.4; 95%CI: 1.1–1.9; P: 0.01), multiparity (AdjOR: 1.7; 95%CI: 1.2–2.5; P: 0.013) and a previous history of cesarean section (AdjOR: 2.1; 95%CI: 1.7–2.6; P: 0.004) maintained significant association with sexual dysfunction while other variables (married status, less than tertiary education, low social class, BMI \geq 30, breast feeding in index pregnancy, and a history of early pregnancy complications) were no longer associated with sexual dysfunction ($P > 0.05$).

DISCUSSION

This study demonstrated that sexual function decreases across the trimesters. It showed that FSFI total score decreases as pregnancy advances, reaching the level of sexual dysfunction (total FSFI $<$ 26.5) in the second and third trimesters. Interestingly, sexual function and frequency of coitus were better in the first trimester compared to the second and third trimesters. This suggests that pregnancy in the first trimester does

not seem to exert much effect on sexual function in the study population. Since it is known that the hormonal (progesterone) changes in pregnancy that affect sexual function increase as pregnancy advances, it is likely that these changes are not yet sufficient enough in the first trimester to affect the sexual function. Although this observation is similar to a number of previous reports,^[4,5,8,11,12] it differed from some others that reported a decline in the first trimester compared to the second trimester.^[13-16] Since the decline in the first trimester reported by some authors was attributed to high incidence of nausea, vomiting, weakness, emotional lability, and other early pregnancy symptoms,^[17] it may suggest that these conditions are not as common in the study population or do not affect their sexual functions significantly.

The study also observed that sexual function declined significantly in the second trimester and even further in the third trimester. This suggests that the increasing steroid levels and physiological changes in pregnancy including changes in the fetal biometry, and amniotic fluid volume may affect sexual function as pregnancy advances. This observation is similar to the findings by some previous authors,^[8,11,12] but differed from some others that observed an improvement in sexual function in the second trimester compared to the first trimester.^[13-16] The observed decline in sexual function in the third trimester is in agreement with many previous related studies.^[4,8,11-16] Knowledge of these observed variations in sexual function during pregnancy will be helpful to clinicians in women counseling on sexual health and allaying of related anxieties during antenatal care services. The observed decline in sexual function and frequency of coitus across the trimesters suggests that pregnancy obviously affects sexual function and activities. The decline may contribute to the marital disharmony and conjugal infidelity by the men commonly seen in the late pregnancy,^[8,17] which are aggravated in societies where females avoid sexual activity in late pregnancy due to some sociocultural and religious beliefs.^[8,17]

Although the observed sexual dysfunction rate in this study is high (50.5), it falls within the reported range of 37%–94%.^[8,14,15,18-23] The reported wide range in the literature may partly be due to considerably heterogeneity in the study designs particularly the “study instrument.” The FSFI has different versions with different cutoff scores, and comparison of studies that utilized different cutoff scores could be misleading. Nevertheless, we observed that even among studies with similar FSFI cutoff scores, the rate deferred widely suggesting possible geographical, racial, religious,

or sociocultural influences on sexual function during pregnancy.^[8] For instance, the present study utilized a similar cross-validated instrument according to Wiegel *et al.*^[10] but obtained a sexual dysfunction rate of 50.7% much lower than 81% obtained by Daud *et al.*^[8] that utilized similar instrument and cutoff score. However, the rate (50.7%) is similar to the mean rate of 48.2% recorded among pregnant Turkish women.^[14]

This study also demonstrated that “desire and lubrication” are affected not affected as pregnancy advances, but other domain scores (arousal, orgasm, satisfaction, and pain) significantly decrease as pregnancy advances. These observations will guide obstetricians in women counseling regarding the specific sexual function domains affected by pregnancy. The findings are similar to the reports from previous related studies.^[5,8]

The predictors of sexual dysfunction observed in this study included age ≥ 35 years, multiparity, and a previous history of cesarean section. As the woman’s age increases the sexual function declines suggesting that age may have an inverse relationship with the individual FSFI domain scores. A previous systematic review reported a significant decline in sexual activity and sexual function with increasing age.^[24] Multiparity was also observed as a risk factor for sexual dysfunction. This again could be because of the “age factor” since older women are more likely to be multiparous than younger women. Besides the age factor effect, some reports have shown that the quality of “orgasmic grip” decreases with increasing parity and this may result in a decreasing sexual function.^[17] The observation that women with previous cesarean delivery are at higher risk of sexual dysfunction than those with previous vaginal delivery is difficult to explain. However, it may be that women with previous cesarean section may be having some residual pains from the previous scars which may influence their pain perception and sexual function. Another possible explanation may be that these women may be more worried about their future delivery mode and outcome than their counterparts with unscarred uterus.

Study limitations and strengths

This study does not have data on the possible effect of labor and postpartum on sexual function. This information is necessary in determining if the observed changes would resolve or aggravate postpartum. Fortunately, the study participants are being followed up and the outcomes would be presented in subsequent publication. Despite the above limitations, this study is very relevant as it is the first from sub-Saharan Africa (to the best of our knowledge) to comprehensively and

prospectively evaluate the effects of pregnancy on sexual function with reduced likelihood of recall bias that heralded most previous designs. The study was conducted in two major tertiary health facilities in the state with high maternity flow and thus would be more representative and generalizable than a single center study. All the instruments for data collection were validated and have been used in previously published studies.

CONCLUSION

Sexual function declines as pregnancy advances, and the rate of sexual dysfunction is high in the study population. The risk factors for sexual dysfunction are age ≥ 35 years, multiparity, and previous history of cesarean section. Obstetricians are therefore encouraged to discuss sexual health issues during antenatal care services to assure the women that the decline in sexual function in pregnancy is physiological and expected. This may help to allay their sexual anxieties and improve their sexual functions/coital frequencies. They should also make more efforts towards reducing the modifying obstetric factor such as the “rate of cesarean section” which predisposes to sexual dysfunction.

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Conflicts of interest

There are no conflicts of interest.

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APPENDIX**FEMALE SEXUAL FUNCTION INDEX (FSFI) QUESTIONNAIRE —Rosen *et al.* (2000)**

Questions and Response Options: Tick the options that apply to you.

Q1: Over the past 4 weeks, how **often** did you feel sexual desire or interest?

- 5 = Almost always or always
- 4 = Most times (more than half the time)
- 3 = Sometimes (about half the time)
- 2 = A few times (less than half the time)
- 1 = Almost never or never

Q2: Over the past 4 weeks, how would you rate your **level** (degree) of sexual desire or interest?

- 5 = Very high
- 4 = High
- 3 = Moderate
- 2 = Low
- 1 = Very low or none at all

Q3. Over the past 4 weeks, how **often** did you feel sexually aroused (“turned on”) during sexual activity or intercourse?

- 0 = No sexual activity
- 5 = Almost always or always
- 4 = Most times (more than half the time)
- 3 = Sometimes (about half the time)
- 2 = A few times (less than half the time)
- 1 = Almost never or never

Q4. Over the past 4 weeks, how would you rate your **level** of sexual arousal (“turn on”) during sexual activity or intercourse?

- 0 = No sexual activity
- 5 = Very high
- 4 = High
- 3 = Moderate
- 2 = Low
- 1 = Very low or none at all

Q5. Over the past 4 weeks, how **confident** were you about becoming sexually aroused during sexual activity or intercourse?

- 0 = No sexual activity
- 5 = Very high confidence
- 4 = High confidence
- 3 = Moderate confidence
- 2 = Low confidence
- 1 = Very low or no confidence

Q6. Over the past 4 weeks, how **often** have you been satisfied with your arousal (excitement) during sexual activity or intercourse?

- 0 = No sexual activity
- 5 = Almost always or always
- 4 = Most times (more than half the time)
- 3 = Sometimes (about half the time)
- 2 = A few times (less than half the time)
- 1 = Almost never or never

Q7: Over the past 4 weeks, how **often** did you become lubricated (“wet”) during sexual activity or intercourse?

- 0 = No sexual activity
- 5 = Almost always or always

- 4 = Most times (more than half the time)
- 3 = Sometimes (about half the time)
- 2 = A few times (less than half the time)
- 1 = Almost never or never

- Q8. Over the past 4 weeks, how **difficult** was it to become lubricated (“wet”) during sexual activity or intercourse?
- 0 = No sexual activity
 - 1 = Extremely difficult or impossible
 - 2 = Very difficult
 - 3 = Difficult
 - 4 = Slightly difficult
 - 5 = Not difficult
- Q9: Over the past 4 weeks, how often did you **maintain** your lubrication (“wetness”) until completion of sexual activity or intercourse?
- 0 = No sexual activity
 - 5 = Almost always or always
 - 4 = Most times (more than half the time)
 - 3 = Sometimes (about half the time)
 - 2 = A few times (less than half the time)
 - 1 = Almost never or never
- Q10: Over the past 4 weeks, how **difficult** was it to maintain your lubrication (“wetness”) until completion of sexual activity or intercourse?
- 0 = No sexual activity
 - 1 = Extremely difficult or impossible
 - 2 = Very difficult
 - 3 = Difficult
 - 4 = Slightly difficult
 - 5 = Not difficult
- Q11. Over the past 4 weeks, when you had sexual stimulation or intercourse, how **often** did you reach orgasm (climax)?
- 0 = No sexual activity
 - 5 = Almost always or always
 - 4 = Most times (more than half the time)
 - 3 = Sometimes (about half the time)
 - 2 = A few times (less than half the time)
 - 1 = Almost never or never
- Q12: Over the past 4 weeks, when you had sexual stimulation or intercourse, how **difficult** was it for you to reach orgasm (climax)?
- 0 = No sexual activity
 - 1 = Extremely difficult or impossible
 - 2 = Very difficult
 - 3 = Difficult
 - 4 = Slightly difficult
 - 5 = Not difficult
- Q13: Over the past 4 weeks, how **satisfied** were you with your ability to reach orgasm (climax) during sexual activity or intercourse?
- 0 = No sexual activity
 - 5 = Very satisfied
 - 4 = Moderately satisfied
 - 3 = About equally satisfied and dissatisfied

- 2 = Moderately dissatisfied
1 = Very dissatisfied

Q14: Over the past 4 weeks, how **satisfied** have you been with the amount of emotional closeness during sexual activity between you and your partner?

- 0 = No sexual activity
5 = Very satisfied
4 = Moderately satisfied
3 = About equally satisfied and dissatisfied
2 = Moderately dissatisfied
1 = Very dissatisfied

Q15: Over the past 4 weeks, how satisfied have you been with your sexual relationship with your partner?

- 5 = Very satisfied
4 = Moderately satisfied
3 = About equally satisfied and dissatisfied
2 = Moderately dissatisfied
1 = Very dissatisfied

Q16: Over the past 4 weeks, how **satisfied** have you been with your overall sexual life?

- 5 = Very satisfied
4 = Moderately satisfied
3 = About equally satisfied and dissatisfied
2 = Moderately dissatisfied
1 = Very dissatisfied

Q17: Over the past 4 weeks, how **often** did you experience discomfort or pain during vaginal penetration?

- 0 = Did not attempt intercourse
1 = Almost always or always
2 = Most times (more than half the time)
3 = Sometimes (about half the time)
4 = A few times (less than half the time)
5 = Almost never or never

Q18: Over the past 4 weeks, how **often** did you experience discomfort or pain following vaginal penetration?

- 0 = Did not attempt intercourse
1 = Almost always or always
2 = Most times (more than half the time)
3 = Sometimes (about half the time)
4 = A few times (less than half the time)
5 = Almost never or never

Q19. Over the past 4 weeks, how would you rate your **level** (degree) of discomfort or pain during or following vaginal penetration?

- 0 = Did not attempt intercourse
1 = Very high
2 = High
3 = Moderate
4 = Low
5 = Very low or none at all

FSFI SCORING SYSTEM — Rosen *et al.* (2000)

The individual domain scores and full-scale score of the FSFI are derived by the computational formula outlined in the table below. Individual domain scores are obtained by adding the scores of the individual items that comprise the domain and multiplying the sum by the domain factor (see below). The full-scale score is obtained by adding the six

domain scores. It should be noted that within the individual domains, a domain score of zero indicates that no sexual activity was reported during the past month.

Domain	Questions	Score Range	Factor	Minimum	Maximum
Desire	1, 2	1–5	0.6	1.2	6.0
Arousal	3, 4, 5, 6	0–5	0.3	0	6.0
Lubrication	7, 8, 9, 10	0–5	0.3	0	6.0
Orgasm	11, 12, 13	0–5	0.4	0	6.0
Satisfaction	14, 15, 16	0 (or 1)–5	0.4	0	6.0
Pain	17, 18, 19	0–5	0.4	0	6.0
Full-Scale Score Range			2.0	36.0	