



Sexual Dysfunction and Related Factors during Pregnancy at a Tertiary Health Facility in Southwestern Nigeria

**Adeyemi Sunday Adefisan^{1*}, Jacob Olumuyiwa Awoleke¹,
Babatunde Ajayi Olofinbiyi¹, Olusola Peter Aduloju¹,
Temitope Omoladun Okunola¹, Oluwatoyin Olawumi Adefisan²
and Oluseyi Emmanuel Adelekan³**

¹*Department of Obstetrics and Gynaecology, Ekiti State University/Ekiti State University Teaching Hospital, Ado-Ekiti, Nigeria.*

²*Ekiti State University Teaching Hospital School of Midwifery, Ado Ekiti, Nigeria.*

³*Department of Obstetrics and Gynaecology, College of Medicine and Health Sciences, Afe Babalola University, Ado Ekiti, Nigeria.*

Authors' contributions

This work was carried out in collaboration among all authors. Authors ASA and JOA provided study concept. Authors ASA, JOA, BAO, OPA and TOO performed study design. Authors ASA, JOA, BAO, OPA and TOO helped in data collection and/or processing. Authors ASA, OOA and OEA did data analysis and/or interpretation. Authors ASA, OOA and OEA did literature Searches. Author ASA wrote original draft of the manuscript. Authors ASA, JOA, BAO, OPA, TOO, OOA and OEA critically reviewed the manuscript. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/JAMMR/2021/v33i430833

Editor(s):

(1) Dr. Emmanouil (Manolis) Magiorkinis, General Hospital for Chest Diseases "Sotiria", Greece.

Reviewers:

(1) Jéssica Mayra Ferreira, University of Campinas, Brazil.

(2) Umaharan Thamothersampillai, University of Jaffna, Sri Lanka.

Complete Peer review History: <http://www.sdiarticle4.com/review-history/65887>

Original Research Article

Received 15 December 2020

Accepted 20 February 2021

Published 08 March 2021

ABSTRACT

Aims: This study aimed at determining the prevalence of sexual dysfunction among the pregnant women studied. It compared the prevalence in each trimester of pregnancy, and identified socio-demographic factors associated with sexual dysfunction in pregnancy.

Study Design: A descriptive cross-sectional study.

Place and Duration of Study: Department of Obstetrics and Gynaecology, Ekiti State University Teaching Hospital, Ado Ekiti, Nigeria between 1st and 30th of November 2020.

*Corresponding author: E-mail: aadefisan@yahoo.com;

Methodology: We included a total of 124 pregnant women. Data were collected using an electronic questionnaire incorporating the Female Sexual Function Index (FSFI). An FSFI score ≤ 26.55 was classified as sexual dysfunction.

Results: Some 60.5% of the respondents had sexual dysfunction. The total FSFI score of study participants was 20.62 ± 8.32 . The FSFI mean score of women with sexual dysfunction was 15.25 ± 6.34 while it was 28.57 ± 2.42 for those without sexual dysfunction.

Conclusion: Sexual dysfunction is prevalent among the pregnant population studied. The prevalence increased with advancing gestation. Aside from routine antenatal care, healthcare providers should be aware and equipped to provide the necessary information and care for this sensitive issue.

Keywords: Pregnant women; sexual dysfunction; female sexual function index.

1. INTRODUCTION

Pregnancy is associated with physical, emotional, and social changes including the couple's sexual life. The World Health Organization (WHO) defined sexual health as 'a state of physical, emotional, mental and social well-being related to sexuality [1]. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence.[1] Sexual dysfunction may however arise from dissatisfaction with sexual relationships and this can negatively affect a couple's Psychological health [2,3].

Physiological changes can alter a woman's body image during pregnancy leading to low self-esteem, which ultimately impacts their sexual life.[4] Discomfort and pain during sex can result from decreased vaginal lubrication due to increased concentration of progesterone.[5] Women's sexuality during pregnancy is also affected by common complaints including heartburn, fatigue, backache and breast tenderness [6]. Sexual desire and arousal are impaired during the first trimester by nausea and vomiting, while physical discomfort, dyspareunia from vaginal dryness and uncomfortable sexual positions are mainly implicated in the third trimester [6]. The second and third trimesters of pregnancy are also associated with decreased duration of intercourse and failure of orgasm.[6] An assessment of the sexual dysfunction can be made from the pregnant woman's perspective, rather than from the clinician, using the Female Sexual Function Index (FSFI) [7–10].

In Brazil, Monteiro et al. [11] reported a prevalence of sexual dysfunction of 66.7% among expectant women. Meanwhile, a Japanese study [12] reported a prevalence of

62.2% in pregnant women, and lower mean FSFI values for women who delivered via Caesarean section. In a study involving 1,000 married women attending five district medical centres in lower Egypt, 68.9% of the women had one or more sexual problems, although 23% of the affected women did not feel distressed by these issues. Assessing the presence of a critical symptom of sexual dysfunction, the study also revealed that 31.5% of the women suffered from dyspareunia, 49.6% had decreased sexual desire, 36% had difficult arousal, and 16.9% had anorgasmia [13]. Following the above trend, a study from Ile-Ife, Nigeria noted that 63% of the respondents had sexual dysfunction.[14] Factors including maternal age, parity, and gestational age were also noted to influence the prevalence of sexual dysfunction. Leite et al,[15] found that 40.8% of pregnant teens experienced sexual dysfunction in the first trimester, while the corresponding figures in the second and third trimester were 31.2% and 63.2% respectively. Comparatively, the older women in the study had higher prevalence of sexual dysfunction across the trimesters with 46.6%, 34.2% and 73.3% respectively. Primigravidae tend to have less frequent intercourse in pregnancy compared to multigravidae.[16] Lack of relevant information about sex during pregnancy and the fear of possible adverse outcomes were the most relevant reasons for avoidance of sex during pregnancy [16].

The welfare of a couple can be negatively impacted when emotional issues arise due to their inability in adapting to changes in sexual activity during pregnancy.[17] Research into female sexuality during pregnancy is of utmost importance as their emotional and sexual needs are often neglected by many clinicians[11]. Studies have shown that pregnant women are mostly not comfortable discussing their sexuality with their healthcare workers. Bartella et al.[18]

reported that only 49% of pregnant women complained about their sexuality while 66% felt comfortable discussing it if the topic was brought up. This has been a significant limitation in the studies evaluating sexuality during pregnancy [12].

This study aimed to determine the prevalence of sexual dysfunction among pregnant women in Southwestern Nigeria, and identify socio-demographic factors associated with maternal sexual dysfunction.

2. MATERIALS AND METHODS

2.1 Study Area

This study was carried out among antenatal patients attended to in Ekiti State University Teaching Hospital, Ado Ekiti

2.2 Study Design

This was a descriptive cross-sectional study carried out in November, 2020.

2.3 Sample Size

The sample size was calculated with the formula $N = Z^2 pq/d^2$ using a prevalence of 92% for sexual dysfunction during pregnancy.[19,20] When 10% attrition rate was added to take care of non-response, a total of 124 subjects were needed for the study.

2.4 Sampling Technique and Data Collection

Convenience sampling technique was used where consecutive consenting pregnant women who met the inclusion criteria were recruited. Only women with live singleton gestation, and who had cohabited with their partners for at least four weeks prior to recruitment were included in the study. Women were excluded if they had concomitant maternal diseases like sickle cell anaemia or chronic hypertension, multiple gestation, low lying placenta, uncertain dates or declined consent.

Gestational ages of recruited women were calculated from their last menstrual period if known or otherwise from an early ultrasound scan result. They were informed about the study and that questionnaires would be sent to them electronically. Those who agreed to be

participate in the study were given consent forms to fill. Their E-mail addresses or instant messaging numbers were recorded. The self-reported questionnaire was designed using Google form and the link copied and sent to them electronically either via E-mail or instant messaging app (whichever was preferable to them). This was done to ensure privacy and remove the feeling of awkwardness while completing the questionnaire because sexuality is such a sensitive issue. The study instrument required them to provide their sociodemographic details (age, parity, educational status, occupation, tribe and religion), and their perceived reasons for engaging in intercourse during pregnancy. Next, their sexual function was assessed using the Female Sexual Function Index (FSFI), a highly reliable instrument recommended for widespread use within the female population. FSFI consists of a brief self-report of 19 questions that assesses the 6 domains (desire, arousal, lubrication, orgasm, satisfaction, pain) of sexual functioning in women in the previous four weeks.[11] Individual scores were obtained by adding the items in each domain (single score), which were then multiplied by the domain's factor to provide the weighted score. The higher the FSFI score, the lower the risk of sexual dysfunction. The final score was obtained by the sum of the weighted scores for each domain. Women with scores equal to or lower than 26.55 [11] were considered as having sexual dysfunction. The respondent was considered sexually active if she engaged in any form of sexual activity with one or more partners while sexual initiation was defined as any acknowledged attempt by the client or her partner to establish sexual contact. The missionary and cowgirl sexual positions were described as 'man on top' and 'woman on top' positions respectively while doggy sexual position was described as 'rear entry'.

2.5 Data Analysis

Their responses were automatically generated into an excel spreadsheet in the Google form. The data were then coded and entered into Statistical Package for Social Sciences (SPSS), version 22 (IBM, Chicago, IL). Descriptive statistics was used for demographic and baseline data and summarized as mean, standard deviation and percentages as appropriate. A univariate analysis of the variables was performed. The averages of each domain according to the risk of sexual dysfunction (FSFI \leq 26.55) was compared using the Student's t-test

for independent variables. The strength of the correlation between the risk of sexual dysfunction and all sociodemographic variables was then measured by the Chi-Square test. Any p values lower than 0.05 was considered significant.

3. RESULTS

A total of 124 women were included in the study. Table 1 shows the sociodemographic characteristics of the study respondents. The mean age of respondents was 31.34 ± 4.37 years with a range of 19-40 years. The majority (41.1%) of them belonged to 31-35 years of age range while only 1.6% were less than 20 years. More than 90% of the subjects were of the Christian faith, of Yoruba ethnicity and the majority (80.6%) had tertiary education. The mean gestational age at recruitment was 31.73 ± 7.53 weeks (range 12-41 weeks). There were almost twice as many multigravidae (66.1%) compared to primigravidae (33.9%) among the study population. Approximately three-fifths, 75(60.5%) of the women had sexual dysfunction ($FSFI \leq 26.55$). Total FSFI score of study participants was 20.62 ± 8.32 . The FSFI mean score of women with sexual dysfunction was 15.25 ± 6.34 while it was 28.57 ± 2.42 for those without sexual dysfunction. Table 2 shows the participants' FSFI domain mean scores with sexual satisfaction being the highest. As shown in Table 3, FSFI domain scores varied significantly across the three trimesters for all the sexual function. (P -value < 0.001). The relationship between sexual dysfunction and the participants' socio-demographic characteristics was presented in Table 4. Sexual dysfunction was significantly more likely to occur in women who are Christians (58.9% versus 37.9%, $P < 0.001$), professionals (27.4% versus 14.5%, $P < 0.001$), of Yoruba extraction (56.5% versus 34.7%, $P < 0.001$), had tertiary education (48.4% versus 32.2%, $p < 0.001$) and were in the third trimester of pregnancy (46.8% versus 29.0%, $p < 0.001$). These significant findings can be explained by the demographics of the study participants.

About 70% of the study participants considered themselves sexually active and 98/124 had sexual satisfaction. However, only 39.5% of the women often initiated intercourse during the course of the pregnancy. The sexual position commonly utilized was doggy (48.3%) followed

by missionary (41.4%) position. More than half of the women believed that sex makes labour easier while more than 70% engaged in sex to satisfy their sexual urge. The most common reason for not engaging in intercourse was reduced libido (86.5%) followed by discomfort and pain. (Table 5).

4. DISCUSSION

This study presented epidemiological data on the prevalence and predictors of sexual dysfunction among prenatal women in southwestern Nigeria. Using a cut-off FSFI score of ≤ 26.55 , 60.5% of the respondents self-reported sexual dysfunction. This is similar to previous studies.[11,13,14] With six out of every ten respondents experiencing sexual difficulties during pregnancy, the prevalence of sexual dysfunction is high in the study population. Although efforts were made to ensure privacy, given the 'culture of silence' on issues related to sex in our conservative society, it is possible that this figure could be higher in reality. This should prompt prenatal care providers to develop protocols that will assist in screening for, identifying, and managing expectant mothers with sexual dysfunction to improve sexual health in pregnancy.

Sexual domains of arousal and orgasm, especially in the last trimester of pregnancy, had the lowest FSFI scores in this study. Previous studies [11,21] also documented low FSFI score in arousal, but higher scores in orgasm. Since majority of the respondents admitted to having sex during pregnancy in order to satisfy their sexual appetite and also claimed sexual satisfaction, the reduction in the FSFI score in orgasm domain in our study may not be unconnected with psychological inhibition which could follow the fear of adverse obstetric outcomes (miscarriage, membrane rupture, infection) reported by the respondents.

We observed from the index study that the prevalence of sexual dysfunction increased with advancing gestational age as confirmed by other studies .[22–24] Tiredness, poor vaginal lubrication, and awkward sexual postures [6] due to the gravid uterus, are likely to increase the experience of sexual difficulties in the later part of pregnancy. Postural adjustments and the use of lubricants may improve the pleasure of coitus during this stage.

Table 1. Sociodemographic characteristics of respondents

	Frequency(N=124)	Percentage (%)
Age groups (years)		
≤20	2	1.6
21-25	11	8.9
26-30	39	31.5
31-35	51	41.1
36-40	21	16.9
Mean ± SD	31.34 ± 4.37	
Range	19-40	
Educational status		
Primary	1	0.8
Secondary	16	12.9
Tertiary	100	80.6
Postgraduate	7	5.6
Ethnic groups		
Yoruba	113	91.1
Igbo	7	5.6
Hausa	2	1.6
others	2	1.6
Religion		
Christianity	120	96.8
Islam	4	3.2
Occupation		
Unemployed	12	9.7
Professional	52	41.9
Trading	35	28.2
Artisan	17	13.7
Schooling	8	6.5
Gravidity		
1	42	33.9
2-4	78	62.9
≥5	4	3.2
Parity		
0	53	42.7
1-3	70	56.5
≥4	1	0.8
Gestational Age (weeks)		
Mean ± SD	31.73± 7.53	
Range	12-41	

Table 2. FSFI domain scores

FSFI domain	Mean ± SD	Min – max
Desire	3.06 ± 1.04	1.2-5.4
Arousal	2.88 ± 1.56	0.0-5.4
Lubrication	3.85 ± 1.40	0.0-5.7
Orgasm	2.84 ± 1.89	0.0-5.6
Satisfaction	4.08 ± 1.92	0.8-6.0
Pain	3.91 ± 1.75	0.0-6.0
Total FSFI score	20.62 ± 8.32	2.0-31.3

SD; standard deviation, min; minimum, max; maximum

Table 3. FSFI domain scores according to trimester of pregnancy

FSFI domain	First trimester mean \pm SD	Second trimester mean \pm SD	Third Trimester mean \pm SD	P value
Desire	3.15 \pm 1.31	2.89 \pm 1.06	3.08 \pm 1.02	< 0.001
Arousal	3.04 \pm 1.82	2.86 \pm 1.64	2.83 \pm 1.53	< 0.001
Lubrication	3.79 \pm 1.67	3.78 \pm 1.47	3.87 \pm 1.37	< 0.001
Orgasm	3.47 \pm 2.50	2.96 \pm 1.93	2.80 \pm 1.88	< 0.001
Satisfaction	4.13 \pm 2.45	4.25 \pm 1.88	4.00 \pm 1.94	< 0.001
Pain	4.63 \pm 2.13	3.91 \pm 1.85	3.83 \pm 1.71	< 0.001
Total FSFI	22.56 \pm 10.69	21.34 \pm 8.42	20.31 \pm 8.42	< 0.001

Friedman's ANOVA Test, SD; standard deviation

Table 4. Relationship between sexual dysfunction and socio-demographic characteristics

Sociodemographic characteristics	Women with SDN (%)	Women without SDN (%)	X ²	P value
Age (years)				
< 30	24(19.4%)	15(12.1)	0.075	0.703
30-39	50(40.3)	34(27.4)		
\geq 40	1(0.8)	0(0.0)		
Parity				
1	29(23.4)	13(10.5)	0.127	0.365
2-4	44(35.5)	34(27.4)		
\geq 5	2(1.6)	2(1.6)		
Gravidity				
0	36(29.0)	17(13.7)	0.156	0.222
1-3	38(30.6)	32(25.8)		
\geq 4	1(0.8)	0(0.0)		
Occupation				
Unemployed	7(5.6)	5(4.0)	0.713	<0.001
Professional	34(27.4)	18(14.5)		
Trading	19(15.3)	16(12.9)		
Artisan	9(7.3)	8(6.5)		
Schooling	6(4.8)	2(1.6)		
Tribe				
Yoruba	70(56.5)	43(34.7)	0.720	<0.001

Sociodemographic characteristics	Women with SDN (%)	Women without SDN (%)	X²	P value
Igbo	2(1.6)	5(4.0)		
Hausa	2(1.6)	0(0.0)		
Others	1(0.8)	1(0.8)		
Religion				
Christianity	73(58.9)	47(37.9)	0.708	<0.001*
Islam	2(1.6)	2(1.6)		
Level of education				
Primary	1(0.8)	0(0.0)	0.710	<0.001*
Secondary	9(7.3)	7(5.6)		
Tertiary	60(48.4)	40(32.2)		
Postgraduate	5(4.0)	2(1.6)		
Trimester				
Frist trimester	4(3.2)	4(3.2)	0.708	<0.001*
Second trimester	13(10.5)	9(7.3)		
Third trimester	58(46.8)	36(29.0)		

* *p value <0.05*

Table 5. Sexual characteristics during pregnancy

	Frequency	Percentage (%)
Do you consider yourself Sexually active?		
Yes	87	70.2
No	37	29.8
Sexual Satisfaction		
Satisfied	98	79.0
Not satisfied	26	20.9
Who often initiates sex		
Respondent	49	39.5
Spouse	75	60.5
Sexual positions utilized (N=87)		
Missionary	36	41.4
Doggy	42	48.3
cowgirl	9	10.3
Reasons for engaging in sex during pregnancy(N=87)*		
Makes labour easier	46	52.9
Improves baby's wellbeing	19	21.8
To satisfy sexual urge	61	70.1
Ensure marital harmony and prevent infidelity	32	36.8
Reasons for not engaging in sex(N=37)*		
Fear of miscarriage	10	27.0
Physical awkwardness	7	18.9
Reduced libido	32	86.5
Discomfort and pain	16	43.2
Fear of membrane rupture	5	13.5
Fear of infection	7	18.9

*multiple responses

Sexual dysfunction was significantly associated with socio-demographic variables in the index study. Women who were highly skilled professionals were more likely to experience challenges with sex during pregnancy. The physical workload and mental exertion may create stressors that can interrupt various domains of sexual cycle. Deliberate enquiries into their sexual lives in an understanding manner, may help this class of women overcome the pain of a dysfunctional sexual life. Being of Yoruba ethnicity and the Christian faith were linked with higher likelihood of experiencing sexual dysfunction. Although this finding may be due to the wide differences in the proportion of women from the various ethnic and religious groups in this study, further epidemiological surveys are needed to ascertain if cultural and religious influences can be identified. Sexual problems were more prevalent in women who were educated up to tertiary level. This contradicted the findings by Faruk et al [25] and Guendler et al [21] in Turkey and Brazil respectively, who reported that this level of education was associated with reduced risks of sexual dysfunction during pregnancy. Our hypothesis is that since more education could

result in better health-seeking behavior, these more educated respondents were better able to identify aberrations in their sexual patterns, and were less reluctant to divulge it.

Although female-initiated sexual encounters occurred less often among the study population, about four-fifths of our subjects reported sexual satisfaction. Since orgasm domain scores were the least, implying the most dysfunction, it is possible that the respondents had different criteria for assessing their level of sexual satisfaction. Interestingly, as was noted in another southwestern Nigerian study,[26] more women believed that sex widens the birth canal, thereby facilitating delivery. This belief appears to have become part of the folklore of southwestern tribes of Nigeria. Although coital activities have no mechanical impact on the process of labour, the probable effect of seminal prostaglandins on the cervix and labour initiation might have reinforced this concept [27].

A key limitation of such a study is the under-reporting of sensitive sexual issues by participants. However, the use of electronic questionnaires ensured privacy, and minimized

the feeling of embarrassment that might have accompanied face-to-face interviews. The fact that all recruited women returned their filled questionnaires is an attestation to the effectiveness of this approach. However, this study is limited to participants with accessibility to email or phones with instant messaging functionalities.

5. CONCLUSION

Sixty percent of the pregnant women in this study had experienced recent problems with sex. The necessary anatomic changes in pregnancy can become potential hurdles to the frequency and pleasure of sex. While socio-demographic variables were shown to influence female sexual function during pregnancy, the domains of sexual cycle were affected to different degrees. Also, the magnitude of dysfunction increased with advancing gestational ages. Considering the public health importance of sexual dysfunction, and the 'preference' for 'suffering in silence' in our setting, prenatal caregivers should be aware of this problem. Guidelines for screening, identifying, and managing women with sexual dysfunction should be developed and adhered to. Misconceptions regarding the role of sex and labour facilitation should be addressed with research and evidence-based health education.

CONSENT

Written informed consent was obtained from patient who participated in this study.

ETHICAL APPROVAL

Ethics committee approval was received for this study from the Ethics and Research committee of Ekiti State University Teaching Hospital, Ado Ekiti. Approval was obtained from the Ethics and Research Committee of the hospital.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. WHO | Defining sexual health [Internet]. WHO. World Health Organization; 2020 [Cited 2020 Oct 22].

- Available:http://www.who.int/reproductivehealth/topics/sexual_health/sh_definitions/en/
2. Carteiro DMH, De Sousa LMR, Caldeira SMA. Clinical indicators of sexual dysfunction in pregnant women: integrative literature review. *Rev Bras Enferm.* 2016;69(1):153–61.
 3. Yeniel AO, Petri E. Pregnancy, childbirth, and sexual function: Perceptions and facts. *Int Urogynecol J.* 2014;1;25(1):5–14.
 4. Cunningham FG, Leveno KJ, Bloom S, Gilstrap L, Cunningham FG. *Williams Obstetrics (23rd Edition)*. [Internet]. New York, USA: McGraw-Hill Professional Publishing; 2010 [Cited 2020 Oct 14]. Available:<http://public.ebookcentral.proquest.com/choice/publicfullrecord.aspx?p=4657822>
 5. McDonald EA, Gartland D, Small R, Brown SJ. Frequency, severity and persistence of postnatal dyspareunia to 18 months post partum: A cohort study. *Midwifery.* 2016;34:15–20.
 6. Pauls RN, Occhino JA, Dryfhout VL. Effects of pregnancy on female sexual function and body image: a prospective study. *J Sex Med.* 2008;5(8):1915–22.
 7. Rosen C, Brown J, Heiman S, Leib R. The female sexual function index (FSFI): A multidimensional self-report instrument for the assessment of female sexual function. *Journal of sex & marital therapy.* 2000;26(2):191–208.
 8. Isidori AM, Pozza C, Esposito K, Giugliano D, Morano S, Vignozzi L, et al. Development and validation of a 6-item version of the female sexual function index (FSFI) as a diagnostic tool for female sexual dysfunction. *J Sex Med.* 2010;7(3):1139–46.
 9. Çayan S, Akbay E, Bozlu M, Canpolat B, Acar D, Ulusoy E. The Prevalence of female sexual dysfunction and potential risk factors that may impair sexual function in turkish women. *Urol Int.* 2004;72(1):52–7.
 10. Boehmer U, Timm A, Ozonoff A, Potter J. applying the female sexual functioning index to sexual minority women. *Journal of Women's Health.* 2012;21(4):401–9.
 11. Monteiro MN, Lucena EE De S, Cabral PU, Queiroz Filho J, Queiroz J, Gonçalves AK. Prevalence of sexual dysfunction among expectant women. *Rev Bras Ginecol Obstet.* 2016;38(11):559–63.

12. Saotome TT, Yonezawa K, Suganuma N. Sexual Dysfunction and Satisfaction in Japanese couples during pregnancy and postpartum. *Sex Med.* 2018;6(4):348–55.
13. Elnashar AM, El-Dien Ibrahim M, El-Desoky MM, Ali OM, El-Sayd Mohamed Hassan M. Female sexual dysfunction in Lower Egypt. *Bjog.* 2007;114(2):201–6.
14. Fajewonyomi BA, Orji EO, Adeyemo AO. Sexual dysfunction among female patients of reproductive age in a hospital setting in Nigeria. *J Health Popul Nutr.* 2007;25(1):101–6.
15. Leite APL, Campos AAS, Dias ARC, Amed AM, De Souza E, Camano L. Prevalence of sexual dysfunction during pregnancy. *Revista da Associação Médica Brasileira.* 2009;55(5):563–8.
16. Serati M, Salvatore S, Siesto G, Cattoni E, Zanirato M, Khullar V, et al. Female Sexual function during pregnancy and after childbirth. *The Journal of Sexual Medicine.* 2010;7(8):2782–90.
17. Thomas HN, Thurston RC. A biopsychosocial approach to women's sexual function and dysfunction at midlife: A narrative review. *Maturitas.* 2016;87:49–60.
18. Bartellas E, Crane JMG, Daley M, Bennett KA, Hutchens D. Sexuality and sexual activity in pregnancy. *Bjog:An international journal of O&G.* 2000;107(8):964–8.
19. Charan J, Biswas T. How to calculate sample size for different study designs in medical research? *Indian J Psychol Med.* 2013;35(2):121–6.
20. Nulufer E. Sexual function of pregnant women in the third trimester. *Alexandria Journal of Medicine.* 2018;54:139–42.
21. Guendler JA, Katz L, Flamini MEDM, Lemos A, Amorim MM. Prevalence of sexual dysfunctions and their associated factors in pregnant women in an outpatient prenatal care clinic. *Rev bras ginecol obstet.* 2019;41(9):555–63.
22. Sompop K, Kusol R, Wiboolphan T. Prevalence of Sexual dysfunction in thai pregnant women. *Thai J Obstet Gynaecol.* 2011;19(4):172–80.
23. Safieh J, Leili M. Sexual dysfunction in iranian pregnant women. *Iran J Reprod Med.* 2013;11(6):479–86.
24. Anna F, Iwona C, Jerzy S, Piotr F, Milosz L, Violetta S-P, et al. Sexual functioning in pregnant women. *International Journal of Environmental Research and Public Health.* 2019;16:4216.
25. Faruk K, Erkan E, Onder M, Eyup K, Akin SA, Sefa R. prevalence and correlates of female sexual dysfunction among Turkish pregnant women. *Turk J Urol.* 2016;42(3):178–83.
26. Bello FA, Olayemi O, Aimakhu CO, Adekunle AO. Effect of pregnancy and childbirth on sexuality of women in Ibadan, Nigeria. *ISRN Obstetrics and Gynecology.* 2011;2011:1–6.
27. Omar N, Tan P, Sabir N, Yusop E, Omar S. Coitus to expedite the onset of labour: a randomised trial. *Bjog.* 2013;120(3):338–45.

© 2021 Adefisan et al.; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:

The peer review history for this paper can be accessed here:
<http://www.sdiarticle4.com/review-history/65887>