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EXPLORING THE ROLE OF MEDICAL AND OBSTETRIC FACTORS IN SEXUAL DYSFUNCTION AMONG POSTPARTUM WOMEN IN RIVERS STATE

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Abstract: This study investigated the medical and obstetric determinant of sexual dysfunction among postpartum women in Rivers State. The study adopted descriptive research design with a population consisting of two million, six hundred and seventy thousand, nine hundred and three (2,670,903) postpartum women in Rivers State. A multi-stage sampling procedure was used to select a sample size of 1,200. Data was collected using an adapted questionnaire titled “Female Sexual Function Index (FSFI)” with a reliability coefficient of 0.856. The data collected were analyzed with the aid of Statistical Product for Service Solution (SPSS) version 23.0 linear and multinomial logistic regression at 0.05 alpha level. The finding of the study showed that there existed statistically significant relationship between sexual dysfunction and variables such as mode of delivery ($p<0.05$), history of hypertension ($p<0.05$), and history of diabetes ($p<0.05$). The findings of the study further established that majority 825(98.9%) of those who had Cesarean section had sexual dysfunction; all the respondents (100%) and majority (98.0%) who were hypertensive and diabetic respectively had sexual dysfunction. It was concluded that the determinants of sexual dysfunction among postpartum women in Rivers State were mode of delivery, history of hypertension, and history of diabetes. It was recommended that, the Rivers State healthcare board should help postpartum women to ease sexual health problems by establishing special sexual health units for postnatal mothers in every healthcare facility.

Keywords: Medical And Obstetric Factors, Sexual Dysfunction, Postpartum Women.

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Introduction

Sexual dysfunction is a silent sexual and reproductive health problem which ruins sexual relationships. It is a public health problem. Global reports showed that, about 22-43% of women all over the world experience sexual dysfunction and 30-50% in the United States of America (Yvone, 2015). In Africa, Nafiu et al. (2010) reported the prevalence of sexual dysfunction as high as 72.8% among women in Ghana. The report in Nigeria, revealed its prevalence to be as high as 89% (Olugbenga-Bello et al., 2020). One may experience occasional sexual difficulty in life without any problem. However, when the inability to react emotionally or physically to sexual stimulation expectedly is persistent or recurrent it becomes a dysfunction. The World Health Organization (2015) defines sexual dysfunction as a person's inability to participate in a sexual relationship as they would wish. It is a difficulty experienced by an individual or partners during any stage of normal sexual activity, including physical pleasure, desire, preference, arousal, or orgasm (WHO, 2015). Diagnosis for sexual dysfunction could be done through an interview with the woman and her partner, separately and together when possible, and/or a pelvic examination. A sexual disorder is typically diagnosed when symptoms have been present for at least 6 months and cause significant distress. Some women may not be distressed or bothered by decreased or absent sexual desire, interest, arousal, or orgasm. In such cases, a disorder is not diagnosed (Faubion et al., 2013). The pattern of Sexual dysfunction varies with individuals. It could be life long, acquired, situational or generalized. However, the range of dysfunction is independent sex preference. Factors contributing to sexual dysfunction are psychological, biological, social and environmental (Allison, & Kelly, 2021).

Certain factors are associated with sexual dysfunction. Associated factors in this study are meant to be those factors that are linked to or related with the dysfunction. These factors among others include high educational level, medical illnesses, excessive domestic duties, inadequate foreplay, aging, past medical history, previous sexual abuse, infertility, and parity (Nur et al., 2020). Contextually, factors such as mode of delivery, and medical history (hypertension and diabetes) would be discussed as determinants of sexual dysfunction. Medical history could be any medical condition or illness experienced by women, which could contribute to sexual dysfunction. Sexual dysfunction may even be worsened for a woman whose mode of delivery was caesarean section because of the pains within her abdominal area, knowing that the sexual organs are very close to the stitched area. Cabral et al. (2012) reported that, women who had undergone a hysterectomy had a significantly higher incidence of sexual dysfunction. Sexual dysfunction in postpartum mothers can be co-morbid whereby they experience a particular dysfunction alongside with others. According to Nappi et al. (2016), dyspareunia is often co-morbid with sexual difficulties such as lack of desire and arousal, and strain within the sexual relationship. On the other hand, Norafini et al. (2020) indicated that, dyspareunia can result from a range of conditions causing genital pain, including vulval skin conditions (e.g. lichen sclerosus), vulvovaginal and urinary tract infections, sexually transmitted infections (STIs) and endometriosis. Furthermore, the report by Mitchell et al. (2017) illustrated that, the dyspareunia of 7.5% of women in Britain—is linked to poorer sexual, physical, relational and mental health. Also, Pazmany et al. (2013) gave other correlates which include hypervigilance to pain, depression and anxiety, and low self-esteem. Yet, as shown in Bergeron et al. (2014) that, sexual pain disorders are often overlooked or badly managed, significantly exacerbating patient distress.

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A woman's previous medical history could be associated with her sexual dysfunction. The study of Olugbenga-Bello et al. (2020) showed that on very few of respondents who were sexually abused admitted to have contributed to their sexual dysfunction and that 7% and 5.6% had a past medical history of hypertension and diabetes respectively among those with sexual dysfunction which was confirmed with the measured values of blood pressure and random blood glucose during the survey. However, it was shown in the study of Owiredun et al. (2011) that, sexual dysfunction is one of the consequences of diabetes, such medical conditions alongside the postpartum stress could make a woman lose interest in sexual activities. Studies have linked sexual dysfunction to existence of uterine fibroids. Women with fibroids report higher frequency of mild dyspareunia and an 80% higher frequency of moderate to severe dyspareunia than women without fibroid (Zimmermann et al., 2012). In another report, Basson in Olugbenga-Bello et al. (2020) noted that, the reason for unsatisfactory sexual life mainly included medical illnesses such as fibroid which makes the woman to bleed incessantly, and experience discomforts that causes emotional instability thereby, making her interest in sexual intercourse to diminish.

Sexual dysfunction itself is a health problem with diverse consequences yet, many women specifically at postpartum may not want to talk about it for the fear of being labelled or seen as sexually agitative. The effects of sexual dysfunction continue to eat up the peace and harmony in so many relationships. Sexual dysfunction among postpartum women could lead to marital infidelity, making the male partner having sexual affairs outside thereby, exposing spouse to the contraction of sexually transmitted diseases which is more deleterious to health. Observation shows that some women do not give attention to sexual dysfunction due to the numerous activities surrounding the postpartum period such as giving special care to the new borne baby and the mother including several bills that need to be settled. Furthermore, postpartum women are one of the neglected group in research on sexuality. In Rivers State, observation has shown that even among the health care providers, sexual dysfunction is a neglected topic as they scarcely talk about it both during the antenatal and postnatal visit of women hence, it becomes imperative to unravel it in order to lend a voice concerning its prevalence and the associated factors which could raise the consciousness about it and subsequent healthcare seeking to avert its consequences in homes. Therefore, this study investigated the medical and obstetrics determinants of sexual dysfunction among postpartum women in Rivers State. The following research questions were answered:

- i. What is the relationship between mode of delivery (vaginal or CS) and sexual dysfunction among postpartum women in Rivers State?
- ii. What is the relationship between history of hypertension and sexual dysfunction among postpartum women in Rivers State?
- iii. What is the relationship between history of diabetes and sexual dysfunction among postpartum women in Rivers State?

The following null hypotheses stated to guide the study were tested at 0.05 level of significance:

- i. There is no significant relationship between mode of delivery (vaginal or CS) and sexual dysfunction among postpartum women in Rivers State.
- ii. There is no significant relationship between history of hypertension and sexual dysfunction among postpartum women in Rivers State.
- iii. There is no significant relationship between history of diabetes and sexual dysfunction among postpartum women in Rivers State.

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Methodology

The study adopted descriptive research design with a population consisting of two million, six hundred and seventy thousand, nine hundred and three (2,670,903) postpartum women in Rivers State. A multi-stage sampling procedure was used to select a sample size of 1,200. Data was collected using an adapted questionnaire titled “Female Sexual Function Index (DFSDQ)” with a reliability coefficient of 0.856. The data collected were analyzed with the aid of Statistical Product for Service Solution (SPSS) version 23.0 using percentage and multinomial logistic regression at 0.05 alpha level.

Results

The results of the study are shown below:

Table 1: Percentage distribution showing mode of delivery (vaginal or CS) and sexual dysfunction among postpartum women in Rivers State

Mode of delivery	Sexual dysfunction				Total
	Normal F(%)	Mild F(%)	Moderate F(%)	Severe	
Vaginal	9(1.1)	246(29.5)	417(50.0)	162(19.4)	834(100)
CS	15(4.3)	117(33.9)	189(54.8)	24(7.0)	345(100)
Total	24(2.0)	363(30.8)	606(51.4)	186(15.8)	1179(100)

Table 1 revealed the relationship between mode of delivery (vaginal or CS) and sexual dysfunction among postpartum women in Rivers State. The result established that more than half (54.8%) of those who had Cesarean section and half (50.0%) of those who had vaginal delivery respectively had moderate sexual dysfunction. Thus, the relationship between mode of delivery (vaginal or CS) and sexual dysfunction among postpartum women in Rivers State was high.

Table 2: Regression analysis showing relationship between history of hypertension and sexual dysfunction among postpartum women in Rivers State

Model	R	R Square	Adjusted Square	R Std. Error of the Decision Estimate	Very High relationship
1	.94	.883	.88	0.99	

Table 2 revealed the relationship between history of hypertension and sexual dysfunction among postpartum women in Rivers State. The result showed that there was a very high positive relationship between history of hypertension and sexual dysfunction (r = 0.94). The result further showed that history of hypertension contributed

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88.3% of the variance in the sexual dysfunction among women ($R^2 = 0.883$). Therefore, the relationship between history of hypertension and sexual dysfunction among postpartum women in Rivers State was high.

Table 3: Regression analysis showing relationship between history of diabetes and sexual dysfunction among postpartum women in Rivers State

Model	R	R Square	Adjusted Square	R Std. Error of the Decision Estimate		
1	.86	.743	.743	1.468	Very relationship	High

Table 3 revealed the relationship between history of diabetes and sexual dysfunction among postpartum women in Rivers State. The result showed that there was a very high positive relationship between history of diabetes and sexual dysfunction ($r = 0.86$). The result showed that history of history of diabetes contributed 74.3% of the variance in sexual dysfunction among women ($R^2 = 0.743$). Therefore, the relationship between history of diabetes and sexual dysfunction among postpartum women in Rivers State was high

H₀₁: There is no significant relationship between mode of delivery and sexual dysfunction among postpartum women in Rivers State

Table 4: Multinomial logistic regression analysis showing relationship between mode of delivery and sexual dysfunction among postpartum women in Rivers State

Sexual dysfunction	Mode of delivery	Df	χ^2	pvalue	Odds Ratio (OR)	95%CI	
						Lower	Upper
No dysf.	Ref.	3	77.33	0.00*	Ref.		
Mild	Delivery				0.28	0.12	0.67
Moderate	Delivery				0.27	0.11	0.63
Severe	Delivery				0.08	0.03	0.22

*Significant. $p < 0.05$.

Table 4 revealed the multinomial logistic regression of relationship between mode of delivery and prevalence of sexual dysfunction among postpartum women in Rivers State. The findings of the study showed a significant relationship between mode of delivery and prevalence of sexual dysfunction ($p < 0.05$). The result indicated that mode of delivery was 3.57 times less likely contribute to mild sexual dysfunction ($OR = 0.28$, 95%CI: 0.12 – 0.67), 3.70 times less likely to contribute to moderate ($OR = 0.27$; 95%CI: 0.11 – 0.63), and 12.5 times less likely to contribute to severe sexual dysfunction ($OR = 0.28$, 95%CI: 0.12 – 0.67). Thus, the null hypothesis which stated that there is no significant relationship between mode of delivery and prevalence of sexual dysfunction among postpartum women in Rivers State was rejected.

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H₀₂: There is no significant relationship between history of hypertension and sexual dysfunction among postpartum women in Rivers State

Table 5: Linear Regression analysis on significant relationship between history of hypertension (systolic blood pressure) and prevalence of sexual dysfunction

Model		Sum of Squares	df	Mean Square	F	Sig.	Decision
1	Regression	8747.64	2	4373.82	4444.24	.00*	Rejected
	Residual	1158.35	1177	.98			
	Total	9906.00	1179				

*Significant, $p < 0.05$

Table 5 presented the regression analysis on significant relationship between history of hypertension and sexual dysfunction. The findings of the study revealed that there was a significant relationship between history of hypertension and sexual dysfunction [$f(1,1178) = 4444.24$, $p < 0.05$]. Therefore, the null hypothesis which stated that there was no significant relationship history of hypertension and sexual dysfunction among postpartum women in Rivers State was rejected.

H₀₃: There is no significant relationship between history of diabetes and sexual dysfunction among postpartum women in Rivers State

Table 6: Regression analysis on significant relationship between history of diabetes and sexual dysfunction

Model		Sum of Squares	df	Mean Square	F	Sig.	Decision
1	Regression	7364.68	1	7364.68	3413.81	.00*	Rejected
	Residual	2541.31	1178	2.15			
	Total	9906.00	1179				

*Significant, $p < 0.05$

Table 6 presented the regression analysis on significant relationship between history of diabetes revealed that there was a significant relationship between history of diabetes and sexual dysfunction [$f(1,1178) = 7364.68$, $p < 0.05$]. Therefore, the null hypothesis which stated that there was no significant relationship history of diabetes and sexual dysfunction among postpartum women in Rivers State was rejected.

Discussion of findings

The finding of this study in Table 1 established that majority 98.9% and 95.7% of those who had vaginal delivery and Cesarean section respectively had sexual dysfunction; and there was a significant relationship between mode of delivery and prevalence of sexual dysfunction ($p < 0.05$). The reason adduced for this is that those who gave birth through caesarean section may be battling with pains which could interfere with their sexual function, leading to sexual dysfunction. On the other hand, those who had vaginal delivery with complications and lots of pain may also have diminished interest in sexual intercourse, especially at postpartum because of stomach ache and vaginal injuries which could be painful during sexual intercourse. By implication, postpartum women both the ones that delivery through cesarean section and vaginal delivery may delay sexual activities until they gain

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stability in health. The finding of this study corroborates that of Brotto et al. (2010) whose study on women's sexual desire and arousal disorders revealed a relationship between women's mode of delivery and sexual dysfunction. The finding of this study also gives credence to that of Holanda et al. (2014) whose study on sexual dysfunction and associated factors in Brazil revealed a statistically significant relationship between prevalence of sexual dysfunction and mode of delivery. The finding of this study is similar to that of Norafini et al. (2020) whose study in Sarawak revealed a relationship between women's mode of delivery and sexual dysfunction. The finding of this study is also in line with that of Adebuseye et al. (2020) whose study in Nigeria revealed a relationship between women's mode of delivery and sexual dysfunction. The similarity between the present study and the previous ones could be due to the homogeneity of the study respondents, as they were both carried out among postpartum women. The finding of this study is at variance with that of Alanye and Bulut (2021) whose study among postpartum women in Edinburgh showed that there was no statistically significant relationship between mode of delivery and sexual function scores ($p>0.05$). The divergence in the sample size and study location could be implicated for the variation found between the both studies. The result in Table 2 indicated that both in the systolic and diastolic reading, all the respondents 195(100%) and 183(100%) who were hypertensive had sexual dysfunction; there was also a significant relationship between history of hypertension and prevalence of sexual dysfunction ($p<0.05$). This finding is not surprising because hypertension incapacitate other organs of the body including sexual organ which by implication, deters sexual functioning. This finding of this study give credence to Nyalile et al. (2020) whose study in Tanzania showed significant relationship between hypertension and sexual dysfunction. The finding of this study is also in line with Deribew et al. (2021) whose study in Ethiopia showed significant relationship between hypertension and sexual dysfunction. The finding of this study is in line with that of Szollosi and Szabo (2020) whose study in Hungary revealed a significant relationship between sexual dysfunction and health condition of women. The finding of this study is also similar to that of Mirfat and Sheren (2019) whose study in Egypt revealed a statistically significant relationship between prevalence of sexual dysfunction and woman suffering chronic diseases including hypertension. The similarity in the methods used in both studies could be implicated for the similarities found, as they all adopted the descriptive research design. The finding of this study is at variance with that of Rezaei et al. (2017) whose study on postpartum sexual functioning among women in Iran revealed a non-statistically significant relationship between sexual dysfunction and mode of delivery. The difference in the study location could explain for the variance found in both studies. The result in Table 3 established that majority of the respondents 144(98.0%) who were diabetic had sexual dysfunction; and there was a significant relationship between history of diabetes and prevalence of sexual dysfunction ($p<0.05$). This finding is not surprising because diabetes impairs the immune system and other organs of the body including sexual organ which by implication, deters sexual functioning. The findings of this study is akin to that of Mekonnen et al. (2021) whose study in Ethiopia revealed a statistical relationship between sexual dysfunction and diabetes mellitus. The finding of study is in agreement with that of Van et al. (2017) whose study o in Vietnam indicated a significant relationship between sexual dysfunction and disease history including diabetes. Furthermore, the finding of this study is in line with several other studies such as Olajubu et al. (2019), and Ezeude et al. (2020) which all established a statistically significant relationship between the prevalence of

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sexual dysfunction and diabetes mellitus. The finding of this study is similar to that of Mirfat and Sheren (2019) whose study in Egypt revealed a statistically significant relationship between prevalence of sexual dysfunction and woman suffering chronic diseases including diabetes. The similarity in the study design used in both studies could be implicated for the similarities found, as they all adopted the descriptive research design.

Conclusion

Based on the findings of the study, it was concluded that the predictors of sexual dysfunction among postpartum women in Rivers State were mode of delivery, history of hypertension, and history of diabetes.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. The ministry of health should make better modern equipment available to ease the delivery process for women so they don't undergo so much pain that makes them not to function well sexually.
2. The government should help postpartum women with chronic diseases such as hypertension and diabetes, to function optimally sexually by incorporating sexual healthcare services as part of the routine services provided during their postnatal visits.
3. The ministry of health should make provision for postnatal women with sexual health challenges as well as chronic diseases, for medical equipment to check their glucose level, and high blood pressure at every postnatal visit, rather than focusing on the infant alone.

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