Healthcare Review 1(1), 2020 **ISSN 2692-8787**

Assessing Sexual Function of Women after 12 Months of IUD Usage

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https://sriopenjournals.com/index.php/healthcare_review/index

Doi: https://doi.org/10.47285/hr.v1i1.5

Citation: Lamptey, E., Oladokun, A. & Okunlola, M.A. (2020). Assessing Sexual Function of Women after 12 Months of IUD Usage, *Healthcare Review*, 1(1), 12-18. Doi: https://doi.org/10.47285/hr.v1i1.5

Research Article

Abstract

The Intrauterine Device (IUD) is a well-accepted method of contraception. Most women are currently using it because of its effectiveness, longevity, and affordability. Moreover, users need no strict routine instructions for IUD. However, many women in the absence of any pre-existing conditions that may impair sexual functions discontinue the method due to poor sexual satisfaction. This paper aims to assess and measure the effects of IUDs on sexual function in women with no underlying condition over a period of 12 months. This study employed a longitudinal approach. To be eligible to participate, the study enrolled 260 women who have chosen to use IUDs willingly on their own at these selected centers during this period and are aged 20 years and above. It collected data at baseline and at 12 months of use. Measurements at these two timelines were done using the Female Sexual Function Index (FSFI). The prevalence of female sexual dysfunction among participants after 12 months was 47.7% (124). In the analysis of Mean scores, FSFI at baseline and at 12 months was 31.31 and 24.76 respectively ($p<0.05$). Significantly reduced scores ($p=0.001$), for all the six domains (desire, arousal, lubrication, orgasm, satisfaction, and pain) of sexual function were noted. Desire and pain were the most affected areas of sexual function with very low scores. Without any underlying and related triggers of sexual health, the study discovered that IUDs have the potentials to cause female sexual dysfunction in almost half of its users.

Keywords: Sexual Function, FSFI, Women, IUD Usage, 12 Months

1. Introduction

Sexual functions are needed throughout the stages of life. It is needed for sexual orientation, gender identity, sexual pleasure, intimacy, eroticism, and reproduction. Good sexual functioning involves the ability to start sexual stimulation, experience lubrication, orgasm, and enjoy sexual pleasure in the absence of pain and discomfort. Human sexuality also includes social functioning, culture, sexual identity, and spirituality. Sexual functioning is different in both

men and women by the nature of their reproductive organs(Gorzalka et al., 2010). These reproductive organs enable men and women to enjoy sexual pleasure and reproduce their young ones. According to the World Health Organization, sexual health must include the physical, emotional, and social health of women. For a woman to have good health, there must be good sexual functioning(Kariman et al., 2017). In the event of sexual life, women face many challenges particularly about the type of contraceptive to choose (Panchalee et al., 2014). Almost all contraceptive methods have probable effects on a sexual relationship and functioning(Toorzani et al., 2010).

The IUD is a long-acting reversible contraceptive method that is highly effective at preventing pregnancy, convenient to use, requires no strict instructions, and is well accepted(Ferreira et al., 2019). It is one of the most popular options because it offers protection for a long period, there is a quick return to fertility after discontinuation, and cost of uptake is affordable(Okunlola et al., 2009). They are effective for preventing pregnancy, highly acceptable and many women are using them(Peipert et al., 2011). Globally,14.3% of women are currently using it but the distribution of users in developing and developed countries differs(Buhling et al., 2014).In developing countries, 14.5% of reproductive-aged women are using it whereas in the developed world the percentage is only 7.6%(d'Arcangues, 2007). Statistics from the Ghana Health Service and other credible sources such as the Planned Parenthood Association of Ghana indicate there has been a 40% decline in the patronage of the device since the year 2000 and currently only 2% or less of reproductive-aged women in Ghana are using them(GDHS,2014). Researchers have stated that sexual function determines a woman's contraceptive preference, practices, and period of use(Higgins & Smith, 2016).IUDs may affect sexual functions which are factors influencing their acceptability in general(Higgins & Smith, 2016). Some women refuse to use the device due to concerns and effects on sexual life. According to some women, having a device with strings attached inside their bodies seems strange and foreign (Peipert et al., 2011). A Study done by Fleming KL et al. found that women with such complaints believe that the device might hurt them. Satisfactory sexual habit or good sexual functioning is one of the parameters of quality life but women on IUDs may have female sexual dysfunction. IUDs still have many advantages and women using them can enjoy full sexual life. On the other hand, the device can interrupt sexual life and satisfaction. Intrauterine contraception can cause pain during insertion, infections, abdominal cramps, and unexplained bleeding episodes. After IUD insertion, some women develop persistent or recurrent sexual problems leading to a lifelong challenge(Gonçalves et al., 2016). In the absence of any underlying intervention and condition, the prevalence of Female Sexual Dysfunction among women ranges from 27 to 70% (de Castro Coelho & Barros, 2019). Therefore, the usage of certain birth controls like the IUD can cause more sexual health and psychological problems for women. The drivers of sexual dysfunction when a woman is using contraceptives is not only related to the method of contraception. Other conditions or factors like diabetes, smoking, sexual abuse medications, alcoholism, depression, menopause, etc. could impair the quality of sexual life. In the absence of these conditions, the impact of IUDs on sexual health has not been assessed well in Ghana among reproductive-aged women. The current study employed the Female Sexual Function Index to measure sexual functions in women screened with no pre-existing conditions and have accepted to use Intrauterine Contraception over an observation period of 12 months.

2. Materials and Methods

This study employed a longitudinal approach to investigate the sexual function of women using IUDs. The study was conducted in six selected family planning centers in urban Accra and all respondents were recruited between January and December 2019. To be eligible to participate, the study enrolled women who have chosen to use IUDs willingly on their own at

these selected centers during this period and are aged 20 years and above. The minimum age of 20 was chosen to ensure the maturity of sexual functions(Hayes et al., 2008). This study was reviewed and approved by the Research Ethics Committees of the University College Hospital Ibadan (NHREC/05/01/2008a) and Ghana Health Service (GHS-ERC 009/02/19). Participation was voluntary and the purpose of the study was fully explained to the respondents. Their informed consent was also obtained. Participants were screened as follows after meeting the above mentioned preliminary criteria. Women with FSFSI scores less than or equal to 26.55 were excluded from the study because it signifies sexual dysfunction. Also, participants were excluded if they have a history of depression, sexual abuse, low self-esteem, neurological diseases, pelvic floor surgeries, infections, a cardiovascular disease affecting blood vessels (Hypertension), diabetes, smoking, alcoholism, menopause and any condition that can affect sexual life. Data was collected using a questionnaire form and the female sexual function index (FSFI) as the baseline. The questionnaire form includes socio-economic characteristics and obstetric history. A total number of 260 respondents met the preliminary criteria and the initial baseline screening. They were observed, monitored with caution not modify their behavior or cause interference within a period of 12months or up to December 2019. Then they were made to complete the FSFI again. They were instructed to fill the questionnaire based on or reflecting their sexual experiences during the 12 months of IUD use. Statistical analysis was performed using the Statistical Package for the Social Science (SPSS) version 20. The assumption of a normal distribution was tested by the Shapiro Wilk test, the p-value was less than 0.05 and the test showed that data was not normally distributed. Hence the non-parametric data were analyzed using the Wilcoxon test. Descriptive statistics for continuous variables were expressed as mean and standard deviation while categorical variables and prevalence of female sexual dysfunction were expressed as numbers with percentages. Scores of FSFI between the two timelines were compared and the level of significance was set as $p<0.05$.

3. Results

A total of 260 women were recruited and followed up successfully at the end of the observation period. The demographic characteristics of the participants are shown in Table 1.

Table 1: Socio-demographic characteristics of Participants

Characteristics	n (%)
Age group	
20-25	26 (10 %)
26-30	104 (40%)
31-35	78 (30 %)
36-40	39 (15%)
41-45	13 (5%)
Marital Status	
Married	169(65%)
Single	26(10%)
In union but not married	65 (25%)
Educational level	
No formal education	35 (13.4%)
Primary	65 (25.0%)
Secondary	86 (33.3%)
Tertiary	74 (28.3%)
Religion	
Islam	48 (18.4%)
Traditional/Others	47(18.3%)
Christian	165(63.3%)
Parity	
Nulliparous	52(20%)
Parous	208 (80%)
Employment Status	
Employed	138(53.4%)
Not employed	122(46.6%)
Menstrual Patterns	
Regular	190(73.3%)
Irregular	70(26.7%)
Satisfied with Current Relationship	
No	26(10.0%)
Yes	236(90.0%)

The majority of the participants were women within the age of 26-30 years (40%), followed by 31-35 years (30 %) and the least been 41-45(5%). Married women were 65%, 33.3% had secondary education with 28.3% been educated to the tertiary level. Most of the women were parous (80%) while the remaining have not given birth before, 53.4% were employed at the time of the study,73.3% had a regular menstrual pattern and 90.0% indicated that they were satisfied with their current relationship.

The FSFI and domain scores at the beginning of the study were as follows: FSFI (31.31±2.67), desire (4.84±0.87), arousal (5.41±0.48), lubrication (5.33±0.59), orgasm (5.27±0.68), Satisfaction (5.47±0.52) and Pain (4.95±0.87). At 12 months, FSFI and domain scores obtained were as follows: FSFI scores (24.76±7.88), desire (3.93±1.21), arousal (4.18±1.32), lubrication (4.14±1.39), orgasm (4.26±1.46), satisfaction (4.13±1.44) and Pain (4.07±1.43).

Table 2: Scores of Female Sexual Function Index Components at Baseline and 12 months

FSFI Domain Score	Baseline	At 12 months	P-value
Desire	4.84 ± 0.87	3.93 ±1.21	0.001
Arousal	5.42 ± 0.48	4.18±1.32	0.001
Lubrication	5.42 ± 0.48	4.14± 1.39	0.001
Orgasm	5.27 ± 0.68	4.26± 1.46	0.001
Satisfaction	5.47 ± 0.52	4.13± 1.44	0.001
Pain	4.95 ± 0.87	4.07± 1.43	0.001
Total FSFI Scores	31.31 ± 2.67	24.76 ±7.88	0.001
p<0.05(Wilcoxon Test)			

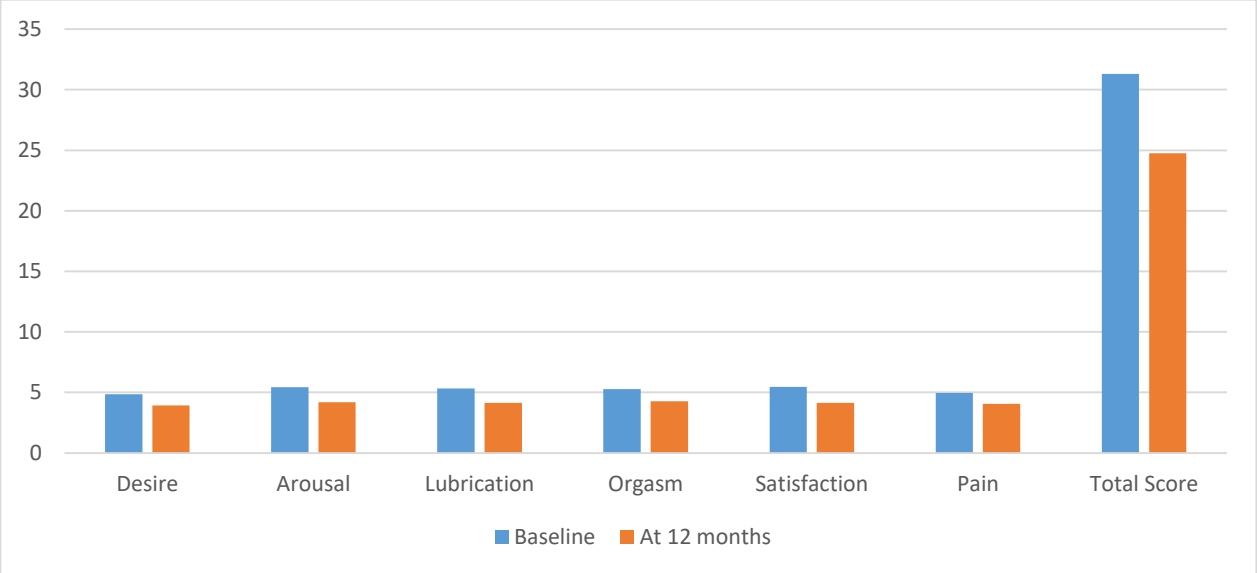

Fig. 1: Bar chart diagram of FSFI Scores at two timelines

The prevalence of Female Sexual dysfunction among the participant was 47.7% (Table 4). Based on FSFI Scores (Table 5), orgasm and arousal were the highest functioning domains

among women using IUDs representing (4.26 ±1.46) 17.2% and (4.18± 1.32)16.8% respectively. Sexual Desire and Pain were the least been (3.93 ±1.21) 15.8% and (4.07± 1.43) 16.4%.

Table 3: Prevalence of Sexual Dysfunction at 12 months

FSFI Scores of IUD Users at 12 months	n	%	FSFI Scores Mean + SD
< 26.55 (Sexual Dysfunction)	124	47.7	17.39 ± 4.53
≥ 26.55(Normal Sexual Function)	136	52.3	31.47 ± 3.35
Total	260	100.0	24.76 ± 7.88

4. Discussion

Impairment of sexual functions can be affected by many factors including psychological, physiological, cultural, and others. One of the considerable factors among couples is the decision to choose a contraceptive method. The choice of a family planning method has effects on sexual functions. Researchers have stated that the prevalence of sexual dysfunction in women is likely to be around 40%(Laumann et al., 1999). This study investigated this concept in IUD Users over a period of 12 months and found that without any underlying causes, the prevalence of female sexual dysfunction was 47.7%. These results were a little similar to that of Panchalee et al., 2014 who found a 50.9% prevalence of FSD in IUD users. However, their study collected data from women in a society with different races and lifestyles without screening. The method they used was a cross-sectional but not longitudinal or observational study and the time duration was short.

The overall mean scores of FSFI at baseline were 31.31±2.67 while the corresponding scores at 12 months were 24.76±7.88, which indicated a significant reduction. The study also considered the effects of IUDs on the various domains of sexual function. Low scores were obtained in the desire and pain domain than in other areas. Low scores signify worse functioning in these domains. IUD Users might have decreased sexual function, especially in the desire and pain domain compared with women with no IUDs. It is also possible that the causes of desire and pain disorders are highly related. With our findings, there was a statistically significant difference between overall FSFI and domain Scores between the two timelines ($p<0.05$).

5. Conclusion

It is important that researchers identify contraceptives that affect sexual behaviors and functions, consider their outcomes, and decide whether it meets the client's sexual needs. To increase the desire of women to use IUDs, more attention must be directed to investigating this phenomenon. The effects of long-term contraceptives such as the IUD on sexual functioning must be well understood. IUDs have numerous advantages, long-term use with good compliance, and fewer instructions to adhere to. The IUDs have the potentials to cause sexual dysfunction after a long period of use such as 12 months. Therefore, women who prefer this method because of the benefits should be informed and educated on sexual dysfunction associated with the use of the device. In the event that a woman chose to use this method, the user should be closely monitored, followed up, counseled, and managed where possible.

6. Limitations of the study

Although the sample size is adequate, a large number of women using IUDs included in the study would have given more information about sexual function and dysfunction. However, the number of women patronizing the device is declining, and therefore sample size is considered limited.

Acknowledgments: The authors thank all the participants for their voluntary participation and support.

Author Contributions: Emmanuel Lamptey conceived the idea and collected data; Michael Okunlola analyzed the data; Emmanuel Lamptey and Adesina Oladokun wrote the paper.

Conflict of Interest: The authors declare no conflict of interest.

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