IOSR Journal of Nursing and Health Science (IOSR-JNHS)
e-ISSN: 2320–1959.p- ISSN: 2320–1940 Volume 9, Issue 2 Ser. I (Mar - Apr. 2020), PP 07-14
www.iosrjournals.org

Assessment of Female Sexual Function during Pregnancy

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Abstract:
Background*: Pregnancy is one of the most serious periods in women's lives. The state of pregnancy is characterized by physical, hormonal and psychological changes which profoundly affect women's sexuality.* ***The aim****: to assess female sexual function during pregnancy.* ***Design:*** *A descriptive design was used.* ***Setting:*** *This study was conducted at the antenatal care unit in Helwan general hospital.* ***Sample:*** *A purposive sample of 240 pregnant women was recruited and equally divided into first, second and third trimester.* ***Tools:*** *two tools were used for data collection in this study,* ***tool I*** *was self-administered questionnaire to collect data about socio-demographic characteristics, sexual health knowledge during pregnancy and effect of pregnancy on sexual function* ***tool II*** *was female sexual function index (FSFI) which was a validated and reliable measure of female sexual function* ***Results:*** *The study denoted that 77.5% of pregnant women had poor sexual health knowledge during pregnancy as well as 62% of pregnant women had sexual dysfunction during pregnancy.* ***Conclusion:*** *pregnancy had a negative effect on female sexual function as pregnancy progress.* ***Recommendation:*** *Sexual health counseling should be provided to all pregnant women during pregnancy as an essential part of routine antenatal care.*

Key Word*: Sexual function, Pregnancy, Sexual health.*

Date of Submission: 20-02-2020 Date of Acceptance: 04-03-2020

I. Introduction

Sexual health is a fundamental aspect to the physical and emotional health and is considered one of the bases of well-being of individuals, couples and families. Additionally, one of the key components of pregnant women's sexual health is sexual function, which unfortunately, is the most common sexual health problem affecting them. Female Sexual function is how the female body reacts in different stages of the sexual response cycle, or as a result of sexual dysfunction. Studies have shown that, disturbance in the female sexual function at any level is able to affects pregnant women's sexual satisfaction, body image and causes different degrees of stress in their life [12].

Pregnant women's sexual function is influenced by physical and psychological factors. Among the common factors that can threaten pregnant women's sexual function is the understanding them from their sexuality. For instance, pregnant women who think they are not attractive for their husbands during the period of their pregnancy are at the risk of developing sexual disorder twice the time than women who think the opposite [13].

Lack of sexual health information during pregnancy affects pregnant women's interpersonal relationship, leads to undesired consequences such as inability to make a healthy and satisfactory sexual relation with their husbands, which itself leads to undesired physical, mental and social consequences in couples. In addition to Psychological disorders such as; depression, anxiety, mood swings, sexual fear and sexual dysfunction all these factors may lead pregnant women to abstain from sexual intercourse; however, the restriction of sexual activity in a healthy pregnancy is unnecessary [14].

Hence, the obstetric nurse has a crucial sex counselor role to address sexual health problems during pregnancy as well as educating pregnant women health sexual practices to enhance their sexual function in pregnancy and to gain a better understanding of how these aspects of a woman's life impact the health care services she receives. Women's health care practitioners have an opportunity to advance pregnant women sexual satisfaction and overall health by evaluating and communicating with them about their sexual function [15].

1.1 Significance of study

According to the latest report of Zahra et al., [16], reported that the prevalence of sexual dysfunction during pregnancy is between 23% and 47% in the second trimester, between 46% and 73% in the third trimester of pregnancy. Diminished sexual activity may adversely affect pregnant woman health, self-esteem, loss of emotional connection and mental tension as well as interpersonal relationships between couples. Such problems

during pregnancy, when couples need greater intimacy, can make the already highly tense period of pregnancy even harder.

In this context, pregnancy has a negative effect on women's sexual function. However; the data about female sexual function is limited due to a lack of validated instruments and the retrospective design of studies. Ignorance, old women's tales and different social, cultural and religious beliefs may influence the sexuality of couples in pregnancy. Especially in societies with restricted traditional norms that are strongly influenced by religious beliefs and socio-economic inequality, sexuality cannot be discussed in an open and comprehensive manner [17].

Consequently that, Egypt, as a conservative community, is lacking adequate studies addressing sexual function during pregnancy, probably owing to superstitions, misguided beliefs as well as the sensitivity of the topic. Even healthcare providers refrain from extensive discussion and sufficient counseling to women during their sensitive period of pregnancy when several physical, hormonal and psychological changes take place simultaneously. The approach of sexual function during pregnancy is still surrounded by several taboos by the lack of knowledge and cultural, personal or religious prejudices [18].

1.2 Aim of the study

This study aimed to assess female sexual function during pregnancy through;

1- Assess women's sexual health knowledge during pregnancy.
2- Assess sexual function of women's during pregnancy.

1.3 Research questions

1- What is pregnant women's knowledge about sexual health during pregnancy?
2- What is the effect of pregnancy on female sexual function during pregnancy?

II. Material And Methods

2.1 Study Design: A descriptive design used in carrying out this study.

2.2 Study Setting: The study was carried out at the antenatal clinic at Helwan general hospital, Helwan District, Cairo, Egypt

2.3 Study Duration: January 2018 to December 2018.

2.4 Sample size: A purposive sample of 240 pregnant women.

2.5 Subjects & selection method: The study population was selected with certain inclusion criteria; primigravida more than 8 weeks gestation (based on the first day of the last menstrual cycle or ultrasound result), with singleton pregnancy and agreed to participate in this study.

Exclusion criteria:

Pregnant women who had chronic medical diseases (hypertension, heart disease, and diabetes), any medical sexual intercourse contraindications (as vaginal bleeding), and history of drug therapy, emotional and psychological problems, history of traumatic events such as sexual harassment or termination of pregnancy

2.6 Data collection tool

The data for this study was collected using two tools; **Tool I: Self-administered questionnaire sheet**: It was designed by the researcher in Arabic language after reviewing national and international related literature (Erbil, 2018) [4], (EL-Gharib, 2018) [11]. It was consisted of three parts. **1stpart**: presented the socio-demographic characteristics such as: age, residence, occupation, duration of pregnancy, level of education, duration of marriage, if she was circumcised or not. **2nd part:** Concerned with sexual health knowledge of the pregnant woman as meaning of sexual health, importance of sexual health, components of external and internal female reproductive organs, meaning of female sexual function, stages of female sexual response cycle, difference between male and female sexual response cycle, normal physiological and psychological changes during pregnancy.

Scoring system: the answers of the questions were coded as following; Correct and complete = 3, Correct and incomplete = 2 & Incorrect / no answer = 1. Total score of knowledge = 27 points.

3rd part: represented effect of pregnancy on sexual function of the pregnant woman such as physiological and psychological changes of pregnancy that affect woman's sexual function, changes in frequency of sexual relation during pregnancy, if there was any change in positions of sexual relation and the most suitable position of sexual relation during pregnancy for the pregnant woman

Tool II: Arabic version of the female sexual function index (ArFSFI). The Female Sexual Function Index (FSFI) was developed by Rosen et al. (2000) [10]. It is a highly reliable and valid assessment tool so, it has been translated into more than 20 languages, and it has become the de facto ″gold standard″ in the assessment of female sexual function and an indispensable tool in clinical research of FSD. It was adopted by Anis et al., (2011) [9] to Arabic version of the female sexual function index to be a validated, reliable, and locally accepted

tool used for assessment of FSD in the Egyptian population.. Sexual function of the pregnant women was assessed using the Female Sexual Function Index (FSFI) questionnaire which is a validated 19-item, self-administered questionnaire that measures the six aspects of sexual function in women (desire, arousal, lubrication, orgasm, satisfaction, and pain). For this study, the Arabic translation was used. The translation was based on the original FSFI questionnaire. Questions are grouped in six domains: desire (items 1 and 2), arousal (items 3–6), lubrication (items 7–10), orgasm (items 11–13), satisfaction (items 14–16) and pain (items 17–19). Responses to each question related to the previous month were reported. FSFI score interpretation: The answer choices in the FSFI carry a number of points and are summed to obtain six domain scores and an overall score. The domain scores are obtained as the sum of points attributed to questions in that domain multiplied by the domain factor. Minimum score possible is 2 and the maximum is 36.

The following table describes the six domains, their corresponding questions and possible score range, as well as the domain factor.

Domain	Questions	Score Range	Factor	Minimum Score	Maximum Score	Score
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(or1) – 5	0.4	0.8	6.0	
Pain	17, 18, 19	0 – 5	0.4	0	6.0	
Full Scale Score Range				2.0	36.0	

Available at: http://www.fsfiquestionnaire.com/

Validity of the tools:

The tools were tested through five expertise; five from of maternal and newborn health nursing, who reviewed the tools' contents for clarity relevance, comprehensiveness, and understandability. All recommended modifications were applied.

Reliability of the tools:

Reliability was applied by the researchers for testing the internal consistency of the tool, by administration of the same tools to the same subjects under similar conditions two times 15 days apart. Answers from the repeated testing were compared (Test- re- test reliability was (0.82) and Cronbach's Alpha reliability was 0.890.

Pilot study:

It was conducted on 24 pregnant women. They represented about 10% of the total study sample .The aim of the pilot study was to evaluate clarity ,visibility ,applicability as well as the time allowed to fulfill the developed tools. According to the obtained results modifications such as omission, addition and re-wording were done. The number of the pilot study excluded from the study sample.

Ethical Consideration

An official permission was obtained from the ethical committee of faculty of Nursing Helwan University to conduct the study. A written informed consent was obtained from each participant. They were assured that anonymity and confidentiality guaranteed and the right to withdraw from the study at any time.

Procedure methodology

An official permission including the title and purpose of the study submitted from the Dean of Faculty of Nursing Helwan University to get an approval for data collection to conduct the study that forwarded to director of Helwan General Hospital where the study was conducted. The study work was carried out from the beginning of January, 2018 and completed at the end of December, 2018. The researcher visited the previously mentioned setting three days per week from 9.00 am until 1.00 Pm. A written approval was obtained from each pregnant woman after the researcher introduced herself and explained the purpose of the study.

Statistical analysis

Data entry and statistical analysis were performed using personal computer software, the statistical package for social sciences (SPSS), version 20. Suitable descriptive statistics were used such as; frequency, percentage, median, range, mean and standard deviation. Chi–square test was used to detect the relation between the variables. The p-value is the probability that an observed difference is due to chance and not a true difference. A significant level value was considered when p-value ≤ 0.05 and a highly significant level value was considered when p-value ≤ 0.001, while p-value > 0.05 indicates non-significant results.

Limitations of the study: most of the pregnant women considered that sexual issues are prohibited to be discussed openly that required more devoted time and effort to persuade them.

III. Result

Table (1) displays that; the mean age of the studied sample was 21.25±2.22. Around half (52.5%) of them had secondary education and 28.3 % had preparatory education. Regarding their occupation; 72.1% were not work while 27.9% were worked. Additionally, 60.8% of the studied sample was from rural areas. Regarding duration of marriage; 55.3% of the studied sample married since≤ 10 months while 31.7% were married since 11-15 months ago. The mean and standard deviation of their duration of pregnancy were 19.38±8.715.

Figure (1) indicates that more than three quarters of studied sample (77.50%) had poor knowledge and only (4.6%) had good knowledge about sexual health information during pregnancy.

Figure (2) reflects that the three highest physiological changes that affect pregnant women's sexual function during pregnancy were backache (65.4%), general weakness (46.7%) followed by nausea and vomiting (33.3%).
Figure (3) reveals that 47.0 % of pregnant women never received sexual health information, while 42.0 % received sexual health information after marriage.
Figure (4): shows that 62.10% of pregnant women had sexual dysfunction during pregnancy.

Table (1): Distribution of the Pregnant Women Regarding Socio-demographic Characteristics (N=240).

Characteristics	No.	%
Age in Years		
- ≤ 20	111	46.3
- 21 –25	116	48.3
- ≥ 26	13	5.4
Mean± SD	**21.25±2.226**	
Educational level		
- Primary education	18	7.5
- preparatory education	68	28.3
- Secondary education	126	52.5
- University education	28	11.7
Occupation		
- Work	67	27.9
- Not work	173	72.1
Place of residence		
- Rural	146	60.8
- Urban	94	39.2
Duration of marriage		
≤ 10 months	134	55.3
11-15 months	76	31.7
≥ 16 months	30	13.0
Mean± SD	**10.91±4.279**	
Duration of pregnancy		
≤ 12 weeks	80	33.3
13-26 weeks	80	33.3
27-40±2 weeks	80	33.3
Mean± SD	**19.38±8.715**	
Perform circumcision		
- No	85	24.2
- Yes	182	75.8
Receiving sexual information or counseling during current pregnancy in the antenatal care clinic		
- No	207	86.3
- Yes	33	13.8

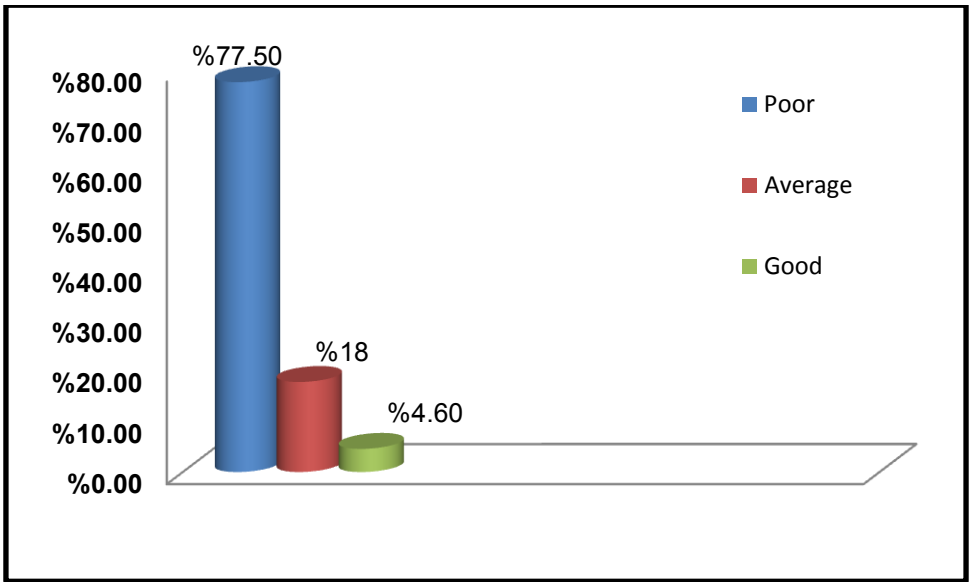

Figure (1): Distribution of pregnant women's sexual health knowledge regarding sexual function during pregnancy (N =240).

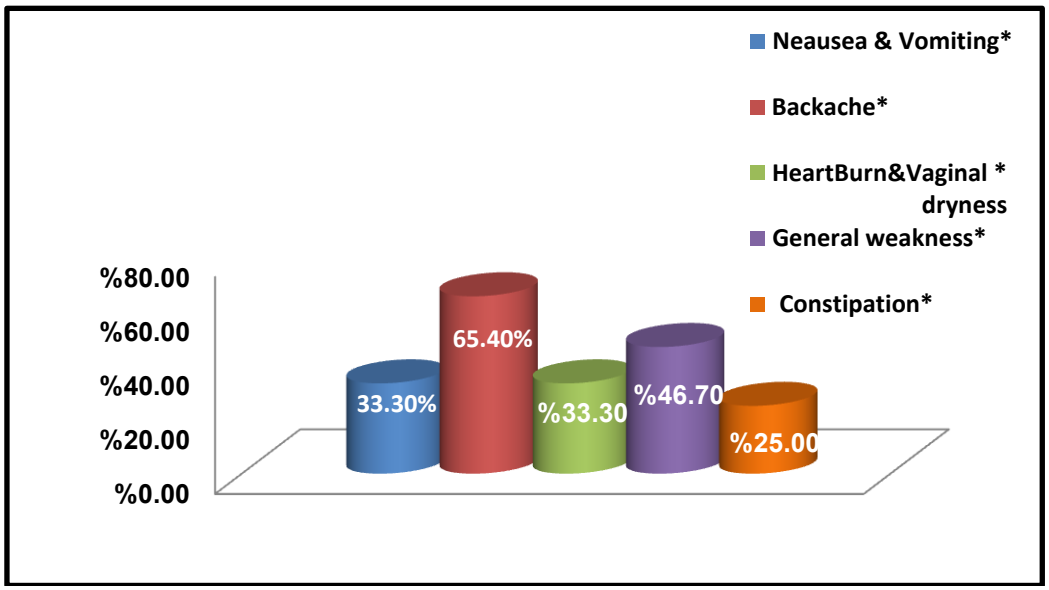

Figure (2): Distribution of the Pregnant Women regarding Normal Physiological Changes that affect their Sexual Function during Pregnancy (N=240)

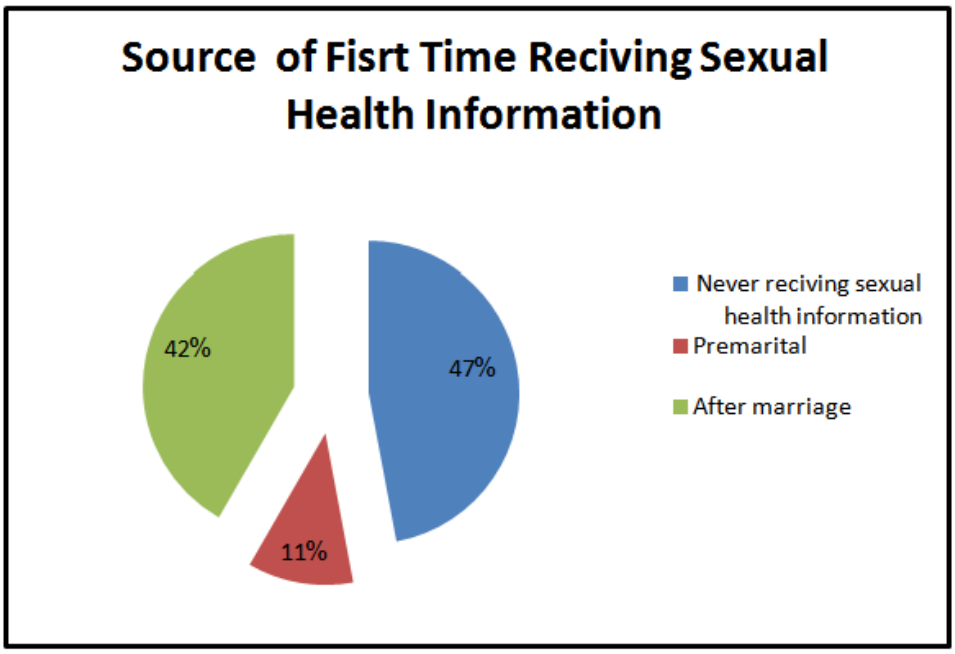

Figure (3): Distribution of the Pregnant Women according to First Time Receiving Sexual Health Information (N=240).

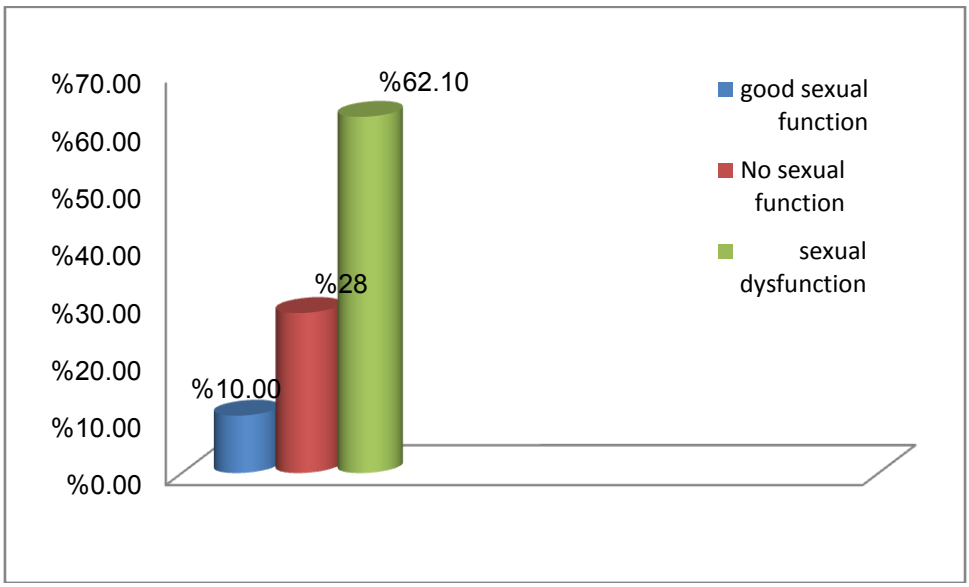

Figure (4): Distribution of the Total scores of Pregnant Women Female Sexual Function Index (FSFI) (N=240).

IV. Discussion

The absence of sexual counseling during pregnancy gives rise to false beliefs, which, together with physical changes, concerns about the risks, and fluctuations in sexual interest, cause a decrease in sexual activity. Nonetheless, sexuality remains a very important aspect of pregnancy, toward which the pregnant women must adopt a broader approach, not limited to intercourse, and adopt healthy sexual practices that are adapted to the physical, emotional, social and sexual changes that happen during this critical time of pregnancy **[1]**.

Regarding age of pregnant women, the results of the current study showed that half of the pregnant women were from 21-25years with mean age 21.2 ± 2.2 years. This result is inconsistent with Brown et al. [2] who studied effect of Pregnancy on Sexuality of Women in Ibadan, Nigeria and denoted that the mean age of the study subjects was 30.7 ± 0.27 years.

Concerning pregnant women's educational level, more than half of them had secondary education, nearly three quarter did not work and two- thirds of them were from rural areas. This could be confirmed that

there was strong relation between educational level and the pregnant women place of residence. This result is in agreement with El-nashar et al. (2016), **[3]**. who studied female sexual dysfunction in Lower Egypt and denoted that 50% of the study subjects had secondary education, and about two- thirds of them were from rural areas.

Regarding duration of marriage of the pregnant women, the study findings showed that the mean of the duration of marriage was 10.9 ±4.2 months. This may be because two quarters of the studied pregnant women were from rural areas that encourage early marriage of females. This result is in disagreement with Erbil (2018), [4] who studied Sexual function of pregnant women in the third trimester and mentioned that mean of duration of marriage of the study sample was 4.20 ± 4.36 years.

Regarding sexual health knowledge of the pregnant women during pregnancy, the present study revealed that there was great increase in the percentage of knowledge total score levels from pre to post implementation of the sexual health educational program regarding all items of knowledge. The majority of the pregnant women had good sexual health knowledge compared with the pre test results. This figuring out an alarm concerns with the importance of sexual health education and awareness during pregnancy. This finding is consistent with Heidari et al. (2018),[5] who studied the effect of sexual education on sexual function of Iranian couples during pregnancy and reported a statistically significant increase in the mean scores of pregnant women's knowledge throughout pre and post intervention. Also, this result is in agreement with Masoumi (2017), [6] who studied the effect of sexual counseling on marital satisfaction of pregnant women referring to health centers in Malayer (Iran) and stated that the mean post test scores of knowledge was higher than of pre test knowledge scores.

Regarding normal physiological effects of pregnancy on sexual function of the pregnant women, the current study findings revealed that the highest normal physiological changes reported by the studied pregnant women that affect their sexual function during pregnancy were backache, general weakness followed by nausea and vomiting. This was in agreement with study conducted by Çavus & Beyazıt [7] who studied factors affecting sexual activity and sexuality-related quality of life in different stages of pregnancy and stated that backache, general weakness as well as nausea and vomiting were among normal physiological changes which affect sexual function for most of the study subjects.

Concerning FSFI scores during the second trimester were higher than first and third trimesters. In the first trimester such discomfort as fatigue, nausea, vomiting, emotional changes, and fear of abortion take place. As well as discomfort of third trimester such as dyspnea, weight gain, vaginal dryness and back pain make sexual activities are more undesirable and negatively affect sexual function. All these discomfort are not present or not as marked in the second trimester. As well as most women feel more emotionally stable, have more energy and trouble free. This finding is consistent with Heidari et al. [5],who stated that sexual function significantly improved during the mid- pregnancy period than the first and third trimester.

Also, this study finding is supported by Khalesi, Bokaie & Attari [8], who stated that FSFI scores in domain: desire, arousal and lubrication had been increased from the second trimester compared with the first trimester. The second gestational trimester is considered the most emotionally stable periods of gestation when pregnancy seems to be clearly established, increased pelvis vascularity and with the cessation of nausea allows an increase in orgasmic quality as well as in the level of orgasm. These factors can explain the presence of the sexual function's best indicators in the second trimester.

In addition, the study results showed there was no statistical significant correlation between all socio-demographic items except place of residence, duration of marriage, and duration of pregnancy there were a strong direct correlation in relation with the total scores of pregnant women FSFI. This result finding is in the same line with Aydin et al. [1] who compared between Sexual Functions in Pregnant and Non-Pregnant Women and mentioned that there was no meaningful difference between the studied socio-demographic criteria of the study subjects on sexual function in pregnant and non-pregnant women

V. Conclusion

In the light of the study research questions and study findings, it might be concluded that; the studied sample had inadequate sexual knowledge during pregnancy. As well, negative effect of pregnancy on female sexual function as pregnancy progress.

VI. Recommendation

Based on the findings of the current study, the following recommendations are suggested:

- There is an urgent need for sexual health educational program for enhancing female sexual function during pregnancy.
- Future studies are needed for more investigations about the physical and psychological effect of pregnancy on the sexual function of the pregnant women with large sample size in different geographic location to confirm the findings

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