

## Original Article

# Sexual Dysfunction of Pregnant: An Example from Turkey

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### Abstract

**Background:** Changes in pregnancy may lead to sexual dysfunction disorders by affecting the sexual life of the women.

**Objective:** The current study aimed at determining the effects of pregnancy upon sexual dysfunction.

**Methodology:** The population of this descriptive study was composed of pregnant women who were registered to Number 1 Family Health Center (FHC) in city center of Konya Province, Turkey. Non-sampling method was used for the data collection. All the women who presented to the FHC during the study time and accepted to participate in the study were included in the study. A total of 80 women who were literate, had an active sexual life and were voluntary to participate in the study were recruited. Data were collected through a questionnaire containing demographic data and the Female Sexual Function Index and analyzed using SPSS 12 software.

**Results:** In the study; all the pregnant women were married and their mean score of sexual dysfunction was  $25.8 \pm 0.7$ . It was found out that scores of arousal, lubrication, orgasm, pain and mean total score of the pregnant women aged 18-24 years; score of arousal and mean total score of the pregnant women who had university degree; scores of desire, arousal, lubrication, pain and mean total score of those who were pregnant for the first time, scores of desire, arousal, lubrication, orgasm, satisfaction and mean total score of those having core family and scores of all subscales and total score of those not experiencing sexual dysfunction were significantly higher than other groups.

**Conclusions:** The sexual dysfunctions of the pregnant women were moderate. The majority of pregnancies stated that they had sexual dysfunctions and all of the scale scores (Desire, Arousal, Lubrication, Orgasm, Satisfaction, Pain) were lower.

**Keywords:** Sexual Dysfunction, Pregnant, Nursing

### Introduction

Pregnancy is a period during which not only anatomical and physiological changes are experienced but also all systems –particularly reproduction system- undergo changes. These changes may lead to sexual dysfunction disorders by affecting the sexual life of the women. Reactions of the couples to pregnancy, idea of becoming a family, sexual identity and role of women, cultural norms and economical factors affect sexuality during pregnancy. As in many cultures, sexuality which is considered as a taboo

in our country and neglected by women is an issue to which health professionals do not pay attention. Since the fact that sexual life maintains its taboo characteristic, sexual life during pregnancy continues to be a subject about which candidate mothers and fathers have poor knowledge because they often abstain from asking questions related to sexuality to doctors. When the studies that determined how sexual life was lived and what changes affected sexual life during pregnancy period were examined; it was identified that increasing age of pregnancy

caused decreases –particularly- in sexual desire, frequency of sexual intercourse, orgasm and sexual satisfaction functions. These studies demonstrated that sexual activity during pregnancy continued but most of the women experienced decreases in frequency of sexual intercourse and sexual desire (Aslan *et al*, 2005; Gokyildiz and Beji, 2005; Fok *et al*, 2005; Tosun Guleroglu and Gordeles Beser, 2014; Okzan *et al*, 2009). Although orgasm during pregnancy varies, sexual satisfaction generally reduces (Aslan *et al*, 2005; Gokyildiz and Beji, 2005; DeJudicibus and McCabe, 2002; Lee, 2002; Oruc *et al*, 1999). The current literature argues that pregnancy causes sexual problems. The number of the studies that determine what possible changes affect sexual life during pregnancy is very limited. Therefore, the current study aimed at determining the effects of pregnancy and socio-demographic factors upon sexual function.

## Methods

**Design and samples:** The population of this descriptive study was composed of pregnant women who were registered to Number 1 Family Health Center (FHC) in city center of Konya Province, Turkiye. No sampling method was used for the data collection. All the women who presented to the FHC during the study time and accepted to participate in the study were included in the study. A total of 80 women who were literate, had an active sexual life and were voluntary to participate in the study were recruited.

**Scales:** For the data collection; a questionnaire form that addressed descriptive characteristics of the subjects and was designed by the researchers and The Female Sexual Function Index (FSFI) that was designed by Rosen *et al*, (2000) and reliability and validity tests of which were conducted by Oksuz and Malhan (2005) were used.

**The Female Sexual Function Index (FSFI):** The Female Sexual Function Index (FSFI) was developed by Rosen *et al*, (2000) and its Turkish reliability and validity tests were conducted by Oksuz and Malhan (2005). FSFI, which was used in studies that were approved in domestic and foreign platforms was designed with six subscales (desire, arousal, lubrication, orgasm, satisfaction and pain) in order to measure female sexual functions and its relevant dimensions. Cronbach's alpha values were separately

estimated for each of the six subscales and these values were found to be  $\geq 0.82$ . FSFI, being composed of 19 items, measures desire, sexual desire or frequency and level/degree of sexual interest in the 1 stand 2nd questions; frequency and level/degree of arousal, sexual confidence and satisfaction in the 3rd, 4th, 5th and 6th questions; frequency, difficulty of lubrication and frequency and difficulty of lubrication maintenance in the 7th, 8th, 9th and 10th questions; frequency, difficulty and satisfaction in orgasm in the 11th, 12th and 13th questions; satisfaction level/degree in sexual intercourse and whole sexual life in the 14th, 15th and 16th questions; pain during and following vaginal penetration in the 17th, 18th and 19th questions. The highest raw score that can be obtained from the index which can be applied for those having sexual intercourse in the last month is 95 while the lowest raw score is 4. A simple mathematical algorithm was designed in order to determine scores of the subscales and the total score. Scores of subscales and total score are estimated by multiplying each raw score with the coefficients of the relevant subscale (coefficients: desire-0.6, arousal-0.4, lubrication-0.4, orgasm-0.3, satisfaction-0.3 and pain-0.3). Thus, the highest score that can be obtained after mean raw scores are multiplied by the factor loads is 36 while the lowest score is 2. A total score and it; 26.55 of FSFI indicates presence of sexual dysfunction (Wiegel *et al*, 2005).

**Data Analysis:** Data evaluation was done through SPSS 22.0 package program using ANOVA, Kruskal- Wallis, Independent t tests were used.

**Ethical Consideration:** In order to undertake the study, the ethical suitability of the research was approved by Ethical Council of the Mevlana University and the FHC and oral informed consent was obtained from the patients.

## Results

In the current study; all the pregnant women were married and their mean score of sexual dysfunction was moderate ( $25.8 \pm 0.7$ ). It was found out that scores of arousal, lubrication, orgasm, pain and mean total score of the pregnant women aged 18-24 years; score of arousal and mean total score of the pregnant women who had university degree; scores of desire, arousal, lubrication, pain and mean total score of those who were pregnant for the first time, scores of desire, arousal, lubrication, orgasm, satisfaction and mean total score of those having core family

and scores of all subscales and total score of those not experiencing sexual dysfunction were significantly higher than other groups. The majority of pregnancies stated that they had sexual dysfunctions and all of the scale scores were lower ( $p < 0.05$ , Table 1).

In the statistical analyses; it was noted that there were significant differences among FSFI total scores and subscale scores in terms of age of first pregnancy, income status, profession of the pregnant women and their husbands and substance abuse ( $p > 0.05$ , Table 1).

**Table 1. Comparison of total and subscale FSFI with identifying characteristics of pregnant.**

Identifier Features (%)	FSFI total and subscale						
	Desire	Arousal	Lubrication	Orgasm	Satisfaction	Pain	Total
<b>Pregnant's age</b>	$p > 0.05$	$p < 0.05$	$p < 0.05$	$p < 0.05$	$p > 0.05$	$p < 0.05$	$p < 0.05$
18-24 age (26.3)	4.3±1.3	6.3±1.5	6.7±1.2	3.7±0.7	3.7±0.6	3.6±0.9	28.4±5.9
25-31 age (47.5)	3.9±1.2	5.7±1.6	6.4±1.3	3.3±0.9	3.4±0.8	3.3±0.9	26.1±6.1
32-38 age (26.3)	3.5±1.1	4.9±1.4	5.4±1.7	2.9±1.0	3.0±1.0	2.7±1.0	22.7±6.9
<b>Educational status</b>	$p > 0.05$	$p < 0.05$	$p > 0.05$	$p > 0.05$	$p > 0.05$	$p > 0.05$	$p < 0.05$
Primary (22.5)	3.4±1.2	4.9±1.4	5.6±1.2	3.1±0.9	3.0±0.8	2.9±0.9	23.0±5.9
High school (55)	3.9±1.3	5.6±1.7	6.4±1.7	3.3±1.1	3.4±0.9	3.3±1.0	26.1±7.2
University (22.5)	4.3±1.0	6.3±1.1	6.5±1.0	3.5±0.6	3.6±0.5	3.4±0.8	27.8±4.5
<b>First pregnancies age</b>	$p > 0.05$	$p > 0.05$	$p > 0.05$	$p > 0.05$	$p > 0.05$	$p > 0.05$	$p > 0.05$
18-22 age (32.5)	3.7±1.2	5.6±1.6	6.2±1.4	3.4±0.9	3.4±0.7	3.2±1.0	25.6±6.3
23 age (25)	3.4±1.2	5.0±1.4	5.7±1.7	2.8±1.1	3.0±1.0	3.2±1.1	23.4±6.9
24 age (16.3)	4.5±1.0	6.1±1.5	6.6±1.4	3.6±0.9	3.6±0.8	3.4±0.8	28.1±6.1
24 age or up (26.3)	4.1±1.2	6.0±1.7	6.5±1.3	3.4±0.9	3.5±0.8	3.1±1.0	26.9±6.3
<b>Number of pregnancies</b>	$p < 0.05$	$p < 0.05$	$p < 0.05$	$p > 0.05$	$p > 0.05$	$p < 0.05$	$p < 0.05$
1. Pregnancy (36.3)	4.2±1.3	6.1±1.8	6.6±1.2	3.5±0.9	3.5±0.8	3.5±0.9	27.5±6.6
2. Pregnancy (36.3)	4.1±1.0	6.1±1.3	6.6±1.1	3.4±0.9	3.5±0.6	3.3±0.8	27.2±4.9
3. Pregnancy (16.3)	3.2±1.2	4.4±1.4	4.9±2.0	2.7±1.1	2.8±1.1	2.4±1.1	20.9±7.8
4. and up (11.3)	3.2±1.0	4.8±1.3	5.6±1.0	3.1±0.9	3.1±0.9	3.0±0.8	23.0±5.5
<b>Pregnant's job</b>	$p > 0.05$	$p > 0.05$	$p > 0.05$	$p > 0.05$	$p > 0.05$	$p > 0.05$	$p > 0.05$
Housewife (61.3)	3.8±1.2	5.5±1.6	6.1±1.4	3.3±0.9	3.4±0.8	3.1±0.9	25.4±6.3
Officer(25)	3.9±1.2	5.7±1.6	6.4±1.3	3.2±1.0	3.3±0.8	3.4±0.8	26.0±6.3
Employee (13.8)	4.3±1.3	6.2±1.6	6.2±2.0	3.4±1.3	3.5±1.1	3.4±1.3	27.1±8.5
<b>Husband's job</b>	$p > 0.05$	$p > 0.05$	$p > 0.05$	$p > 0.05$	$p > 0.05$	$p > 0.05$	$p > 0.05$
Officer (28.8)	3.9±1.3	5.9±1.6	6.5±1.3	3.3±1.0	3.4±0.7	3.2±1.1	26.4±6.4
Employee (42.5)	3.8±1.3	5.4±1.6	5.9±1.7	3.2±1.0	3.2±0.9	3.2±1.0	24.9±7.1
Self-work (28.8)	4.0±1.2	5.8±1.5	6.4±1.2	3.5±0.8	3.5±0.8	3.2±0.9	26.6±5.9
<b>Income status</b>	$p > 0.05$	$p > 0.05$	$p > 0.05$	$p > 0.05$	$p > 0.05$	$p > 0.05$	$p > 0.05$

1000 tl or less (6.3)	3.9±1.4	6.0±1.5	6.6±1.5	3.8±0.5	3.6±0.5	3.1±1.4	27.2±6.4
1000-5000 tl(81.3)	3.8±1.2	5.5±1.7	6.1±1.5	3.2±1.0	3.3±0.9	3.2±0.9	25.4±6.7
5000 tl or up(12.5)	4.0±1.2	6.2±1.2	6.6±1.3	3.6±0.7	3.7±0.7	3.5±0.9	27.8±5.5
<b>Family type</b>	<b>p&lt;0.05</b>	<b>p&lt;0.05</b>	<b>p&lt;0.05</b>	<b>p&lt;0.05</b>	<b>p&lt;0.05</b>	<b>p&gt;0.05</b>	<b>p&lt;0.05</b>
Core (93.8)	4.0±1.1	5.8±1.5	6.3±1.4	3.4±0.8	3.4±0.8	3.2±0.9	26.4±6.1
Extensive (6.3)	1.9±1.0	3.3±1.8	4.3±0.9	1.8±1.1	2.2±1.1	2.7±1.2	16.3±5.6
<b>Substance use</b>	<b>p&gt;0.05</b>						
None (92.5)	3.9±1.2	5.6±1.6	6.2±1.5	3.3±0.9	3.4±0.8	3.2±1.0	25.8±6.5
Cigarette (7.5)	4.1±1.4	5.6±2.0	6.2±1.6	3.3±1.2	3.3±1.1	3.6±0.5	26.2±7.7
<b>Partner's subs. use</b>	<b>p&gt;0.05</b>						
None (47.5)	3.9±1.3	5.6±1.7	6.1±1.7	3.3±1.0	3.3±0.9	3.1±1.1	25.5±7.3
Cigarette (52.5)	3.9±1.1	5.7±1.5	6.3±1.2	3.3±0.9	3.4±0.8	3.3±0.8	26.1±5.8
<b>Sexual dysfunction</b>	<b>p&lt;0.05</b>						
Have (48.8)	2.9±0.9	4.3±1.1	5.0±1.2	2.5±0.8	2.7±0.8	2.6±0.8	20.3±4.8
No (51.3)	4.8±0.8	6.9±0.7	7.3±0.6	4.0±0.3	4.0±0.3	3.8±0.7	31.0±2.5
<b>Total FSFI and Subscales</b>	<b>3.9±0.1</b>	<b>5.6±0.1</b>	<b>6.2±0.1</b>	<b>3.3±0.1</b>	<b>3.4±0.0</b>	<b>3.2±0.7</b>	<b>25.8±0.7</b>

## Discussion

In the studies in the literature, prevalence of sexual dysfunctions may vary. Socio-cultural and economical differences among the countries are one of the important reasons that account for the variance in prevalence of sexual dysfunctions (Mert AND Erberk Ozen, 2011). Besides, low socio-economical and educational level and number of pregnancies and births are major factors that cause sexual dysfunctions among women (Demir *et al*, 2007).

The studies done indicate that sexual activity is maintained during pregnancy but majority of the women experience decreases in the frequency of sexual intercourse and sexual desire (Aslan *et al*, 200; Gokyildiz and Beji, 2005; Fok *et al*, 2005). In the study of Tosun Guleroglu (2014) according to the FSFI total score, more than half of the pregnant women (63.4%) had sexual dysfunction. In the study of Cayan *et al*, (2004) conducted with 179 female patients, it was reported that 60.3% of the women had desire, 43% had subjective arousal, 38% had lubrication, 45.8% had orgasm, 38% satisfaction, and 36.8% had pain disorders. Another study conducted in our country demonstrated that prevalence of female sexual dysfunction was 48.3% (Oksuz and

Malhan, 2006). Although orgasm in pregnancy changes, sexual satisfaction generally reduces (Aslan *et al*, 2005; Gokyildiz and Beji, 2005; DeJudicibus and McCabe, 2002; Lee, 2002; Oruc *et al*, 1999). The current literature emphasizes that pregnancy causes sexual problems. Similar to the literature; the present study pointed out that majority of pregnancies stated that they had sexual dysfunctions. It was seen that prevalence of female sexual dysfunction of the pregnant women was bigger compared with the previous literature, which, we thought, may have originated from sociodemographic characteristics that may affect sexual functions and from physiological complaints undergone during pregnancy.

In our study, the lowest score was obtained from pain subscale by all the participant pregnant women (3.2±0.7). In addition, pain score was significantly low among those who had sexual dysfunction (48.8%) as compared with those who did not have sexual dysfunction (Table 1). The study of Ege *et al*, (2010) found out that there was a statistically significant correlation between dyspareunia experienced during sexual intercourse and sexual dysfunction. According to the logistic regression analysis; it was seen that

those having dyspareunia during sexual intercourse (45.1%) were 5 times more likely to suffer from sexual dysfunction than those not having dyspareunia during sexual intercourse. Likewise, the study of Elnashar *et al.*, (2007) identified that 31.5% of the women experienced pain during sexual intercourse while the study of Valadares *et al.*, (2008) reported that 39.5% of the women experienced pain during sexual intercourse. These findings emphasize the necessity to detect the factors that cause or may cause pain and to bring these factors under control.

Advanced age is a crucial and independent risk factor of sexual dysfunctions the effects of which have clearly been defined and there is a positive correlation between advanced age and sexual dysfunctions (Ege *et al.*, 2010; Berman *et al.*, 2000). Similarly, the current study indicated that scores of all FSFI subscales and total scores were higher among those young pregnant women aged 18-24 and their scores of arousal, lubrication, orgasm, pain and total scores were significantly higher than older pregnant women (aged 25-38). In light of these findings; it may be argued that sexual function of the women aged 18-24 was normal because their total FSFI score ( $28.4 \pm 5.9$ ) was bigger than 26.55. However, since total FSFI scores of the women aged 25-31 and those aged 32-38 ( $26.1 \pm 6.1$  vs.  $22.7 \pm 6.9$ ) was smaller than 26.55 it may be suggested that they had sexual dysfunction. There are many studies proposing that sexual function of women is negatively influenced by increased age (Okzan *et al.*, 2009; Elnashar *et al.*, 2007; Moreira *et al.*, 2008). The study of Tosun Guleroglu (2014) reported that mean scores of FSFI desire and satisfaction of those aged  $>35$  were lower than those aged  $\leq 35$ . In the studies of Gokyildiz and Beji (2005), and Fok *et al.*, (2005); it was noted that increasing age of pregnancy caused decreases—particularly— in sexual desire, frequency of sexual intercourse, orgasm and sexual satisfaction functions. Demir *et al.*, (2007) found that women who did not have sexual dysfunctions were statistically and significantly younger than those who had sexual dysfunctions when the age groups were compared in terms of presence of sexual dysfunctions. The reason was said to be the changed estrogen levels and atrophy in vagina epithelium seen in advanced ages. With advanced age; functional capacity of tissues and organs reduces and high number of pregnancies and hormonal changes may cause

discomfort in sexual intercourse and psychological stress in advanced age and produce sexual dysfunctions. Also, possibly reduced sexual attraction of couples due to increased marriage duration may be playing a role, too.

Mean scores of desire, arousal, lubrication, satisfaction, pain and mean total scores of those being pregnant for the first time were significantly higher. It was identified that women who were pregnant for the first time did not have sexual dysfunctions because their total FSFI score (27.50) was bigger than 26.55 and women whose number of pregnancy was three and more had sexual dysfunctions. Demir *et al.*, (2007) did not detect an important difference between women who gave birth for the first and those who were nulliparous in terms of total FSFI score but FSFI sexual desire scores were lower among those who gave birth. The study of Tosun Guleroglu (2014) that the total number of the pregnancies affected sexual functions of the pregnant women and those with a history of  $\geq 4$  pregnancies had lower mean scores in FSFI. Bigger number of pregnancies means higher number of children, which we conceive may increase the responsibility and stress of the pregnant women. These factors in turn may negatively affect their sexual functions.

There were no differences between income status and experience of sexual dysfunctions among the participant women. Similar to this finding; the study of Elnashar *et al.*, (2007) reported that there were no any correlations between income and sexual dysfunctions. The study of Ege *et al.*, (2010) pointed out that no correlations existed between income and experience of sexual dysfunctions but the regression analyses conducted emphasized that income status might be a risk factor. The study of Tunc (2005) reported that sexual satisfaction, sexual communication, and vaginismus status of the pregnant women with higher economical income were healthier and better than other pregnant women. Gokyildiz and Beji (2005), and Fok *et al.*, (2005) suggested that economical factors affected sexuality during pregnancy. It may be put forward that sexual functions of the pregnant women become worse as their economic status deteriorates. According to the data gauged by the American National Health and Social Survey, socioeconomic status is a risk factor for sexual function disorders and a decline in economic status may result in sexual dysfunctions

(Demirezen, 2006). That the literature contained similar and different results made us conclude that economical status may turn out to be a risk factor for the experiencing sexual problems. It may be concluded that it will be difficult for people to seek solutions to their sexual problems in a situation where they are unable to meet basic needs such as food and water and shelter.

It was noted that there was a significant difference between educational status and experience of sexual dysfunction among the women. Scores of arousal and total scores of those who had university degrees were considerably higher. Likewise, it was pointed out in literature that having low educational level increased risk for experiencing sexual dysfunctions (Cayan *et al*, 2004; Bahar *et al*, 2007). Tosun Guleroglu (2014) found that low educational level adversely affects sexual functions of the pregnant women. Also, Ege *et al*, (2010) detected a significant difference between educational status and experience of sexual dysfunction among the women. Eryilmaz *et al*, (2004)'s study conducted with 238 pregnant women indicated that low educational level negatively affected sexual relation in pregnancy in a serious manner and that the difference originated from the subjects who had primary school degree and were literate. By decreasing their self-esteem, poor education impairs self-confidence of the women and prevents them from knowing their body and from discovering their own health needs correctly (Moreira *et al*, 2008). One's ability to access knowledge may be easier if his/her educational level increases (Tunc, 2005).

Total FSFI scores and subscale scores of those having core families were significantly higher. Equally; Ozerdogan *et al*, (2009) found that sexual dysfunctions were more common among those who lived in extended families as compared to those who lived in core families. The study of Singh *et al*, (2009) did not indicate that family type was correlated with sexual function. These findings made us conclude that living in crowded families may restrict sexual lives of the couples; which may affect their sexual function negatively.

### Conclusion

In the study; all the pregnant women were married and their mean score of sexual dysfunction was  $25.8 \pm 0.7$ . It was found out that scores of arousal, lubrication, orgasm, pain and

mean total score of the pregnant women aged 18-24 years; score of arousal and mean total score of the pregnant women who had university degree; scores of desire, arousal, lubrication, pain and mean total score of those who were pregnant for the first time, scores of desire, arousal, lubrication, orgasm, satisfaction and mean total score of those having core family and scores of all subscales and total score of those not experiencing sexual dysfunction were significantly higher than other groups.

In light of these findings, it may be recommended that:

All health care personnel should be trained about sexuality and sexual health both through vocational education at the schools and on-the-job trainings after graduation.

Both pregnant women and their husbands should be provided with trainings about sexual functions and sexual health before, during, and after pregnancy period.

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