

## Changing sexuality and influencing factors during pregnancy: A cross-sectional study

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### ABSTRACT

**Objective:** The aim of this study is to evaluate women's sexual function and satisfaction with pregnancy. **Methods:** A cross-sectional descriptive design was adopted. The data of 208 women who referred to health centers during 2016-2017 in Turkey were collected through convenient sampling. STROBE was used in the planning, implementation, and reporting of the study design. Data were collected using a Demographic Questionnaire, the Golombok-Rust Inventory of Sexual Satisfaction- Female Form-Turkish version. The questionnaires were filled in by the face-to-face interview method. **Results:** The mean age of women was  $27.90 \pm 6.03$  and ages ranged from 18 to 45 years. In addition, all participants (n: 208) were 3<sup>rd</sup> trimester. 58.85% of the participants had sexual dysfunction and low satisfaction. When the previous trimesters of the woman were compared, there was a significant difference between trimesters in satisfaction ( $6.09 \pm 4.14$ ) and anorgasmia ( $6.90 \pm 3.17$ ) from GRISS subscale scores and the mean total GRISS score was  $42.86 \pm 15.24$ . **Conclusions:** The prevalence of sexual dysfunction and sexual dissatisfaction in pregnancy is high. This article concludes that all women and their spouses should be informed about health outcomes related to sexual activity during pregnancy.

**Keywords:** Pregnancy, sexuality, sexual functions, satiation

### Gebelikte değişen cinsellik ve etkileyen faktörler: Kesitsel bir çalışma

#### ÖZET

**Amaç:** Çalışmanın amacı kadınların gebelik döneminde cinsel fonksiyonunu ve gebelik doyumunu değerlendirmektir. **Yöntem:** Çalışma, kesitsel tanımlayıcı tipte planlanmıştır. Türkiye'de 2016-2017 yılları arasında sağlık ocaklarına başvuran 208 kadının verileri uygun örnekleme yoluyla toplanmıştır. Çalışma tasarımının planlanması, uygulanması ve raporlanmasında STROBE kullanılmıştır. Veriler, Demografik Anket, Golombok-Rust Cinsel Doyum Envanteri-Kadın Formu-Türkçe versiyonu kullanılarak toplanmıştır. Anketler yüz yüze görüşme yöntemiyle doldurulmuştur. **Bulgular:** Kadınların yaş ortalaması  $27.90 \pm 6.03$  ve yaşları 18 ile 45 arasında değişmekteydi. Katılımcıların tamamı 3. trimesterde olan gebelerdi. Katılımcıların %58.85'inde cinsel işlev bozukluğu ve düşük memnuniyet vardı. Gebeler önceki trimesterleri karşılaştırıldığında, GRISS alt ölçek puanlarından memnuniyet ( $6.09 \pm 4.14$ ) ve anorgizm ( $6.90 \pm 3.17$ ) açısından trimesterler arasında anlamlı fark vardı ve ortalama GRISS toplam puanı;  $42.86 \pm 15.24$  saptandı. **Sonuç:** Gebelikte cinsel işlev bozukluğu ve cinsel tatminsizlik prevalansı yüksektir. Bu makale, tüm kadınların ve eşlerinin hamilelik sırasında cinsel aktivite ile ilgili sağlık sonuçları hakkında bilgilendirilmesi gerektiği sonucuna varmaktadır.

**Anahtar Kelimeler:** Hamilelik, cinsellik, cinsel işlevler, doyum

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## INTRODUCTION

Sexuality in human life, though not vital, is a necessary instinct to survive and maintain species. Sexual dysfunction is a common problem among women in Turkey and its prevalence varies between 48.3% and 46.9%. sexual dysfunction, and low self-esteem.<sup>1,2</sup> It is associated with libido, orgasm, and arousal problems.<sup>3-7</sup>

Pregnancy is a sensitive issue in terms of sexuality and it is a complex period in which various anatomical and physiological changes along with psychological, and cultural factors may affect the sexuality of the spouses.<sup>8-10</sup> These changes are generally associated with decreased or interrupted sexual activity and can lead to sexual problems.<sup>11-13</sup> Among the reasons for the reduced sexual desire of women during pregnancy, fear of damage to the fetus or pregnancy during coitus, the belief that sexual intercourse during pregnancy is a sin and not considered religious, causing preterm birth, lack of a comfortable position for sexuality, the body image lack of appeal may be caused by fear and myths.<sup>14-24</sup> The sexuality affected during pregnancy and the sexual dysfunctions it causes are an important aspect of quality of life and should be considered together with all pregnant women and their partners.<sup>25</sup>

Sexuality includes individual-specific differences. Nowadays, sexuality is a highly researched topic and many published studies have investigated sexual dysfunction. In the literature, while the Female Sexual Function Index (FSFI)<sup>8,12,26</sup> scale is used in studies investigating the sexuality of pregnant women, studies using the Golombok-Rust Inventory of Sexual Satisfaction (GRISS)<sup>27-30</sup> scale are very few. The aim of this study was to evaluate the sexual function and satisfaction of women during three trimesters of pregnancy, and to scrutinize the relationship between sexual satisfaction and sexual function during pregnancy. To this end;

- Is there a change in the sexual desire level of the pregnant woman in different trimesters?
- Is there a relationship between sexual desire and sexual satisfaction during pregnancy?

## METHODS

### Design of the study

STROBE rules were applied in the planning, implementation, and reporting of the study design. The study was comparative and descriptive.

### Target population and sample

This study population of 208 pregnant women who applied to the hospital in the Istanbul region between March 2017 and September 2017 of different socioeconomic status. Chronically and psychiatric patients with a diagnosis of pregnancy between 18-45

years of age, who can speak Turkish, have no risk factors during pregnancy. Pregnant women who did not have any health problems and reported that their spouses had no sexual dysfunction were included in the study. The sample size required for the study was reported by Karakuş and Yanikkerem (2016) based on the probability of 34.7% decreased sexual desire, 5% type I error probability and 95% confidence interval was calculated by 185.<sup>31</sup> Therefore, given a possible 10% reduction, 208 sample sizes were selected for the study. Initially, the researcher explained the intention of the study to the management of the hospital and asked the list of pregnant women to be included in the study sample and telephone numbers. 208 participants were randomly selected from pregnant women who applied to the hospital using a random numbers table. Pregnant women who came to the examination were informed about the study and after an explanation about the study, written and verbal consent were obtained from those who volunteered to participate in the study. And then, the data were collected for 20 minutes by face-to-face interview method. At the end of the study, 208 data questionnaires were analyzed.

### Data collection tools

Two forms were used for collecting data. The first form is the Descriptive Information Form. This form is a questionnaire consisting of 24 questions in total, including 6 questions related to socio-demographic information, 6 questions investigating obstetric characteristics, and 12 questions about the age of first sexual intercourse, and the status of obtaining information about sexuality during pregnancy, and sexuality during pregnancy. The second form is the *GRISS-Women Form*.<sup>12</sup> Inventory is a measurement tool for assessing the quality of sexual intercourse and sexual dysfunctions. The inventory was created by therapists to evaluate sexual dysfunction in a heterosexual couple. While there are 28 questions in the inventory, there are two separate forms as male and female. The questionnaire is self-filled by the respondent and assesses 12 domains (5 female-specific, 5 male-specific, and 2 non-gender-specific). The female form includes 7 sub-dimensions: anorgasmia, vaginismus, miscommunication, infrequency, avoidance, apathy, and dissatisfaction. Total GRISS<sup>13</sup> scores are calculated based on a scoring table provided by the survey, resulting in 1-9 points. The higher the converted score, the greater the sexual dysfunction. A score greater than 4 indicates a problem for that couple. The Cronbach's alpha coefficient of the scale was found to be .91 in women.

### Data Analysis

Statistical Package for the Social Sciences (SPSS, SPSS Inc., Chicago, IL, U.S.A.), version 20.0 was used for data analysis. Descriptive statistics (means, standard deviations and frequency distributions) were

calculated for socio-demographic and GRISS variables. One-way ANOVA and t-test were used for data showing normal distribution. Relationship tests were applied to evaluate the relationships between the variables. Apart from this, linear regression analysis was performed to examine the relationship between GRISS.  $P < .005$  was considered significant.

### Ethical approval

This study was carried out after the approval of the Non-Interventional Clinical Research Ethics Committee (09.03.2017, No: 59491012-604.01.02-) and the approval and permission letter from the unit of the hospital (No: 95273397-604.02). Furthermore, by the Declaration of Helsinki, written and verbal information about the study and the nature of the study was provided to the participants, and their written consent was obtained.

## RESULTS

### *Socio-demographic and Obstetric characteristics of pregnant women*

In total, 208 pregnant women participated in the study. The mean age of women was  $27.90 \pm 6.03$  and ages ranged from 18 to 45 years. The majority of women (49.5%) were in the 25-34 age range, (and 57.2%) were housewives with a high school or higher education level (75.48%). Moreover, 58.1% of them declared that their income and expenses were equal. 36.06% of the respondents reported that they had arranged their marriages through an arranged procedure. 39.42% primigravida's were used in obstetric history. The mean gestational age was  $22.64 \pm 9.52$  weeks. A significant number of participants planned their pregnancy (71.63%) and 14.4% of women smoked (Table 1).

**Table 1. Relationship between women's characteristics and sexual satisfaction**

Personal characteristics	n	GRISS Mean $\pm$ SD	p
Age (years)			
>18	66	41,71 $\pm$ 13,51	.000*
18-35	104	40.34 $\pm$ 13.46	
$\geq 45$	38	48.41 $\pm$ 15.62	
Educational Level			
Primary School <sup>a</sup>	103	58.42 $\pm$ 10.24	.000*
Secondary School <sup>b</sup>	105	37.87 $\pm$ 15.22	
Employment Status			
Employed	156	58.47 $\pm$ 13.63	.012
Unemployed	52	44.00 $\pm$ 14.57	
Level of income			
Low-income family	62	29.22 $\pm$ 3.25	.001*
Middle-income family	121	26.09 $\pm$ 3.76	
High-income family	25	24.03 $\pm$ 4.27	
Type of marriage			
Arranged	133	57.44 $\pm$ 10.03	.001*
Loved	75	41.50 $\pm$ 13.65	
Whether the pregnancy was planned			
Planned	148	40.91 $\pm$ 13.15	.004*
Unplanned	55	45.69 $\pm$ 15.07	
Pain during sexual intercourse			
Yes	51	50.00 $\pm$ 13.64	.002*
No	151	40.62 $\pm$ 13.88	
Was your sexual life affected during pregnancy?			
Decreased	103	44.00 $\pm$ 14.57	.012
hasn't changed	74	42.47 $\pm$ 15.48	
Increased	16	36.81 $\pm$ 15.50	
Is it safe to have sex during pregnancy?			
Safe	127	40,51 $\pm$ 14.47	.015
Risk	81	45.42 $\pm$ 12.26	

Abbreviations: GRISS, Golombok Rust Inventory of Sexual Satisfaction Scale <sup>a</sup>Not illiterate or literate and primary school.

<sup>b</sup>Secondary school, high school and university. Bold values are statistically significant parameters.

$P < 0.001$  t= t-test, F= ANOVA

### *Changes of and beliefs about sexuality during pregnancy*

Among 208 women, 58.85% had sexual dysfunction, and 5.58% were only slightly affected, in addition, 1.92% reported that her husband had sexual dysfunction. According to the findings, 24.51%

reported pain during sexual intercourse. Approximately 24% of the participants stated that they experienced coitus 1 week after learning the pregnancy. Before pregnancy, the majority of women (37.9%) experienced two or more sexual intercourse a week. This rate gradually decreases during pregnancy, especially in the last trimester of 7.69%

had two or more incidence of sexual intercourse. Half of the pregnant women (50%) stated that they avoided sexual intercourse during pregnancy. They reported that the biggest reason for pregnant women to reduce the frequency of sexual intercourse was the fear of harming the fetus during sexual intercourse

(63.74%). According to Table 1, although it is difficult to get into the relationship due to physical reasons in the first trimester (70.19%) and because of the growing abdomen in the third trimester, the idea of harm to the baby is among the most common reasons (83.65%) (Table 2).

**Table 2. Changes of and beliefs about sexuality during pregnancy**

Sexuality characteristics	Before pregnancy		Pregnancy					
	n	%	n	%				
<b>Getting information about sexuality</b>								
Yes	98	47.12	112	53.84				
No	110	52.88	96	46.15				
<b>Information source</b>								
Health personnel <sup>a</sup>	5	5.1	55	49.10				
Family <sup>b</sup>	25	25.51	15	13.39				
Other	68	69.38	42	37.50				
<b>Sexual Adjustment</b>								
Yeah, we're both willing	208	100	74	35.57				
Yeah, we're both reluctant	-	-	8	3.84				
My wife is willing I'm reluctant	-	-	122	58.85				
My wife is reluctant I am willing	-	-	4	1.92				
<b>Frequency of coitus</b>								
> 4 per week	37	17.78	6	2.88				
2-3	76	36.53	16	7.69				
<2 per week	95	45.67	169	81.25				
Nothing	-	-	17	8.17				
<b>Sexual intercourse periods</b>								
<4	75	36.05	134	64.42				
4-10	82	39.42	52	25.00				
> 10	51	24.51	22	10.57				
<b>Sexual Desire Level</b>			<b>1<sup>st</sup></b>	<b>2<sup>nd</sup></b>	<b>3<sup>rd</sup></b>	<b>1<sup>st</sup></b>	<b>2<sup>nd</sup></b>	<b>3<sup>rd</sup></b>
Increased	-	-	28	40	28	13.46	19.23	13.46
Decreased	-	-	119	102	105	57.21	49.03	50.48
No change	-	-	61	66	75	21.78	31.73	36.05
<b>Fear of Coitus</b>								
Yes	-	-	104			50.0		
No	208	100	104			50.0		

Abbreviations: <sup>a</sup> Health personnel; midwifery, nurse, doctor <sup>b</sup>Family; mother, father, husband  
P<0.001 t= t-test, F= ANOVA

### GRISS Score

It was found that 40.91±13.15 of pregnant women had high sexual satisfaction score and there was a significant relationship between demographic characteristics and sexual satisfaction of participants (p<.000). When the relationship between the demographic characteristics of women and their sexual satisfaction was examined, it was observed that the sexual satisfaction scores of women who were advanced age (48.41±15.62), secondary school education (58.42±10.24), low income (29.22±3.25) and unplanned pregnancy (40.91±13.15) were negatively affected (p<.000) (Table1). When the scale subscales were examined, it was found that the mean score of the lowest subscale was 3.50±3.14 in the avoidance dimension and the mean score of the highest sub-dimension was 6.90±3.17. When the

general sexual satisfaction score averages are taken into consideration, it can be asserted that there is a problem limit in terms of sexual satisfaction scale and there is a problem according to the scale score (Table 3).

Table 4 shows the effects of sexuality in the return of pregnancy on the sexual satisfaction scores of women and analyzes the effects of independent variables on the dependent variable. According to the results of the regression analysis, the model established is statistically significant (F=8.398; p=.000). Three independent variables explain 4.2% of the variance in the dependent variable, and the regression model is statistically significant (p=.000) (Edited R<sup>2</sup>=.042). There is no autocorrelation problem in the established model. Durbin W value is between 1.5 and 2.5 (DW=2.071).

**Table 3. Means of GRISS score**

Survey measure	n	Min	Max	Mean±SD
Infrequency	208	0	48	3.79 ± 3.46
Non-communication	208	0	8	4.14 ± 1.95
Dissatisfaction	208	0	15	6.09 ± 4.14
Avoidance	208	0	16	3.50 ± 3.14
Non-sensuality	208	0	15	5.73 ± 3.39
Vaginismus	208	0	16	6.47 ± 3.03
Anorgasmia	207	0	16	6.90 ± 3.17
Sexual satisfaction	208	6	105	42.86 ± 15.24

**Table 4. Multiple regression analysis of women's sexual desire status by characteristics of GRISS scores**

Dependent Variable	Independent Variable	$\beta$	Standard error	Beta	t	p	VIF	F	Model (p)	R2	Durbin Watson
GRISS	Constant	1.390	.299	-	4.641	.000*	-				
	Problem During Merge	-.087	.074	-.100	1.168	.041*	1.140				
	Sexual Desire Level	.405	.121	.292	3.351	.001*	1.185	8.398	.000*	.042	2.071
	Duration of Sexual Intercourse	-.007	.004	-.154	1.879	.022*	1.048				

P<0.001 t= t-test, F= ANOVA

## DISCUSSION

It is accepted that pregnancy has a significant effect on the sexual behaviors of women.<sup>11,13,14,26</sup> The widespread effect of pregnancy on sexuality is that there is a decrease in sexual activity during pregnancy. Physiological and psychological changes during pregnancy may affect sexual function, activity and satisfaction.<sup>12,30</sup> In the study, changes in the frequency of sexual intercourse, sexual desire, stimulation, pain and satisfaction during pregnancy were detected. We used the GRISS questionnaire for the study. The questionnaire provides a total score for both women and men and subscales for each gender.<sup>30</sup> Comfortable and satisfying sexual intercourse during pregnancy ensures a problem-free sexual life. This study was planned as a descriptive study to investigate the hypothesis that pregnancy negatively affects sexual function and satisfaction.

In the study, women reported that they avoided having sex during pregnancy, while at the same time they had less pleasure in touching and caressing and increased sexual desire. The study is consistent with previous studies evaluating sexual dysfunction in women during pregnancy.<sup>31</sup> In addition, the lowest average score among the areas of sexual function is related to sexual desire, in parallel with the results of a study in Iran.<sup>32</sup>

The decrease in the level of sexual desire in the study is consistent with the results of Aslan et al.<sup>1</sup> (2005) and another study<sup>18</sup> conducted in China. Women reported that they had problems communicating during sexual intercourse and described a lot of pain in sexual intercourse.<sup>28,29</sup> Lack of communication between spouses about sexual problems is related to sexual dissatisfaction and sexual dysfunction.<sup>31</sup> Litzinger and Gordon (2005) in their study of 387 couples, sexual satisfaction, communication and marital satisfaction in their study of relationships, reported that communication affects sexual satisfaction and marriage satisfaction.<sup>33</sup> Nearly 40% of respondents reported that their sexual lives were very affected during pregnancy. In the literature, sexual function and satisfaction decreased during pregnancy and reached the highest point in the third trimester. The reason for this may be that the participants have more pregnancy complaints in the first trimester and this is supported in the literature.<sup>31-33</sup> It is believed that as a primary reason for the prevention and effect of sexual activity during pregnancy, participants are afraid of harmful obstetric consequences, sexual intercourse may be harmful to the baby or mother during pregnancy and may cause miscarriage, bleeding, premature birth and fetal injuries. The findings were similar to those of previous studies.<sup>8-10</sup> In a study conducted in Thailand, participants showed that 47% of sexuality was



concerned that the fetus might be harmful to the fetus.<sup>14</sup> The most affected state of sexual intercourse was a decrease in the frequency of sexual intercourse and the reason for the reduction was because of women's belief in sexuality during pregnancy or sexual embarrassment may affect the initiation of sexual activity. Providing health professionals with couples on sexual health during pregnancy would be very helpful in solving problems. Sexuality is seen as a taboo according to some cultures and couples cannot talk to health professionals about sexuality during pregnancy because of shame and sin. In this study, the frequency of sexual intercourse in three trimesters before and during pregnancy was evaluated. The findings of the study showed a significant decrease in the frequency of sexual intercourse during pregnancy, especially in the third trimester. The findings of our study revealed that only 7.3% of the women had sexual intercourse two or more times a week and 8.17% had no coitus in the last three months. Decreased sexual activity due to the growing abdominal circumference during the last trimester was an expected condition, which made coitus difficult. Similar to this study, many studies reported that the coital frequency decreased by half in pregnancy compared to pre-pregnancy. According to the literature, many studies (61.4%) show that the frequency of sexual intercourse during pregnancy is two or less per week.<sup>14,27,34</sup> The decrease in the frequency of sexual intercourse during pregnancy is multifactorial. Pain during coitus (24.51%) is one of the important factors affecting living. In a study conducted in Iran, 81.8% of women experienced less coitus during pregnancy, and 69.7% said that sexual desire decreased due to pain during participant sexuality.<sup>14</sup> In a study in Turkey, 22% of pregnant women suffered from sexual problems and pain during sexual intercourse reportedly attracted 50.0%.<sup>11</sup> Sexuality in general is regarded as taboo because of religious reasons or social pressure in Turkey. The multidisciplinary approach is beneficial for couples, particularly for midwives, pregnant women, and key professionals in establishing direct relationships to keep themselves safe and provide training and counseling on sexual changes in all trimesters.

Sexual dissatisfaction is the level of satisfaction of a person's sexual intercourse and is defined as a multidimensional experience consisting of components such as emotions, thoughts, personal attitudes and beliefs. When describing the concept of sexual satisfaction, the most frequently discussed concepts were relationship frequency and intensity of orgasm. Communication is an important variable in terms of sexual issues and has a great impact on sexual satisfaction.<sup>32</sup> The prevalence of sexual satisfaction using GRISS was 42% in pregnant women. These findings were partially similar or lower than previous results on the prevalence of sexual satisfaction during pregnancy. Sexual satisfaction disorder using FSFI in pregnant women in various countries was found to be

93.4%<sup>31</sup>, 88.9%<sup>8</sup>, 46.2%<sup>12</sup> and 49.0%<sup>33</sup> respectively. In these studies, rates of sexual satisfaction in pregnancy were evaluated using FSFI, which is thought to be higher. In a study conducted on Japanese couples, the satisfaction problem in pregnant couples was found to be 65%.<sup>34</sup> In our study, the most common sexual problems were inability to communicate and more than half of pregnant women reported that they could not communicate during pregnancy. In the study conducted by Litzinger and Gordon (2005), the non-communication subscale was found to be one of the strongest correlations among couples ( $r = .661$  in males and  $.656$  in females).<sup>33</sup> Sexual frequency (about half of women lived) was found to be the main problem in pregnant women, and this problem can be affected by both psychosocial factors and beliefs about sexuality during pregnancy.

#### ***Association between socio-demographic characteristics of women and sexuality during pregnancy***

Sexuality is an important part of human life. For many people, it plays an extremely important role in improving the quality of life, maintaining a healthy life and developing. Pregnancy is an important period of women's life and is very important for sexuality during pregnancy. In the study, low GRISS score was seen in women with advanced age, low education level, multiparous, unplanned pregnancy, and pain in sexual intercourse. Looking at the literature, studies suggest that sexual function is affected in older age, prolongation of marriage, multiparous, low education level, housewife and low income level.

In the study of Jamali and Mosalanejad<sup>32</sup> (2013) there was no relationship between sexual dysfunction and variables such as education level, maternal age, occupation or parity; Dwarica et al.<sup>27</sup> (2019) and Pauleta et al.<sup>8</sup> (2010) studies; no relationship was found between sexual function and education level, maternal age and income level. In a study conducted in Turkey, pregnant women living in socio-economic regions, women age, spouse's age, peer education, pregnancy trimester is a statistically significant relationship between women's sexual function subscales with spousal support and frequency of sexual intercourse bulunmuştur.<sup>12,17</sup>

In this study, the communication scores of the women who were arranged in an arranged manner were lower than the women who had a love marriage. In a study conducted in Turkey, blind date married women, as taking pleasure from sexual problems and sexual intercourse during pregnancy and stated that the low quality of sex life.<sup>29</sup> During pregnancy, couples should have an effective communication about sexuality, as they can have a positive effect on their sexual relations. It is seen that sexual problems are neglected, not explained and there is no solution to affect sexual life

and quality of women significantly during pregnancy and cause serious problems. In Turkey, many people are hesitated to talk about sexual issues and is ashamed. For this reason, health care providers should be trained and trained in sexual health to provide couples with sexual problems before, during and after pregnancy. There was no significant relationship between female characteristics and vaginismus score. Communication, satisfaction, anorgasmia and sexual satisfaction scores were higher in women with unplanned pregnancy. Findings are similar in the literature.<sup>12,35</sup>

While pregnancy affects the woman hormonally, physically and psychologically, these changes also affect her desire to participate in sexual activity. Mean avoidance, sensuality and satisfaction scores of pregnant women who had pain during sexual intercourse were found to be significantly higher. Sexual pain can result in sexual dysfunction and dissatisfaction and affect sexual activity during pregnancy. Women may experience discomfort during pregnancy due to pain and difficulty in positioning during sexual intercourse. Lack of information and lack of information about sexual life during pregnancy causes a lack of sexual intercourse and the formation of false thoughts.

Many women in the study did not tend to explain their sexual problems and were generally ashamed.<sup>35,36</sup> Health professionals should encourage and support couples to talk about their sexual problems during this period. In this study, it was found that women who received information about sexuality during pregnancy had the lowest scores of non-communication and anorgasmia compared to women who did not. Getting information and training about sexuality during pregnancy, expressing problems and being aware of the changes caused by pregnancy, has improved sexual function and communication between couples. It is very important to identify women's feelings, perceptions and behaviors related to sexual life during pregnancy, to help them express themselves and to improve their self-confidence, to assess women's sexual needs and concerns, and to increase communication and emotional ties between couples. Health professionals need to be aware of these situations and make recommendations.

## LIMITATIONS and STRENGTHS

There are some limitations in the study. First limitation contained in the study population outpatient pregnant women; therefore, the findings of this study cannot be generalized to all women in Turkey. As a second limitation, sexuality is a very sensitive issue, and women may feel ashamed about it and therefore their answers may be biased. The subjective aspects of sexual intervention may never have been fully measured or determined. The third limitation was evaluated using GRISS. Although the Golombok-Rust

scale is valid in the literature, in the previous 51 studies, FSFI was used to measure sexual function or satisfaction in pregnancy. This situation caused us some difficulties in comparing our findings with other studies. At the beginning of the study, we used GRISS to assess the sexuality of couples (women-husband) during pregnancy; however, we could not evaluate the problems of sexual satisfaction and dysfunction of Turkish men during pregnancy. Sexuality is one of the things that people hesitate to talk about, and Turkish men do not tend to express their feelings about sexuality clearly, and most refuse to participate in the study. Sexuality in Muslim countries such as Turkey is quite a sensitive issue and it is difficult to assess the pairs together. In the study, male sexual dysfunctions may affect current outcomes, but we could not include men in the study, and this is an important limitation of the study. Lack of information and lack of information about sexual life during pregnancy causes a lack of sexual intercourse and the formation of false thoughts. It is therefore important to inform couples about sexuality during pregnancy. Despite these limitations, there are some powerful aspects of work, for example, issues primarily in Istanbul, in Turkey were examined using GRISS and there are no published studies on using sexual satisfaction among women during pregnancy and GRISS. The study findings may contribute to important information about sexuality during pregnancy, and health professionals also consider issues during antenatal care of women.

## CONCLUSION

According to the results of the analysis, there is a relationship between sexual satisfaction and pregnancy among Turkish women. In the study, it was found that sexuality was negatively affected during pregnancy, especially in different trimesters. In addition, many women in the study did not tend to explain their sexual problems and were generally ashamed. During this period, health workers should encourage and support couples to talk about their sexual problems. Health professionals should be aware of couples' sexual dissatisfaction and dysfunction and make recommendations.

### *Author Contributions:*

*Study idea/design: AYK, MMK*

*Data collection: AYK*

*Data analysis and interpretation: AYK*

*Literature review: AYK*

*Writing of the article: AYK*

*Critical review: MMK*

*Final approval and responsibility: AYK, MMK*

*Technical and material support: AYK*

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