Acıbadem Univ. Sağlık Bilim. Derg. 2025; 16 (1)
https://doi.org/10.31067/acusaglik.1489968

Evaluation of Sexual Life According to Pregnancy Trimesters

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Received: 27.05.2024
Accepted: 02.09.2024

ABSTRACT

Aim: Physiological changes during pregnancy affect the couple's sexual life. Changes in sexual desire and arousal are inevitable with the strong effect of hormones. The aim of this study was to evaluate the sexual function levels of pregnant women according to trimester periods.

Materials and Methods: The study was conducted prospectively; Those who applied to the Gynecology and Obstetrics clinic in between November 2023 and December 2023; Women whose pregnancy was between 6 and 40 weeks were included. After obtaining informed consent from patients who met the inclusion and exclusion criteria, the 'Female Sexual Function Index-FSFI' questionnaire was administered face-to-face and age, parity, educational status, employment status and body mass index were calculated and recorded.

Results: A total of 198 pregnant women between 6-40 weeks of gestation who applied to the gynaecology and obstetrics outpatient clinic accepted to participate in the study. Of the pregnant women who participated in the study, 64 were in the first trimester, 64 were in the second trimester and 67 were in the third trimester. When the groups were compared, 93.75% of the first trimester pregnant women, 93.75% of the second trimester pregnant women and 98.5% of the third trimester pregnant women were diagnosed with sexual dysfunction and the rate of sexual dysfunction was significantly higher in the third trimester.

Conclusion: This study also showed that sexual function problems of women increase in the first and last trimesters of pregnancy; sexual desire and satisfaction with sexuality, arousal and orgasm decreases.

Keywords: pregnancy, sexual function, trimester

ÖZET

Amaç: Gebelik döneminde meydana gelen fizyolojik değişiklikler çiftin cinsel hayatını etkilemektedir. Hormonların güçlü etkisi ile de cinsel istek ve uyarılmada değişikliklerin olması kaçınılmazdır. Çalışmada gebelerin trimester dönemlerine göre cinsel fonksiyon düzeylerinin değerlendirilmesi amaçlandı.

Gereç ve Yöntem: Çalışmaya prospektif olarak; Kasım 2023 -Aralık 2023 tarihleri arasında Mengücekgazi Eğitim Araştırma hastanesi kadın hastalıkları ve doğum polikliniğine başvuran; 6-40 hafta arasında gebeliği bulunan kadınlar dâhil edildi. Dahil edilme ve dışlanma kriterlerini karşılayan hastalara onam alındıktan sonra 'Kadın Cinsel İşlev Ölçeği-FSFI' anketi yüz yüze olarak uygulandı ve yaş, parite, eğitim durumu, çalışma durumu, beden kitle indeksleri hesaplanıp kayıt altına alınarak bu verilerin trimesterler arasında farklılık gösterip göstermediği değerlendirildi.

Bulgular: Kadın hastalıkları ve doğum polikliniğine başvuran; 6-40 hafta arasında gebeliği bulunan 198 gebe çalışmaya katılmayı kabul etti. Çalışmaya katılan gebelerin 64'ü birinci trimester gebelik haftasındaki, 64'ü ikinci trimester gebelik haftasındaki ve 67 tanesi de üçüncü trimester gebelik haftası içerisindeki kadınlardan oluşmaktaydı. Birinci trimesterdaki gebelerin %93,75 , ikinci trimesterdaki gebelerin %93,75 ve üçüncü trimesterdaki gebelerin %98,5 cinsel fonksiyon bozukluğu tanısı alarak gruplar kıyaslandığında üçüncü trimesterda cinsel işlev bozukluğu görülme oranı anlamlı daha yüksek olarak görüldü.

Sonuç: Bu çalışma göstermiştir ki gebeliğin ilk ve son trimesterinde kadınların cinsel işlev sorunları artmakta; cinsel istek ve cinsellikten memnuniyet duyma, uyarılma ve orgazm olma durumları azalmaktadır.

Anahtar Kelimeler: gebelik, cinsel fonksiyon, trimester

Pregnancy is a process characterized by physiological and psychological changes and hormonal fluctuations. Rapidly rising estrogen and progesterone in the blood and the main hormone of pregnancy, Human Chorionic Gonodotropin (HCG), causes weight gain due to increased intravascular and extravascular fluid and changes in the digestive, respiratory and cardiovascular systems, especially in the first trimester [1]. In addition to changes in all systems, psychological changes such as fatigue, weakness, headache, insomnia and intolerance to odors also occur. Additionally, changes in the mammary gland may occasion breast tenderness and milk production during sexual arousal. Although it does not seem possible that ; these rapid and intense changes in thewoman during pregnancy does not affect the sexual life of the couple. [2]. Especially in the first trimester of pregnancy, increased blood flow in the vulvar and pelvic region increases sexual arousal in women. In the second trimester, adaptation to sexual life may become easier due to the psychological acceptance of pregnancy and the establishment of hormonal and physical balance.Changes in the sexual life of the couple will be inevitable with the meaning attributed to pregnancy in social life, cultural factors and the mission of motherhood.

Materials and Methods

The study prospectively included women with a pregnancy between 6-40 weeks who applied to the gynecology and obstetrics outpatient clinic of Mengücekgazi Training and Research Hospital between November 2023 and December 2023. Patients who were previously diagnosed with sexual dysfunction and who were prohibited from sexual intercourse due to risky pregnancy were excluded from the study. After obtaining consent from the patients who met the inclusion and exclusion criteria, the 'Female Sexual Function Questionnaire-FSFI' was administered face-to-face. The 19-question FSFI questionnaire scores the participants' sexual function status in the last four weeks on the sub-parameters of sexual desire, orgasm, arousal, satisfaction, lubrication and pain. The cut off value was taken as = 26.55, with the highest score being 36 and the lowest score being 2. Pregnant women with a score below 26.55 were considered to have sexual dysfunction. Age, parity, educational status, employment status, and body mass index were calculated and recorded, and the variability of these data between trimesters was compared. In determining the study group, the rule of MacCallum, Widaman, Zhang and Hong that the size of the sample group should be at least 5 times the number of items in the scale was taken into consideration and 198 pregnant women with 10 times the number of questions in the questionnaire were included in the study. The study was started after the approval decision dated 02.11.2023 and numbered 2023-19/13 was obtained from Erzincan Binali Yıldırım University Clinical Research Ethics Committee.

Statistical Analyses

SPSS 21.0 program was used for statistical analysis and ratios, and the distribution of variables was evaluated by Kolmogorov-Smirnov test and histograms. Mean, standard deviation (SD), frequency and percentage distribution were used for descriptive statistical methods and Kruskal Wallis H Test was used for comparison of dependent and independent variables. The cut-off value for significance was $p \leq 0.05$.

Results

Between November 2023 and December 2023, 198 pregnant women who applied to the Gynecology and Obstetrics polyclinic of Mengücekgazi Training and Research Hospital between 6-40 weeks of gestation were questioned and 198 pregnant women agreed to participate in the study. Of the pregnant women who participated in the study, 64 were in the first trimester of pregnancy, 64 were in the second trimester of pregnancy and 67 were in the third trimester of pregnancy. The ages of the patients were normally distributed and ranged between 19 and 42 years with a mean age was 28.84±5.2 years.

Demographic variables including age, gestational week, gravidity, parity, abortion and number of living children, education and employment status are shown in Table 1. The total number of pregnancies was between 1 and 8 (mean 2.32±1.2), parity between 0 and 5 (mean 1.01±0.9), and number of living children between 0 and 4 (mean 1.01±0.94). The number of abortions ranged between 0 and 5 (mean 0.318±0.65) (Table 1).

Table 1: Sociodemographic variables					
Data	Mean(±Ss.)(n=198)	1.Trimester(n=64)	2.Trimester(n=67)	3.Trimester(n=67)	p
Age	28,84±5,2	30,46 ±5,69	27,78±4,98	28,83±5,21	0,08
Pregnancy Week	22,06(±11,1)	9,67(±2,45.)	20,22(±3,82)	35,73(±2,45)	*0,00*
Gravide	2,32±1,2	2,44±1,17	1,99±1,17	2,55±1,42	*0,025*
Parity	1,01±0,9	1,11±0,88	0,78±0,10	1,13±1,08	0,055
Number of living children	1,01±0,94	1,11±0,88	0,78±0,10	1,13±1,08	0,49
Abortions	0,318±0,06	0,33±0,62	0,21±0,70	0,42±0,63	0,182
Education					*0,010*
Primary	28	15	4	9	
Secondary	40	11	16	13	
High school	71	26	27	18	
Associate degree	44	11	18	15	
University	15	1	2	12	
Working Status					0,537
Working	33	9	14	10	
Not working	165	55	53	57	

Pregnant women with a total FSFI score < 26.55 were considered to have sexual dysfunction, and the average score of the pregnant women participating in the study was calculated as 17.26±7.63. Only 9 patients' scores were above 26, and sexual dysfunction was observed in 95.9% of the participants (Table 2).

When the groups were compared, 93.75% of the pregnant women were diagnosed with sexual dysfunction in the first trimester, 93.75% in the second trimester, 98.5% in the third trimester, and the rate of sexual dysfunction in the third trimester was significantly higher.

Table 2: Rate of sexual dysfunction diagnosis according to trimester of pregnancy			
Pregnancy trimester	**FSFI Total score < 26,5**	**FSFI Total score >26,5**	**p**
1.Trimester n	60	4	
%	93,75	6,25	
2.Trimester n	60	4	0,14
%	93,75	6,25	
3.Trimester n	66	1	
%	98,5	1,5	
n total %	186 95,9	9 4,1	

Sexual function status of pregnant women in the first trimester was questioned; sexual desire scores ranged from 1.2 to 4.8 with a mean of 2.98±1.03. Sexual arousal scores ranged from 0.6 to 2.4 with a mean of 1.49±0.54, lubrication scores ranged from 0.00 to 6.00 with a mean of 3.41±1.61. Orgasm scores ranged from 0.00 to 4.00 with a mean of 2.46±1.15. Satisfaction scores ranged from 0.00 to 6.00 and the mean was 3.91±1.75. Pain discomfort scores ranged from 0.00 to 6.00 with a mean of 3.86±1.80. FSFI total scores ranged from 2.4 to 29.20 with a mean of 18.13±7.06 (Table 3).

In the second trimester, sexual desire scores ranged from 1 to 6, and the mean was 3.41±1.18. Sexual arousal scores range from 0.3 to 3.0 with a mean of 1.70±0.57, lubrication scores range from 0.00 to 6.00 with mean of 3.77±1.38 and orgasm scores range from 0.00 to 4. It varies between .00 and the mean is evaluated as 2.66±0.96. Satisfaction scores range from 0.00 to 6.00, with a mean of 4.1±1.51. Pain discomfort scores ranged from 0.00 to 6.00, with a mean of 3.79±1.46. FSFI total scores ranged from 3.0 to 30.0, with a mean of 19.54±6.07 (Table 3).

In the 3rd trimester pregnant group, sexual function status was questioned and sexual desire scores ranged between 1.2 and 5.4, with a mean of 3.06±1.14. Sexual arousal scores ranged from 0.3 to 3.0, with a mean of 1.29±0.65; Lubrication scores range from 0.00 to 6.00, with a mean of 3.34±1.77. Orgasm scores ranged between 0.00 and 4.00, and the mean was 2.00±1.45. Satisfaction scores range from 0.00 to 6.00, with a mean of 2.83±2.24. Pain discomfort scores ranged from 0.00 to 6.00, with a mean of 2.38±2.05. When FSFI total scores were calculated, the mean score was 17.26±7.65 and ranged between 1.5 and 30.0 (Table 3).

Table 3: Comparison of mean FSFI domains and total scores according to trimester of pregnancy

FSFI Domains	1.Trimester (n=64)	2.Trimester (n=64)	3.Trimester (n=67)	P		
				T1-T2	T1-T3	T2-T3
Desire	2,98±1,03	3,41±1,18	3,06±1,14	*0,081*	*0,95*	*0,004*
Arousal	1,49±0,54	1,70±0,57	1,29±0,65	*0,14*	*0,16*	*0,01*
Lubrication	3,41±1,61	3,77±1,38	3,34±1,77	*0,75*	*0,19*	*0,08*
Orgasm	2,46±1,15	2,66±0,96	2,00±1,45	*1,0*	*0,98*	*0,05*
Satisfaction	3,91±1,75	4,1±1,51	2,83±2,24	*1,0*	*0,04*	*0,01*
Pain	3,86±1,80	3,79±1,46	2,38±2,05	*1,0*	*0,001*	*0.01*
Total Score	18,13±7,06	19,54±6,07	17,26±7,65	*0,81*	*0,07*	*0,14*

Pregnancy trimesters were compared in terms of FSFI domains, there was no significant difference between first trimester and third trimester gestational weeks in terms of sexual desire; However, sexual desire was significantly higher in the second trimester pregnant group. The pregnancy trimesters were compared in terms of arousal, the arousal rate was significantly higher in the second trimester, while no significant difference was found between the first trimester and the other groups. Although the second trimester group scored the highest in terms of lubrication, there was no significant difference between the groups. While there was no significant difference between the first and second trimester pregnant groups in terms of orgasm and satisfaction; the scores obtained in the third trimester pregnant groups were significantly lower than the other groups. On the other hand, pain discomfort scores were close to each other in the first and second trimester pregnant groups, while they were significantly lower in the third trimester pregnant group.

There was no significant difference in FSFI total scores between groups, with women in the third trimester having the lowest mean scores (Table 3).

Discussion

Sexual function is an important part of physical and mental well-being and differences in sexual function during pregnancy have a significant impact on women's quality of life. On the other hand, it is also important for couples to maintain a healthy relationship[3].

Although the prevalence of sexual dysfunction during pregnancy varies according to the population studied; Studies have reported that sexual dysfunction can be seen at rates as high as 80% with various sub-parameters such as decreased libido and pain[4].

In a study conducted in Turkey in 2015, the prevalence of sexual dysfunction in pregnant women was up to 91%[5]. In a study by Bilge et al. examining the gestational periods, 46.1 % of the pregnant women who participated in the study were found to have low sexual function[6]. In the study in 2023, where sexual function was examined according to pregnancy periods, the rate of sexual dysfunction was determined to be 49.1 percent [7].

During pregnancy, there are also variations in sexual function according to the gestational periods. Studies have shown that the rate of sexual dysfunction is higher in the third trimester compared to other trimesters [6,8-10]. In this study conducted in accordance with the literature, the rate of sexual dysfunction was found to be higher in the third trimester.

Even though sexual dysfunction was found to be higher in the first trimester compared to the pre-pregnancy period due to conditions such as high rates of nausea and vomiting, increased sensitivity to odors including the odor of the partner, stress of having just learned about pregnancy, and breast tenderness; no significant difference was observed in this study compared to the second trimester, in accordance with similar studies[11-13].

Further each FSFI domains were examined, differences were observed according to the gestational periods. Sexual desire, arousal, orgasm and satisfaction sub-scores were significantly lower in the third trimester. In a study conducted in 2017, it was observed that the level of sexual satisfaction decreased during pregnancy [14]. In another similar study, it was observed that the level of sexual satisfaction in the first and third trimesters was lower than in the second trimester, similar to this study [6]. In a study conducted in Romania; while desire and arousal were found to remain constant throughout pregnancy; it was observed that orgasm increased in the second trimester, similar to this study, but was significantly lower in the third trimester. In the same study, satisfaction level was lower in the third trimester. While lubrication problems were observed to increase due to the effect of hormones in the same study; in this study, no significant difference was observed in terms of lubrication between pregnancy periods[7]. In the study conducted by Daud et al. in 2019, similar to this study, no significant difference was observed in terms of lubrication scores between trimesters; while desire, arousal, satisfaction and pain scores were significantly lower in the third trimester as in this study. According to Daud et al., there are several factors that cause a further decrease in sexual function status in the third trimester. Among the reasons are decreased libido levels, negative self-perception that the person is less attractive during pregnancy, being more tired, having concerns such as causing rupture of the amniotic membrane and causing the birth process to begin[4]. In addition to the increase in body weight during pregnancy; not finding the appropriate position in sexual intercourse and feeling pain during sexual intercourse or not feeling comfortable during sexual intercourse are also seen among other reasons[15-18]. On the other hand, according to the literature, a decrease in the desire for sexual intercourse can be seen in the spouses of pregnant women due to similar reasons such as the thought of harming the pregnant woman herself and, to a large extent, the fetus, or due to physical changes in pregnant women. On the other hand, according to many studies, the spouses of pregnant women find it appropriate to have sexual intercourse during pregnancy [16,17,19,20].

Along with the changing mood during pregnancy, the pregnancy process itself constitutes an alarming situation for women. In many studies, it has been shown that anxiety levels increase during pregnancy [6,18]. Misinformation about having sexual intercourse during pregnancy causes an increase in anxiety in pregnant women and a decrease in sexual activity. Since many factors, from the woman's birth style to the number of children, cause sexual health problems in women in the post-pregnancy period, sexual health problems should also be evaluated and followed up after pregnancy; Additionally, research shows that pregnant women want to get information about sexuality from professionals and that healthcare professionals should give women accurate information about sexuality[16,21,22,23].

Conclusion and Recommendations

One of the important factors affecting the quality of women's lives and relationships is having a healthy sexual life. During pregnancy, interest in sexual intercourse decreases in most women as pregnancy progresses. This study has also shown that women's sexual function problems increase in the first and last trimesters of pregnancy; sexual desire and sexual satisfaction, arousal and orgasm decrease.

In our country, as in other countries, sexuality is still seen as a taboo for women and continues to be important as a situation where accurate information should be accessed. It is important for healthcare professionals to question pregnant women about their sexual life and to provide necessary information before pregnancy, during pregnancy and after delivery in order to correct inaccurate information and beliefs and to prevent concerns that may arise in pregnant women and their partners.

Declarations

Funding

There are no financial supporters of the study.

Conflict of Interest

The authors have declared no conflict of interest.

Ethics Approval

After the approval numbered 2023-19/13 from the erzincan binali yıldırım university clinical research ethics committee, the study started.

Accessibility of data and materials (data transparency)

Authors agree to share data upon request.

Authors' Contributions

BKY and BNM performed the research, analyzed the data, and wrote the paper.

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