GEBELİĞİN KADINLARIN CİNSEL FONKSİYONU ÜZERİNE ETKİSİ

Ayten ŞENTÜRK ERENEL[1], Sıdıka PELİT AKSU[1], Gülten KOÇ[2]

[1]Gazi Üniversitesi, Sağlık Bilimleri Fakültesi, Hemşirelik Bölümü, Ankara, Türkiye
0000-0002-0841-2099
0000-0001-9251-0689
[2]Hacettepe Üniversitesi, Hemşirelik Fakültesi, Ankara, Türkiye
0000-0002-1094-5003

ÖZ

Çalışmada gebeliğin kadın cinsel fonksiyonuna etkisinin belirlenmesi amaçlanmıştır. Çalışma tanımlayıcı olarak yapılmıştır. Veriler araştırmacılar tarafından toplanmıştır. Araştırmanın uygulaması Türkiye'de bir üniversite hastanesinin gebe polikliniğinde gerçekleştirilmiştir. Örneklem, içleme kriterlerine uyan 179 kadından oluşturulmuştur. Araştırmanın uygulamasına başlamadan önce etik kurul izni ve uygulamanın yapılacağı kurumdan yazılı izin alınmıştır. Çalışmamızda gebelerin yaklaşık yarısının cinsel sağlık konusunda bilgi sahibi olduğu belirlenmiştir ve bilgi sahibi olan kadınlar bilgiyi en çok sağlık personelinden (%60.2) almıştır. Gebelerin %58.7'si gebeliklerinde cinsel yaşamlarının olumsuz etkilendiğini, etkileyen faktörler arasında ilk üç sırada düşük yapma korkusunun (%59.1), beden imajında değişimin (%36.2) ve hormonal değişimin (%30.5) olduğu belirlenmiştir. Cinsel istek düzeyi, cinsel ilişki sıklığı, memnuniyet, ağrı, uyarılma düzeyi, orgazm ve kayganlaşma gibi alanların gebelik öncesi döneme göre olumsuz etkilendiği ve gebelik ilerledikçe genellikle olumsuzluğun arttığı belirlenmiştir ($p<0.05$). Kadınların önemli bir kısmının, sağlığın önemli belirleyicilerinden biri olan cinsel sağlık bilgisine sahip olmadığı; sağlık personelinin diğer kaynaklara yakın bir oranda önemli bir bilgi kaynağı olduğu; cinselliğin tüm alt boyutlarının gebelik sırasında gebelik öncesi döneme göre olumsuz etkilendiği; ve gebelik ilerledikçe olumsuzluğun arttığı saptanmıştır.

Anahtar kelimeler: Gebelik, Gebe Kadınlar, Cinsellik, Cinsel Davranış, Cinsel Fonksiyon

EFFECTS OF PREGNANCY ON FEMALE SEXUAL FUNCTION

ABSTRACT

This study aimed to determine the effects of pregnancy on female sexual function. This study was conducted in a descriptive manner. Data were collected through form developed by the researchers. The study was carried out in the prenatal polyclinic of a university hospital in Turkey. The sampling involved 179 women matching the study criteria. At the outset, ethics committee approval, written consent of the related institution and participating women were obtained. It was determined that nearly half of the pregnant women had information about sex and that they received this information mostly from healthcare personnel (60.2%). A majority (58.7%) of the pregnant women stated that their pregnancies affected their sex life and that the first three factors influencing them were fear of miscarriage (59.1%), change in body image (36.2%), and hormonal change (30.5%). It was found that sexual desire level, the frequency of sexual intercourse, satisfaction, pain, stimulation level, orgasm, and vaginal lubrication were negatively affected compared to the period before pregnancy, and that the adverse conditions increased as the pregnancy progressed ($p<0.05$). It was found that: a significant proportion of women did not have knowledge of sexual health, which is one of the important determinants of health; healthcare personnel were a significant source of information with a close rate to that of other sources; all sub-dimensions of sexuality were adversely affected during pregnancy in comparison to the pre-gestational period; and adverse conditions increased as the pregnancy progressed.

Key words: Pregnancy, Pregnant women, Sexuality, Sexual behavior, Sexual function

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İletişim/Correspondence
Sıdıka PELİT AKSU
Gazi Üniversitesi Sağlık Bilimleri Fakültesi Hemşirelik Bölümü
Ankara, Türkiye

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INTRODUCTION

Sexual health is one of the components of health and it is a dynamic process that is affected by many factors. Sexual function is affected by many physiological processes such age, psychosexual development, sexual experiences, social values, social status, education, working life, religion, sex-specific roles and expectations, sexual beliefs, sexual behaviors, diseases and surgeries, medications used, menopause, and pregnancy and birth experience (1-7). For this reason, sexual dysfunction (SD) is among the most important problems of women's health, which is prevalent in many societies (1,4). Sex is one of the taboo topics in Turkey. Both the health system and the education system are not informative in this regard. As a result, sexual health issues are neglected and SD is widespread. Although pregnancy is a physiological process, it is one of the conditions that affect sexual function. There are many factors that impact sexual function during pregnancy. Some of them are adjustment to marriage, the transition to parenting, previous pregnancies, miscarriage history, stress, anxiety, religion, culture, planned or unplanned pregnancy, urinary system and pelvic floor disorders, physical changes brought on by pregnancy, myths, and changes in the relationships of the couples (8). It was reported in a study conducted by Küçükdurmaz et al. that Prevalence of sexual dysfunction was found to be 87% in study population. The rate of sexual dysfunction was higher in the first (87%) and third (92.6%) trimesters when compared to the second (80.6%) trimester (9). In a study by Babazadeh et al. (2013) 69.7% of the pregnant women stated that they experienced decreased sexual desire during pregnancy (10). A study Senturk Erenel et al. (2011) found that while the rate of women never having orgasm before pregnancy was 8.6%, it increased to 47.3% during pregnancy ($p<0.05$) (11).

Healthcare professionals have significant responsibilities for the protection and promotion of women's health. These responsibilities include assessment of the sexual function of women and appropriate counseling for women during a period stretching from the antenatal to postnatal term. For this reason, the study was conducted to determine the effects of pregnancy on female sexual function.

MATERIALS AND METHODS

Design and sample

The study was conducted in a prenatal polyclinic of a university hospital between 05.05.2014- 01.09.2014 dates in Turkey. It was designed as a descriptive study. The universe of the study consisted of all pregnant women referred to the pregnancy polyclinic (About 1000 pregnant women in one year). According to sample size, sample was determined to be a total of 179 pregnant women. Thus, the sampling comprised 179 women matching the study criteria. The sampling included women who were sexually active, had no communication problems (language, comprehension, hearing), and carried no pregnancy-related risk factors (such as vaginal bleeding, hyperemesis gravidarum, placenta previa, placenta ablatio, premature rupture of membranes, cervical dilatation, preeclampsia, eclampsia, gestational diabetes, heart disease during pregnancy, and premature birth).

Measures

Before starting the study, the ethics committee granted approval written consent of the related institution and participating

women were obtained. The study was conducted in a quiet suitable room with pregnant women in the prenatal polyclinic. Data were collected through form developed by the researchers from literature, which consisted of two parts. The first part contained 12 questions to identify the sociodemographic characteristics of the women and the second part consisted of 24 questions to determine sexuality-related characteristics before and during pregnancy (9,10,11). Expert opinion was obtained from three associate professors who are experts in this field before starting to apply the form. The data collection form was administered to the pregnant women in the first, second, and third trimesters. The women in their first trimester were asked questions about the pre-gestational period and the first trimester. The women in their second trimester were asked questions about the pre-gestational period and the first and second trimesters. The questions asked of the women in their third trimester included questions about the pre-gestational period and the first, second, and third trimesters.

Statistical Analysis

In data evaluation, Statistical Package for the Social Sciences (SPSS) 20 was used. Analyses of the data involved frequencies, percentage distributions, and mean calculations. The Chi-square test was used to evaluate the relationship between variables such as sexual desire level, the frequency of sexual intercourse, satisfaction, pain, stimulation level, orgasm, and vaginal lubrication. The significance level was accepted as $p<0.05$ for all statistical analyses.

Ethics Approval

All procedures (surveys) performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. An application was made to the Ethical Commission of xxx University for ethical evaluation of the study and the ethical approval was granted (24.02.2014-decision no:100). The study started after the official permissions by University Hospital were granted. The permission was granted by all pregnant women who participate study.

RESULTS

Table 1 provides some of the descriptive characteristics of the participants. Mean age of the pregnant women was 27.14 ± 4.6. Mean age of the spouses was 30.79 ± 4.7. Mean marriage duration was 4.7 ± 0.4 years. With regard to education, 39.8% of the women and 43% of their spouses were high school graduates. In addition, 74.3% of the women and the husbands of 1.1% did not have a job, 93.9% of the women had a core family, 60.3% were married to their husbands after dating, and 68.2% defined their incomes as equal to their expenses (Table 1). Though not supplied in the table, 50.8% of the women were experiencing their first pregnancy, 15.6% were in the first trimester, 32.4% were in the second trimester, and 52% were in the last trimester. Most, 81%, stated that their pregnancy was planned (Table 1).

Table 2 presents information about the state of having knowledge about sex and the distribution of some characteristics relating to sex. It was determined that nearly half of the pregnant women had information about sex and that they received this information mostly from healthcare personnel (60.2%), mass media (57.3%), and the Internet (56.2%), respectively. The topics of the

Table 1. Some of the descriptive characteristics of the participants (n=179)

Characteristics	n	%
Age		
<20	14	7.8
21-25	52	29.1
26-30	77	43.0
31-35	28	15.6
>36	8	4.5
X±SS= 27.14±4.6 (min=17, max=40)		
Educational Level		
Primary school	23	12.8
Secondary school	43	24.0
High school	71	39.8
Bachelor's and postgraduate	42	23.4
Working Status		
Employed	46	25.7
Unemployed	133	74.3
Age of Spouse		
<24	14	7.8
25-29	58	32.4
30-34	69	38.5
35-39	29	16.2
>40	9	5.0
X±SS= 30.79±4.7 (min=20, max=47)		
Educational Level of Spouse		
Primary school	14	7.8
Secondary school	31	17.3
High school	77	43.0
Bachelor's and postgraduate	57	31.9
Working Status of Spouse		
Employed	177	98.9
Unemployed	2	1.1
Marriage Duration (year)		
<1	42	23.4
1.1-3	47	26.3
3.1-5	30	16.8
5.1-7	21	11.7
7.1-9	20	11.2
>9.1	19	10.6
X±SS= 4.7±0.4(min=1 month, max=24 years)		
Type of Family		
Core	168	93.9
Extended	11	6.1
Marriage Style		
Vision	71	39.7
Dating	108	60.3
Perceived income level		
Incomes lower than their expenses	45	25.1
Incomes as equal to their expenses	122	68.2
Incomes more than their expenses	12	6.7

information obtained by the participants were sex in pregnancy (73%), sexual health (65.2%), and sex in the postnatal period (55.1%). A majority (58.7%) of the pregnant women stated that their pregnancies affected their sex life and that the first three factors influencing them were fear of miscarriage (59.1%), change in body image (36.2%), and hormonal change (30.5%) (Table 2).

Table 2. Information about the state of having knowledge about sex and the distribution of some characteristics relating to sex

Characteristics	n	%
Information about the state of having knowledge about sex (n=179)		
Yes	89	49.7
No	90	50.3
Information Sources (n=89)*		
Healthcare personnel	53	60.2
Mass Media	51	57.3
Internet	50	56.2
Friends	35	39.3
Relatives (spouse-relative)	14	15.7
The topics of the information obtained (n=89)*		
Sex in pregnancy	65	73.0
Sexual health	58	65.2
Sex in postnatal period	49	55.1
Sexually transmitted diseases	34	38.2
Anatomy-physiology of reproductive organs	31	34.9
The impact of sexual life on pregnancy (n=179)		
Yes	105	58.7
No	74	41.3
Factors affecting sexual life in pregnancy (n=105)*		
Fear of miscarriage	62	59.1
Change in body image	38	36.2
Hormonal change	32	30.5
Stress and fatigue	29	27.6
Nausea –vomiting	18	17.1
Thinking that your baby will feel	15	14.3
Decrease in spouse interest	13	12.4
Sleepiness	11	10.5
Other**	5	5.2

* More than one answer has been given. The percentages are taken over " n ".
** Thinking that is sin (3), frequent urination (2)

Table 3. Some characteristics of the pregnant women relating to their sexual activities during the pre-gestational period and three trimesters

Some Characteristic Related to Sexual Activity	Pre-gestational period (n=179) (1)		First Trimester (n=179) (2)		Second Trimester (n=151) (3)		Third Trimester (n=93) (4)		Statistics		Difference
	n	%	n	%	n	%	n	%	X^2	p	
Sexual desire level											
Low / No	18	10.1	60	33.5	59	39.1	53	57.0	**259.255**	**0,000**	**1-2, 1-3, 2-3, 2-4, 3-4**
Middle	87	48.6	88	49.2	73	48.3	32	34.4			
High	74	41.3	31	17.3	19	12.6	8	8.6			
The frequency of sexual intercourse											
More than once a day	5	2.8	3	1.7	1	0.7	---	---			
Once a day	25	14.0	11	6.1	6	3.9	---	---			
Once a week	21	11.7	43	24.0	46	30.4	17	18.3	**87.819**	**0.000**	**1-2, 1-3, 2-3, 2-4, 3-4**
Twice a week	55	30.7	35	19.6	29	19.2	7	7.5			
Three times a week and over	71	39.7	34	19.0	14	9.3	8	8.6			
Once every two weeks	2	1.1	29	16.2	29	19.2	18	19.3			
One or less per month	---	---	24	13.4	26	17.2	43	46.3			
Sexual satisfaction											
Very satisfied	35	19.6	19	10.6	8	5.3	4	4.3			**1-2, 1-3, 1-4, 2-3, 2-4, 3-4**
Satisfied	125	69.8	92	51.4	75	49.7	37	39.8	**60.622**	**0,000**	
Not satisfied	13	7.2	47	26.3	48	31.8	24	25.8			
Not Satisfied at all	6	3.4	21	11.7	20	13.2	28	30.1			
Pain											
Never	129	72.1	109	60.9	78	51.6	41	44.1			**1-2, 1-3, 1-4, 2-3, 2-4, 3-4**
Sometimes	33	18.4	48	26.8	45	29.8	21	22.6	**60.974**	**0,000**	
Most of the time	10	5.6	8	4.5	15	9.9	17	18.3			
Always	7	3.9	14	7.8	13	8.6	14	15.0			
Sexual stimulation level											
Low / No	6	3.4	39	21.8	36	23.8	41	44.1	**249.426**	**0,000**	**1-2, 1-3, 1-4, 2-3, 2-4, 3-4**
Middle	103	57.5	102	57.0	93	61.6	41	44.1			
High	70	39.1	38	21.2	22	14.6	11	11.8			
Orgasm											
Never	5	2.8	30	16.7	26	17.2	37	39.8			**1-2, 1-3, 1-4, 2-3, 2-4, 3-4**
Sometimes	47	26.3	61	34.1	69	45.7	33	35.5	**292.309**	**0,000**	
Most of the time	85	47.4	63	35.2	43	28.5	17	18.2			
Always	42	23.5	25	14.0	13	8.6	6	6.5			
Vaginal lubrication											
Never	4	2.2	16	8.9	19	12.6	23	24.8			**1-2, 1-3, 1-4, 2-3, 2-4, 3-4**
Sometimes	22	12.3	43	24.0	47	31.1	25	26.9			
Most of the time	78	43.6	67	37.4	47	31.1	17	18.2	**235.402**	**0,000**	
Always	75	41.9	53	29.6	38	25.2	28	30.1			

Table 3 provides some characteristics of the pregnant women relating to their sexual activities during the pre-gestational period and three trimesters. Our study found that in the pregnancy period, sexual desire level, the frequency of sexual intercourse, sexual satisfaction, sexual stimulation level, orgasm, and vaginal lubrication were negatively affected compared to the pre-gestational period and that these adverse conditions increased significantly as the pregnancy progressed ($p<0.05$). Further, the comparison of the pre-gestational period and trimesters revealed that the incidence of pain during sexual intercourse increased significantly as the pregnancy progressed ($p <0.05$) (Table 3).

DISCUSSION

There is no inconvenience of sexual intercourse in terms of maternal and fetal health unless it poses a risk. However, sexual life during pregnancy may be negatively affected due to such reasons as the lack of information about sexuality, or social and religious issues (11,12). In our study, more than half of the women stated that their sexual life was negatively affected during pregnancy. It was determined that fear of miscarriage was the first and most important reason that affected the sexual life during pregnancy (more than half of the women). Similar to the findings of our study, it was determined in a study Jamali and Mosalanejad, (2013) that 46.3% of the pregnants believed that intercourse during pregnancy might damage the fetus and 52.9% of the study subjects believed intercourse during pregnancy to lead to abortion (13). Aribi et al. (2012) found that the women (66.7%) mentioned a decrease on their sexual interest and activity during pregnancy. And one of causes of this decline were fear to harm the fetus (14). Yanikkerem et al. (2016) determined that the most important reasons for decreasing the frequency of sexual intercourse included the fear of harming the fetus during intercourse (62.1%) and fear of having miscarriage (47.8%) (15) .

Sexuality is a topic accepted as a social taboo in Turkey and it is handled in a limited manner in formal education. For this reason, sexual health issues are likely to be neglected in health services as well. More than half of the women in our study stated they had no knowledge of sexuality during pregnancy. Although 60.2% of the women reported their primary source of information was healthcare personnel, the proportion of those who cited mass media (57.3%) and the Internet (56.2%) was also quite high. Similar to the findings of this study, Bilen Sadi and Aksu (2016) reported that 62.8% of the pregnant women in their study did not have sexuality-related knowledge (16). Isajeva et al. (2012) determined that almost half of the women in their study obtained information about sex during the gestational period mostly from popular medical literature, about one-third from the Internet, and only 31.9% from their physicians (17). These results suggest that women do not have enough information about sexuality in pregnancy, their common sources of information were the Internet and the mass media, and that they did not receive adequate counseling services from healthcare personnel.

Sexuality during pregnancy undergoes changes for many reasons. The level of sexual desire in our study was evaluated according to the pre-gestational period and trimesters. The level of sexual desire was found to decrease significantly in later periods of pregnancy ($p<0.05$). When the related literature was reviewed, the findings were found to support the findings of this study, which revealed that sexual desire

usually decreased during pregnancy. (10,11,18). According to these results, it can be said that physiological and psychological changes occurring during pregnancy and the lack of knowledge impact sexuality negatively.

The frequency of sexual intercourse is one of the sub-dimensions of assessing sexual health. While approximately one third of the women in our study stated that they had three or more intercourses a week before pregnancy, the frequency of sexual intercourse decreased as the pregnancy progressed, and approximately half of the pregnant women in the last trimester said that the frequency of sexual intercourse decreased to once a month or less ($p<0.005$). Similar to our findings, studies conducted in Turkey reported that the frequency of sexual intercourse significantly decreased in the later months of pregnancy (11,19,20). Moreover, similar to the findings of our study, studies conducted in different countries determined that the frequency of sexual intercourse in pregnancy decreased compared to the pre-gestational period and that this decrease was found to increase with the progression of the pregnancy (21-23).

Sexual satisfaction is another indication of sexual health. In our study, it was determined that sexual satisfaction during pregnancy was generally negatively affected compared to the period before pregnancy ($p<0.005$). Different findings related to sexual satisfaction during pregnancy were found in the literature. Similar to the findings of this study, it was found in some studies in the related literature that sexual satisfaction was significantly reduced during the entire pregnancy process, especially in the last trimester (18,19,22). On the other hand, Chang et al. (2011) found that satisfaction in the last trimester of pregnancy was significantly higher compared to the first trimester (24). Hanafy et al. (2014) reported in their study that sexual satisfaction decreased significantly in the second and third trimesters compared to the first trimester (25)

Pain incidence during sexual intercourse can stem from many factors. A comparison of the pre-gestational period and the trimesters in our study revealed that the pain experienced during sexual intercourse significantly increased as the pregnancy progressed ($p<0.05$). Findings of studies regarding this area are diverse. Galazka et al. (2015) found that the level of pain during sexual intercourse during the gestational period was significantly lower. [18] Hanafy et al. (2014) reported that pain was significantly higher in the second trimester compared to the first and third trimester. The source of these differences may have stemmed from the different settings of the studies, and the difference in knowledge, belief, and attitudes regarding sexuality (25).

In our study, it was determined that sexual stimulation decreased during pregnancy compared to pre-gestational period, which was more adversely affected as the pregnancy progressed ($p<0.05$). Similarly, Hanafy et al. (2014) reported that sexual stimulation decreased significantly in the third trimester compared to the first and second trimesters (25). Furthermore, Galazka et al. (2015) determined that sexual stimulation significantly decreased during the gestational period (18).

In our study, it was found that there was a significant decrease in orgasm in sexual intercourse during pregnancy in comparison to the pre-gestational period and that this decrease continued as the pregnancy progressed ($p<0.05$). Senkumwong et al.

(2006) determined that the rate of having orgasms decreased during all periods of pregnancy (26). According to Sentürk Erenel et al. (2011) while the rate of women who had never had an orgasm before pregnancy was 8.6%, it increased to 47.3% during pregnancy ($p<0.05$) (11). Hanafy et al. (2014) report that orgasm decreased significantly in the third trimester compared to the first and second trimesters (25). It was also observed in a study by Galazka et al. (2015) that orgasm experiences in sexual intercourse during the gestational period were significantly lower (18). This may be due to changes in body image and the difficulty of appropriate positions during pregnancy. The results of our study showed that vaginal lubrication decreased in comparison to the pre-gestational period and that the decrease continued in the gestational period ($p<0.05$). The results of our study are consistent with those of the literature (18-25).

CONCLUSION

In conclusion, it was found that: a significant proportion of women did not have knowledge of sexual health, which is one of the important determinants of health; healthcare personnel were a significant source of information with a close rate to that of other sources; all sub-dimensions of sexuality were adversely affected during pregnancy in comparison to the pre-gestational period; and adverse conditions increased as the pregnancy progressed. For this reason, it is recommended that sexuality and sexual health issues should be addressed during routine pre-gestational visits without neglect. Trainings on sexuality and its sub-dimensions during pregnancy can be organized for pregnant women.

Study limitations

The results of this study are limited to the sampling group, so cannot be generalized to the whole of society. The study data were collected based on self-reporting by the individuals and the information provided by the participants was assumed to be correct. But, pregnant women may not remember the pre-pregnancy or previous trimesters correctly.

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