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Research Article

EFFECTS OF PREGNANCY ON FEMALE SEXUALITY

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ABSTRACT

Purpose: This study was conducted in order to examine the effects of pregnancy on female sexuality.

Material and Method: The type of study is cross sectional study model. Study sample is 106 pregnant women who applied to Kafkas University, Faculty of Medicine, Application and Study Hospital Gynecology and Obstetrics Polyclinic and who complied with the criteria for participation and volunteered to participate in the study. Data was collected between May and October, 2015. In collecting of data, "Personal Information Form" and "Index Of Female Sexual Function (IFSF)" was used. In evaluating of data, the average, percentage, chi-square, and in comparing the groups the analysis of variance was used for continuous variables.

Findings: The average age of pregnant women, who were taken under the study was calculated as 27.52 ± 5.94 (17-44 years old), the average number of pregnancy weeks as 20.55 ± 1.07 and the average number of pregnancies as 2.24 ± 1.24 . It was determined that 34% of pregnant women were in the first, 33% in the second and 33% in third trimester.

89.4% of pregnant women stated that the frequency of sexual intercourse decreased during pregnancy. In the statistical analysis made, it was found that there was not any change in the frequency of sexual intercourse according to trimesters of pregnancy ($p > 0.05$). The proportion of pregnant women who have the idea that sexual intercourse during pregnancy harms the baby was 63.5%, and the proportion of pregnant women who made change in sexual intercourse during pregnancy with this idea was 48.6%. In the study, average IFSF points of pregnant women was found as 19.86 ± 9.49 and in the statistical analysis made it was found that IFSF scores were not affected by pregnancy week and pregnant women's working status, education level, family income, family structure, and whether pregnancy was planned or not ($p > 0.05$).

Conclusion: In this study, it was found that pregnancy cause a decrease in sexual desire, there was not any difference in sexual function between trimesters, pregnant women's sexual function was not affected by obstetric and sociodemographic factors.

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INTRODUCTION

Pregnancy is a period, in which many changes in spouses' sexual intercourse, affecting the lives of women [1-3]. Physical discomforts, changes and fear of harming the baby experienced during this period can affect the sexual intercourse by changing couple's sexual interest and desire. During pregnancy, sexuality is affected also by the response of the couples against pregnancy, sexual identity and role of women, the idea of becoming family, economic factors and cultural norms [2,4].

Sexuality, being shared easily in developed societies, whereas still continues as a taboo in developing societies. In our society, the spouses mostly are hesitant to ask questions to their doctors about sexuality; physicians also ignore the sexuality in patient

interviews with these issues often come up when there is a problem with the pregnancy and sexuality is prohibited for a while as a result of this [2,3,5,6].

There are no adequate studies determining from which possible changes the sex life is affected during pregnancy [3,7-12]. Koyun (2012) in his study, stated that sexual functions decrease in pregnancies at later ages but the descriptive characteristics do not affect sexual function [8]. Bilen Sadiand Aksu (2014) in their study, stated that 42.9% of women do not find sexual intercourse safe in pregnancy and 51.4% of them fear of sexual intercourse during pregnancy. In addition, they stated that in the preconception period 8.7% of women and 12.6% of men have very low libido scores, and during pregnancy 41.3% of

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women and 13.6% of men have very low libido scores [7]. It is also known that many people have false beliefs about sexuality during pregnancy.

It will be useful to determine the effects of pregnancy on sex life and the information needs of the couple's related to sexuality during pregnancy in preservation of a healthy family structure [3]. In this direction, a study was conducted; in order to determine the effects of pregnancy on female sexuality with pregnant women who were followed at a health facility.

It was aimed the results to be a guide in training and consulting services that healthcare professionals will provide about sexual life during pregnancy.

MATERIAL AND METHOD

Purpose and Method of Study

This study was conducted in the cross-sectional study model in order to determine the effect of pregnancy on female sexuality.

Ethical Principles of Study

Thesis proposal was submitted to the Ethics Committee of Kafkas University Medicine School and approval was taken. Preliminary information about the study has been given to the Chief Physician of Kafkas University, Faculty of Medicine, Application and Study Hospital and written permission was taken from the institution. After taking permission in writing from the relevant authorities before starting to collect study data, and "informed consent" principle was adhered by giving information to the women about the purpose of the study in order to protect the rights of women surveyed. It was taken care of "Autonomy" principle by telling women that they can withdraw from the study at any time, and it was taken care of "Privacy and Protection of Privacy" principle by telling that will be protected after personal information was shared with the researcher. "Disidentification and Security" principle was fulfilled by indicating that the obtained information and respondents' identities will be kept as secret [13].

Place and Time of the Study

The study was conducted at Kafkas University, Faculty of Medicine, Application and Study Hospital Gynecology and Obstetrics Polyclinic between May and October, 2015. The study began on 13 May 2015 and finished on 10 February 2016.

Universe and Sample of the Study

Study universe; consisted of pregnant women who applied to Kafkas University, Faculty of Medicine, Application and Study Hospital Gynecology and Obstetrics Polyclinic between 13 May 2015 and 30 October 2015.

The study sample was selected as random sampling by randomized sampling method, and consisted of 106 pregnant women who applied to Kafkas University, Faculty of Medicine, Application and Study Hospital Gynecology and Obstetrics Polyclinic and who complied with the criteria for participation and volunteered to participate in the study between 13 May 2015 and 30 October 2015. Power analysis was evaluated as 0,992 at 0,5 significance level and 0.95 confidence interval at three degrees of freedom by using G Power 3.1.92 program and

with this result it was reached to the conclusion that the sample was adequate.

Criteria sought for participating in the study

- To be literate at least
- To live with a spouse
- Not to have received a diagnosis of risky pregnancy
- Not to have received any treatment psychiatrically
- Not to have received any medical treatment due to systemic disease.

Forms Used in Collecting Data

Personal Information Form: This form, which was developed by the researcher in the light of literature details, consists of a total of 20 questions to determine descriptive characteristics of pregnant women and some of their characteristics related to sexuality. [3,7,8].

Index of Female Sexual Function = IFSF: It is the Index Of Female Sexual Function performed by Yılmaz ve Eryılmaz, the validity and reliability study of which was made in 2004. It consists of a total of 9 questions. With each question, sexual function status of women in the last 4 weeks was questioned. The scale has 3 sub dimensions including "sexual satisfaction" (Articles of 6.7.8.), " frequency of sexual intercourse, libido" (Articles of 3.4.5.9.) and "discomfort during sexual intercourse" (Articles of 1.2.). The highest point that can be taken from the scale was 49. The scores under 30 points indicate the presence of sexual dysfunction. The fact that IFSF enables to examine the areas including desire, sexual arousal, orgasm, and pain of sexual intercourse was determined also by the results of validity study and Cronbach Alpha coefficient, which was internal consistency coefficient, was found to be 0.82 [12,14]. In this study Cronbach Alpha coefficient was found to be 0.92.

Data Collection

Pre-application was applied to 15 pregnant women in order to determine whether data forms were understood by pregnant women and it was determined that the forms are understandable. Pre-application data were left out of scope of study. Face to face interviews were made with pregnant women who applied to Kafkas University, Faculty of Medicine, Application and Study Hospital Gynecology and Obstetrics Polyclinic and they were informed about the study, verbal consent was taken from pregnant women accepting to participate in study and the data was collected by applying Personal Data Sheet and the Index of Female Sexual Function by the researcher by using face to face interview method. It took about 15-20 minutes to fill out the forms. Data was collected between 13 May and 30 October, 2015.

Evaluation of Data

Analysis of data obtained from the study was conducted by using Statistical Package for Social Science (SPSS) 20.0 package program. Normal distribution of the variables was tested with Kolmogorov smirnov test, and the variance equality was tested with Levene test. Since the data shows normal distribution, all analyzes were made with parametric tests. Continuous variables were expressed as average (\pm) standard deviation, while categorical variables were expressed as percentage. In the comparison of group averages, One Way

Anova (analysis of variance) was used for numeric variables, and Chi-square test was used for categorical variables. In all comparisons, $p < 0.05$ level was considered significant.

Limitations and Generalizability of Study

Data of study was collected by face to face interview method. Therefore, the reliability of the data was limited to information provided by the interviewers. Since it was conducted with the pregnant women who participated in the study at Kafkas University, Faculty of Medicine, Application and Study Hospital Gynecology and Obstetrics Polyclinic, the data obtained was limited with the sample and it cannot be generalized to all pregnant women.

Findings

The findings obtained from the study were as follows.

Table 1 Distribution of Descriptive Characteristics of pregnant women

Descriptive Characteristics(N=106)	X±SS	
Average age of pregnant women	27.52±5.94	
Average age of spouse of pregnant women	31.97±6.15	
Average number of pregnancy week	20.55±1.11	
Average number of pregnancies	2.24±1.24	
	S	%
Age		
-17-25	40	37.9
-26-34	51	48.1
-35-44	15	14.0
Educational Status		
-Primary School	66	62.3
-Secondary School/High School	24	22.6
-University and Upper	16	15.1
Working Status		
-Not Working	92	86.8
-Working	14	13.2
Income Status		
-Income is higher than expenses	12	11.3
- Income is equal to expenses	76	71.7
- Income is lower than expenses	18	17.0
Family Type		
-Nuclear Family	55	51.9
-Extended Family	51	48.1
Spouse's Educational Status		
-Primary School	55	51.8
-Secondary School/High School	29	27.4
-University and Upper	22	20.8
Spouse's Occupational Status		
-Self-Employment	59	55.7
-Civil Cervant	22	20.8
-Private Sector	25	23.5
Whether Pregnancy Is Planned Or Not		
-Planned	78	73.6
-Not Planned	28	26.4
Type of Conception		
-Spontaneous (Natural)	102	96.2
-By Treatment	4	3.8
Trimester		
-First (the first 14weeks)	36	34.0
-Second (from week 15 to 26)	35	33.0
-Third (27 weeks and later)	35	33.0
TOTAL	106	100.0

When the distribution of the descriptive characteristics of pregnant women taken in the scope of study were examined (Table 1), it was found that average age of pregnant women was 27.52±5.94 (17-44 years old), the average age of the spouses was 31.97±6.15 (19-60 years old) and average number of pregnancies was 2.24±1.24. 62.3% of pregnant women were primary school graduates, 86.8% of them were not working, for 71.7% of them income and expenses were equivalent, and

51.9% of them have the nuclear family. It was found that in 73.6% of pregnant women the pregnancy was planned and in 96.2% of them it was spontaneous (natural). It was determined that 34% of pregnant women were in first, 33% of them in second and 33% of them in third trimester. In addition, 51.8% of spouses of pregnant women were primary school graduates and 55.7% of them were self-employed.

Table 2 Comparison of the descriptive characteristics of pregnant women according to the trimesters

Descriptive Characteristics(N=106)	I. Trimester		II. Trimester		III. Trimester		P Value*
	N	%	N	%	N	%	
Family Type							
-Nuclear Family	20	55.6	18	51.4	17	48.6	,839
-Extended Family	16	44.4	17	48.6	18	51.4	
Educational Status							
-Primary School	17	47.3	22	62.8	27	77.2	,191
-Secondary School/High School	12	33.3	9	25.7	3	8.6	
-University and Upper	7	19.4	4	11.5	5	14.2	
Working Status							
-Not Working	31	86.1	31	88.6	30	88.2	,943
-Working	5	13.9	4	11.4	4	11.8	
Income Status							
-Income is higher than expenses	4	11.1	5	14.3	3	8.6	,092
- Income is equal to expenses	28	77.8	27	77.1	21	60.0	
- Income is lower than expenses	4	11.1	3	8.6	11	31.4	
Spouse's Educational Status							
-Primary School	14	38.9	17	48.6	24	68.6	,142
-Secondary School/High School	13	36.1	11	31.4	5	14.3	
-University and Upper	9	25.0	7	20.0	6	17.1	
Spouse's Occupational Status							
-Self-Employment	20	55.6	14	40.0	25	71.4	,06
-Civil Cervant	7	19.4	11	31.4	4	11.4	
-Private Sector	9	25.0	10	28.6	6	17.1	
Whether Pregnancy Is Planned Or Not							
-Planned	26	72.2	26	74.3	26	74.3	,974
-Not Planned	10	27.8	9	25.7	9	25.7	
Type of Conception							
-Spontaneous (Natural)	32	91.4	35	100	33	97.1	,166
-By Treatment	3	8.6	--	--	1	2.9	

*Chi-square test was conducted.

Comparison of the descriptive characteristics were given in Table 2 according to the trimesters. When compared descriptive characteristics of pregnant women according to the trimesters it was found that there were similarities between groups and the difference between them were not significance statistically ($p > 0.05$).

Distribution and comparison of some characteristics of pregnant women according to the trimesters was given in Table 3. It was found that 58.3% of pregnant women in Ist trimester and 51.4% of pregnant women in IInd trimester and 62.9% of pregnant women in IIIrd trimester did not have sexual intercourse during pregnancy. As a result of statistical analysis it was found that the difference between status of having sexual intercourse and trimesters was not significant ($p > 0.05$). It was found that 52.8% of pregnant women in Ist trimester and 60% of pregnant women in IInd trimester and 55.9% of pregnant women in IIIrd trimester had positive opinions on sexual intercourse during pregnancy, although it was found that the difference between the groups was not significant ($p > 0.05$).

It was found that there was a decrease in frequency of sexual intercourse during pregnancy in 86.1% of pregnant women in Ist trimester and 88.2% of pregnant women in IInd trimester and 94.1% of pregnant women in IIIrd trimester had positive opinions on sexual intercourse during pregnancy, although it was found that the difference between the groups was not significant ($p>0.05$).

the trimesters it was found that the three groups were similar and the difference between the groups was not significant statistically ($p>0.05$).

Distribution of answers given by pregnant woman to the expressions in the Index Of Female Sexual Function in the last four weeks was shown in Table 4.

Table 3 Distribution and Comparison of Some Characteristics of Pregnant Women According To the Trimesters

Characteristics of Sex (N=106)	I. Trimester		II. Trimester		III. Trimester		TOTAL		P value*
	N	%	N	%	N	%	N	%	
Status of Entering Sexual Intercourse During Pregnancy									
-Yes	15	41.7	17	48.6	13	37.1	45	42.5	,622
- No	21	58.3	18	51.4	22	62.9	61	57.5	
Her Approach to Sexual Intercourse During Pregnancy									
-Positive	19	52.8	21	60.0	19	55.9	59	55.7	,982
-Negative	12	33.3	10	28.6	11	32.3	33	31.1	
-I do not know	5	13.9	4	11.4	4	11.8	14	13.2	
Change in frequency of sexual intercourse during pregnancy									
-Decreased	31	86.1	30	88.2	32	94.1	93	87.7	,532
-No change	5	13.9	4	11.8	2	5.9	13	12.3	
Current Problem About Sexuality									
-She has	5	13.9	6	17.1	6	17.6	17	16.0	,897
-She does not have	31	86.1	29	82.9	28	82.4	89	84.0	
Does sexual intercourse harm the baby?									
-Yes									,885
- No	24	66.7	21	61.8	21	61.8	66	62.9	
	12	33.3	13	38.2	13	38.2	40	37.1	
Position Change in Sexual Intercourse									
-Yes	17	47.2	22	62.9	12	35.3	51	48.1	,127
- No	1	2.8	3	8.5	3	8.8	7	6.6	
- No answer	18	50.0	10	28.6	19	55.9	48	45.3	
Sexual Intercourse Positions In Pregnancy									
- I do not have idea	7	19.4	13	37.1	7	20.0	27	25.5	,072
-Side-lying position	29	80.6	20	57.1	28	80.0	77	72.6	
-Lying-on-back position	--	--	2	5.8	--	--	2	1.9	
Getting Information From Health Personnel On Sexuality									
-I got	1	2.8	2	5.7	--	--	3	2.8	,354
-I did not get	35	97.2	33	94.3	35	100	103	97.2	

*Chi-square test was conducted.

It was found that 13.9% of pregnant women in Ist trimester and 17.1% of pregnant women in IInd trimester and 17.6% of pregnant women in IIIrd trimester had problems in sexual intercourse during pregnancy, although it was found that the difference between the groups was not significant ($p>0.05$). It was found that 66.7% of pregnant women in Ist trimester and 61.8% of pregnant women in IInd trimester and 62.9% of pregnant women in IIIrd trimester had the thought that sexual intercourse during pregnancy will harm the baby, it was found that the difference between the groups was not significant ($p>0.05$).

It was determined that 49.1% of pregnant women stated that they did not have sexual intercourse with their spouses in the last four weeks, 47.2% of them stated that they had very low or absent clitoris sensitivity during sexual arousal or the intercourse and sexual intercourse was not satisfying at all. It was found that 43.4% of pregnant women did not have any sexual desire and 52.8% of them stated that they did not have any orgasm in the last four weeks. It was determined that the difference between the answers given by pregnant women to the expressions in the Index Of Female Sexual Function in the last four weeks were not statistically significant according to trimesters and the trimesters have similar characteristics in terms of variables ($p> 0.05$).

When examined those who made position changes in sexual intercourse during pregnancy according to trimesters, it was found that position changes was highest in IInd trimester with the rate of %62.9. Although it was found that this difference was not significant statistically ($p>0.05$).The percentage of those who answered to the question of what was the position change was 27.4% (25.5% side-lying position, 1.9% supine position) It was determined that majority of the pregnant women (97.2%) did not get information from health personnel on sexuality, it was found that the difference between the groups was not significant($p>0.05$). When some characteristics of pregnant women on sexuality were compared according to

Average points taken by pregnant women for sub dimensions and the total of IFSF Scale Were given in Table 5. It was determined that sub dimensions average point for sexual satisfaction of pregnant women was 6.05 ± 3.06 , sub dimensions average point of frequency for sexual intercourse/libido was 7.59 ± 2.93 and sub dimensions average point for discomfort during sexual intercourse was 6.21 ± 4.14 .

Table 4 Distribution of Answers Given By Pregnant Woman to the Expressions in Index of Female Sexual Function (N=106)

EXPRESSIONS	I.Trimester		II.Trimester		III.Trimester		Total		Test and P Value
	N	%	N	%	N	%	N	%	
1. How often did you experience discomfort during sexual intercourse with your spouse in the past 4 weeks?									
a) I did not attempt sexual intercourse	17	47.2	17	48.6	16	45.7	50	47.2	$\chi^2=10.200$ P=0.423
b) Almost always or always	---	---	1	2.9	---	---	1	0.9	
c) Most of the times (more than half)	---	---	1	2.9	3	8.6	4	3.8	
d) Sometimes (about half)	4	11.1	4	11.4	7	20.0	15	14.2	
e) A few times (much less than half)	8	22.2	8	22.9	3	8.6	19	17.9	
f) Almost never	7	19.4	4	11.4	6	17.1	17	16.0	
2. How often did you complain of vaginal dryness during sexual intercourse with your spouse in the last 4 weeks?									
a) I did not attempt sexual intercourse	17	47.2	17	48.6	16	45.7	50	47.2	$\chi^2=5.145$ P=0.742
b) Almost always or always	---	---	---	---	1	2.9	1	0.9	
c) Most of the times (more than half)	---	---	---	---	---	---	---	---	
d) Sometimes (about half)	3	8.3	6	17.1	2	5.7	11	10.4	
e) A few times (much less than half)	8	22.2	6	17.1	8	22.9	22	20.8	
f) Almost never	8	22.2	6	17.1	8	22.9	22	20.8	
3. How often did you attempt sexual intercourse in the last 4 weeks?									
a) 0	18	50.0	19	54.3	15	42.9	52	49.1	$\chi^2=6.311$ P=0.612
b) 1-2	8	22.2	9	25.7	10	28.6	27	25.5	
c) 3-4	8	22.2	4	11.4	9	25.7	21	19.8	
d) 5-6	1	2.8	3	6.6	1	2.9	5	4.7	
e) 7-10	---	---	---	---	---	---	---	---	
f) 11	1	2.8	---	---	---	---	1	0.9	
4. How often have you felt sexual desire in the last 4 weeks??									
a) Almost never or never	16	44.4	16	45.7	14	40.0	46	43.4	$\chi^2=4.101$ P=0.663
b) A few times (much less than half)	13	36.1	16	45.7	14	40.0	43	40.6	
c) Sometimes (about half)	6	16.7	3	8.6	7	20.0	16	15.1	
d) Most of the times (more than half)	---	---	---	---	---	---	---	---	
e) Almost always or always	1	2.8	---	---	---	---	1	0.9	
5. How do you find your level of sexual desire in the past 4 weeks?									
a) Very low at all	13	36.1	9	25.7	7	20.0	29	27.4	$\chi^2=9.040$ P=0.339
b) Low	8	22.2	15	42.9	14	40.0	37	34.9	
c) Moderate	14	38.9	10	28.6	14	40.0	38	35.8	
d) High	---	---	1	2.9	---	---	1	0.9	
e) Very high	1	2.8	---	---	---	---	1	0.9	
6. How satisfying was your sexual intercourse with your spouse in the last 4 weeks?									
a) Not satisfying at all	17	47.2	17	48.6	16	45.7	50	47.2	$\chi^2=9.473$ P=0.304
b) Not satisfying	4	11.1	8	22.9	2	5.7	14	13.2	
c) Half	11	30.6	8	22.9	16	45.7	35	33.0	
d) Moderately satisfying	3	8.3	1	2.9	1	2.9	5	4.7	
e) Very satisfying	1	2.8	1	2.9	---	---	2	1.9	
7. How satisfying was your sex life in general in the last 4 weeks?									
a) Not satisfying at all	12	33.3	16	45.7	13	37.1	41	38.7	$\chi^2=13.433$ P=0.098
b) Not satisfying	8	22.2	8	22.9	6	17.1	22	20.8	
c) Half	7	19.4	8	22.9	14	40.0	29	27.4	
d) Moderately satisfying	9	25.0	2	5.7	2	5.7	13	12.3	
e) Very satisfying	---	---	1	2.9	---	---	1	0.9	
8. How often did you have an orgasm during sexual stimulation or intercourse within the last 4 weeks?									
a) Almost never or never	20	55.6	18	51.4	18	51.4	56	52.8	$\chi^2=8.294$ P=0.405
b) A few times (much less than half)	10	27.8	9	25.7	4	11.4	23	21.7	
c) Sometimes (about half)	2	5.6	4	11.4	6	17.1	12	11.3	
d) Most of the times (more than half)	3	8.3	3	8.6	7	20.0	13	12.3	
e) Almost always or always	1	2.8	1	2.9	---	---	2	1.9	
9. How do you assess the sensitivity of your clitoris during sexual stimulation or intercourse in the last 4 weeks?									
a) Very low or at all	15	41.7	18	51.4	17	48.6	50	47.2	$\chi^2=5.943$ P=0.654
b) Low	10	27.8	6	17.1	6	17.1	22	20.8	
c) Moderate	10	27.8	10	28.6	12	34.3	32	30.2	
d) High	1	2.8	---	---	---	---	1	0.9	
e) Very high	---	---	1	2.9	---	---	1	0.9	

Table 5 Average Points of Pregnant Women ForSub Dimensions and the Total of IFSF Scale

IFSF		The lowest and Highest Point From Scale	The lowest and Highest Points taken by Pregnant Women From Scale	IFSF X±SS
Sub Dimensions	Sexual Satisfaction	3-15	3-15	6.05±3.06
	Frequency of Sexual Intercourse/ Libido	4-21	4-20	7.59±2.93
	Discomfort During Sexual Intercourse	2-12	2-12	6.21±4.14
	TOTAL	9-49	9-46	19.86±9.49

Table 6 Comparison of the average IFSF points according to descriptive characteristics of pregnant women

Descriptive Characteristics(N=106)	IFSF X±SS	Test ve P Value
Family Type		
-Nuclear Family	20.34±9.63	t=0.536
-Extended Family	19.35±9.40	P=0.593
Educational Status		
-Primary School	19.63±9.33	KW=0.509 P=0.775
-Secondary School/High School	20.87±8.89	
-University and Upper	19.31±11.38	
Working Status		
-Not Working	19.82±9.70	U =563.000 P=0.688
-Working	20.15±8.15	
Spouse's Educational Status		
-Primary School	19.12±9.10	KW=2.183 P=0.336
-Secondary School/High School	22.31±9.22	
-University and Upper	18.50±10.59	
Spouse's Occupational Status		
-Self-Employment	19.38±9.31	KW=1.877 P=0.598
-Civil Cervant	20.95±10.12	
-Private Sector	20.90±9.80	
- Other	13.66±6.42	
Income Status		
-Income is higher than expenses	21.66±12.20	KW=0.852 P=0.653
- Income is equal to expenses	19.96±8.64	
- Income is lower than expenses	18.27±11.20	
Whether Pregnancy Is Planned Or Not		
-Planned	19.62±9.60	U=995.500 P=0.487
-Not Planned	20.53±9.30	
Type of Conception		
-Spontaneous (Natural)	19.92±9.14	U=140.000 P=0.287
-By Treatment	18.50±18.33	
Trimester		
-First (the first 14 weeks)	20.36±10.37	I=0.896
-Second (from week 15 to 26)	19.00±8.69	
-Third (27 weeks and later)	20.22±9.52	

Comparison of the average IFSF points according to descriptive characteristics of pregnant women was given in **Table 6**. In the study, the average IFSF points of pregnant women who have nuclear family type were determined as 20:34±9.63, whereas the average IFSF points of pregnant women who extended family were determined as 19:35±9.40. The average IFSF points of pregnant women who were graduate of primary school were determined as 19.63±9.33, The average IFSF points of pregnant women who were graduate of secondary school/high school were determined as 20.87±8.89 and the average IFSF points of pregnant women who were graduate of university and upper were determined as 19:31±11:38. The average IFSF points of pregnant women who were working were determined as 20:15±8:15 while the average IFSF points of pregnant women who were not working were determined as 19.82±9.70. The average IFSF points of

pregnant women whose spouses were graduate of primary school were determined as 19:12±9:10, the average IFSF points of those whose spouses were graduate of secondary school/high school were determined as 22.31±9.22 and the average IFSF points of those whose spouses were graduate of university and upper were determined as 18.50±10.59. The average IFSF points of pregnant women whose income was more than their expenses were determined as 21.66±12.20, the average IFSF points of those whose income was equal to their expenses were determined as 19.96±8.64 and the average IFSF points of those whose income was less than their expenses were determined as 18.27±11.20. The average IFSF points of pregnant women whose pregnancy were planned were determined as 19.62±9.60, while the average IFSF points of those whose pregnancy were not planned were determined as 20.53±9.30. The average IFSF points of pregnant women who conceived spontaneously were determined as 19.92±9.14, while the average IFSF points of those who conceived by treatment were determined as 18.50±18.33. The average IFSF points of pregnant women in the first trimester were determined as 20.36±10.37, the average IFSF points of pregnant women in the second trimester were determined as 19:00±8.69, and the average IFSF points of pregnant women in the third trimester were determined as 20:22±9:52. When the average IFSF points were compared according to descriptive characteristics of pregnant women and it was found that there was not a statistically significance difference between the groups (p>0.05).

Table7 Comparison of The Average IFSF Points According To Some Characteristics of The Pregnant Women On Sexuality

Some Characteristics for Sex	IFSF X±SS	Test P Value
Ability to define sexuality		
-She knows	20.16±9.80	U=112.500 P=0.756
-She does not know	20.00±10.09	
Status of Entering Sexual Intercourse During Pregnancy		
-Yes	19.06±9.40	t=-0.745 P=0.458
- No	20.45±9.59	
Her Approach to Sexual Intercourse During Pregnancy		
-Positive	20.58±9.18	KW=3.186 P=0.203
-Negative	20.54±10.52	
-I do not know	14.84±6.85	
Change in frequency of sexual intercourse during pregnancy		
-Decreased	19.81±9.48	U=494.000 P=0.767
-No change	20.36±9.96	
Does sexual intercourse harm the baby?		
-Yes	20.74±9.51	t=0.958 P=0.341
-No	18.89±9.41	
Position Change in Sexual Intercourse		
-Yes	18.49±9.26	KW=2.968 P=0.227
- No	23.71±6.39	
- I do not have idea	21.00±9.95	
Sexual Intercourse Positions In Pregnancy		
- I do not have idea	19.59±9.60	KW=1.162 P=0.559
-Side-lying position	20.88±9.34	
-Lying-on-back position	16.50±10.60	
Current Problem About Sexuality		
-She has	22.88±9.27	U=642.000 P=0.354
-She does not have	19.39±9.47	
Getting Information From Health Personnel On Sexuality		
-I got	23.00±2.64	MW- V=137.500 P=0.765
-I did not get	19.87±9.60	

Comparison of the average IFSF points according to some characteristics of the pregnant women on sexuality was shown in Table 7. The average IFSF points of pregnant women who could define sexuality accurately were determined as 20.16 ± 9.80 , while the average IFSF points of those who could not define sexuality accurately were determined as 20.00 ± 10.09 . The average IFSF points of those who have sexual intercourse during pregnancy were determined as 19.06 ± 9.40 , while the average IFSF points of those who do not have sexual intercourse during pregnancy were determined as 20.45 ± 9.59 . The average IFSF points of those who have positive opinion for sexual intercourse during pregnancy were determined as 20.58 ± 9.18 , while the average IFSF points of those who have negative opinion for sexual intercourse during pregnancy were determined as 20.54 ± 10.52 , and the average IFSF points of those who have any idea for sexual intercourse during pregnancy were determined as 14.84 ± 6.85 .

The average IFSF points of those whose frequency of sexual intercourse decreased during pregnancy were determined as 19.81 ± 9.48 , and the average IFSF points of those whose frequency of sexual intercourse did not change during pregnancy were determined as 20.36 ± 9.96 . The average IFSF points of those who think that sexual intercourse during pregnancy will harm the baby were determined as 20.74 ± 9.51 , while the average IFSF points of those who think that sexual intercourse during pregnancy will not harm the baby were determined as 18.89 ± 9.41 . The average IFSF points of those who had problems in sexuality during pregnancy were determined as 22.88 ± 9.27 , and the average IFSF points of those who did not have any problems in sexuality during pregnancy were determined as 19.39 ± 9.47 . The average IFSF points of those who got information from health personnel on sexuality were determined as 23.00 ± 2.64 , the average IFSF points of those who did not get information were determined as 19.87 ± 9.60 . The average IFSF points were compared according to some characteristics of pregnant women on sexuality and it was determined that there was no significant difference between the groups ($p > 0.05$).

Table 8 Comparison of the relation between some descriptive characteristics of pregnant women and IFSF point averages

Descriptive Characteristics		IFSF X+SS
Average age	r	0.002
	p	0.980
Average number of pregnancies	r	-0.078
	p	0.429
Average age of spouse	r	-0.084
	p	0.394
Average number of pregnancy week	r	-0.017
	p	0.861

It was found that there was not any significant relation between average age of pregnant women, average age of spouse, average number of pregnancy and IFSF point averages ($p > 0.05$).

DISCUSSION

97.1% of the pregnant women participated in the study stated that they did not get information from health personnel on sexuality during pregnancy. In the study conducted by Bilen Sadi and Aksu (2014), they stated that 62.9% of women did not get information on sexuality during pregnancy [7]. In the study

conducted by Yılmaz and Eryılmaz (2004), it was found that 31.9% of pregnant participants did not get information on sexuality during pregnancy [12]. Also in another study, it was found that 35.5% of pregnant women did not get information on sexuality during pregnancy [11]. That the spouses did not get information on sex life during pregnancy from the experts causes decrease in number of sexual intercourses of couples as well as it causes couples to have wrong ideas about it.

Couples' access to accurate and reliable information about sexual life during pregnancy concerns also health workers. From all of these results; it was seen that the sexual problems which have devastating effects on women but suppressed by the effects of cultural, social and religious factors, considered to be intimate and not discussed, were not examined much also by health personnel. However, it is thought that detecting and solving the problems, which women experienced related to sexual life, at an early stage will be effective in the development of women's health and in improving their living quality. In this regard, it is required to realize information transfer in this respect at higher rates by overcoming traditional obstacle of shyness.

The majority of pregnant women (89.4%) stated that their frequency of sexual intercourse decreased in all trimesters. In study of Koyun (2012), it was determined that 65% of the pregnant women stated that their frequency of sexual intercourse during pregnancy decreased in all trimesters [8], Bartellas *et al* (2000) found that the frequency of sexual intercourse of 71% of pregnant women decreased [15]. In a study made, it was stated that the frequency of sexual intercourse decreases as trimester progresses [3]. The fact that sexual desire decreases during pregnancy was shown by many studies.

While Masters and Jhonson, reported a decrease in the first trimester during pregnancy, they showed an increase in the second trimester and again a decrease in the third trimester. In the study of Oruç *et al* (1999), it was stated that the sexual desire decreases during pregnancy [11]. In a study made with Chinese pregnant women, it was reported that sexual activity and desire of women decreased during pregnancy. In the same study, it was reported that sexual desire, orgasm frequency, satisfaction from sex and the contribution to start the intercourse decreased during pregnancy [4]. In a national study, it was reported that when libido score before pregnancy was compared individually, libido In the study made by Aslan *et al* (2005), pregnancy libido scores were found to be lower [16]. Bilen Sadi and Aksu (2014), in their study, stated that 42.9% of women do not find sexual intercourse during pregnancy safe, 51.4% of them were afraid of sexual intercourse during pregnancy. They stated also that it was determined that libido score was very low in 8.7% of women and 12.6% of men during pre-conception period, and libido score was very low in 41.3% of women and 13.6% of men during conception period [7]. Whereas in another study, it was determined that one of every five pregnant did not have any sexual intercourse in the last four weeks [17]. Similarly, also in that study, 47.2% of pregnant women did not attempt or have any sexual intercourse, 43.4% of them did not have sexual desire at all. Libido is affected by many factors during pregnancy and it shows a serious decrease compared to pre-conception period. Physiological, psychological and sociocultural factors, myths

and wrong information can lead to decrease in libido. In the study, the rate of pregnant women who have the idea that sexual intercourse during pregnancy will harm the baby is 63.5%, and the rate of those who made position changes in sexual intercourse was 48.6%, and the rate of those who answered to the question about position change was 27.4% (25.5% side-lying position, 1.9% supine position,). When trimesters were compared, the three groups were assessed as similar and it was determined that the difference between them was not statistically significant ($p > 0.05$). In the study made by Lee *et al* (2010); that the most commonly used sexual intercourse position during pregnancy was determined as the classic position with rate of 67.6% [18].

Koyun (2012), in his study, determined the rate of pregnant women who have the opinion that sexual intercourse during pregnancy will harm the baby as 59%, the rate of those who changed sexual intercourse position with the thought that sexual intercourse during pregnancy will harm the baby as 45.5%, and those who answered to the question about position change as classic position with rate of 8%, side lying position with rate of 7%, prostration position with rate of 7% and sitting position with rate of 5% [8]. In the study of Eryılmaz *et al* (2002), 61.4% of pregnant women find sexual intercourse during pregnancy risky [19]. In another study, 49% of pregnant women were found to be worried about sexual intercourse during pregnancy by thinking it may harm the baby [15]. In a study made in Thailand, it was detected that 47% of pregnant women were found to have an idea that sexual intercourse may be harmful to the fetus [17].

In this study made, it was determined that total point average of pregnant women' IFSF sub dimensions was 19.86 ± 9.49 and sexual dysfunction was detected in pregnant women' participated in the study based on the average score that can be obtained from the scale, and it was determined that average IFSF point was not affected by trimester, pregnancy week, pregnant women's working status, education level, family income, family structure and whether the pregnancy was planned or not ($p > 0.05$). In study of Koyun(2012), average IFSF points of pregnant women was determined as 23.2 ± 9.8 . In addition, the IFSF scores were affected by pregnancy week and women' working status; although it was not affected by education level, age, family income or health insurance [8]. In the studies made, sexual dysfunction was determined, respectively, in 67%, 93.4% and 61% of pregnant women [8, 17,20]. Physiological, psychological and sociocultural factors during conception period, myths and wrong information can lead to decrease in libido and a serious decrease was seen compared to pre-conception period.

CONCLUSION AND RECOMMENDATIONS

In conclusion; however sexual activity shows individual differences, sexual functions were affected by many factors during pregnancy and it was observed that frequency of sexual intercourse decreases and frequency of sexual dysfunction increases. In addition, pregnant women, could not get enough information from health personnel about the sexual life. In this context, it was possible to suggest to conduct in service programs that increase the sensitivity of health personnel on the issue. Information or brochures with technical details about

sexual activity during pregnancy should be given to the couples.

Conflict of interest

None of the authors declare any conflicts of interest.

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