

Original Article



Role of the First Childbirth and its Associated Factors on Sexual Satisfaction and the Quality of Sexual Life of Married Women

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Abstract

Background and aims: Sexual satisfaction (SS) and a desirable quality of sex life are known as prerequisites for the physical and mental health of individuals. This study was designed to evaluate the role of the first childbirth and its associated factors in life satisfaction and the quality of life of married women in Shahrekord.

Methods: This self-control cohort study was conducted on 124 married women who were planning to have their first pregnancy from January 2018 to February 2019. The convenience sampling method was used to select the samples. The questionnaires utilized in this research included the Demographic Information Questionnaire, the Married Women's Sexual Satisfaction Questionnaire, and the Sexual Quality of Life-Female Questionnaire. The data were analyzed by independent *t* test, chi-square, and Pearson correlation coefficient using SPSS, version 22.

Results: The mean scores of SS and the quality of sexual life before pregnancy and one year after delivery were 63.45 ± 13.62 and 52.38 ± 13.59 , as well as, 88.40 ± 14.19 and 71.08 ± 13.29 , respectively. In this study, there was a significant relationship ($P \pm 0.041$) between changing the quality of sexual life and good economic status of individuals, as well as irregular menstrual status and contraceptive methods (natural birth control). Further, the relationship between residence and change in SS was significant so that people living in cities had the most change in SS compared to those living in rural areas ($P \pm 0.046$).

Conclusion: SS and its dimensions, including physical and psychological barriers, dominant cultural values, and husband-related factors, as well as the mean score of the quality of sex life one year after delivery, were lower than before pregnancy.

Keywords: Quality of sex life, Sexual satisfaction, Nulliparous women

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Introduction

Satisfactory sex and the right to enjoy intercourse profoundly affect the communication, intimacy, general health, and conflict styles between the husband and wife (1). Sexual satisfaction (SS) and the quality of sex life are recognized as an integral part of individuals' quality of life (2,3). In fact, the occurrence of any problems with sexual function may lead to negative effects on the general welfare and the overall quality of life (4). SS and desirable quality of sex life strengthen the couples' relationships and enhance their general health (5,6). Numerous factors can influence sexual behavior, including age, economic status, duration of the marriage, number of children, job stress, and social and emotional communicative aspects (intimacy and strength of family relationships). The other factors are sexual attitudes and values, physical health,

mental health and depression, environmental barriers, the frequency of intercourse, the difference between sexual behaviors, sexual desires, and orgasms (7-9). Although childbirth can affect SS and the quality of sex in women according to some studies (10), some other studies suggest that nulliparous women, regardless of the number of children, feel more pain during intercourse and experience less SS than women with children (11). Another research demonstrated that the number of deliveries and the type of delivery do not seem to be determining factors of sexual desire, function, and satisfaction in women over 40 (12). Further, a significant positive relationship was found between women's quality of sex life and marital adjustment of women to conceive in a study although more studies need to be performed in this regard (13).

Women are more influenced by psychological factors

than men in terms of SS and the quality of sex life (7). Women seem to be more sensitive than men due to certain physiological conditions, and this vulnerability is greater in terms of psychological characteristics (14). Thus, this study sought to evaluate the role of first childbearing and its associated factors in satisfaction with the life and quality of life of married women in Shahrekord from January 2018 to February 2019.

Materials and Methods

This was a self-control cohort study. The statistical population encompassed married women who intended to have their first pregnancy and referred to a gynecologist for pre-pregnancy counseling in 2018-2019. The sample size was calculated to be 100 subjects based on the relevant formula, which accounted for a total of 124 subjects considering the probability of the samples dropping. The sample size was determined using the sample volume formula as follows:

Considering the 95% confidence level ($Z \pm 1.96$), $p \pm 0.5$, $d \pm 0.2^* p$, and $d^2 \pm 0.01$, the required number of samples was 100 people, which considering the dropout, 124 people were included in the study.

$$n = \frac{Z^2 p(1-p)}{d^2}$$

The married women meeting the inclusion criteria were enrolled in the study by the convenience sampling method. The inclusion criteria were women aged 15-37 years, husbands aged less than 50, physical health (having no metabolic and chronic diseases, no genital infections, and no severe pain during intercourse), mental health (not suffering from depression, anxiety, obsessive-compulsive disorder, and other severe mental illnesses with a psychotic presentation). The other criteria included nulliparity, term infant, singleton pregnancy, lack of using drugs that affect sexual desire such as antidepressants by the couple, lack of morbid obesity or hyperadiposis (body mass index > 30), no drug use by the woman or her spouse, literacy (having at least a diploma), and regular sexual activity.

On the other hand, the exclusion criteria were unwillingness to continue cooperation, congenital malformations of the baby, multiple births, the incidence of sexual problems in the woman or her spouse at any stage of the study (pain, erection problems in the husband, depression, and other diseases related to sexual function), inability to access the person, and the death of the woman or her spouse.

Three questionnaires were used in this study. The first one was a demographic information questionnaire. It contains questions about the age, age of the spouse, duration of the marriage, level of education of the woman and her spouse, economic status, place of residence, employment status of the woman and her spouse, menstrual status, method of contraception, and the type of delivery. The second questionnaire was the Married Women's Sexual Satisfaction Questionnaire (MWSSQ).

It was designed by Shahvari et al (15) through different phases and localized according to the prevailing public culture in Iran. The MWSSQ encompasses 27 questions in two physical and emotional dimensions. This tool has four subscales as follows:

- Records containing 8 questions (13, 15, 16, 17, 18, 20, 25, and 26) and factors such as loving the husband, emotional intimacy, sexual adjustment, satisfactory performance towards marital roles, and the feeling of sexual power.
- Physical and mental barriers with 9 questions (3, 4, 5, 9, 10, 14, 21, 23, and 27).
- Dominant cultural values with 5 questions (1, 2, 7, 11, and 12).
- Finally, husband-related factors with 5 questions (6, 8, 9, 22, and 24).

The scoring of the questionnaire is based on a 5-point Likert-type scale ranging from never (1 point) to always (5 points). Questions 3, 6, 9, 10, 14, 19, 21, 23, 24, and 27 are scored reversely. The overall MWSSQ score falls within the range of 27-135 where a higher score indicates a higher level of SS. Using Cronbach's alpha test, the instrument reliability was assessed to be 0.916, suggesting a good reliability rate that can be used to evaluate the SS of married Iranian women. Face validity was measured in the third phase, and two items had an impact score of > 1.5. One item was removed from the scale because of a low content validity ratio (CVR) of 0.42. The scale-level content validity index (CVI, S-CVI) of the whole questionnaire was 0.938 (15). The third instrument was the Sexual Quality of Life-Female (SQOL-F) questionnaire. It is a short 18-item questionnaire designed by Symonds et al to evaluate the association between women's sexual disorders and quality of life (3). The SQOL-F is a self-reporting scale that focuses on sexual self-esteem, emotions, and communicative issues and has 4 subscales as follows:

- Sexual-psychological emotions including questions 2, 3, 7, 8, 10, 16, and 17.
- Satisfaction with sex and intercourse containing questions 1, 5, 9, 13, and 18.
- Self-worthlessness including questions 4, 6, and 15.
- Sexual repression encompassing questions 11, 12, and 14.

The scoring of this questionnaire is according to a 6-point Likert-type scale ranging from quite agree (1 point) to quite disagree (6 points), and the overall score falls within the range of 18-108 where the higher score reflects the better quality of sex life. This questionnaire has been localized in Iran by Maasoumi et al with an evaluated Cronbach's alpha as 0.73 and in both questionnaires, the CVR of the questions was estimated to be 0.75-1 and the CVI in all cases was evaluated as 0.8-0.97 (16).

An electronic questionnaire that could be sent through social networks was designed given the problem of access to women after childbirth, which was sent to all of them accordingly. A letter of introduction and the goal of the

project were sent to them as an introduction, and they were asked to enter the submitted link to complete the mentioned questionnaire. The completed questionnaires were automatically recorded on the site. After explaining the objectives of the study and the confidentiality of the information and obtaining written consent from the samples, as well as assuring them that they can leave the study whenever they want, they were asked to complete the questionnaires once before pregnancy and once a year after the birth of their child. During this time, they were followed up via phone calls. Finally, the collected data underwent analysis.

The data were coded and then entered into the SPSS software, version 22. Descriptive (including frequency, percentage, mean, and standard deviation) and analytical (including independent *t* test, chi-square, and Pearson correlation coefficient tests) statistics were used for analyzing the results.

Results

This study was performed on 124 married women planning to have their first pregnancy who had referred to a gynecologist for pre-pregnancy counseling by completing the scales before pregnancy and one year after delivery. The average age and the duration of marriage of the studied women are listed in Table 1.

The mean score of SS was 63.45 ± 13.62 and 52.38 ± 13.59 before pregnancy and one year after delivery, respectively. Additionally, the mean score of sexual quality of life before pregnancy and one year after delivery was 88.40 ± 14.19 and 71.8 ± 13.29 , respectively.

Table 2 provides the demographic characteristics of the studied women. Moreover, the findings concerning the association between individual variables and changes in the quality of sex life before pregnancy and one year after delivery revealed that people with good economic status had experienced the highest change rate in the quality of sex life ($P \pm 0.041$). In this regard, women with irregular menstruation intervals experienced the highest rate of changes in the quality of sex life ($P \pm 0.041$). Based on the results, women who used the natural birth control method experienced the highest rate of changes in the quality of sex life ($P \pm 0.041$). In addition, urban residents had the highest change rate in SS compared to rural residents ($P \pm 0.046$).

Other individual variables, including age, age of spouse, duration of the marriage, education level and occupation

of women and their spouses, and the type of delivery showed no statistically significant difference with the changes in the quality of sex life and SS in this study ($P < 0.05$, Tables 1 and 2).

The findings (Table 3) indicated that the mean scores of SS and its dimensions, including physical and psychological barriers, dominant cultural values, and husband-related factors, were lower one year after delivery than before pregnancy ($P < 0.001$); further, no statistically significant difference was observed in the records (history) dimension before pregnancy and one year after delivery ($P \pm 0.229$).

According to Table 4, the mean scores of the quality of sex life and all its dimensions were significantly lower one year after delivery than before pregnancy ($P < 0.01$).

Based on the results of the correlation coefficient, the quality of sex life had a direct and significant association with SS before pregnancy and one year after delivery in the studied women ($r \pm 0.727$, $P < 0.001$, $r \pm 0.741$, $P < 0.001$) so that women with high quality of sex life had higher SS before pregnancy and one year after delivery. In addition, the changes in the quality of sex life demonstrated a direct and significant relationship with changes in SS so that women with higher changes in their quality of sex life experienced more changes in SS as well ($r \pm 0.608$, $P \pm 0.001$) (Table 5).

Tables 6 and 7 present the results of the multivariate regression. As shown, the proposed regression model is significant and precedes 41% and 36% of changes in the sexual quality of life ($F \pm 2.95$, $P < 0.001$, $R^2 \pm 0.412$, adjusted $R^2 \pm 0.272$) and SS ($F \pm 2.38$, $P < 0.002$, $R^2 \pm 0.361$, adjusted $R^2 \pm 0.210$), respectively.

Regarding changes in the quality of sexual life in this model, older people ($\beta \pm -0.401$, $P \pm 0.003$) and good economic status ($\beta \pm -0.273$, $P \pm 0.032$) and those with a higher education of the spouse ($\beta \pm 0.213$, $P \pm 0.034$) had the least changes in the quality of sexual life. However, people with older age of the spouse ($\beta \pm 0.287$, $P \pm 0.003$) with an associate degree ($\beta \pm -0.213$, $P \pm 0.034$), regular menstrual status ($\beta \pm -0.356$, $P < 0.001$), emergency cesarean delivery ($\beta \pm -0.201$, $P \pm 0.042$), and hormonal contraception ($\beta \pm -0.318$, $P \pm 0.001$) had the most changes in sexual quality of life.

With regard to changes in SS in this model, people with older age ($\beta \pm -0.376$, $P \pm 0.007$) and average economic status ($\beta \pm -0.309$, $P \pm 0.025$) and those with higher education with a spouse diploma ($\beta \pm -0.252$, $P \pm 0.016$)

Table 1. The mean and standard deviation of the age, spouse age, and duration of the marriage, and the correlation with changes in the quality of sex life and sexual satisfaction

Variables	Minimum	Maximum	Mean \pm SD	Correlation with changes in the quality of sex life		Correlation with changes in sexual satisfaction	
				Spearman coefficient	<i>P</i> value	Spearman coefficient	<i>P</i> value
Age (y)	16	37	25 \pm 5.26	-0.110	0.227	-0.116	0.203
Spouse age (y)	22	40	30.4 \pm 15.12	-0.035	0.702	-0.074	0.418
Duration of marriage (y)	1	15	2.2 \pm 57.08	0.054	0.557	0.102	0.265

Note. SD: Standard deviation.

Table 2. The distribution of absolute and relative frequencies of demographic variables of the studied individuals

Variables	Variable label	Number (%)	Changes in the quality of sex life	Changes in sexual satisfaction
Economic situation	Poor	16 (12.9%)	-12.13 ± 37.73	-2.16 ± 50.56
	Average	83 (66.9%)	-16.16 ± 96.10	-11.17 ± 9.61
	Good	22 (17.7%)	-25.15 ± 13.10	-12.16 ± 95.52
	Excellent	2 (1.6%)	-12 ± 3.72	-1 ± 4.41
	Missing	1 (0.8%)		
<i>P</i> value			0.036*	0.242
Women's education level	Diploma	59 (47.6%)	-17.15 ± 5.71	-9.14 ± 11.31
	Associate's degree	18 (14.5%)	-14.14 ± 16.46	-5.19 ± 88.04
	Bachelor's degree	35 (28.2%)	-20.16 ± 17.66	-12.22 ± 42.53
	MSc. and higher	7 (5.6%)	-23.20 ± 14.83	-12.17 ± 58.84
	Missing	5 (4%)		
<i>P</i> value			0.467	0.598
Education level of their spouses	Diploma	70 (56.5%)	-16.15 ± 65.91	-10.16 ± 02.29
	Associate's degree	15 (12.1%)	-22.12 ± 6.67	-18.14 ± 06.33
	Bachelor's degree	23 (18.5%)	-14.17 ± 60.77	-3.21 ± 08.48
	MSc. and higher	10 (8.1%)	-22.21 ± 80.32	-14.19 ± 70.70
	Missing	6 (4.8%)		
<i>P</i> value			0.381	0.063
Employment status of women	Public sector employee	3 (2.4%)	-20.0 ± 66.57	-8.19 ± 33.62
	Housewife	111 (89.5%)	-16.15 ± 99.48	-9.16 ± 99.98
	Freelance	9 (7.3%)	-16.25 ± 66.01	-5.28 ± 77.74
	Missing	1 (0.8%)		
<i>P</i> value			0.925	0.791
Employment status of their spouses	Public sector employee	14 (11.3%)	-23.13 ± 92.89	-10.15 ± 42.81
	Worker	45 (36.3%)	-15.13 ± 80.97	-7.17 ± 04.75
	Freelance	62 (50%)	-17.18 ± 54.13	-12.18 ± 19.44
	Unemployed	3 (2.4%)	-4.4 ± 33.72	-14 ± 3.17
<i>P</i> value			0.200	0.296
Place of residence	City	75 (60.5%)	-18.17 ± 06.07	-12.19 ± 42.01
	Village	48 (38.7%)	-16.15 ± 25.12	-5.15 ± 72.53
	Missing	1 (0.8%)		
<i>P</i> value			0.549	*0.043
Menstrual status	Regular	87 (70.2%)	-14.16 ± 43.31	-8.18 ± 40.80
	Irregular	37 (29.8%)	-24.14 ± 08.08	-12.15 ± 94.38
<i>P</i> value			0.002*	0.197
Type of childbirth	Natural	44 (35.5%)	-19.18 ± 93.10	-12.15 ± 88.41
	Elective cesarean section	8 (6.5%)	-16.10 ± 50.09	-11 ± 17.57
	Emergency cesarean section	7 (5.6%)	-6 ± 5.7	-0.6 ± 57.39
	Missing	65 (52.4%)		
<i>P</i> value			0.089	0.068
Birth control (contraception) method	Natural	74 (59.7%)	-19.15 ± 35.61	-12.16 ± 04.14
	Condoms	24 (19.4%)	-16.13 ± 54.85	-18 ± 4.71
	Hormonal methods	15 (12.1%)	-6.20 ± 33.39	-3.24 ± 53.62
	Missing	11 (8.9%)		
<i>P</i> value			0.018*	0.074

*Significant at the level of $P < 0.05$

Table 3. The comparison of the mean scores of sexual satisfaction dimensions of studied women before pregnancy and one year after pregnancy

Variable	Before Pregnancy	One year after delivery	The rate of change in sexual satisfaction	P value
		Mean ± SD	Mean ± SD	
Dimensions of sexual satisfaction				
Records	31.6 ± 80.29	30.5 ± 93.83	-0.8 ± 87.01	0.229
Physical and psychological barriers	31.4 ± 51.75	29.5 ± 70.06	-3.6 ± 44.37	<0.001*
Dominant cultural values	22.3 ± 7.82	20.3 ± 20.81	-1.5 ± 86.64	<0.001*
Factors related to the husband	21.3 ± 04.67	17.3 ± 45.85	-3.4 ± 58.87	<0.001*
Sexual satisfaction	63.13 ± 45.62	52.13 ± 38.59	-9.17 ± 75.91	<0.001*

Note. SD: Standard deviation.

Table 4. The comparison of the mean scores of the dimensions of quality of sex life of the studied women before pregnancy and one year after pregnancy

Variable	Before pregnancy	One year after delivery	The rate of change in sexual satisfaction	P value
	Mean ± SD	Mean ± SD	Mean ± SD	
Dimensions of the quality of sex life				
Sexual-psychological emotions	34.6 ± 37.96	29.8 ± 99.35	-4.8 ± 38.89	<0.001
Satisfaction with sex	25.3 ± 12.89	15.5 ± 18.52	-9.7 ± 93.10	<0.001*
Self-worthlessness	14.3 ± 81.02	13.3 ± 34.79	-1.4 ± 46.44	<0.001*
Sexual repression	14.3 ± 08.31	12.3 ± 56.96	-1.4 ± 52.48	<0.001*
Quality of sex life	88.14 ± 40.19	71.13 ± 08.29	-17.16 ± 31.24	<0.001*

Note. SD: Standard deviation.

Table 5. The correlation coefficient matrix of the quality of sex life and sexual satisfaction before pregnancy and one year after delivery and their changes in the subjects

	1	2	3	4	5	6
1. The quality of sex life before pregnancy	1	0.727** <i>P</i> <0.001	0.304** 0.001	0.370 <i>P</i> <0.001	-0.626 <i>P</i> <0.001	-0.282 0.002
2. Sexual satisfaction before pregnancy		1	0.171 0.057	0.179* 0.047	-0.495 <i>P</i> <0.001	-0.465 <i>P</i> <0.001
3. The quality of sex life one year after delivery			1	0.741** <i>P</i> <0.001	0.553** <i>P</i> <0.001	0.441** <i>P</i> <0.001
4. Sexual satisfaction one year after delivery				1	0.283** <i>P</i> <0.001	0.637** <i>P</i> <0.001
5. Changes in the quality of sex life					1	0.608** <i>P</i> <0.001
6- Changes in sexual satisfaction						1

Note. ** Significant at the level of 0.01.

had the least changes in SS. Conversely, people with high duration of marriage ($\beta \pm 0.289$, $P \pm 0.005$) with an associate degree ($\beta \pm -0.252$, $P \pm 0.016$), regular menstrual status ($\beta \pm -0.218$, $P \pm 0.018$), and a hormonal contraceptive method ($\beta \pm 220$, $P \pm 0.027$) had the most changes in SS.

Discussion

This study evaluated SS, the quality of sex life, and its related factors in nulliparous women. According to the results, the mean scores of the quality of sex life and all its dimensions one year after delivery were significantly lower than before pregnancy. Kisa et al demonstrated that the overall score of the quality of sex life of pregnant women decreases and some changes occur during this period (13). The results of another study suggested that nulliparous women reported a higher score on the SS questionnaire, compared to parous women, regardless of age and mode of delivery. Childbirth seems to have a sustainable impact on sexual function since it appears

to be more than physical factors and goes far beyond the postpartum period (17). Parity has been also reported as one of the factors influencing the quality of women's sex life in the study conducted by Zhao et al (18). Contrary to these results and those of the present study, Fehniger et al reported that parity and the type of delivery were not recognized as the major factors effective on sexual desire and satisfaction in life among women who had at least one childbirth event (12).

The finding of the current study also revealed that the mean scores of SS and its dimensions, including physical and psychological barriers, dominant cultural values, and husband-related factors, were lower one year after delivery than before pregnancy.

Some studies suggested that childbirth can affect SS and the quality of sexual association in women so that most studied women experience postpartum sexual problems, and the likelihood of sexual problems will increase as the age increases and the increased time after childbirth

Table 6. Multivariate regression results in variables related to changes in sexual quality of life in women

Changes in the quality of sexual life		B model coefficient	Standard error	β Standard coefficient	t	P value
Constant		43.735	13.923	-	-3.141	0.002
Age		-1.196	0.388	-0.401	-3.078	0.003
Spouse age		1.117	0.473	0.287	2.362	0.020
Duration of marriage		1.437	0.750	0.186	1.915	0.058
Economic situation	Weak (Ref)	-	-	-	-	-
	Medium	-4.315	4.415	-0.127	-0.977	0.331
	Good	-11.388	5.231	-0.273	-2.177	0.032
	Excellent	-7.050	13.931	-0.056	-0.506	0.614
Women's education	Diploma (Ref)	-	-	-	-	-
	Associate degree	9.626	4.470	0.213	2.153	0.034
	B.Sc.	-4.644	3.691	-0.131	-1.258	0.211
	MSc and higher	0.613	7.803	.008	0.079	0.938
Education of spouses	Diploma (Ref)	-	-	-	-	-
	Associate degree	-9.040	4.305	-0.185	-2.100	0.038
	B.Sc.	-0.356	3.891	-0.009	-0.092	0.927
	MSc and higher	-2.111	5.653	-0.034	-0.373	0.710
Employment status of women	Public sector employee (Ref)	-	-	-	-	-
	Housewife	12.167	7.957	0.234	1.529	0.129
	Self-employment	6.163	9.672	0.100	0.637	0.526
Employment status of their spouses	Public sector employee (Ref)	-	-	-	-	-
	Laborer	3.528	5.595	0.105	0.630	0.530
	Self-employment	2.065	4.994	0.064	0.414	0.680
	Jobless	19.075	9.893	0.184	1.928	0.057
Residence	Village (Ref)	-	-	-	-	-
	City	-0.385	2.841	-0.012	-0.136	0.892
Menstrual status	Irregular (Ref)	-	-	-	-	-
	Regular	12.544	3.056	0.356	4.104	<0.001
Type of delivery	Natural (Ref)	-	-	-	-	-
	Elective cesarean section	-5.708	5.477	-0.088	-1.042	0.300
	Emergency cesarean section	13.878	6.721	0.201	2.065	0.042
Method of contraception	Natural (Ref)	-	-	-	-	-
	Condom	2.959	3.700	0.073	0.800	0.426
	Hormonal methods	15.551	4.570	0.318	3.403	0.001

(19). However, some studies represented that nulliparous women, despite the number of children, feel more pain during intercourse and have less SS than women with children (11). In another study, it was revealed that the number of deliveries and the type of delivery are not known as determining factors for sexual desire, function, and satisfaction in women over 40 (12). The individuals' life and SS and the quality of sex life are related to many sociocultural, demographic, psychological, physical, and even racial factors (20). These factors can explain the differences found in the results of some studies with those of the present study.

The quality of sex life demonstrated a direct and significant association with SS in the studied women before pregnancy and one year after delivery in the current study so that women with high quality of sex

life had higher SS before pregnancy and one year after delivery. Likewise, the change in the quality of sex life had a direct and significant relationship with the change in SS so that individuals with a higher quality of sex life could experience a higher change rate in SS. Although the association between SS and the quality of sex life had not so far been assessed in any research, a study performed by Flynn et al indicated that sexual health and satisfaction appear as an important aspect of the quality of life, which is associated with many demographic variables and even the level of individuals' health (21). In another study, the researchers reported a significant association between the quality of life and its subscales and women's SS and some demographic variables (22).

A significant association was found between changes in the quality of sex life with economic status, menstrual

Table 7. Multivariate regression results in variables related to sexual satisfaction changes in women

Changes in the quality of sexual life		B model coefficient	Standard error	β Standard coefficient	t	P value
Constant		-11.220	16.077	-	-0.698	0.487
Age		-1.243	0.449	-0.376	-2.771	0.007
Spouse age		0.847	0.546	0.196	1.552	0.124
Duration of marriage		2.472	0.866	0.289	2.853	0.005
Economic situation	Weak (Ref)	-	-	-	-	-
	Medium	-11.634	5.098	-0.309	-2.282	0.025
	Good	-11.664	6.040	-0.252	-1.931	0.056
	Excellent	-17.220	16.087	-0.123	-1.070	0.287
Women's education	Diploma (Ref)	-	-	-	-	-
	Associate Degree	12.649	5.162	0.252	2.450	0.016
	B.Sc.	1.569	4.262	0.040	0.368	0.714
	MSc and higher	3.097	9.010	0.038	0.344	0.732
Education of spouses	Diploma (Ref)	-	-	-	-	-
	Associate degree	-12.046	4.971	-0.222	-2.423	0.017
	B.Sc.	6.244	4.493	0.135	1.390	0.168
	MSc and higher	-2.979	6.527	-0.044	-0.456	0.649
Employment status of women	Public sector employee (Ref)	-	-	-	-	-
	Housewife	3.336	9.187	0.058	0.363	0.717
	Self-employment	-5.512	11.168	-0.081	-0.494	0.623
Employment status of their spouses	Public sector employee (Ref)	-	-	-	-	-
	Laborer	3.301	6.461	0.089	0.511	0.611
	Self-employment	-1.839	5.767	-0.052	-0.319	0.750
	Jobless	15.319	11.423	0.134	1.341	0.183
Residence	Village (Ref)	-	-	-	-	-
	City	-4.725	3.280	-0.130	-1.440	0.153
Menstrual status	Irregular (Ref)	-	-	-	-	-
	Regular	8.515	3.529	0.218	2.413	0.018
Type of delivery	Natural (Ref)	-	-	-	-	-
	Elective cesarean section	-12.371	6.325	-1.172	-1.956	0.053
	Emergency cesarean section	10.254	7.761	.134	1.321	0.190
Method of contraception	Natural (Ref)	-	-	-	-	-
	Condom	7.343	4.273	0.164	1.719	0.089
	Hormonal methods	11.885	5.277	0.220	2.252	0.027

status, and the contraception method of individuals in the present study. Furthermore, regarding the relationship between individual variables and changes in SS before pregnancy and one year after delivery, only the association between the place of residence and changes in SS appeared significant. According to Flynn et al, sexual health and SS were correlated with factors such as age, gender, sexual activity status, and the general health of individuals (21). Moreover, another study showed that age and gender are also important factors with an impact on satisfaction with sexual relationships (23). The findings of this study demonstrated a significant association between changes in the quality of sex life and economic status, menstrual status, contraception method, and the place of residence of individuals so that individuals with good economic status, irregular menstruation, natural birth

control methods, and urban residency had experienced the highest rate of change in the quality of sex life after a year. Similarly, Forbes et al concluded that age is the strongest predictor of the decreased quality of sex life in men. They further indicated that although age reduces the quality of sexual relationships, it does not have much effect on the quantity (24). In another study, a statistically significant relationship was found between SS scores and contraceptive methods (25). However, in this study, other individual variables, including age, age of spouse, duration of the marriage, education level and occupation of women and their husbands, and the type of delivery, revealed no statistically significant difference with the change in the quality of sex life and changes in SS. The existing differences may be due to cultural and racial differences in various studies. However, concerning age, women of

childbearing potential up to 37 years were examined in the current study, and differences in satisfaction and quality of sex life seem to represent themselves at older ages.

Additionally, sexual desire and SS are associated with factors such as emotional expression and postpartum depression, and such psychological issues can affect people's sexual desire and pleasure (26). Thus, in addition to physical problems, any demographic factor may influence people's mental health, SS, and the quality of sex life. Accordingly, the findings of a study revealed that cognitive variables such as sexual attitudes, sexual hallucinations, and body images affect SS (23).

Conclusion

SS and its dimensions, including physical and psychological barriers, dominant cultural values, and husband-related factors, as well as the mean score of the quality of sex life, were lower one year after delivery than before pregnancy. Furthermore, women with a higher quality of sex life had higher SS in both evaluation times. Thus, it is suggested to focus on deeper and broader aspects of women's sexual health in future studies, and surveys would be made based on community culture in different geographical areas.

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Conflict of Interests

The corresponding author of this article is the executive assistant of the journal, the entire process of examining and reviewing the article was the same as that of the other authors and there is no conflict of interest.

Ethical Approval

This study was approved by the Ethics Committee of Shahrekord University of Medical Sciences (Approval code: IR.SKUMS.1395.116).

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