



Sexual Function and Quality of Life Among Postpartum Women: A Cross-Sectional Study

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Abstract

Objectives: Sexual function plays an important role in strengthening the marital relationship. Sexual issues affect individuals' quality of life. This study aimed to investigate the association between the sexual function and the quality of life among postpartum women in Iran.

Materials and Methods: For this cross-sectional descriptive study, 380 postpartum women who had referred to 10 urban health care centers in the west of Iran were chosen. They were recruited using the randomized cluster sampling method. A checklist for socio-individual and maternal status of women, female sexual function index (FSFI) and SF-36 questionnaire were used for data collection. Descriptive and inferential statistics were used for data analysis via SPSS software.

Results: Most of the participants (76.3%) suffered from sexual dysfunction. Sexual desire was the most prevalent sexual dysfunction (79%). Moreover, the majority of the women achieved moderate scores in the subscales of the SF-36 questionnaire. The women with higher FSFI scores achieved higher scores in all SF-36 subscales. The Pearson correlation coefficient showed an appositive statistically significant linear correlation between the women's general health and all dimensions of the FSFI except for pain during sexual relationships. The logistic regression analysis revealed that sexual function was a protective factor against the reduction of the quality of life, because quality of life was higher among the women with a higher level of sexual function compared to those with a lower sexual function ($P < 0.05$).

Conclusions: Sexual dysfunction in the postpartum period could adversely affect the women's quality of life. While sexual problems are very common in the postpartum period, they are not reported in most cases. Health care providers should design appropriate programs such as extended postpartum counseling for the women in the postpartum period.

Keywords: Quality of life, Sexual dysfunction, Postpartum, Childbirth, Delivery, Iran

Introduction

The promotion of women's health is one of the most important indicators of the health status of a nation (1). Sexual activities in the postpartum period and the provision of related advice are the important elements of the women's health care (1,2). Out of 90% of the women who begin sexual activities 6 months after childbirth, 84% experience sexual problems (3). Appropriate sexual function can lead to the improvement of individuals' life conditions. On the contrary, sexual dysfunction can affect both parents' quality of life and their marital relationship, as sexual desire plays a key role in the individuals' health, quality of life, and overall welfare (3, 4). In many countries, sexual dysfunction is considered a taboo subject that negatively affects the quality of life and may cause mental disorders (5). Therefore, the postpartum period can be considered for the examination of health-related issues and sexual function (2). However, a small fraction of women (15%) report sexual problems after childbirth or consultation with the healthcare team. According to previous studies, this can be due to a lack of information about the healthcare team or unwillingness to discuss this

problem in postpartum care (6-8).

Consulting about sexual problems especially in Asian societies such as Iran have not been discussed generally and widely due to cultural and religious issues. Consequently, this may hinder providing appropriate services for the target group (1,9).

The quality of life is a multi-dimensional phenomenon and is influenced by physical, psychological, emotional, social, sexual, and spiritual health factors (10). A few studies have been carried out on the relationship between the quality of life in the postpartum period and factors influencing it (11-14). Although sexual dysfunction is one of the factors that adversely affects women's quality of life in the postpartum period, the association between the sexual function and the quality of life has not been adequately studied (1,2,12). Therefore, this study aimed to examine the association between sexual function and the quality of life in the postpartum period.

Materials and Methods

This cross-sectional study was conducted in 10 urban healthcare settings in a city in the west of Iran. The study

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group consisted of all the women who met the following criteria: less than 8 months had passed since childbirth, aged ≥ 18 years old, childbirth at 38-42 weeks of the gestational age, and the desire to participate in the study. Women with the following criteria were excluded from the study: any obstetric complications for the mother or baby at birth, postpartum depression, any disability or chronic illness, any type of surgery in the past 3 months for each spouse, and genital lesions that caused some problems in sexual intercourse. Sampling was performed using the cluster random sampling method. Initially, the city of data collection was divided into 5 geographic regions (center, north, south, east, and west). Next, 2 health care centers in each region were selected randomly. Each region was considered a cluster. Since the number of households covered by each healthcare center was different, proportional random sampling was used to determine the sample size in each center. After reviewing family health records, eligible women were identified and randomly selected to participate in the study. The aim and method of study were explained to the women. The participants were informed that collected data will be kept confidential and the women could withdraw from the study anytime without any effect on their care.

The sample size ($n = 375$) was calculated based on $\alpha = 0.05$ and $\sigma = 22$ (15). Given the possibility of the attrition of the samples, 400 women were selected randomly using the numbers assigned to the women's medical records. Lastly, 380 postpartum women were accepted to take part in the project and fill out the questionnaires (response rate = 95%).

A checklist examined the socio-demographic characteristics of the participants and was filled out based on the women's self-report. Demographic data consisted of age, number of livebirth, method of childbirth, occupation, medical history, education level, and history of divorce. The health-related quality of life (HRQOL) questionnaire was a multi-dimensional instrument and was validated by Montazeri et al (16) in Iran. It examined 8 aspects of the quality of life including physical function (10 items), general health (5 items), bodily pain (2 items), role limitations due to physical problems (4 items), vitality (4 items), role limitations due to emotional problems (3 items), mental health (5 items), and social function (2 items). The internal consistency of this instrument was assessed using the calculation of Cronbach's alpha coefficients in 8 dimensions that were reported as 0.77-0.90 (16).

The women's sexual activities in the previous month was studied using the female sexual function index (FSFI). This instrument was designed in 2000 by Rosen et al (17) and its reliability was assessed by previous studies (18-20). This scale evaluated 6 domains of sexual function in the past month including sexual desire (2 cases), arousal (4 cases), lubrication (4 cases), orgasm (3 cases), sexual satisfaction (3 cases), and pain (3 cases). Moreover, the

questions 1, 2, 15 and 16 were scored from 1 to 5 and other questions were scored from 0 to 5. The zero score in each of these areas indicated no sexual activity in the previous month. The summation of the domains' scores was multiplied by the related coefficients (5). The range of the scores was reported as 2-36 and a lower score indicated a poorer sexual function. $FSFI \leq 28$ was considered sexual dysfunction. Furthermore, achieving less than 65 of the total score of each domain indicated sexual dysfunction in that domain. As a result, scores less than 3.9 in each 6 domains were considered sexual dysfunction (18).

The reliability and validity of this questionnaire were evaluated by other studies (19,20). In terms of reliability and validity, the Farsi version of this instrument was assessed by Mohammadi et al and Fakhri et al (21,22). The internal consistency of the questionnaire was also assessed using the Cronbach's alpha coefficient, that was reported as 0.72-0.90.

Before data collection, the Ethics Committee affiliated with Ilam University of Medical Sciences, Iran, approved the study research protocol. The researchers referred to the health care centers from June 2014 to June 2015. After explaining the aim of the study, the women were asked to participate in individual interviews. Interviews were carried out by a female interviewer in a private place convenient to the participants. The women who agreed to take part in this study signed the written informed consent form prior to the study.

Face and content validity of the questionnaires were assessed by 10 faculty members affiliated with the university in which the authors worked. The final versions of the questionnaires were tested for reliability in a pilot study on 25 women in the postpartum period. The SPSS software version 15.0 was used for data analysis. Relationships between the women's sexual function and the quality of life were assessed by inferential statistics including independent *t* tests, chi-square, Pearson correlation coefficient, and logistic regression as appropriate.

Results

In this study, 380 women participated, from which 93, 153, and 134 women filled out the questionnaires at 8-12 weeks, 3-5 months, and 6-8 months of the postpartum period, respectively. About half of the women ($n = 202$, 53.2%) were primiparous and the method of childbirth in 233 (61.3%) of the women was the caesarean section. The mean (SD) of the participants' age was 29.81(5.5) years. Most of the women were housewives (86.6%) and almost half of them (44.7%) had an academic education degree (Table 1). The rate of cesarean section was higher among primiparous women than those with higher incomes and the educated women. The mean (SD) of the total sexual function in the postpartum period was 22.24 (7.93). The majority of the women (76.3%) suffered from sexual dysfunction in the postpartum period (the score of the sexual function ≤ 28).

Table 1. The Maternal and Socioeconomic Characteristics of the Women

Characteristics	No. (%)
Age (y)	
15-25	74 (19.5)
25-35	234 (61.6)
>35	72 (18.9)
Education (y)	
<12	210 (55.3)
>12	170 (44.7)
Job	
Housewife	329 (86.6)
Employed	51 (13.4)
Number of deliveries	
1-2	338 (88.9)
>2	42 (11.1)
Income	
Fair	252 (66.3)
Poor	128 (33.7)
Type of delivery	
NVD	147 (38.7)
CS	233 (61.3)
Breastfeeding	
Yes	339 (89.2)
No	41 (10.8)
Time passed since birth (mon)	
<3	128 (33.7)
>3	252 (66.3)

Abbreviations: NVD, normal vaginal delivery; CS, caesarian section.

The most common sexual dysfunction in the postpartum period was a lack of sexual desire, which was reported by 79% of the women. No statistically significant relationship was reported between the method of childbirth and sexual dysfunction in the postpartum period. Furthermore, there were no statistically significant relationships between the women's level of education, income and occupation, and sexual dysfunction. The mean score of sexual function was significantly higher in the non-lactating women compared to the lactating ones ($P=0.006$).

No statistically significant relationship was reported between the women's quality of life and the method of childbirth. The younger women had a better quality of life in vitality, social function and bodily pain domains ($P<0.05$). The employed women significantly had a higher quality of life in vitality, mental health and physical function domains compared to the housewives ($P<0.05$). Moreover, different aspects of quality of life and breastfeeding had no statistically significant relationships. The mean scores of quality of life of the women in the postpartum period based on the sexual function are shown in Table 2. The women with higher sexual function scores had significantly higher quality of life in all aspects. The Pearson correlation coefficient showed a positive significant relationship between general health and other domains of sexual function except for pain during sexual intercourse (Table 3).

Binary logistic regression analyses showed the

Table 2. The Participants' Scores in Eight Aspects of HRQoL According to Their Sexual Function

Subscales of the SF-36	Sexual Dysfunction		P-value
	Yes Mean(SD)	No Mean(SD)	
General health	48.77 (14.0)	55.38 (13.2)	<0.001
Vitality	57.20 (19.1)	70.72 (15.2)	<0.001
Mental health	65.37 (18.2)	77.28 (15.9)	<0.001
Role emotional	58.73 (39.6)	68.88 (36.6)	0.031
Social function	65.64 (22.1)	78.33 (17.55)	<0.001
Bodily pain	61.24 (21.3)	73.26 (15.5)	<0.001
Role physical	57.74 (36.4)	69.44 (32.4)	0.001
Physical function	65.32 (26.33)	75.00 (22.2)	0.002
Physical HRQoL (total) ^a	57.74 (16.57)	68.27 (14.84)	<0.001
Mental HRQoL (total) ^b	61.74 (19.3)	73.80 (16.9)	<0.001

^a Physical HRQoL referred to mean score of PF+BP+RP+GH.

^b Mental HRQoL referred to mean score of VT+MH+SE+RE.

relationship between the dimensions of sexual function and the quality of life. The estimated odds ratios (OR) and 95% CI of binary logistic regression analysis are reported in Table 4. According to the logistic regression analysis, the dimensions of sexual function including arousal, lubrication, orgasm, and sexual satisfaction were protective factors against the quality of life. The probability of poor physical and mental quality of life was lower among the women with higher sexual function scores compared to those with a lower sexual function. The women with high sexual desire had 31% lower odds of poor physical quality of life than those with lower sexual desire (CI=0.415–1.177, OR=0.699). Likewise, the women with low pain had 16% lower odds of poor physical quality of life than those with high feeling of pain (CI=0.566 –1.267, OR=0.847) (Table 4).

Discussion

It was found that the most prevalent sexual dysfunction was the lack of sexual desire. In the studies of Shirvani et al and Boroumandfar et al in Iran, a reduction in sexual desire was reported for 40% of the women in postpartum period (3,23). However, the findings of other studies in Iran showed that only 2.4% of the women reported postpartum sexual problems due to cultural and social beliefs (23). Additionally, healthcare providers lacked enough knowledge and time during consultation in the postpartum period, which caused insufficient advice regarding sexual problems in the postpartum period. The study of Cheng et al showed that most women preferred to discuss sexual issues with healthcare providers instead of their family or friends (24). The findings of previous studies showed that healthcare providers' education besides support by the family and spouses led to the improvement of sexual relationships and quality of life in the postpartum period (25,26). Emerging various life changes after childbirth such as fatigue, anxiety and caring for the newborn negatively affected the women's sexual

Table 3. The Correlation Between the Quality of Life Dimensions and the Sexual Function of the Women in the Postpartum Period

FSFI Domains	Subscales of the SF-36					
	Physical Health			Mental Health		
	General Health	Physical Function	Bodily Pain	Mental Health	Social Function	Vitality
Sexual desire	0.138**	0.041	0.200**	0.235**	0.262**	0.266**
Arousal	0.118*	0.104*	0.249**	0.257**	0.262**	0.254**
Lubrication	0.123*	0.162**	0.249**	0.243**	0.245**	0.221**
Orgasm	0.163**	0.154**	0.267**	0.248**	0.250**	0.241**
Satisfaction	0.210**	0.112*	0.295**	0.304**	0.312**	0.270**
Pain	0.070	0.065	0.209**	0.135**	0.180**	0.197**

* $P < 0.05$, ** $P < 0.01$.

Table 4. The Relationship Between the Sexual Function and Quality of Life in the Postpartum Period Based on the Logistic Regression Analysis

Variable	Physical Quality of Life			Mental Quality of Life		
	OR	95% CI	P Value	OR	95% CI	P Value
FSFI Domains						
Sexual desire	0.699	0.415 – 1.177	0.178	0.713	0.423 – 1.203	0.205
Arousal	0.541	0.356 – 0.822	0.004	0.441	0.288 – 0.675	<0.001
Lubrication	0.401	0.264 – 0.609	<0.001	0.502	0.332 – 0.759	0.001
Orgasm	0.367	0.240 – 0.562	<0.001	0.389	0.255 – 0.594	<0.001
Sexual satisfaction	0.411	0.260 – 0.649	<0.001	0.458	0.291 – 0.720	0.001
Pain	0.847	0.566 – 1.267	0.418	0.676	0.451 – 1.014	0.058
Total	0.409	0.235 – 0.711	0.002	0.350	0.197 – 0.620	<0.001

Abbreviations: FSFI, Female sexual function index, Poor quality of life = 1, Good quality of life = 0.

life and quality of life (2,6,27); though, the women’s sexual problems improved gradually after childbirth (23,28). However, the findings of some studies showed that the women reported some degrees of sexual dysfunction one year after childbirth (23,27). Therefore, it is recommended to pay more attention to the sexual problems of women in the postpartum period that consequently can improve women’s quality of life. The findings of the present study also showed that most women had a moderate level of quality of life, which was consistent with the findings of Bahrami et al in Iran (29).

In the present study, there was a statistically significant relationship between the women’s sexual function and quality of life. Moreover, in this study, sexual function played a protective role for the quality of life. The women with high sexual function had 60% and 65% less poor physical and mental quality of life than those with a low sexual function. These findings are consistent with the results of Naeinian et al and Lau et al in Iran and China, respectively (30,31).

There was a positive statistically significant relationship between the mental aspects of quality of life such as mental health, social function and vitality and different aspects of the sexual function. Lau et al believed that sexual problems in women were more related to their mental health. Sexual health and quality of life were also associated together (31, 32). Consequently, a low sexual desire as a main problem was reported by the women in this study, which led to low sexual satisfaction, low quality of marital relationship, and

low quality of life. Satisfaction with sexual relationships and sufficient sexual desire were the most important parts of the marital relationship, which could affect the quality of life in social, psychological and physical aspects (33, 34).

Limitations

Data about the women’s quality of life and the sexual function before childbirth was not collected. Therefore, no evidence is available whether sexual problems occurred in the postpartum period or in the childbirth. Some other possible confounding factors might also have affected the validity of the findings.

Conclusions

Postpartum sexual dysfunction can affect the women’s quality of life. As postpartum care is limited to 6 weeks after childbirth, the duration of providing postpartum care should be reconsidered, for instance one year after the childbirth. In addition, the content of postpartum care should be revised with an emphasis on sexual problems. It is also recommended to examine the effectiveness of such programs on the women’s quality of life in societies with different cultures. Health care providers should design appropriate programs such as extended postpartum counseling for the women in the postpartum period.

Ethical Issues

This paper was derived from a research project approved in Research Council of Ilam University of Medical Sciences

under the code of ethics: EC/93/H/259.

Conflict of Interests

No conflict of interests is declared by the authors in this study.

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