Evaluation of Sexual Function, Quality of Life, and Mental and Physical Health in Pregnant Women

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Abstract

Objective: To evaluate sexual function and its relationship with quality of life, and mental and physical health in pregnant women.

Materials and methods: Obtained results showed that 59 (39/3%) pregnant women were "very dissatisfied", 25 (16/7%) women were "moderately dissatisfied", 64 (42/7 %) women were "both satisfied and unsatisfied", only 2 (1/3 %) women were relatively satisfied, and no one was "very satisfied". There is a significantly negative weak correlation between female sexual function with anxiety and depression, while there is a significantly positive weak correlation between female sexual function with the general quality of life, psychological health and environment dimensions. Only depression predicts female sexual function significantly. The women more than 10 years passed of their marriage showed more sexual satisfaction compared to those less than 10 years passed of their marriage ($p< 0.05$).The roles of predictive variables in sexual dissatisfaction, as well as the limitations for the study are discussed in the article.

Results: Obtained results showed that 59 (39/3%) pregnant women were "very dissatisfied", 25 (16/7%) women were "moderately dissatisfied", 64 (42/7 %) women were "both satisfied and unsatisfied", only 2 (1/3 %) women were relatively satisfied, and no one was "very satisfied". There is a significantly negative weak correlation between female sexual function with anxiety and depression, while there is a significantly positive weak correlation between female sexual function with the general quality of life, psychological health and environment dimensions. Only depression predicts female sexual function significantly. The women more than 10 years passed of their marriage showed more sexual satisfaction compared to those less than 10 years passed of their marriage ($p< 0.05$).The roles of predictive variables in sexual dissatisfaction, as well as the limitations for the study are discussed in the article.

Conclusion: Depression as same as environment heath had an important effect on sexual satisfaction in pregnant women and so assessment of depression and environment health in medical program for pregnant women is necessary. Also considering decrease in sexual satisfaction in aging training new methods for sexuality can be useful.

Keywords: Sexual Function, Quality of Life, Mental and Physical Health

Introduction

Sex in humans is a resultant of biological structure, life experiences, knowledge, behavior, and attitudes, which is influenced by physical, psychological, interpersonal, and cultural factors. Despite of the significant advances in the treatment of sexual problems, knowledge about the nature of sex in humans is low, especially the lack of knowledge

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about women's sexual problems compared to men's. In other words, relatively little information about relationship among sexual behavior, sexual attitudes, sexual fantasies and sexual functioning in women is available.

Prevalence of sexual dysfunctions in American women 43 % and in men 31% was reported in National Health and Social Life Survey (1). Lacks of libido, inability to achieve orgasm, pleasure and pain during sexual intercourse were the most common sexual problems in women (2). It also showed that sexual activity during pregnancy (3-6) and postpartum (4) is reduced.

The review of literature shows that the following six factors decrease libido, frequency of sexual intercourse and sexual satisfaction during pregnancy: (i) change in social role happening from pregnancy to parenthood, (ii) sexual satisfaction, (iii) mood, (iv) fatigue, (v) physical changes related to childbirth and (vi) breast-feeding (4). Factors affecting sexual behavior during pregnancy and postpartum are known to be among biological factors (fatigue, exhaustion, dyspareunia, and back pain), psychological factors (psychological symptoms, such as depressed mood, premenstrual sexual history, negativism and ambivalence to pregnancy, and guilt over sexual activity), interpersonal factors (decreased sexual interest, unwanted pregnancy, lack of satisfaction in interpersonal relationship and ambivalent attitudes toward partner), as well as fears and concerns (such as fear of injury to the fetus, pain and premature delivery, miscarriage, bleeding and membranes rapture) (3, 7-9). Review of literature by Crista and Johnson (2011) (10) has shown that despite fears and stories about sexual activity during pregnancy, maintenance of sexual interactions during pregnancy and after it promotes physical health, well-being, and deepening intimacy.

The aim of present study was to evaluate sexual function, quality of life, mental and physical health in pregnant women. Moreover, differences in sexual dysfunction based on the women length of marriage were also investigated in this study.

Materials and methods

Using a descriptive correlational design, 150 pregnant women attending in a training course for pregnancy, held in Shahid Mostafa Khomeini Hospital, Tehran, Iran, during their 20th and 37th weeks of pregnancy, selected by goal oriented sampling method for study.Including criteria were being in 20th to 36th weeks of delivery, appling for participating in training course willingly, and to be candidate for normal delivery. Also Excluding criteria were lack of orthopedic problems, Lack of Cephalopelvic Disproportion Pathophysiology (CDP), lack of distress fetus, and lack of placenta per via.

Training were held in group sessions in classes including 20 trainee. After obtaining the course chief administer approval, the researcher were attended in the classes individually, explained the aims of the study for the participants, and asked their cooperation. Finally questionnaires were completed by those attendants declared their oral agreements.

The mean (standard deviation) age for participants was 28.4 (4.96) and mean (standard deviation) duration of their marriage was 6.59 (4.40) years. Following questionnaires were applied in order to collect information from all participants:

Female sexual function index (FSFI)

Female Sexual Function Index, as a generic standard questionnaire, contains 19 items and addresses women's sexual function in 6 dimension including sexual desire (frequency and level of sexual desire), arousal (frequency and level of arousal and satisfaction with sexual arousal), lubrication (frequency and difficulty of vaginal lubrication and problem in orgasm related to vaginal lubrication), orgasm (frequency of orgasm, difficulty in reach orgasm and satisfaction with orgasm), satisfaction (satisfaction with emotional closeness with a spouse, satisfactory sex with wife and overall life satisfaction) and pain (frequency and level of pain during and after intercourse) (11). The overall index score of sexual function is also calculated. The higher score means better sexual functioning. Psychometric properties of this questionnaire were confirmed by some studies (11, 12). In Iran, validity and reliability of this questionnaire on women with sexual dysfunction and control groups have been studied by Mohhamadi and Et al (2008). Cronbach's alpha for the sexual function index and it`s dimensions ranged 0.70 (sexual desire) to 0.91 (orgasm). (13). Construct validity of the questionnaire studied by Khademi and Et al (2006) (14) on 547 Iranian women showed 5 dimensions that are comparable with the original factor structure studied by Rosen and Et al (11).

World health organization quality of life questionnaire (WHOQOL-BRIEF)

This questionnaire has 26 items that the first two items are analyzed separately. The first item assesses

person's perception of general quality of life and the second item assesses person's perception of general health. Questionnaire has the Likert scale (1-5), while items 3, 4 and 26 are reverse scoring. WHOQOL-BRIEF measures physical health, mental health, social relationship and environment influences (15). Psychometric properties of questionnaire have been reviewed by several studies (16, 17). Cronbach alpha coefficients for all dimensions, except social relationship, were above 0.70, being acceptable. Also, construct validity via the distinction between quality of life in healthy people and those with chronic illness has been confirmed by Nejat and Et al in Iranian population in 2006(18).

Depression, anxiety and stress scale (short form) (DASS-21)

DASS-21 contains 21 items and is associated with negative emotions (depression, anxiety and stress) . Depression subscale includes statements assessing unhappy, lack of self-esteem, hopelessness, worthless of life, lack of interest, lack of enjoyment of life, and lack of energy and power. Items including in anxiety subscale assess physiological hyperactive, situational fears and anxieties, while stress subscale addresses difficulty to reach relaxation, tension in the past, and irritability. After reading the items, respondents should rate the frequency of the symptoms experiencing over the past week using a four-likert scale (from zero to three) (19). Studies have shown that the DASS-21subscales have good psychometric properties. In Iran, psychometrics properties of DASS-42 and DASS-21 were examined and confirmed by Afzali and Et al (2008) and Asghari and Et al (2005) (20, 21).

Results

Descriptive measures on Female Sexual Function Index for the pregnant women studied are given in table 1.

Data showed that the 59 (39/3%) pregnant women studied were "very dissatisfied" from their sexual function, 25 (16/7%) women were "moderately dissatisfied", 64 (42/7 %) women were "both satisfied and unsatisfied", only 2 (1/3 %) women were relatively satisfied, and no one was assigned in the "very satisfied" group. The results related to the correlation between women sexual function and some other variables studied are presented in table 2.

Data depicted in table 2 shows that there is a significantly negative weak correlation between female sexual function with anxiety and depression, while there is a significantly positive weak correlation between female sexual function with the general Quality Of Life (QOL), psychological health and environment dimensions.

The results of statistical analysis of variance and multiple regressions in order to determine the effect of variables (depression, anxiety, stress, physical health, psychological health, social relationship and environment) on the total score of sexual function in the sample studied are presented in table 3. The results of statistical analysis of variance and multiple regressions in order to determine the effect of variables (depression, anxiety, stress, physical

Table 1: Descriptive measures on Female Sexual Function Index for the pregnant women studied

Scale	Subscale	Mean	Standard deviation	Skewness	Kurtosis	Minimum	Maximum
	Sexual function index	14.21	7.78	-0.01	-1.47	3.2	31.8
	Interest	3.08	1.02	0.121	-0.373	1.2	6
	Arousal	2.03	1.77	0.211	-1.316	0	6
(FSFI)	Lubrication	1.72	1.54	0.05	-1.55	0	4.8
	Orgasm	1.9	1.71	-0.04	-1.72	0	4.8
	Satisfaction	3.76	1.39	0.31	-1.17	1.2	6
	Pain	1.7	1.7	0.49	-0.95	0	5.6
	Anxiety	6.24	4.23	0.94	0.58	0	21
(DASS-21)	Stress	7.06	5.16	0.79	0.12	0	21
	Depression	3.88	4.19	1.64	2.87	0	21
	General QOL	4.07	0.76	-1.11	2.68	1	5
	Satisfaction From health	4.02	0.74	-1.01	1.62	2	5
(WHOQOL-BRIEF)	Physical health	3.74	0.56	-0.44	0.51	1.86	5
	Mental health	3.54	0.49	-0.52	0.16	1.86	4.5
	Social relationship	3.91	0.59	-1.02	2.9	1.33	5
	Environment influences	3.69	0.52	-0.64	0.99	1.88	4.88

Table 2: Presenting the correlations between sexual function and other variables studied in pregnant women

Scale	Subscale	(FSFI)						
		Desire	Arousal	Lubrication	Orgasm	Satisfaction	Pain	Female sexual function
(DASS-21)	Anxiety	**-0.21	-0.12	-0.11	*-0.16	**-0.21	-0.05	*-0.16
	Stress	*-0.19	-0.09	-0.06	-0.11	**-0.25	-0.001	-0.13
	Depression	**-0.25	*-0.18	-0.14	*-0.18	**-0.32	-0.08	**-0.22
(WHOQOL-BRIEF)	General QOL	0.08	*0.20	*0.20	*0.23	*0.23	*0.22	*0.23
	Satisfaction From health	-0.02	0.04	0.001	0.06	0.09	0.06	0.05
	Physical health	0.14	0.03	0.01	0.05	0.13	-0.02	0.06
	Psychological health	0.2	0.13	0.11	*0.16	**0.30	0.09	*0.19
	Social relationship	**0.23	0.09	0.01-	0.08	*0.17	0.09	0.12
	Environment	**0.23	0.14	0.11	0.12	**0.23	0.09	*0.17

*p < 0.05, **p < 0.01

Table 3: Presenting the results of statistical analysis of variance and multiple regression in order to determine the effect of each predictor variable on the total score of female sexual function in pregnant women studied

Variable		Unstandardized Coefficient of regression (B)	Std. Error of regression (SEB)	Standardized Coefficient of regression (Beta)
Model 1	Depression	-0.41	0.14	-0.22**

**p < 0.01, R2= 0.043, N= 150

health, psychological health, social relationship and environment) on the total score of sexual function in the sample studied.

As table 3 shows, among all variables were entered into the regression equation, only the depression scores predict female sexual function, significantly (B= -0.22, t (142) = -2.75, p< 0.01). Other statistics shows that depression predicts a significant proportion of variance of female sexual function; although, this value is very small (R^2= 0.043, F (6, 142) = 7.61, p< 0.01).

Differences between female sexual function and its dimensions in the two groups of pregnant women (those with less and more than 10 years length of marriage) are presented in table 4. It shows that there is a significant differences between women with > 10 years length of marriage and those with <10 years length of marriage in their sexual satisfaction dimension. Mean comparison also reveals that the women with <10 years length of marriage has more sexual satisfaction compared to those with > 10 years length of marriage.

Discussion

In the present study, a systematic enquiry was applied in order to evaluate pregnant women sexuality and its psychological correlates. Our findings confirmed a high prevalence of sexual dissatisfaction among pregnant women studied. The obtained results also showed that depression is the most important predictor of sexual function in pregnant women. Depression revealed a significantly negative correlation with dimensions of desire and orgasm. Our findings are consistent with the results of other studies showing that depression during pregnancy has a significant effect on sexual satisfaction and desire (4). Desire is the first phase of four stages of sexual response, while depressed mood can lead to a decreased libido level, following by a decreased sexual function. The results also showed that the desire and sexual satisfaction were correlated with most of aspects included in quality of life and mental health (anxiety, stress and depression). The finding also revealed the significant correlation between desire and sexual satisfaction with environment health. Environment health is defined as the person's perception of physical environment (pollution, noise, traffic and weather), financial resources, freedom, physical security and home environment. Sexual satisfaction after depression had the highest correlation with psychological health. Psychological health is described as the person's perception about appearance, negative feelings, positive self-esteem, thinking, learning, memory and concentration. Pain and Lubrication had no significant relationship with mental health variables (anxiety, stress and

Table 4: Presenting the differences between sexual function in the two groups of pregnant women (those with less and more than 10 years of marriage), using one-way analysis of variance

Scale	Subscale	Marriage years	Mean	Standard deviation	F
(FSFI)	Female sexual function	Less than 10 years	14.53	7.99	0.768
		More than 10 years	13.24	7.17	
	Interest	Less than 10 years	3.11	1.02	0.642
		More than 10 years	3.02	1.01	
	Arousal	Less than 10 years	2.09	1.87	0.46
		More than 10 years	1.84	1.43	
	Lubrication	Less than 10 years	1.78	1.59	0.433
		More than 10 years	1.55	1.4	
	Orgasm	Less than 10 years	1.95	1.74	0.610
		More than 10 years	1.78	1.67	
	Satisfaction	Less than 10 years	3.9	1.43	*0.030
		More than 10 years	3.34	1.19	
	Pain	Less than 10 years	1.71	1.7	0.996
		More than 10 years	1.71	1.72	

**p < 0.05

depression) and quality of life. Lack of correlation between the mentioned variables is probably due to the fact that Pain and Lubrication are more affected by the physiological and hormonal changes and fatigue (10). Results also indicated a decreased sexual satisfaction in the women studied over the time (3, 4, 6, 7). It seems that as the age increases, physiology of sex and sexual response cycle are affected and hormonal changes occurs. Consequentially sexual desire and frequency of intercourse decrease which ultimately lead to lower sexual satisfaction (4). Also with increasing age, the body image changed. High body esteem and low frequency of appearance-based distracting thoughts during sexual activity are predictors of sexual satisfaction in women (22).

Although there were only three women over 40 years old in this study, but it may be noted that menopause can have its effects on physical changes (declining vagina lubrication and experiencing more thinner and less flexible vagina walls) and decrement in sexual desire as estrogen levels decreases. Other studies also revealed the decrement in sexual desire and increment in sexual dysfunctions in midlife as a result of menopause (23).

Ignoring sexual satisfaction of pregnant women spouse during the course of pregnancy could be considered as a limitation for the present study. The history of participants for sexual satisfaction and mental health prior to their pregnancy were also not considered. Investigation of sexual function in both women and their spouses before pregnancy, during pregnancy and after pregnancy in a time series study is suggested. In addition, studying sexual dysfunction in pregnant and non- pregnant women is suggested in a comparative study.

Conclusion

Findings revealed depression as a most predictive variable for sexual satisfaction and sexual desire during pregnancy. Therefore considering mental status of the mothers and their psychological and psychiatric assessment during this period will be a good help to them. Feeling satisfaction and sexual desire are also related with environment health, and improving environment atmosphere especially home environment can promote sexual satisfaction. Finally regarding decreasing in sexual satisfaction as a consequence of aging, improving women knowledge and providing special training to increase their competency in intercourse and flirting can help them to achieve more sexual satisfaction.

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