ORIGINAL ARTICLE

Postpartum sexual function in women and infant feeding methods

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Abstract

Objective: To assess postpartum sexual function in mothers using different infant feeding methods.

Methods: The comparative cross-sectional study comprising women referred to health centres in Mashhad, Iran, was conducted from July 7 to December 11, 2011. Sexual function and infant-feeding method of the subjects were assessed four months after childbirth. Data was collected using the standard Female Sexual Function Index and baby's feeding method questionnaire. SPSS 11.5 was used for statistical analysis.

Results: There were 366 women in the study with a mean age of 26.70±4.70 years who were using four methods of infant-feeding: exclusive breastfeeding, breastfeeding plus complementary feeding, formula milk, and breastfeeding plus formula. There was a significant difference between women's sexual function score and infant-feeding method (p=0.04). The highest score 6.23±3.5 belonged to women who had exclusive breastfeeding.

Conclusion: There was a difference in women's sexual function between different groups of infant feeding methods. The highest score of sexual function was found in breastfeeding women. Women need to be educated about exclusive breastfeeding and its positive effects on sexual function.

Keywords: Female sexual function, Infant feeding method, Postpartum. (JPMA 65: 248; 2015)

Introduction

Sexual function is an aggregation of libido, sexual satisfaction, sexual stimulation and orgasm.[1] Sexual dysfunction refers to any disorder in sexual pleasure or is defined as sexual intercourse without satisfaction.[2] Unfortunately, nowadays sexual disorders are very common and can influence many aspects of life directly or indirectly. It is estimated that 80% of marital discords result from couple's sexual problems.[3] The prevalence of sexual dysfunction among women statistically is 30 to 50 per cent and it is 31.5 per cent in Iran.[2] The overall prevalence of postpartum sexual problems has been reported up to 86%.[4] Sexual dysfunction in women results from anatomical, physiological, medical and psychological factors and may have negative effect on quality of life and interpersonal relationships.[5]

One of the factors causing sexual dysfunction is pregnancy and childbirth,[6-8] as during the process of becoming a mother and labour, a woman's body undergoes basic physical and physiological changes which lead to physical, somatic and mental problems.[9] In two studies, the prevalence of sexual dysfunction six months after childbirth was reported to be 70.6 and 43 per cent respectively.[2,10] Breastfeeding and infant-feeding methods are probably contributing factors. However, studies in this field are controversial. Some studies show that breastfeeding enhances sexual activity and libido which leads to early initiation of intercourse after childbirth.[11] Breast nipple-sucking by the baby is enjoyable for some women and causes sexual stimulation. Moreover, mother-baby close contact and nipple-sucking by the baby increases sexual activity. Breast tenderness during breastfeeding also increases libido. On the other hand, some studies suggest that sexual activity, sexual satisfaction and libido are less in breastfeeding women than women feeding their baby with formula,[9,12,13] which was due to fatigue, weakness and dyspareunia.[14] One study showed that libido level is significantly much less in breastfeeding women than women who bottle-feed their baby.[7]

As sexual function plays an important role in strengthening marriage, and breastfeeding is a considerable issue in early months of infant's life and since breast milk as an ideal source of nutrition can provide all the infant's nutritional needs and plays an essential role in children's health,[15] the World Health Organisation (WHO) considers exclusive breastfeeding as the best method of feeding for the baby from birth to the end of 6 month of life.[16] Promotion of breastfeeding for disease prevention and reduction of children mortality is one of the health priorities in Iran which has been dramatically decreased in recent years.[17] Due to the fact

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that understanding postpartum sexual disorders and taking preventive measures and early training and consultation of women would improve quality of marital life and most women do not mention their problem despite being aware of such disorders and their effects on their lives, the current study was planned to inform physicians, midwives and pregnant women about postpartum sexual function in mothers using different infant-feeding methods so that women will be provided with evidence-based training and consultation.

Subjects and Methods

The comparative cross-sectional study comprising women referred to selected health centres in Mashhad, Iran, was conducted from July 7 to December 11, 2011. Sexual function and infant-feeding method of the subjects were assessed four months after childbirth after obtaining approval from the Ethics Committee of Mashhad University of Medical Sciences. Informed consent was also obtained from all the participants. A probability sample was selected from all health centres covered by three main centres (1, 2 and 3) through a multi-stage sampling technique which consisted of stratified and cluster sampling. Sampling of each cluster was done appropriate to the sample size. The sample size was determined by doing pilot study on 60 subjects and formula for comparing means [$n= (z(1-\alpha/2)+ z (1-\beta))^2 S_1^2+S_2^2 1(x_1-x_2)^2$] with power of 80% and significance level of 95%. The sample comprised women attending the selected health centres to receive postpartum care, child growth monitoring, immunisation and family planning counselling four months after childbirth. The inclusion criteria were age 18-45, parity 5 or less, no perineal tear (grades 3 and 4) in the recent childbirth, singleton pregnancy and a healthy baby, women whose husbands were not multi-partners, no history of second marriage in the couple's life, close residency to the health centre, no history of obstetric problems, no history of severe medical diseases in the couple, no drug or alcohol abuse, no administration of drugs affecting sexual function in the couple, and sexual activity after childbirth.

If a woman was eligible for the study, after filling out demographic, obstetric and infant-feeding method forms, she was asked to complete the self-reporting sexual function questionnaire in a calm environment by herself.

Validity of the questionnaires was confirmed using content validity method. Reliability of the questionnaires was confirmed using test-retest method (r=0.77).

The Female Sexual Function Index (FSFI) contains 19 questions that assess female sexual function in 6 areas: desire, arousal, lubrication, orgasm, satisfaction and pain. FSFI scoring system ranges from 1 to 5 for desire, 0 to 5 for arousal, lubrication and pain, and 0 or 1 to 5 for satisfaction. Total score was obtained by adding up the scores of all areas. Therefore, higher scores indicated better sexual function.

Validity of the Persian version of FSFI questionnaire was confirmed using construct validity and internal consistency method in line with an earlier study in Iran (18). Normal distribution of quantitative data was confirmed by Kolmogorov-Smirnov test. Data was analysed using SPSS 11.5. Descriptive statistics (frequency, percentages, mean and standard deviation) were worked out and so was analysis of variance (ANOVA). Confidence interval (CI) and statistical power were 95% and 80% respectively.

Results

There were 366 women in the study with a mean age of 26.70±4.70 years who were using four methods of infant-feeding: exclusive breastfeeding, breastfeeding plus complementary feeding, formula milk, and breastfeeding plus formula. Frequency distribution of demographic and

Table-1: Demographic and social characteristics.

Age		**Mean± Standard Deviation 26.70±4.70**	
		Frequency	**Percent**
Level of education	Illiterate	6	1.6
	Elementary	55	15
	Junior high school	81	22.1
	Senior high school	162	44.3
	Higher education	62	16.9
	Total	366	100
Occupation	Housewife	335	91.5
	Employed	31	8.5
	Total	366	100
Spouse's level of education	Illiterate	9	2.5
	Elementary	54	14.8
	Junior high school	123	33.6
	Senior high school	120	32.8
	Higher education	60	16.4
	Total	366	100
Spouse's occupation	Farmer	5	1.4
	Employee	64	17.5
	Labourer	80	21.9
	Self-employed	204	55.9
	Student	5	1.4
	Total	366	100
Family income level (according to self-judgment)	Less than sufficient	118	32.2
	Sufficient	246	67.2
	More than sufficient	2	0.5
	Total	366	100

Table-2: Comparing the average score of total sexual function and its 6 categories in women four months after childbirth in terms of infant-feeding method.

Area of sexual function	Group				P value
	Exclusive breastfeeding Mean ± SD	Formula Mean ± SD	Breastfeeding plus formula Mean ± SD	Breastfeeding plus complementary feeding Mean ± SD	
Desire	3.28±0.99	3.28±1.06	2.93±0.96	3.25±1.37	0.2
Arousal	3.46 ± 1.17	3.33±1.04	2.97±1.17	3.77±1.42	0.09
Lubrication	3.300±1.03	2.72±1.25	2.87±1.04	3.55±0.97	0.01
Orgasm	4.35±1.35	3.71±1.73	4.22±1.26	4.51±1.32	0.2
Satisfaction	4.72±1.17	4.38±1.64	4.11±1.22	4.22±1.45	0.01
Pain	4.36±1.43	4.17±1.49	3.88±1.68	3.94±1.27	0.2
Total Sex Function score	23.6 ± 5.3	22.4 ± 5.2	20.9 ± 5.9	23.2 ± 7.2	0.04

SD: Standard deviation.

social characteristics of samples is shown in Table-1. There was no significant difference between the four groups (p>.05).

There was a significant difference among the four groups for the mean total score of sexual function four months after childbirth (p=0.04). The highest mean score of sexual function was 23.6±5.3 and belonged to the exclusive breastfeeding group. There was also a significant difference among the groups for the mean score of sexual function in areas of lubrication and satisfaction during lactation period (p=0.01 each). However, this was not true for the mean scores in terms of desire, arousal, orgasm and pain (p>0.05) (Table-2).

Discussion

The study was done to assess the postpartum sexual function in mothers using different infant-feeding methods in Mashhad, Iran. There was a significant difference among the groups for the average total score of sexual function (p=0.04) and the average score related to lubrication and satisfaction, and the highest sexual function score belonged to the exclusive breastfeeding group. A study earlier reported that there was a direct correlation between breastfeeding and increased desire which was similar to our study.[19] However, some studies suggested that breastfeeding has a negative effect on women's sexual function. One study showed that sexual activity in lactating women occurs later than in women feeding their baby with formula milk.[14] Another study reported reduction of sexual activity in postpartum period in breastfeeding women six months after childbirth.[20] Breastfeeding women in another study complained of more pain during intercourse than other women.[21] Yet another study documented that breastfeeding has a negative effect on the initiation of sexual activity after childbirth. In one study, lactation period was compared with pre-conception period and the study was performed in one stage and on a single group, while our study has compared both lactating and non-lactating women in postpartum period.[22]

A cross-sectional study to assess sexual dysfunction and its related factors among breastfeeding women during the first year after childbirth included breastfeeding women who had spent 2 to 12 months of postpartum period. Results demonstrated that approximately half of the women (41.4%) had some degree of sexual dysfunction during the first year after delivery, which was often mild (30.4%). Severe dysfunction was more common in the first 3 months of postpartum period (71.4%). Dysfunction prevalence decreased to 9 months and then increased slightly (p=0.01). It concluded that the prevalence of sexual dysfunction in postpartum period is more than the general population of women. It believed dysfunction was more common during the first 3 months and between 9 to 12 months of postpartum period.[23]

Some studies have suggested that the negative effect of breastfeeding on sexual function may be due to increased level of prolactin and decreased level of sexual hormones (i.e. oestrogen and progesterone) which lead to vaginal dryness and atrophy, and subsequent outcomes such as reduction in the level of vaginal lubrication and, therefore, causing dyspareunia.[24,25] Fatigue, body size and habitus issues and milk secretion during intercourse are other breastfeeding problems.[14,22]

Some studies have also suggested that breastfeeding does not have any effect on sexual activity. One historical cohort study was carried out to compare the association of sexual activity of 258 breastfeeding women with 198 bottle-feeding women within 2-6 months after birth. Results showed that 28.3% of breastfeeding women and 22.9% of non-breastfeeding women had sexual intercourse within the first month and 71.7% of breastfeeding women and 78.1% of non-breastfeeding women had sexual intercourse within the second month of postpartum period or later. There was no significant

relationship between vaginal dryness and breastfeeding. Authors believed there was no significant correlation between breastfeeding and sexual activity.[14]

On the other hand, in some studies breastfeeding was considered to have positive effect on sexual activity, as authors believed that breast-sucking by the baby leads to sexual stimulation and breastfeeding women would experience better sexual feeling to the extent that some women reported contractions similar to orgasm during breastfeeding.[19,22]

One study[14] also considered breastfeeding as a cause of sexual stimulation in women and demonstrated that breastfeeding women have the highest level of sexual desire and orgasm and breastfeeding during postpartum period usually leads to early initiation of sexual desire and activity after birth. This was compatible with our results. However, it seems that in women who accept female and maternal role properly and have a positive attitude towards it, physiological events such as breastfeeding does not have any influence on sexual activity.[14] Furthermore, breastfeeding does have other advantages. Breastfeeding is the most ideal feeding method for infant in first stages of life and exclusive breastfeeding within the first 6 months would provide the infant with all nutritional needs.[26,27]

Lack of breastfeeding in developing countries is associated with increased risk of children mortality and morbidity. Because initial years of life are considered as the most critical stages of human growth and any physical or psychological damage would have permanent effects on other stages of human growth. Thus, breastfeeding plays an essential role in child's health.[28] Moreover, breastfeeding is beneficial to mother, family and society.[29] Therefore, WHO and United Nations International Children's Emergency Fund (UNICEF) recommend breastfeeding within the first hour of life and exclusive breastfeeding until 6 months after birth and also continuing it to the end of 2 years to reach the 1st and 4th Millennium Development Goals (MDGs) (i.e. eradicating extreme poverty and hunger, and reducing child mortality).[30]

Since studies about breastfeeding's effect on sexual function are controversial, therefore further investigations are needed. The results of this study might be generalised to all women referred to health centres to receive postpartum care. Limitations of this study included cultural issues such as timidity of expressing sexual problems, maternal stress throughout the study which was not under control, study environment conditions such as light, air-conditioning, noise, psychological issues and mother's comfort. These are factors associated with the answers. Thus, in order to control these factors partially, we provided women with a calm and comfortable environment.

Conclusion

There was a difference in women's sexual function between different groups of infant-feeding methods. The highest score of sexual function was found in breastfeeding women. As such, women need to be educated about exclusive breastfeeding and its positive effects on sexual function.

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