RESEARCH ARTICLE

CYPRUS
JOURNAL OF MEDICAL SCIENCES

DOI: 10.4274/cjms.2022.2022-5
Cyprus J Med Sci 2024;9(2):113-118

Evaluation of Female Sexual Functions after Cesarean Section

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Abstract

BACKGROUND/AIMS: Our study was conducted descriptively in order to determine the sexual functions, the time of returning to sexual intercourse and the factors affecting sexual functions in the first six months postpartum of women after cesarean delivery.

MATERIALS AND METHODS: The sample group of this study consisted of 207 women with 0-6 month-old babies who had given birth by cesarean section. The data were collected through a face-to-face interview method using the introductory information form (18 questions) developed by the researchers, and the Female Sexual Function Index (FSFI).

RESULTS: The FSFI total score average of the women who participated voluntarily in this study was found to be 20.94±6.9 (minimum-maximum: 2.40-31.20) points. The FSFI total score of 80.6% of the women (n=167) was below 26.55, which is considered as being the score for feminine sexual dysfunction. This decrease in FSFI scores was associated with the time to resuming sexual intercourse after cesarean section, breastfeeding, the duration of the marriages, and the increasing ages of the women and their partners.

CONCLUSION: This study revealed that the sexual functions of women were negatively affected in the first six months postpartum following cesarean section delivery. Provided that there is no pregnancy complication requiring cesarean section, women who prefer elective cesarean section in order to protect the quality of their sexuality and the structure of their genitals should be provided with information regarding the advantages of normal vaginal delivery, the complications which can be encountered after cesarean section, and the potential negative effects of cesarean sections on sexual functions.

Keywords: Caesarean, FSFI, sexual health

INTRODUCTION

Sexuality, which can be affected by values, ethos, and social rules, can be defined as a state of being in total health, with its biological, social and psychological aspects, so enabling people to be sexually active, not only physically, but also mentally, emotionally and socially.[1] The World Health Organization defines sexual health as a state of complete physical, emotional, mental and social wellbeing and not merely the absence of disease, dysfunction or disability.[2] Sexual health is one of the components of health, and although sexual health problems do not cause vital problems, it is a condition which negatively affects the quality of life.[3]

Pregnancy, delivery, and postpartum processes are the periods in which women experience significant physical, psychological, hormonal, social and cultural changes. The sexual life of women changes especially during pregnancy and the postpartum period.[4] A wide range of factors such as the adaptation process to their new roles during pregnancy and the postpartum period, hormonal changes, breastfeeding, problems concerning the baby, body image, and mode of birth affect the sexual

To cite this article: Mammadov B, Şentürk Erenel A. Evaluation of Female Sexual Functions after Cesarean Section. Cyprus J Med Sci 2024;9(2):113-118

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Received: 17.02.2022
Accepted: 12.09.2022

life and sexual behavior of women.[5] In a study conducted with 336 pregnant women with the purpose of evaluating sexual functions, it was observed that pregnancy reduced the quality of sexual function,[6] and in a study conducted to evaluate sexual function in the postpartum period with 236 mothers with 0-12-month-old babies, it was revealed that a significant number of the women experienced sexual dysfunction.[7] It is stated that the mode of delivery can also negatively affect the sexual functions of women. Different results have been presented by studies evaluating the effects of delivery methods on sexual function. Although some studies evaluating sexual dysfunction by comparing modes of delivery have suggested that sexual dysfunction observed in women giving birth via cesarean is less than that of women who had vaginal birth due to the preservation of the structures in the pelvic floor after cesarean section delivery, some studies comparing cesarean delivery and vaginal delivery have found that sexual function is not affected negatively after normal and spontaneous vaginal delivery.[8-12]

The postpartum period is a process in which the woman's maternal-motherhood roles and emotions are experienced in a very intense and complex manner. Although many factors are effective in attaining competence in these roles, cultural values also play an important role. For this reason, our study was conducted descriptively in order to determine sexual functions, the time of resuming sexual intercourse and the factors affecting sexual functions in the first six months postpartum of women after cesarean delivery.

Research Questions

1. What are the factors affecting the sexual functions of women after cesarean delivery?

2. How are the sexual functions of women whose delivery type was cesarean section affected?

MATERIALS AND METHODS

Design of Study

The study was designed in a descriptive cross-sectional manner.

Place and Time of Research

Our study was carried out on mothers who came to a university hospital pediatrics outpatient clinic in Nicosia for health check-ups for their babies. This study was of cross-sectional type and data collection was carried out between February 1st and April 30th 2016. The sample group of this study consisted of 207 women who gave birth by cesarean section and applied to the outpatient clinic between February and April for a check-up of their 0-6 month old babies. The aim of this study was clearly explained to the women and they agreed to participate voluntarily.

Application of the Study

A questionnaire was given to the women who stated that they had resumed their sexual life after giving birth. In order to ensure the privacy of the women participating in this study, the questionnaires were filled out in an unoccupied room in the outpatient clinic. The data were collected through a face-to-face interview method using the introductory information form (18 questions) developed by the researchers, and the Female Sexual Function Index (FSFI). Questions investigating the women's socio-demographic characteristics, breastfeeding status and their sexual lives were included in the introductory information form.

The FSFI is a Likert-type scale consisting of 19 items developed to measure women's sexual functions. Its six subscales assess sexual desire, arousal, lubrication, orgasm, sexual satisfaction and pain. This scale should be answered with respect to the sexual life of women within the previous 1-month period. FSFI subscale scores are calculated by multiplying the scores obtained from the scale items by the coefficients corresponding to the items. The total score of the subscales gives the FSFI scale total score. The FSFI total score can range between 2 and 36 (Table 1). A higher score on the scale indicates better sexual function. A FSFI total score lower than 26.55 indicates sexual dysfunction. The Turkish validity and reliability of this form was determined by Aygın and Eti Aslan[13]. As test-retest was used to ensure the validity and reliability of the study, a correlation analysis was conducted and consequently the correlation coefficient was calculated as 0.75, while the Cronbach's alpha, which reflects the test score reliability and internal consistency, was calculated as 0.98. Ultimately, the use of the scale was deemed valid for Turkish women.

Ethical Considerations

The documents required for conducting this research, such as written permission from the chief physician of the hospital, the approval of the Near East University Scientific Research Evaluation Ethics Committee (approval number: YDU/2015/35-265, date: 11.02.2015), and the informed consent of the participants, were obtained prior to the research.

Statistical Analysis

The data acquired through this study was saved on computer in the SPSS 22 package program. Before statistical analysis was carried out, Kolmogorov-Smirnov and Shapiro-Wilk tests were used to assess whether the variables had normal distribution or not. Descriptive statistics are given by mean ± standard deviation. The Mann-Whitney U test was used for the analysis of data which did not show normal distribution, and the Spearman correlation coefficient was used to compare groups between discrete or categorical variables. The level of statistical significance was accepted as $p \leq 0.05$.

RESULTS

The average age of the women was 31.23±8.05 (minimum-maximum: 18-42) years, and the average age of their spouses was 35.68±8 (minimum-maximum: 22-48) years. 44.9% of the women and 46.4% of

Table 1. Female Sexual Function Index Score calculation table

Subgroups	Question number	Score range	Factor	Minimum score	Maximum score
Sexual desire	1, 2	1-5	0.6	1.2	6
Arousal	3, 4, 5, 6	0-5	0.3	0	6
Lubrication	7, 8, 9, 10	0-5	0.3	0	6
Orgasm	11, 12, 13	0-5	0.4	0	6
Sexual satisfaction	14, 15, 16	0/1-5	0.4	0.8	6
Pain	17, 18, 19	0-5	0.4	0	6
Scale range				2	36
FSFI mean score of the women participating in this study	20.94±6.9 (minimum-maximum: 2.40-31.20)				

FSFI: Female Sexual Function Index.

their spouses were high school graduates. The average length of marriage for the women was 7.58±7.02 years. When it was investigated why the women preferred cesarean section for delivery, it was determined that fear of birth (27.1%), doctor's recommendation (21.3%), and pelvic stenosis (11.1%) constituted the top three reasons. 67.7% of the women and their spouses used an effective contraceptive method. 59.4% of women still breastfeed their babies (Table 2). When the demographic data of women and their FSFI subscale scores were compared, it was found that the increasing age of the women significantly decreased their arousal (p=0.013), desire (p=0.016), orgasm (p=0.004) and sexual satisfaction (p=0.019) scores. It was also found that the increasing age of the spouse also correlated with a decrease in the sexual desire (p=0.001), arousal (p=0.037) and orgasm (p=0.001) scores in the women. Additionally, it was revealed that a longer period of marriage was associated with a decrease in the sexual desire (p=0.001), orgasm (p=0.030) and pain (p=0.013) scores. When the times they resumed sexual intercourse after cesarean section were compared with the FSFI subscale scores, an increase in the desire (p=0.001), lubrication (p=0.001), arousal (p=0.031), orgasm (p=0.001), and sexual satisfaction (p=0.001) scores and a significant reduction in the pain (p=0.013) score were determined in the scores of those who resumed sexual activity in the late postpartum period. When their breastfeeding status and their sexual function subscale scores were compared, the orgasm (p=0.006), satisfaction (p=0.001) and pain (p=0.023) scores were found to be higher in those women who were not breastfeeding (Table 3).

Table 2. Distribution of socio-demographic and some characteristics of the women (n=207)

	n	%
Education		
Primary education	60	29
High school	93	44.9
Undergraduate or above	54	26.1
Spouse's education		
Primary education	44	21.2
High school	96	46.4
Undergraduate and above	67	32.4
Number of living children		
1	106	51.2
2	58	28.0
3 or more	43	20.8
Time since birth		
0-2 month	68	32.8
2-4 month	125	60.4
4-6 month	14	6.8
Caesarean delivery reason		
Fear of normal birth	56	27.1
Doctor's recommendation	44	21.3
Pelvic stenosis	23	11.1
Macrosomic fetus	20	9.7
Previous caesarean section	19	9.2
Elective cesarean	16	7.7
Breech presentation	14	6.8
Fetal distress	6	2.9
Urgent reasons	6	2.9
Entanglement of the umbilical cord	3	1.3
Use of contraceptive method		
Yes	140	67.6
No	67	32.4
Breastfeeding status		
Yes	123	59.4
No	84	40.6
Opinions on how sexual life has been affected during the postpartum period		
No difference	147	71.0
Worse	43	20.8
Better	17	8.2
Total	**n=207**	**100%**

The FSFI total score average of the women who participated voluntarily in this study was found to be 20.94±6.9 (minimum-maximum: 2.40-31.20) points. The FSFI total score of 80.6% of the women (n=167) was below 26.55, which is considered as a threshold score for feminine sexual dysfunction. Although it was not tabulated, considering the subscale scores and FSFI scale total score averages, no correlation was found between these scores and the educational status of the couples, chronic disease history in the women, the number of children, previous surgery, or the use of contraceptive methods (p>0.05).

The distribution of sexual function status according to the characteristics of the women and their spouses is given (Table 4). It was determined that the overall scale scores of the older women were lower (p=0.035). When the time elapsed since the birth of the baby was compared with the mean scores, it was observed that women with more time since the birth of their baby acquired higher scores (p=0.015). An increase in the scale scores of those women who had sexual intercourse at a later time after cesarean delivery was noticed (p=0.007). When comparing the women with or without sexual dysfunctions with the age of their spouse and the duration of their marriage, no significant difference could be determined (p>0.05).

DISCUSSION

Although resuming sexual life after delivery and the quality of sexuality is an important issue for the new mother and her spouse, this may be affected by factors such as the mother's adaptation to her new role, her relationship with her spouse, and her physical and emotional readiness for sexuality. During the first six weeks of the puerperal period, low libido, continuation of lochia, painful sexual intercourse due to a lack of lubrication during coitus, and milk flow from the nipples upon stimulation cause a delay the acceptance of the first sexual intercourse after childbirth. Our study presents data showing that the desire, lubrication, arousal, orgasm and satisfaction scores of the women who resumed sexual intercourse after a significant time following their cesarean sections were increased. A similar study presented data that postpartum sexual dysfunction is closely associated with the time elapsed to resume sexual intercourse after delivery,[14] while another study indicated that the FSFI scale scores significantly increased in the period beginning from the third month to the seventh month after delivery.[15] During this period, the spouses put their sexual problems into a secondary position due to other reasons such as inadequate sleep or postpartum insomnia, the care burden for the baby, and fatigue and they did not consider this as a health problem.

Table 3. Correlation of FSFI subscales according to some characteristics of women

(n=207)	Sexual desire		Arousal		Lubrication		Orgasm		Sexual satisfaction		Pain	
	r	p	r	p	r	p	r	p	r	p	r	p
Age	-0.167	**0.016***	-0.172	**0.013***	-0.005	0.945	-0.202	**0.004***	-0.162	**0.019***	0.001	0.985
Spouse's age	-0.239	**0.001***	-0.145	**0.037***	-0.050	0.472	-0.224	**0.001***	-0.124	0.075	0.016	0.819
Marriage duration	-0.250	**0.001***	-0.090	0.199	-0.006	0.936	-0.151	**0.030***	-0.065	0.355	0.174	**0.013***
Start time/day of sexual intercourse	0.295	**0.001***	0.160	**0.031***	0.267	**0.001***	0.281	**0.001***	0.275	**0.001***	-0.225	**0.002***
Time elapsed since the birth of the baby	0.227	**0.001***	0.126	0.071	0.090	0.199	0.141	**0.043***	0.171	**0.014***	0.096	0.167
Breast-feeding	0.248	0.473	0.162	0.819	0.279	0.636	0.242	**0.006***	0.216	**0.001***	0.166	**0.023***

*p≤0.05, FSFI: Female Sexual Function Index.

Table 4. Comparison of women with and without sexual dysfunction according to some characteristics

	With sexual dysfunction (26.55 points or below) (n=167) (80.6%)	Without sexual dysfunction (above 26.55) (n=40) (19.4%)	p
Age	31.95±8.22	28.25±6.55	**0.035***
Spouse's age	36.28±9.08	33.20±6.77	0.054
Marriage duration	7.90±7.28	6.13±5.63	0.258
Time since birth (days)	71.31±23.54	73.00±24.30	**0.015***
Time to resuming sexual intercourse after cesarean (day)	43.61±18.91	44.62±18.44	**0.007***

*p≤0.05.

Low levels of estrogen which occur throughout lactation due to the high levels of prolactin are considered to be another reason for decreased sexual function after delivery.[16] High levels of prolactin, which initiate lactation, lead to a significant decrease in the secretion of the estrogen and progesterone hormones. Decreased estrogen levels can cause vaginal epithelial atrophy and dyspareunia (painful intercourse) may occur due to a lack of lubrication.[16] Our study results showed that the subscale scores regarding orgasm and satisfaction, and the FSFI scale overall scores of those mothers who did not breastfeed their babies were higher than the scores of the breastfeeding mothers. Similarly, a study conducted in order to assess the postpartum sexual functions of 684 primiparous women presented data showing that the FSFI scale total scores of the breastfeeding mothers were lower than the scores of those mothers who were not breastfeeding their babies.[17] The results of other studies showed that postpartum breastfeeding lowers the quality of sexual functions and increases dyspareunia due to decreased levels of estrogen.[18-21] There is evidence indicating that the state of experiencing dyspareunia even 6 months after delivery is related to breastfeeding rather than the mode of delivery and that lactating women experience dyspareunia 4 times more than non-lactating women.[22] It is considered that a combination of postpartum factors such as breast fullness, hormonal changes, breast tenderness, breastfeeding, etc. causes a significant decrease in sexual functions. This study also showed that the age of the women and their spouses was another factor affecting their FSFI scores. When compared with the younger couples, it was observed that the FSFI scale scores of the older women were lower; consequently, it was obviously seen that older age is a factor which decreases sexual functions. It can be seen in the literature that sexual dysfunctions vary according to age groups and the prevalence of sexual dysfunctions increases with age.[23,24] In our study, a longer period of marriage was not found to be a significant factor in FSFI overall scores, although this factor lowered the desire and orgasm subscale scores of the women. Compared to the youthful period, in which there is more intense energy, passion and desire, and less responsibility, older age is considered as a period in which energy, passion and desire decrease while responsibility and the possibility of experiencing physiological problems increase. Ultimately, it is believed that sexual functions are affected negatively by age.

When we asked the women to compare their pre-pregnancy and current sexual lives, 71% of them stated that there was no difference between their pre-pregnancy and current sexual lives. Compared to the FSFI scale overall scores, it is considered that these women might have had sexual dysfunction before pregnancy or avoided making their sexual issues known as they live in one of the countries in which talking about sexual issues is considered taboo.

It is one of the most frequently discussed issues that the mode of delivery affects both the time to resume sexual life and the quality of sexual function. Most women tend to give birth to their babies through cesarean section because of a fear of giving birth or the thought that vaginal delivery may cause trauma which may affect their sexuality negatively. The results of both meta-analyses and various studies evaluating the sexual functions of women after cesarean and spontaneous vaginal delivery have shown that there is no significant difference between these two modes of delivery from the third month onwards. For this reason, it is thought that women do not need to opt for cesarean section due to concerns of protecting their sexual functions.[25-33] Considering the results of this study, it was apparent that the FSFI scale total scores of the majority of women were below the cut-off score indicating female sexual dysfunction. This result, which supports the findings in the literature, demonstrates that there is no evidence that cesarean delivery preserves the sexual functions of the women who choose to give birth to their babies through cesarean section. Compared to vaginal delivery, cesarean section, which may cause women to experience a more disadvantageous process due to various possible complications such as the risk of developing infection, its longer healing period of the abdominal incision, increased postpartum bleeding, and persistent abdominal pain after childbirth, is considered to significantly affect sexual functions.

Study Limitations

The results of this study do not represent the whole of North Cyprus and are limited to those women who applied to the hospital where this research was conducted.

CONCLUSION

This study revealed that the sexual functions of women were negatively affected in the first six months postpartum following cesarean section delivery. Provided that there are no pregnancy complications requiring cesarean section, women who prefer elective cesarean section in order to protect the quality of their sexuality and the structure of their genitals should be provided with information regarding the advantages of normal vaginal delivery, the complications which can be encountered after cesarean section, and the potential negative effects of cesarean sections on sexual functions.

MAIN POINTS

- Increasing age of the woman and her partner decreases FSFI scores.
- After caesarean section, a longer period of time is needed to restore sexual function.
- Non-breastfeeding mothers have higher orgasm and satisfaction scores than breastfeeding mothers.
- There is no evidence that cesarean section performed to preserve sexual function is better than normal delivery in terms of sexual function scale scores.

Acknowledgements: Thanks to the women who participated in this study.

ETHICS

Ethics Committee Approval: This study was approved by the Near East University Scientific Research Evaluation Ethics Committee (approval number: YDU/2015/35-265, date: 11.02.2015).

Informed Consent: The approval of the informed consent of the participants, were obtained prior to the research.

Authorship Contributions

Concept: B.M., A.Ş.E., Design: B.M., A.Ş.E., Data Collection and/or Processing: B.M., A.Ş.E., Analysis and/or Interpretation: B.M., A.Ş.E., Literature Search: B.M., A.Ş.E., Writing: B.M., A.Ş.E.

DISCLOSURES

Conflict of Interest: No conflict of interest was declared by the authors.

Financial Disclosure: The authors declared that this study had received no financial support.

REFERENCES

1. Lourie MA, Needham BL. Sexual orientation discordance and young adult mental health. J Youth Adolesc. 2017; 46(5): 943-54.
2. World Health Organization. Sexual health: Working definitions. 2002. Available from: https://www.who.int/health-topics/sexual-health#tab=tab_1
3. Bilgin Z, Kömürcü N. Female sexuality and evidence-based approaches (Review). Andrology Bulletin. 2016; 18(64): 48-55 (Turkish).
4. Yeniel AO, Petri E. Pregnancy, childbirth, and sexual function: perceptions and facts. Int Urogynecol J. 2014; 25(1): 5-14.
5. Gökyıldız Ş. Sexuality in the postpartum period and factors affecting it. Andrology Bulletin. 2004; 16: 75-7.
6. Erenel AS, Eroglu K, Vural G, Dilbaz B. A pilot study: In what ways do women in turkey experience a change in their sexuality during pregnancy? Sexuality and Disability. 2011; 29(3): 207-16.
7. Sahin E, Erenel A. A study examining women's sexual function in twelve months postpartum. Medicine Science | International Medical Journal. 2019; 8(1): 148-53.
8. Woranitat W, Taneepanichskul S. Sexual function during the postpartum period. J Med Assoc Thai. 2007; 90(9): 1744-8.
9. Lurie S, Aizenberg M, Sulema V, Boaz M, Kovo M, Golan A, et al. Sexual function after childbirth by the mode of delivery: a prospective study. Arch Gynecol Obstet. 2013; 288(4): 785-92.
10. Kasap E, Aksu EE, Sahin N, Güçlü S, Gur EB. Does delivery method have any effect on sexual function? The Journal of Tepecik Education and Research Hospital. 2016; 26(3): 201-6.
11. Saydam BK, Demireloz Akyuz M, Sogukpinar N, Ceber Turfan E. Effect of delivery method on sexual dysfunction. J Matern Fetal Neonatal Med. 2019; 32(4): 568-72.
12. Chayachinda C, Titapant V, Ungkanungdecha A. Dyspareunia and sexual dysfunction after vaginal delivery in Thai primiparous women with episiotomy. J Sex Med. 2015; 12(5): 1275-82.
13. Aygın D, Eti Aslan F. The Turkish adaptation of the femal sexual function index. Turkiye Klinikleri J Med Sci. 2005; 25(3): 393-9.
14. Boroumandfar K, Rahmati MG, Farajzadegan Z, Hoseini H. Reviewing sexual function after delivery and its association with some of the reproductive factors. Iran J Nurs Midwifery Res. 2010; 15(4): 220-3.
15. Citak N, Cam C, Arslan H, Karateke A, Tug N, Ayaz R, et al. Postpartum sexual function of women and the effects of early pelvic floor muscle exercises. Acta Obstet Gynecol Scand. 2010; 89(6): 817-22.
16. Baytur YB, Deveci A, Uyar Y, Ozcakir HT, Kizilkaya S, Caglar H. Mode of delivery and pelvic floor muscle strength and sexual function after childbirth. Int J Gynaecol Obstet. 2005; 88(3): 276-80.
17. Saleh DM, Hosam F, Mohamed TM. Effect of mode of delivery on female sexual function: A cross-sectional study. J Obstet Gynaecol Res. 2019; 45(6): 1143-7.
18. Rowland M, Foxcroft L, Hopman WM, Patel R. Breastfeeding and sexuality immediately post partum. Can Fam Physician. 2005; 51(10): 1366-7.
19. Rezaei N, Azadi A, Sayehmiri K, Valizadeh R. Postpartum Sexual Functioning and Its Predicting Factors among Iranian Women. Malays J Med Sci. 2017; 24(1): 94-103.
20. Sayasneh A, Pandeva I. Postpartum sexual dysfunction: A literature review of risk factors and role of mode of delivery. In British Journal of Medical Practitioners. 2010; 3(2): 316.
21. Kettle C, Ismail KM, O'Mahony F. Dyspareunia following childbirth. The Obstetrician & Gynaecologist. 2005; 7(4): 245-9.
22. Avery MD, Duckett L, Frantzich CR. The experience of sexuality during breastfeeding among primiparous women. J Midwifery Womens Health. 2000; 45(3): 227-37.
23. Kadri N, McHichi Alami KH, McHakra Tahiri S. Sexual dysfunction in women: population based epidemiological study. Arch Womens Ment Health. 2002; 5(2): 59-63.
24. Oberg K, Fugl-Meyer AR, Fugl-Meyer KS. On categorization and quantification of women's sexual dysfunctions: an epidemiological approach. Int J Impot Res. 2004; 16(3): 261-9.
25. Fan D, Li S, Wang W, Tian G, Liu L, Wu S, et al. Sexual dysfunction and mode of delivery in Chinese primiparous women: a systematic review and meta-analysis. BMC Pregnancy Childbirth. 2017; 17(1): 408.

26. Ghorat F, Esfehani RJ, Sharifzadeh M, Tabarraei Y, Aghahosseini SS. Long term effect of vaginal delivery and cesarean section on female sexual function in primipara mothers. Electron Physician. 2017; 9(3): 3991-6.

27. Kahramanoglu I, Baktiroglu M, Hamzaoglu K, Kahramanoglu O, Verit FF, Yucel O. The impact of mode of delivery on the sexual function of primiparous women: a prospective study. Arch Gynecol Obstet. 2017; 295(4): 907-16.

28. Dabiri F, Yabandeh AP, Shahi A, Kamjoo A, Teshnizi SH. The effect of mode of delivery on postpartum sexual functioning in primiparous women. Oman Med J. 2014; 29(4): 276-9.

29. McDonald E, Woolhouse H, Brown SJ. Consultation about sexual health issues in the year after childbirth: a cohort study. Birth. 2015; 42(4): 354-61.

30. Qian R, Chen Z, Tang L, Zhang W. Postpartum adverse effects and sexual satisfaction following cesarean delivery in Beijing. Int J Gynaecol Obstet. 2016; 132(2): 200-5.

31. Amiri FN, Omidvar S, Bakhtiari A, Hajiahmadi M. Female sexual outcomes in primiparous women after vaginal delivery and cesarean section. Afr Health Sci. 2017; 17(3): 623-31.

32. Klein K, Worda C, Leipold H, Gruber C, Husslein P, Wenzl R. Does the mode of delivery influence sexual function after childbirth? J Womens Health (Larchmt). 2009; 18(8): 1227-31.

33. Faisal-Cury A, Menezes PR, Quayle J, Matijasevich A, Diniz SG. The relationship between mode of delivery and sexual health outcomes after childbirth. J Sex Med. 2015; 12(5): 1212-20.