Available online www.ijpras.com

International Journal of Pharmaceutical Research & Allied Sciences, 2016, 5(3):307-310

Research Article

ISSN : 2277-3657
CODEN(USA) : IJPRPM

Assessment of the relationship between modes of delivery and sexual function in primiparous women perspective

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ABSTRACT

Childbirth is an important step in women's lives and the method of delivery is one of the most important factors affecting the health of mothers during the postpartum period. The cesarean rate in Iran has increased significantly. One of causes is the women tend for keeping their sexual function after delivery. In thishistoricalcohortstudy,306 primiparous women who were admitted in four selected clinics in Bushehr, in 6 to 18 months time period after their delivery and proper for the study, were selected by purposive sampling method.153 mothers had vaginal deliveries and 153 mothers had cesarean sections mode. The data collected by a questionnaire that included demographic information and scale questions of Female Sexual Function Index (FSFI). Statistical analysis carried out by SPSS software, through CHI square test, t-test and three-ways variance analysis (ANOVA).The findings showed no significant statistical difference between the means of orgasm (p=0.09), sexual satisfaction (p= .93), dysparonia (p= 0.98) and sexual function (p= 0.85) of the women in the two groups with 95% confidence intervals (CI).The study showed that, there is no relationship between mode of delivery and sexual function of primiparous women.

Key words: Sexual function, vaginal delivery, cesarean section, postpartum.

INTRODUCTION

Pregnancy and childbirth are two important stages in women's lives (1). Delivery mode is one of the most important affecting factors on mothers' health process in postpartum period (2). Non-emergency cesarean section is one of the most common women surgeries, and in the last 50 years its rate increased due to many reasons including mothers' requests (3). The Cesarean rate in Iran is 47 percent, and the studies have shown that 65 percent of these cesarean sections were unnecessary and was done elective (4). Although, in case of emergency, the cesarean section is a safe method but cesarean delivery with no indication**,** is costly for families and causes problems for hospital staff and medical equipment and in compare to vaginal delivery, it has more intense complications, including risk of anesthesia, postoperative infection, excessive bleeding and thromboembolic events (3). Nowadays, some women prefer cesarean section to vaginal delivery to avoid damage to the pelvic floor and sexual function and urinary incontinence which is among the reasons for increasing the cesarean section worldwide (5). Women believe that vaginal delivery may have a negative impact on sexual satisfaction because in vaginal delivery the perineal and pelvic floor muscles may be damaged (6, 7). Sexual dysfunction not only affects sexual health of the wife but also the sexual health of the husband. Thus, the sexual dysfunction, for whatever reason, can negatively affect the relationship between

the couple (8). Changes in sexual function after childbirth, including disparonia and loss of interest in sex are common among women and its rate varies from 22 to 86 percent (9). There is a little information on the effect of delivery on maternal postpartum sexual function Despite many reports about sexual problems after delivery. Regarding the increased cesarean section rates in Iran and the subsequent increased morbidity and mortality and the positive attitude of women in the preservation of sexual function after cesarean and the importance of sexual health in improving the quality of life and also the contradictory studies about the relationship between mode of delivery and sexual performance, the researcher tried to study the relationship of delivery modes with sexual function by using documented reasons.

MATERIALS AND METHODS

In this historical cohort study, 306 primiparous women who were admitted in four elected clinics in Bushehr, were studied. The samples selected among mothers who passed 6 to 18 months from their delivery. Mothers of 18-35 year-old with only one child who had vaginal delivery or cesarean sections, and who were under prenatal care during their pregnancy were selected. Exclusion criteria were the use of delivery aids tools such as vacuum and forceps, congenital malformations or fetal death, the birth weight less than 2000 g and above 4000 g, history of psychiatric disease known to the woman or her husband, female disorders such as endometriosis and specific fibroids, body mass index above 29.8 kg/m^2, intake of drugs affecting libido and use of condom, and coitus interruptus as contraceptive method. The sampling method was a purposive sampling and 153 of them have had natural childbirth and 153 were delivered by caesarean section. Data gathered by a questionnaire which included demographic information and Female Sexual Function Index (FSFI). The questions in this index were about these six sections, sexual desire, sexual impulse, vaginal lubrication, orgasm, pain and sexual satisfaction. Sexual desire **s**ection contained two questions with a score range from 1 to 5 (coefficient of 6.0, the minimum score of 1.2, and the maximum score of 6), the sexual impulse and vagina lubrication sections with four questions for each one, with score range of 1 to 5 (coefficient of 0.3, the minimum score of zero, and the maximum score of 6), each of the orgasm, pain, sexual satisfaction sections had 3 questions for each one, with the score ranging from zero to 5 (coefficient of 0.4, the minimum score of zero and the maximum score of 6). The score of any individual in each section is the sum of the scores of questions related to that section and multiplying the quotient to the respected coefficient. Total score was obtained by summing the scores of the six sections, which specifies the sexual performance of any individual. The questionnaire validity (validity and reliability) was confirmed after evaluating it by 10 gynecologists. This index is widely used in different scientific researches in Europe, America, and Turkey and its validity and reliability has been proved in these regions.

Questionnaires were completed with interview method by the researcher in a private environment after obtaining the consent of the participant. The samples were allowed to unsubscribe at any stage of the interview. Statistical analysis carried out by SPSS software using chi-square test, t-test and three-way analysis of variance. The significance level was set at 0.05.

RESULTS

Mean age of the women in vaginal delivery group was 24.1 years (SD =0.26) and 24.8 years (SD =0.25) for the cesarean group. The majority of subjects had the diploma degree (54.6 percent) and more educated people with college degrees were in the cesarean group (15.4 per cent). Chi-square test showed a statistically significant difference between the two groups in educational level (P =0.004). The effects of education background on sexual performance variables were controlled by using the three-way analysis test. 95.4% of the mothers were housewives. There were not any significant differences between the two groups in terms of demographic **e**xcept in the educational level characteristics (Table 1).

Table 1. Demographic characteristics

Demographic characteristics		Vaginal delivery n = 153	Cesarean section n = 153	Total n=306
Age		24.1	24.8	
Education level	Below diploma	35(11.4%)	19(6.2%)	54(17.6%)
	Diploma	85(27.8%)	82(26.8%)	167(54.6%)
	College Occupation	24(7.8%)	47(15.4%)	71(23.2%)
	Housewives	148(48.4%)	144(47.1%)	292(95.4%)
	Employed	5(1.6%)	9(2.9%)	14(4.6%)

All the women in vaginal delivery group have had spontaneous labor, without the use of delivery aids tools such as forceps and vacuum, and the cesarean delivery group, were women who selected cesarean section. For vaginal

delivery group the mean time to onset postpartum sexual intercourse was 55.3± 2 days and it was 56.4 ± 2.2 days for cesarean section group. Using independent t-test showed no significant difference between the groups (p= 0.71). There was no statistically significant difference between the average of the women sexual desire to have sex, sexual stimulation, vaginal lubrication, orgasm, sexual satisfaction, disparonia and the sexual function (Table 2).

Table 2: Comparison of sexual function in primiparous women 6 to18 months after vaginal delivery and cesarean section

Women Sexual function	vagina delivery	Cesarean section	P –value
Sexual desire	3.9	3.9	0.6
sexual stimulation	4.19	4.28	0.37
vaginal Lubrication	5.1	5.2	0.9
orgasm	4.9	4.7	0.059
Sexual satisfaction	5.6	5.6	0.92
disparonia	4.8	4.7	0.98
Total score for sexual function	28.6	28.5	0.85
Mean time to onset sex after delivery	55.3	56.41	0.71

DISCUSSION

In this study after eliminating confounding factors and matching the two study groups in terms of the background variables, only the effects of delivery modes factor(vaginal delivery and cesarean section) on sexual function were examined. It was observed that there were no significant differences between the means of orgasms, sexual satisfaction and sexual function of the women in 6 -18 months after their vaginal delivery and cesarean section.

In a study titled the effect of pregnancy and delivery on the postpartum sexual function by Connelly A. et al, they observed that there was no relationship between the mode of delivery and episiotomy with the time of sex relationship onset, anorgasmia and disparonia, and the sexual functions are same before, during and after pregnancy (12). Barret etal observed an increase in sexual dysfunctions rate in the first three months after delivery and it reduced until six months after delivery but it did not continue until before pregnancy (13).

Also Bayturand et al. in another study titled "the effect of delivery mode on the pelvic floor muscles strength and the sexual function after delivery", found that there is no relationship between the pelvic floor muscles strength with the women's sexual function and there is no difference in term of sexual performance difference the vaginal delivery and the cesarean section (5). Fauconnier et al. in a study entitled the role of delivery on postpartum disparonia, found that there is no relationship between mode of delivery and postpartum disparonia (15).In a study by Myhan entitled the relationship between mode of delivery and sexual health of women conducted 6 months after delivery, they found that there was a negative relationship between women sexual function (sexual pleasure, lubrication, orgasm and disparonia) after vaginal delivery with episiotomy.

CONCLUSION

There is no statistical significant difference in sexual function between the groups of vaginal delivery and cesarean section at 6 to 18 months after delivery. Since cesarean has no role in maintaining of sexual function in women after delivery, in the absence of contraindications for vaginal delivery, it is recommended to consider vaginal delivery as the first priority for delivery. Decrease of sexual function may be related to other factors such as fatigue, breastfeeding, gynecological problems, accepting the new role as mother and relationship problems with husband. It is possible that socio-cultural issues have had influences on answering the questionnaire which is outside of the researcher control and since some of the information is based on the responses of the participants' samples so their accuracy is not clear to researcher and answers were accepted as a correct answer. An important limitation of the study is the lack of evaluation of sexual function prior to pregnancy and childbirth, therefore it is recommended to conduct studies to assess sexual function before and after pregnancy.

Acknowledgments
Hereby the investigators (from the thesis with registered number of 235) of the study thank the Deputy of Research and the Midwifery Nursing School, Ahvaz Jundishapur University of Medical Sciences, Deputy of Health of Bushehr University of Medical Sciences and all those who helped us in gathering the information.

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