Original Article

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The Effect of Relaxation on Childbirth and an Increase in Natural Childbirth

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ABSTRACT

BACKGROUND AND OBJECTIVE: Childbirth is a natural phenomenon and physiological and risky process done in two ways: natural and caesarean. Since the majority of cesarean section reasons are the request of pregnant women and fear of labor pain of natural delivery, this study aimed to investigate the effect of relaxation on reducing the fear of childbirth and increasing natural delivery.

METHODS: This quasi-experimental study was done on 112 nulliparous pregnant women 37-20 weeks, with no particular problems in the two trained relaxation and untrained groups. One group received routine care and another group that participate optionally in relaxation classes received 8 sessions of 90-minute relaxation training. Data were collected and analyzed by using a standard questionnaire of childbirth fear, demographic information and pregnancy outcome.

FINDINGS: In the trained group the average of fear score decreased from 48.5±13.9 to 40.5±12.4 (p=0.000) and in the untrained group rose from 58.5±14.2 to 58.7±14.9. The mean difference of childbirth fear in first and second stages between trained group was 7.9±1.8 and untrained group was 0.9±0.2 (p=0.000). In relaxation group 28 cases (49.1%) and in untrained group 18 cases (32.7%) had natural delivery (p=0.033).

CONCLUSION: The results showed that the relaxation by reducing the fear of childbirth increases natural childbirth.

KEY WORDS: *Relaxation, Fear of Childbirth, Cesarean Section, Vaginal Delivery*.

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Introduction

Childbirth is a natural phenomenon and physiological and risky process done in two ways: natural and caesarean sections (1). Natural childbirth in many cases is the best type of delivery, but in some cases, surgery is necessary to save the mother and the fetus (2). Due to caesarean section complications in mothers including heart and lung disease, uterine infection, thromboembolism, bleeding after cesarean section, anesthesia complications, urinary tract damage, the high cost of hospital and in babies including respiratory diseases, jaundice, neonatal infection, head trauma, surgical and obstetric problems and damage to the pelvis that in many countries cause concern for officials and researchers (3-5). Many investigations conducted in Iran demonstrated that more than 70% caesarean sections are done for unnecessary reasons based on pregnant women requests so that 92% of them expressed the fear of labor pain and vaginal delivery complications as reasons for resorting to caesarean section (6).

For this reason, the world health organization states to reduce the fear and stress of mothers, they should be supported during labor and delivery (7). In the past, prenatal care was limited to checkups, normal tests and ultrasound. But these programs were not enough for women and lack of knowledge and their readiness was led to anxiety, complications and following that increases medical intervention day by day. In this regard, the Ministry of Health and Medical Education was implemented classes as preparation for pregnancy and physiological childbirth in selected hospitals in the country (8). One indicator of maternal health program performance review is cesarean rates in the country. The World Health Organization has stated maximum cesarean based on real and scientific indications is 15% (9-11).

To reduce the fear of pain in pregnant women, psychotherapy, learning of different relaxation techniques during childbirth preparation classes, as well as planning for pain relief during labor and before vaginal delivery can be used to reduce the fear of pain of pregnant mothers (12). Relaxation is a disciplined training approach for people to understand the physiological responses and achieve physiological perceptual and a measure of relief without the use of tools and equipment, which have different forms. This method of therapy by reducing the metabolism, heart rate and contractility, a decrease in the secretion of epinephrine and blood pressure affects the body's physiology (13). The effect of relaxation is proven to improve situational stress (14) and relaxation techniques is effective in many situations such as pain, childbirth, anxiety and insomnia (15). In most studies the natural birth rate was higher than caesarean section in the study group, but this is far from the World Health Organization statistics. Although the difference is statistically significant but it is not clinically acceptable. Given the importance of vaginal delivery compared with caesarean section, the aim of this study was to investigate the effect of relaxation on reducing fear of childbirth and an increasing in natural childbirth.

Methods

This quasi-experimental study was done on 112 nulliparous pregnant women 37-20 weeks, with no history of heart disease, hypertension, diabetes, infertility and lack of drugs and unconventional, in two groups of 57 trained people and 55 untrained people. The sample size of 112 patients was based on previous studies (16). Using a standardized questionnaire with 20 questions about the causes of childbirth fear (in the area of pain, liability, injury, premature delivery) that the whole accountability is 5 degree Likert type (17) and a questionnaire containing demographic information.

Fear of Childbirth questionnaire was completed by pregnant women in two stages, the second and third trimester of pregnancy and a month after delivery. Untrained group were under routine care. Classes was started since the second half of pregnancy (20 weeks) for any pregnant woman and was finished in week 37, including 8 meeting. Each session is 90 minutes. The first 15 minutes is devoted to questions and answers, 45 minutes to theory, 15 minutes to exercise and relaxation and the last 15 minutes is devoted to sports. Participation in childbirth preparation classes during 20-37 weeks of pregnancy is according to selection with pregnant women.

Principles of childbirth preparation classes is based on accurate information in order to reduce fear and anxiety, learning relaxation techniques, muscle control, breathing techniques and create a relaxing and supporting environment for the mother. After collecting data, they were analyzed by using descriptive and inferential statistical analysis X2, T-Test, Paired T-Test and Fisher's exact test and $p<0.05$ was considered significant.

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Results

The average age of mothers in the trained group is 25.8±4.2 and in the untrained is group 26.4±4.2 years. The two groups showed no significant difference in age. In the untrained group the average fear score rose from 58.5± 14.2 to 58.7 ± 14.9 But in the trained group decreased from 48.5± 13.9 to 40.5±12.4 (p=0.000). The two groups at 37 weeks of pregnancy had significant differences in mean scores of childbirth fear (p=0.000) (table1).

Table 1. Comparison of the fear of childbirth in various fields, the two groups treated with 37 weeks of pregnancy

Groups / Variables	Trained Mean±SD	Untrained Mean±SD	P-value
Fear of childbirth	40.5±12.4	58.7±14.9	0.000
Pain	12.1±4.2	17±4.6	0.000
Responsibility	9.9±3.8	14.3±4.3	0.000
Body damage	9.7±3.5	14.3±4.7	0.000
Fear of premature delivery	8.9±2.8	13±5	0.000

Score difference of childbirth fear was significant between trained group before and after training (13.8±7.94) and untrained group (7±0.23) (p=0.000). In relaxation group, 28 cases (1/49%) and in the untrained group 18 people (7/32%) had normal delivery (p=0.033). In trained group 8 cases (14%) and in untrained group 19 people (34.5%) were elective cesarean section (p=0.033). Totally in trained group 29 cases (50.8%) and in untrained group 37 cases (62.7%) were cesarean section (p=0.078) (Fig 1). Fear of childbirth also in trained group, before intervention (48.5±13.9) to after the intervention (40.5±12.4) were significantly different (p=0.000) (Fig 2).

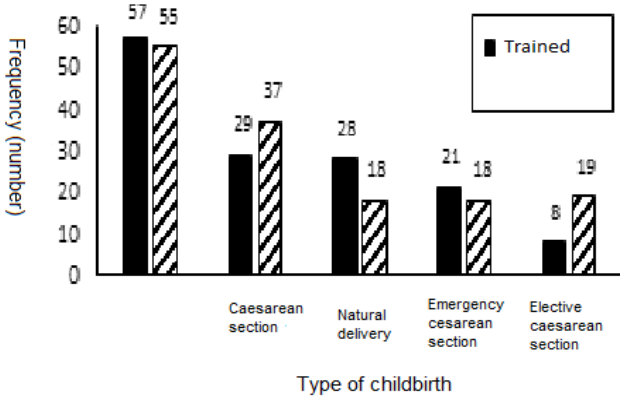


Figure 1. Comparison of delivery type in two trained and untrained groups

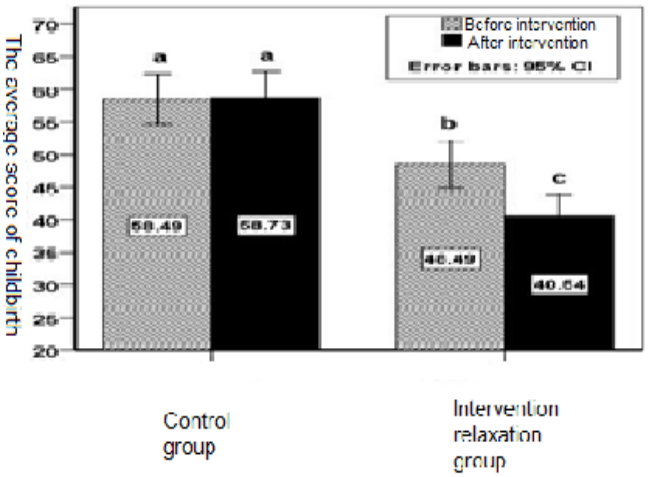


Figure 2. Comparing childbirth fear scores in two groups before and after intervention. Similar letters indicate significant difference and dissimilar letters indicate significant difference

Discussion

In this study the 49.1% of participating in preparing childbirth classes and relaxation group, had normal delivery but in the group receiving usual care 32.7% had normal delivery. There was a significant difference between the rate of caesarean section by maternal request in pregnant women in trained and untrained group so that in trained group maternal request caesarean was much lower. Najafi et al also showed that preparing for childbirth classes have been effective in increasing natural delivery (18). In this study, also in case group the vaginal delivery was significantly higher than the untrained group. Results of Ghooshchian et al on 355 pregnant women showed that there is no significant association between fear of pain and tendency toward cesarean and fear of pain cannot predict the type of delivery (19). But the study of Ghadimi and colleagues showed that fear of labor pain is the most common cause of cesarean section in non-emergency situations (20).

In this study also in untrained group the fear score was higher compared with trained group. Results of Firozbakht et al showed a significant reduction in anxiety, pain, episiotomy and cesarean emergency in trained group (21). In addition, Johnson and colleagues did not observe the relationship between fear of childbirth and emergency cesarean section, in a study of 396 pregnant women (22). These researchers stated that the difference in results may be attributed to cultural differences. In Matinnia and colleagues study, difference between the fear of delivery and selecting

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delivery type was statistically significant; So that most people who had chosen caesarean section had an intense fear of childbirth (23). The results of Consonni and colleagues showed that training during pregnancy such as relaxation training can increase vaginal delivery (24). In a study by Schutte and cooperation, there was a significant correlation between fear of pain and high levels of experienced anxiety and pain associated with childbirth (25).

The study of Sydsjo and colleagues showed that most of the nulliparous women who had fear of childbirth, following by training and advice, chose vaginal delivery (26). But Fahami in evaluation of effect of Lamaze on pregnancy outcome in nulliparous women, found that cesarean section rate was not significantly different in the two trained and untrained groups (27). Moreover, Tofighi Niaki and colleagues demonstrated that training can increase knowledge and awareness, reduce the cesarean section in nulliparous women (28). These contradictions may be related to the onset of training, culture of societies and different type of relaxation. In this study the rate of vaginal delivery in relaxation group was significantly higher than untrained group.

According to this study, use of relaxation techniques affect reducing fear of childbirth and turning to vaginal delivery in pregnant women. Relaxation training routinely is recommended for all pregnant women to be closer to international standards by increasing natural delivery.

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