



The Effect of Relaxation on the Level of Women Anxiety in the Active Phase of Labor

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ABSTRACT

Introduction: Anxiety is the most common emotional reaction of women during childbirth and can lead to adverse effects on fetuses and mothers. Women experience severe anxiety during childbirth, which reduces their chances of giving birth. Therefore, the aim of this study was to evaluate the effect of Jacobson relaxation on reducing the level of women anxiety in active phase of childbirth. **Materials and Methods:** This clinical trial study was performed on 90 pregnant women after informed consent, by random sampling in an intervention group (group for which relaxation was performed) and a control group. At first Eshpel Burgers level of anxiety was measured and then for 20-30 minutes the relaxation was performed for the intervention group and then again, the level of anxiety was measured by the Eshpel Burgers questionnaire. **Data analysis** was done using SPSS 20 software. **Findings:** Levels of anxiety before and after intervention were the same in both groups. The level of anxiety after relaxation in the intervention group was significantly lower than the control group ($p < 0.001$). **Conclusion:** The results of this study showed that the use of complementary medicine in the method of Jacobson muscle relaxation is inexpensive, safe and effective in childbirth, which can be effective in reducing anxiety and is the basis for further research.

Key Words: Muscle Relaxation, Anxiety, Active Phase of Childbirth, Amiralmomenin Hospital, Zabol.

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INTRODUCTION

Anxiety is the most common emotional reaction of women during childbirth and can lead to adverse effects on fetuses and mothers [1]. During childbirth, anxiety, fear, and pain are circulating like a continuous chain [2]. When pain is uncontrollable, coping skills of humans are also decreasing and anxiety also increases. This anxiety leads to severe pain and a defective cycle begins [3]. Increasing pain and anxiety by stimulating the sympathetic nervous system leads to an increase in catecholamines, which reduces the contractions of the uterus, and slows the course of childbirth [4]. Today, it has been found that many common ailments tend to be less susceptible to anxiety than events caused by germs, viruses, harmful substances, or any other external agent [5]. It should be noted that anxiety targets the most vulnerable people, and the strongest people are not

immune from it [6]. As evidence from epidemiological surveys across the globe shows that mood disorders in women are twice that of men, and its peak is during pregnancy and childbirth [7].

Childbirth is one of the stressful conditions for pregnant women. Anxiety and stress at childbirth time can reduce contractile activity of the uterus, increase the duration and probability of childbirth with the help of the equipment and even increase the probability of cesarean [8]. The results show that the fear and anxiety caused by childbirth pain increase the patient's pain and discomfort in childbirth [9-11]. It is also indicated that hormones released in response to anxiety stress during delivery, such as catecholamines, cortisol, epinephrine, and norepinephrine, on the one hand, disrupt the development of cervical dilatation, on the other hand, it affects the contractions of the uterus and decreases its efficiency in the process of childbirth, which ultimately prolongs

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childbirth and increases childbirth pain [12]. Different methods of medical, psychological, and psychotherapy treatments to reduce stress and to train coping skills are a major part of the process of effective exposure to stress. One of the most effective methods is relaxation. [13] Carroll and Bawdher, it seems that learning and applying relaxation in normal and everyday life is beneficial because of its simplicity and effectiveness, it is a technique for coping with stress for anyone, with or without a disorder. The benefits of the relaxation technique presented in this study is that it is an applied relaxation technique, because the person no longer needs to perform muscle contraction after learning the active relaxation technique that led to the person's familiarity with feelings of tension and contraction and only by simply checking the muscles and reminding tension sensations, it takes action to relieve tension in the muscles and the application of this technique generalizes to different situations in everyday life [14]. In emphasizing the positive effect of relaxation techniques, Kaushik et al. say that even a single use of brain relaxation or slow breathing can lead to a temporary decrease in systolic and diastolic blood pressure [15]. Positive relaxation outcomes include increased anxiety adjustment, energy supply, and pain relief from muscle strain, decreased pain anxiety, and easy deep sleep [16]. Good suggests that relaxation is not only effective in reducing the dose of the drug, but also may shorten the duration of hospitalization [17]. Relaxation training is a non-prescriptive intervention that can be used to treat stress from chronic illness or in treatments that have side effects and progressively cause the gain of relaxation feelings [18]. In the study that investigated the effect of progressive muscle relaxation program on depression, anxiety and stress among female students with pre-anxiety syndrome, the results showed that progressive muscle relaxation programs in these students resulted in a decrease in the level of anxiety, stress and depression [19]. Many studies have also shown that cognitive-behavioral techniques have consistently reduced anxiety, depression, stress, increased mental health, and increased success rates in women pregnancy [20-22]. Other studies also found that relaxation technique is a suitable method to fight stress [23], reducing depression, anxiety and stress among female students [24]. Another study showed that relaxation education is a non-drug intervention that is used to treat stress from chronic illness or in treatments that have side effects and can be used to reduce anxiety, depression, reducing nausea, vomiting, and pain [25]. According to the above, clinical studies are necessary to find effective and safe non-pharmacological methods that reduce childbirth anxiety. Therefore, the aim of this study was to

evaluate the effect of Jacobson relaxation on reducing the level of anxiety in women with active phase of childbirth.

MATERIALS AND METHODS

This study was conducted as a randomized clinical trial in Amirmomenin Hospital in Zabol in 2018. After obtaining written informed consent from the research unit, the samples were randomly assigned in such a way that the first two eligible individuals willing to participate in the research were randomly assigned to one of the intervention or control groups, and sampling was carried out in the same manner as the sample size was completed. The sample size (exposure=20% - Power= 80% - $\alpha= 0/05$) with 90 individuals, 45 individuals were control group and 45 individuals were case group women referred to gynecological women with gestational age of 38-44 weeks, cephalic paraesthesia and dilatation 3 centimeters, were performed; study was conducted on women with gestational age of 38- 42 weeks, with cephalic paraesthesia and dilatation of 3 centimeters. Admission criteria was lack of history of asthma, non-use of anti-anxiety and analgesic drugs use as a routine and no anxiety disorder. Exclusion criteria include all mothers who have left the normal course of childbirth and require special care or emergency cesarean. The Eshpel Burgers scales were used to measure positional anxiety. This scale was used by Eshpel Burger. This scale was created by Eshpel Burger in 1983 as a self-assessment instrument in the form of two separate forms and has 40 items. Twenty questions of apparent anxiety and twenty questions of hidden anxiety are measured and allows the respondent to classify their feelings with a score of 1 for non-anxiety and a score of 4 for high anxiety. The total scores of options measure anxiety and its score are between 20- 80. This test can distinguish hidden anxiety as a personal characteristic, from anxiety that is an intermittent emotional experience. This questionnaire has high validity and reliability [26, 27]. The validity of the open-ended questionnaire in Iran was confirmed in 1993. The reliability of this study was calculated and confirmed by Cronbach's alpha coefficient (0.8). Only a clear anxiety questionnaire was used in this questionnaire. The Eshpel Burger Anxiety Inventory was completed once before the active phase of the childbirth and before the intervention and again after the intervention. The statistical comparison of the data after the collection and extraction was done using the SPSS 20 software, and $p < 0.05$ was considered significant. The results were analyzed by independent t-test. For the purpose of the study, both groups were given the same explanation and the individuals with personal satisfaction entered the study after completing the informed consent form. In the first

intervention group, the Eshpel Burgurs anxiety form were filled and then relaxation was performed on the patient for 20 minutes by a clinical psychologist. Finally, the anxiety questionnaire was repeated.

FINDINGS

There was no significant difference between two groups in terms of age, educational level, occupation and number of pregnancies and dilatation, but there was a significant difference in income status. (Table 1 and 2). There was no significant difference in the level of significant anxiety before intervention in the beginning of the active phase in the relaxation group with the control group ($p < 0.005$) (Table 3). In both groups, the level of anxiety was in severe range. There was a significant difference between the level of anxiety after intervention in two groups of relaxation and control, so that the level of anxiety in the relaxation group ($39/88 \pm 10/58$) in comparison with the control group ($64/57 \pm 3/92$) were significantly lower ($p < 0.005$) (Table 4 and 5). To examine the level of anxiety, we will consider paired and independent T-test.

Table 1: Information about job variables, income status and education in the case and control groups

Variable		Relaxation (case)		Non-relaxation (case 28)		P-value
		Frequency	percent	Frequency	Percent	
Job	Housewife	39	86.7	40	88/9	0.748
	Employee	6	13.3	5	11/1	
Income status	Weak	17	37.8	8	17/8	0.027
	Average	24	53.3	25	55.6	
	Good	4	8.9	12	26.7	
Education	Elementary and middle school	27	60	27	60	1.0
	High school	9	20	9	20	
	University	9	20.0	9	20	

There was no statistical correlation between the two groups regarding education and occupation ($p\text{-value} > 0.05$) but there was a difference between the two groups in the income situation ($p\text{-value} < 0.05$).

Table 2: Information on variables such as age, number of childbirth, dilation in two control and case groups

Variable	Relaxation (case)		Non-relaxation (case 28)		P-value
	Mean	SD	Mean	SD	
Age	27.24	5.66	25.46	6.04	0.153
Number of childbirth	2.33	1.41	2	1.1	0.217
dilation	4.46	1.15	4.08	1.23	0.139

According to independent t-test, there was no statistically significant correlation between mean age, number of childbirth and dilation in two groups ($p\text{-value} > 0.05$).

Table 3: Comparison of mean anxiety before relaxation in case and control group

Anxiety	Mean	SD	p-value
Case	63.93	11.17	0.96
Control	63.84	4.07	

Independent t-test showed that the mean of anxiety before relaxation in case group and control group was not significant. There was no statistically significant correlation ($p\text{-value} > 0.05$).

Table 4: Comparison of mean anxiety before and after relaxation in case group

Anxiety	Mean	SD	p-value
Before	63.93	11.17	0.001
After	39.88	10.58	

Paired t-test showed that the mean of anxiety before and after relaxation decreased ($p\text{-value} < 0.05$) and as a result the difference is significant.

Table 5: Comparison of mean anxiety after relaxation in case and control group

Anxiety	Mean	SD	p-value
Case	39.88	10.58	0.001
Witness	64.57	3.92	

Independent t-test showed that there was a significant difference between the mean anxiety after relaxation in the case and control groups ($p\text{-value} < 0.05$).

DISCUSSION

During childbirth, severe maternal anxiety and fear of pain, causing the muscle contraction. Extreme muscle contraction leads to muscle hypoxia, including uterine muscles, and interferes with uterine contractions and in fact interferes with the process of childbirth. Relaxation is one of the non-pharmacological methods. Considering that childbirth is an anxiety trend for pregnant mother, this study, assuming that relaxation is effective in reducing the anxiety of mothers in childbirth, investigated the effect of relaxation on maternal anxiety during childbirth. Based on the obtained results, the level of anxiety after relaxation in the intervention group was in the range of moderate downward anxiety, but in the control group there was severe anxiety. As a result, intervention has been effective in reducing the level of anxiety.

The findings are consistent with the results of some researches such as: Sharifirad et al. (2006), House (2011), Manouchehri et al. (2006), Valiani et al. (2013), Sharma et al. (2008), Narimani et al. and it shows the effectiveness of this exercise in reducing stress, anxiety [19-24]. During the present study, it was found that anxiety reduction in case group was more than control group. Despite the fact that Jacobson relaxation is an effective means of reducing anxiety and due to several benefits, including promoting the repair of perineal tissues, increasing the strength and muscle tone after vaginal childbirth (often associated with muscle weakness around the vagina), reducing the level of anxiety and stress in anxious conditions, the harmlessness of the procedure, the ability to use at home after discharge, and the unrestricted use of the number of times, it is suggested:

Relaxation is a part of women's education in the active phase of childbirth, so that a positive step towards promoting women's health in the active phase of childbirth can be achieved through informed, independent and free participation of the patient in treatment and honored.

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