

EFFICACY OF JACOBSON'S RELAXATION TECHNIQUES ON ANXIETY DURING FIRST STAGE OF LABOUR

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ABSTRACT

Background: Labour and giving birth are life-threatening, with primiparient mothers often experiencing labour anxiety. Jacobson's relaxation techniques can help reduce anxiety and prepare mothers for vaginal delivery instead of caesarean section. **Aim:** To reduce the level of anxiety among primi parturient mothers in first stage of labour. **Objectives:** To assess the level of anxiety during first stage of labour among primi parturient mothers. To assess the efficacy of Jacobson's relaxation techniques on anxiety. To find an association between anxiety with selected demographic variables. **Methods and Material:** A quantitative research study with one group pretest posttest design was conducted on 55 primi parturient mothers using Jacobson's relaxation techniques from latent to active labor. The study used a purposive sampling technique and an anxiety scale to collect data. The data was analyzed using frequency, percentage, mean, and standard deviation, and inferential statistics (Paired 't' test) were used to draw conclusions. **Results:** The study found that 89.1% and 10.9% of primi parturient mothers had severe and moderate anxiety before Jacobson's relaxation techniques. After the techniques, 98.2% and 1.8% of mothers experienced moderate and mild anxiety, with no severe anxiety remaining. The pre-test anxiety level was higher than the post-test level, and there was a significant difference between pre-test and post-test levels ($p < 0.001$). The anxiety level was also associated with demographic variables ($p < 0.001$). **Conclusion:** The study concluded that, Jacobson's relaxation techniques were an effective to reduce anxiety among primi parturient mothers during latent phase of first stage of labour.

Introduction

Labor is an important stage in a woman's life. It is a time of great joy for a woman, but it is also a time of great anxiety for her, both physically and mentally. There are hormonal, physical, and psychological changes have occurred due to labor process as well as due to anxiety during labor. Anxiety is the most prevalent emotional response of women during childbirth, and it can have negative consequences for both fetuses and mothers.¹ Anxiety, fear, and agony circulates in a continuous chain during labour.² When pain becomes unbearable, mothers' coping skills deteriorate and anxiety rises. This worry causes acute pain, and a dysfunctional loop begins.³It's common for women to have mild anxiety throughout labour and delivery.

However, excessive worry and anxiety cause more catecholamine to be released, which worsens pelvic pain. The brain's response to the stimuli increases the sense of pain. Muscle tension rises as worry intensifies. This reduces the effectiveness of uterine contractions and aggravates the discomfort. Thus, a loop of escalating anxiety and panic starts, which will ultimately slow down the labouring process.⁴The findings demonstrate that the patient's pain and suffering during labour are increased by the worry and anxiety brought by birthing pain.⁵ The development of cervical dilatation is disrupted by hormones such as catecholamines, cortisol, epinephrine, and norepinephrine released in response to anxiety and stress during delivery, but on the other hand, it affects the uterus's ability to contract effectively, which ultimately prolongs labour and heightens pain during childbirth.⁶

Relaxation techniques are one of these ways that have attracted significant attention from researchers. The relaxation technique is a cognitive behavioural approach to emotion management. This strategy can help to distract a person's attention away from stress, fear, anger, and discomfort.⁷ Positive relaxing effects include improved anxiety adjustment, enhanced energy supply, muscle strain pain relief, decreased pain anxiety, and easy deep sleep.⁸ A therapy which is researcher used in the present study was Jacobson's relaxation technique focuses on sequentially contracting and relaxing particular muscle groups. The term "progressive relaxation therapy" is often used. Mother can increase awareness of her body and its physical sensations by focusing on certain places, tensing them, and then relaxing them⁹.In the course of labour, relaxation methods are employed as coping strategies to lessen pain by interfering with pain perception, inhibiting the ability to focus on pain, promoting the release of endorphins, and helping to reduce thoughts that exacerbate pain.⁷

Significance of the study: Assessing the efficacy of Jacobson's relaxation techniques on anxiety during first stage of labour among primi parturient mothers.

Material and Methods

A quantitative research approach and one group pre-test post- test research design was used. 55 primi parturient mothers during first stage of labour were selected with purposive sampling technique at labour room of Krishna Hospital and Medical Research Centre Karad, District Satara, Maharashtra.After considering inclusive and exclusive criteria participants were allotted in the study, from 20 January 2023 to 28 February 2023.

The socio demographic information (age, education, occupation, residential area, type of family, family income, socioeconomic status, and gestational weeks), level of anxiety was assessed with three point likertscale having 15 items.The score was interpreted in terms of mild, moderate and severe anxiety.Andefficacy of Jacobson's relaxation techniques wasstudied.The pre-test was conducted in the latent phase of labour when cervical dilatation was one to three centimetre.

Jacobson's relaxation technique was given to the primi parturient mothers when they were in latent phase of labour with cervical dilatation one to three centimetre. And relaxation techniques was ended when primi parturient mothers was in active phase of labour with cervical dilatation was seven to eight centimetre. Each exercise provided every one hourly for fifteen to twenty minutes. Total five cycles and twenty five repetitions for each primi parturient mother were given. Again anxiety was assessed with use of same anxiety scale. The present study was approved by the Institutional Ethical Committee. Informed consent was obtained from participants before data collection.

Statistical analysis was carried out using SPSS-22 (IBM SPSS). The computed frequency, percentage, mean, standard deviation to describe the data and Paired 't' test for see the effect of Jacobson's relaxation techniques.

Results

Majority mothers 72.7% were from age group of 21- 30 years, 38.2% were professionals and 81.8% were unemployed. Most of the primi parturient mothers 52.7% were residing in rural the area, 85.5% were from joint family, and 30.9% primi parturient mothers having family income 30,831 to 46,128 rupees. Majority primi parturient mothers 54.5% were from lower middle class family and 80% primi parturient mothers delivered at 37-38 weeks of gestation.

Table No. 1: Distribution of Primi Parturient Mothers According to Level of Anxiety

n= 55

Level of Anxiety	Pre test		Post test	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Mild (≤ 15)	0	0%	1	1.8%
Moderate (16-30)	6	10.9%	54	98.2%
Severe (≥ 31)	49	89.1%	0	0%

Above table depicts that, in pre-test majority mothers (89.1%) were having severe anxiety. The Pre-test was conducted in latent phase of labour (one to three centimetre cervical dilatation). Then Jacobson's relaxation technique was given, each exercise was given every one hourly for fifteen to twenty minutes. Total five episodes (twenty five repetitions) were given and (98.2%) mothers changed in to moderate anxiety. Post-test was conducted during the transition phase (seven to eight centimetre cervical dilatation).

Table No. 2: Efficacy of Jacobson's Relaxation Techniques on Anxiety Level

n = 55

Level of Anxiety	Mean $\pm$ SD	Mean $\pm$ SD (Pre – Post Anxiety)	t value	p value
Pre test	36.96 $\pm$ 4.75	18.67 $\pm$ 5.11	27.080	<0.001
Post test	18.29 $\pm$ 1.96			

Above table depicts that, mean pre-test (36.96 $\pm$ 4.75) level of anxiety of primi parturient mothers was higher than mean post-test (18.29 $\pm$ 1.96) level of anxiety. There was significant difference was found between pre-test and post-test level of anxiety of primi parturient mothers (p<0.001). There was reduction in anxiety level of primi parturient mothers after administration of Jacobson's relaxation techniques.

Table No. 3: Association between Pre and Post Level of Anxiety with Demographic Variables n = 55

Demographic Variables	Pre-test Mean $\pm$ SD	Post-test Mean $\pm$ SD	t value	p value
Age				
Below20 year	35.75 $\pm$ 8.86	18.37 $\pm$ 2.82	5.899	=0.001
21- 30 year	37.32 $\pm$ 3.66	18.35 $\pm$ 1.57	28.511	<0.001
Above 30 year	36.28 $\pm$ 4.60	17.85 $\pm$ 3.02	8.094	<0.001
Education				
Professional	37.52 $\pm$ 3.47	18.52 $\pm$ 2.15	20.189	<0.001
Graduate or postgraduate	37.43 $\pm$ 3.61	18.68 $\pm$ 2.33	16.970	<0.001
Intermediate or post high school diploma	33.33 $\pm$ 6.74	18.00 $\pm$ 1.50	7.077	<0.001
High school certificate	38.44 $\pm$ 5.83	17.33 $\pm$ 0.70	11.265	<0.001
Residential area				
Rural	35.23 $\pm$ 5.53	18.11 $\pm$ 1.65	15.421	<0.001
Urban	38.51 $\pm$ 3.32	18.44 $\pm$ 2.22	25.786	<0.001
Type of family				
Nuclear	35.12 $\pm$ 4.54	18.75 $\pm$ 2.43	7.351	<0.001
Joint	37.27 $\pm$ 4.76	18.21 $\pm$ 1.89	26.913	<0.001
Socioeconomic status				
Upper middle class	35.45 $\pm$ 4.27	20.00 $\pm$ 2.40	9.225	<0.001
Lower middle class	37.40 $\pm$ 4.66	18.03 $\pm$ 1.86	23.458	<0.001
Upper lower class	37.21 $\pm$ 5.38	17.50 $\pm$.75	13.886	<0.001
Gestational weeks				
37-38 weeks	37.43 $\pm$ 3.93	18.18 $\pm$ 1.63	28.126	<0.001
$\geq$ 39 weeks	35.09 $\pm$ 7.11	18.72 $\pm$ 3.03	8.068	<0.001

Above table depicts that, there was significant association found between mean $\pm$ SD pre and post level of anxiety and demographic variables of primi parturient mothers. Like age ($p=0.001$), education, residential area, type of family, socio-economic status and gestational age at time of delivery ($p<0.001$)

Discussion

In the present study 72.7% mothers were from 21 to 30 years of age and 38.2% completed professional education, 81.8% were unemployed and 52.7% were residing in urban area. Most of them 85.5% living in joint family, 30.9% were having income between rupees 30,831 to 46,128 per months, 54.5% were from lower middle class family and 80% delivered at 37-38 weeks of gestation.

Similar findings were noted by Debajani Nayak et al,¹⁰ (53.3%) were in the age group of 26-30 years. Another research by Soheila Gaini et al,¹¹ reported that, majority (54.86%) primiparous women's had a diploma education that is considered as professional education. By Reza Imankhah et al,¹² noted that, majority (86.7%) mothers were housewife that is considered as unemployed in their study. Another research study done by Bharti Satish Weljale¹³, noted that, majority 16 (53.33%) were belongs to joint family and the most of primigravida mothers 12 (43.33%) were having gestational age between 38-40 weeks at the time of delivery.

Present study found that, 89.1% of primiparturient mothers experienced severe anxiety about labor, while 10.9% experienced moderate anxiety before intervention. After using Jacobson's relaxation techniques, 98.2% of mothers experienced moderate anxiety, while 1.8% remained in mild anxiety.

Similar findings were noted by, PratibhaKhosla et al ¹⁴, none of the women had mild anxiety but, 30% of primipara had moderate anxiety and about 70% of primipara had severe anxiety in the first stage of labour. It was discovered that the majority of primipara experienced severe anxiety during the initial stage of labour. The difference in the degree of anxiety perception in primi was significant at 'p' value (<0.0001). Another findings by BabuLalMeena¹⁵, noted that, overall anxiety score was 46.4% with SD 4.7%. The aspect wise mean anxiety was higher in physical aspect 64.3%, compared to family aspect 45.8%, social aspect 39.2%, and psychological aspect 37.4%.

In the present study, pre-test mean $\pm$ SD was (36.96 $\pm$ 4.75) level of anxiety of primi parturient mothers was higher than mean $\pm$ SD post-test (18.29 $\pm$ 1.96) level of anxiety. There was significant difference was found between pre and post-test level of anxiety of primi parturient mothers ($p<0.001$). There was reduction in anxiety level of primi parturient mothers after administration of Jacobson's relaxation techniques.

Similar findings were noted by Reza Imankhah et al, ¹² that, mean anxiety after relaxation (39.88 $\pm$ 10.58) in case group ($p<0.001$). There was a significant difference was found between level of anxiety after Jacobson's relaxation techniques. Another research by SoheilaGaini et al ¹¹, noted that, Anxiety score in pregnant women under intervention was 82/7 $\pm$ 3/13 before the Benson relaxation and reached 61/23 $\pm$ 6/43 after the Benson relaxation. Paired t-test showed that, this decrease was significant ($P<0.001$).

In the present study there was significant association was found between mean $\pm$ SD pre and post level of anxiety with age ($p=0.001$), education, residential area, type of family, socioeconomic status and gestational age at time of delivery of primi parturient mothers ($p<0.001$). There was no similar study was found to support the present findings but, present study findings may be useful to support the findings of future study in this area.

Conclusion

Based on study findings study conclude that,

- All the primi parturient mothers were very happy to perform Jacobson's relaxation techniques.
- The majority primi parturient mothers (89.1%) were having severe anxiety in pre-test but (98.2%) mothers changed in to moderate level of anxiety after administration of Jacobson's relaxation techniques.
- There was a significant difference in the pre and post level of anxiety of primi parturient mothers during first stage of labour. The mean $\pm$ SD pre-test level of anxiety of primi parturient mothers was higher than the mean $\pm$ SD post-test level of anxiety and significant association was found between level of anxiety with demographic variables.
- Thus, it was proved that the administration of Jacobson's relaxation techniques was an effective to reduce level of anxiety among primi parturient mothers during latent phase of first stage of labour.

Recommendations:

- The study can be replicated on large samples there by findings can be generalized to a large population
- The study can be conducted as a comparative study to assess their level of anxiety among primi parturient and multiparous mothers.
- The similar study can be conducted with randomised trial controlled design.
- The similar study can be conducted with study and control group.

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Conflicting interests

No conflicting interests exist.

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