



A STUDY TO ASSESS THE EFFECTIVENESS OF MUSCLE RELAXATION THERAPY IN REDUCTION OF MATERNAL STRESS AMONG PRIMIGRAVIDAS AT SELECTED AREAS OF GOTTIGERE PHC, BANGALORE

Jisha Mathew*

India.



*Corresponding Author: Jisha Mathew

India.

Article Received on 01/01/2025

Article Revised on 20/01/2025

Article Accepted on 09/02/2025

ABSTRACT

Background & Objectives: During the child bearing period, from conception till postpartum period woman's body undergoes physiological and psychological changes for the adaptation of the pregnancy process. Stress is one of the common symptoms that occur in the pregnancy period. Muscle relaxation therapy is one of the techniques that help to decrease the tension of pregnant women by tensing and relaxing various muscle groups especially in the face, hands and legs. It soothe the mind, de-stress the body and it will provide an overall sense of wellbeing.

Methods: A quasi- experimental pre-test post-test research design with purposive sampling was used. Data was collected from 60 primigravida mothers using structured interview schedule. The muscle relaxation therapy was implemented and post test was conducted after 30 days from both groups to find the effectiveness. **Results:** Majority of primigravida mothers from experimental group were under severe stress and high stress with the PMS% 56.44 and 43.06% and in control group with the PMS% 56.66% and 43.33%. The overall mean post-test score of stress among experimental group is lesser than the overall mean post-test score of stress among control group (26.7<42.4). The obtained 'T' value is 14.27 with df 58 is greater than the table value 2.390 at 0.01 level of significance. **Interpretation and conclusion:** The data support that the muscle relaxation therapy during pregnancy was effective in reducing stress among primigravida mothers who are having stress.

KEYWORDS: Stress, muscle relaxation therapy, primigravida mothers, pregnant women, effectiveness, and alternative methods: yoga, meditation, guided imagery.

INTRODUCTION AND BACKGROUND

Giving birth is one of the great honors which god gave to woman, for this woman is respected everywhere. Pregnancy is a state of carrying one or more offspring's, known as an embryo or fetus inside the womb of a female. The pregnancy is associated with several complications but most of them are treatable. The problems can be both physical and emotional. Emotional health is important for pregnant women. If mother is not emotionally healthy it affects the overall physical and mental health of developing baby.

Stress is a common factor which affects the emotional health of the pregnant women. There are various methods to reduce stress; muscle relaxation therapy is one among that. Muscle relaxation therapy is an effective and widely used strategy for stress relief. It is a therapy with tensing and relaxation of muscle groups. It was developed by Chicago physician Edmund Jacobson. The importance of muscle relaxation is to de-stress the body and mind.

Objectives of the study

1. To assess the stress among primigravidas before muscle relaxation therapy.
2. To determine the effect of muscle relaxation therapy to reduce maternal stress among primigravidas.
3. To find out association between pre- stress level and selected demographic variables.

Hypothesis of the study

H₁- There is significant reduction of maternal stress among primigravidas after muscle relaxation therapy.

H₂-There is significant association between maternal stress and selected demographic variables.

Variables under study

Independent variable: Muscle Relaxation therapy.

Dependent variable: Maternal stress among primigravidas.

Demographic variable: age, educational status, occupation, family income, place of residence, gestational week, height and weight and the source of information about muscle relaxation therapy.

Conceptual framework

A conceptual model selected for the present study is based on Wiedenbach theory model. According to Wiedenbach, nursing practice consist of identifying a patients need for help, ministering the needed help, and validating that the need for help was met. Wiedenbach views nursing as an art based on goal – directed care. Factual and speculative knowledge judgment and skills are necessary for effective nursing practice.^[15]

METHODOLOGY

Research approach and design

A quantitative, quasi experimental pre test post test research design was used for the study. The study consists of primigravida mothers between 12 weeks to 24 weeks of gestation who are residing at the areas of Gottigere PHC. Sixty primigravida mothers are selected for the study using non probability purposive sampling technique.

Inclusion criteria

1. Primigravidas who have stress.
2. Primigravidas who are in the areas of Gottigere PHC.
3. Primigravidas who are present at the time of data collection.
4. Primigravidas who are willing to participate in the study.

Exclusion criteria

1. Primigravidas with any medical complications in pregnancy.
2. Primigravidas with any obstetrical complications in pregnancy.
3. Primigravidas with any gynaecological complications in pregnancy.

Tool used for the study

Part I – Deals with the structured interview schedule for demographic data which consists of 13 items used to collect the sample characteristics such as age in years, religion, education, occupation, family income, height, weight, gestational week, type of family, place of residence, previous experience of stress, sources of information about Muscle Relaxation Therapy.

Part II- consists of Modified Calvin Hobel scale consists of 20 items to reveal the stress of the participants. The level of stress is rated as follows

0-13	: indicates low stress
14-26	: indicates moderate stress
27-44	: indicates high stress
Above 44	: indicates severe stress

Procedure for data collection

After obtaining formal permission from DHO and medical officer, The study was done f with 60 primigravida mothers selected through non probability purposive sampling technique divided into two groups. The experimental group from kalenaagrahara area and the control group from weaver's colony. Each group consists of 30 primigravida mothers respectively. The researcher explained the purpose of the study and obtained the consent from the primigravida mothers who are willing to participate in this present study.

Pre-test was conducted for 60 primigravida mothers by using modified Calvin Hobel scale to assess the level of stress; then muscle relaxation therapy is demonstrated to the experimental group while performing by the investigator to show to the family members and inform them to repeat thrice a day for 3 weeks and provide a time schedule to mark the timings of performing the procedure. After 3 weeks post test was conducted to assess the stress level in both experimental and control group.

RESULTS

Table 1: Findings related to pre test scores on stress among experimental and control group.

n=30+30

Stress Scores	Experimental group					Control group				
	N	Mean	Mean%	PMS	PMS%	N	Mean	Mean%	PMS	PMS%
Severe	14	48.4	60.5	605	56.44	09	47.3	59.1	59.1	56.66
High	16	37.4	85	46.7	43.56	21	36.2	82.27	45.2	43.34

Table 2: Findings related to post test scores on stress among experimental and control group.

n=30+30

Stress Scores	Experimental group					Control group				
	N	Mean	Mean%	PMS	PMS%	N	Mean	Mean%	PMS	PMS%
Severe	-	-	-	-	-	11	49.3	61.6	61.6	56.2
High	14	32	72.7	40	59.26	19	38.4	87.27	48	43.8
Moderate	16	22	84.6	27.5	40.74	-	-	-	-	-

Table 3: Comparison of the pre-test and post-test scores of stress among experimental group by paired 't' test.

n=30

STRESS SCORE	MEAN	sd	t VALUE	df	Table Value
Pre – test	42.5	6.22	31.74	29	2.462
Post – test	26.7	5.92			

 $t_{(29, 0.01)} = 2.462$ **Table 4: Comparison of the pre-test and post-test scores of stress among control group by paired 't' test.**

n = 30

STRESS SCORE	MEAN	sd	t VALUE	df	Table Value
Pre – test	39.6	6.26	9.63	29	2.462
Post – test	42.4	6.14			

 $t_{(29, 0.01)} = 2.462$ **Table 5: Comparison of post-test scores of the experimental and control group by student 'T' test.**

n = 30+30

Post Test Score	Mean	sd	'T' value	Df	Table value
Experimental Group	26.7	5.92	14.27	58	2.390
Control Group	42.4	6.14			

 $t_{(58, 0.01)} = 2.390$

Findings

Pre-test:- the mean pre-test scores perceived stress as severe is 48.4 and as high is 37.4 in experimental group and the mean pre-test scores perceived stress as severe is 47.3 and as high is 36.2 in control group.

Post-test:- The mean post-test scores perceived stress as high is 32 and as moderate is 22 in experimental group and the mean post-test scores perceived stress as severe is 49.3 and as high is 38.4 in control group.

The findings are consistent with a study conducted by DaCosta D, Larouche J, Dritsa M, Brender W to assess the Variations in stress levels over the course of pregnancy. The finding of the study shows that the stress level is decreasing in the post-test than pre-test⁵³.

Effectiveness of muscle relaxation therapy

- The overall post-test mean stress score is lesser than the overall pre-test mean stress score ($26.7 < 42.5$) among experimental group and the obtained 't' value is 31.74 which is greater than the table value $t_{(29, 0.01)} = 2.462$ at 0.01 level.
- The mean of overall post-test scores of stress is higher than the overall pre-test mean stress score ($42.4 > 39.6$) among control group and the obtained 't' value is 9.63.
- The overall mean post-test stress score of experimental group is lesser than the overall mean post-test stress score of control group ($26.7 < 42.4$). The obtained 'T' value is 14.27 with df 58 is greater than the table value 2.390 at 0.01 level of significance.

DISCUSSION

A report of findings is never sufficient to convey their significance. The meaning that researchers give to the results plays a rightful and important role in report. The discussion section is devoted to a thoughtful and

insightful analysis of the findings, leading to a discussion of their clinical and theoretical utility. The findings are consistent with a study conducted by Lokey E. A, Tran Z. V, Wells C. L, Myers B. C, Tran A. C, to assess the Effects of progressive muscle relaxation therapy on pregnancy outcomes. The findings suggested the evidence that there is decrease of stress level after progressive muscle relaxation with a mean of $24.3 < 54.3$ among experimental and control group.

RECOMMENDATION

- A similar study may be replicated on large sample size.
- A comparative study can be done between primi mothers and multi mothers
- A comparative study can be done between the mothers in the first trimester and second trimester of pregnancy
- Comparative study can be done between muscle relaxation therapy with some other alternative method to reduce stress.

REFERENCES

- Paradise Ruth. Psychology for midwives. CBS publishers: 2008.
- Burnett CWF. A concise study on pregnancy and child birth. The world health organization journal. 2010.
- Hosmand, Holmes, Kazarian, Tekatch. Southern online journal of nursing research. 1985.
- P Turton, P Hughes. British journal of psychiatry. 2001.
- Henry Lerner. The text book of miscarriage why it happens and how best to reduce the risks. 2001.
- Sharma P Vijay. Stress during pregnancy can affect the child's health. 2001.
- Carl Son C, Hoyle R. Efficiency of abbreviated progressive muscle relaxation. A quantitative review

of behavioral medicine research. J consults Clia psycho publishers, 1993.

8. Glover, O Conner. Stress in pregnancy has negative implications on fetus, 2004.
9. Barbara Zaut, Laura Natwick, Ashlee Oldani. Stress perception among rural and urban prenatal patients 2005, 2006, 2008.