



## EVALUATE THE EFFECTIVENESS OF PROGRESSIVE MUSCLE RELAXATION THERAPY ON LEVEL OF STRESS AMONG PREGNANCY INDUCED HYPERTENSION MOTHERS AT GOVERNMENT HOSPITAL, TAMBARAM.

### Nursing

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### ABSTRACT

**Background:** Pregnancy induced hypertension (PIH) Complicates 6-10% of Pregnancies. A systolic blood pressure of 140 mmHg or above, a diastolic blood pressure of 90 mmHg or above, is hypertension in pregnancy. Progressive muscle relaxation therapy is an intervention that can be used as complementary and non-pharmacological therapy. Progressive muscle relaxation therapy is one of the relaxation techniques that is easily learned by the mother is simpler cost-effective intervention. **Aim And Objectives:** To evaluate the effectiveness of progressive muscle relaxation therapy on level of stress among pregnancy induced hypertension mothers at Government Hospital, Tambaram. **Methodology:** Quantitative research approach, quasi experimental non-equivalent research design was used. 60 hypertension mothers were selected by using non-probability purposive sampling technique. The study was conducted at Government Hospital, Tambaram. **Results:** The pre-test mean score of stress was  $20.06 \pm 9.44$  and  $19.50 \pm 9.23$  and the post-test mean score of stress is  $11.10 \pm 5.46$  and  $8.96$  and  $0.27$ . The calculated paired 't' test value of  $t=1.246$  was statistically significant at  $p<0.001$  level and  $p<0.05$  level. **Conclusion:** This study concludes that the progressive muscle relaxation therapy on level of stress among pregnancy induced hypertension mothers was found to be effective in reducing the level of stress in the post-test.

### KEYWORDS

Pregnancy induced hypertension mothers, Progressive muscle relaxation therapy and level of stress.

### INTRODUCTION

Pregnancy and childbirth are a great event in the life of every women, for which she aspires and longs for, with great expectations. Pregnancy is a time of growth and hope. Pregnancy is not only a biological event but also an adaptive process. This period is a time of physical and psychological preparation for birth and parenthood. Pregnancy is a complex phenomenon which includes physiological, psychological and social changes. Stress and anxiety symptoms have been linked with hypertensive disorder during pregnancy. They are also a risk factors for adverse outcome for mothers and children.

Hypertension is one of the most common complication during pregnancy. Increased maternal and perinatal morbidity and mortality. It is a condition that the pregnant women appear at least 2 or 3 signs, including hypertension, proteinuria and edema after 20<sup>th</sup> week of pregnancy.

Stress is a normal reaction to a radical transformations (such as pregnancy). Too much of stress can be overwhelming and could even lead to health problems both for you and your baby. Physical discomforts and other changes in your daily life can cause stress during pregnancy. Stress may lead to high blood pressure during pregnancy. This lays you at risk of a serious high blood pressure condition called preeclampsia, premature birth and having a low-birth weight infant.

PMR is a relaxation technique that involves tensing and relaxing specific muscle groups in a systematic way to reduce stress and anxiety. It has improved concentration, increased self-esteem, increased spontaneity and creativity.

A systolic blood pressure of 140 or above, a diastolic blood pressure of 90 mmHg or above, is hypertension in pregnancy. Diagnosing hypertension disorder of pregnancy [HDP] requires taking two or more consecutive measurements with elevated systolic and diastolic blood pressure<sup>11</sup>.

### Statement Of Problem

A quasi-experimental study to evaluate the effectiveness of progressive muscle relaxation therapy (PMR) on level of stress among pregnancy induced hypertension mothers at Government hospital, Tambaram.

### OBJECTIVES

1. To evaluate the effectiveness of progressive muscle relaxation therapy on level of stress among pregnancy induced hypertension (PIH) mothers.
2. To associate the level of stress among pregnancy induced hypertension (PIH) mothers with their selected demographic variables.

### Null Hypotheses

- NH<sub>1</sub>** - There is no significant difference between pretest and post test level of stress among pregnancy induced hypertension (PIH) mothers.
- NH<sub>2</sub>** - There is no significant association between the level of stress among pregnancy induced hypertension (PIH) mothers with their selected demographic variables.

### MATERIALS AND METHOD

A quantitative research approach with Quasi experimental non-equivalent pretest and post-test control group design was used. The study was conducted at antenatal ward at GH, Tambaram. It is 217 bedded hospital, approximately 5-7 mother's came with the pregnancy induced hypertension everyday. The sample size of the study 60. Pregnancy induced hypertension mothers who are at between 20 to 36 weeks of gestation with mild and moderate level of blood pressure and fulfilled the inclusion criteria. Non probability purposive sampling technique was used in this study. Demographic data such as age, religion, education, type of occupation, monthly income of the family, type of the family and diet. The perceived maternal stress scale was developed by Sreeja Gangadharan was used to assess the level of stress among pregnancy induced hypertension mothers. The scale consists of 15 statements related to stress assessment among pregnancy induced hypertension mothers with options ranging from 0-3 based on the subject experiences.

### Data Collection Procedure

The data collection period was 1 week. Formal written permission was obtained from the Principal of Venkateswara Nursing college, Thalambur, Chennai. The written informed consent was obtained from pregnancy induced hypertension mothers.

- o The sample were selected based on predetermined criteria
- o The purpose of the study was explained to all those who participated in the study.

o The investigator explained in detail about the nature of the study.  
o The pretest was conducted on 12.02.2024 to evaluate the progressive muscle relaxation therapy among the pregnancy induced hypertension mothers. On the same day we have planned to teaching the program was conducted by manually for 15 minutes.

#### Description of Intervention:

##### Demonstration on PMR (15-20 mins)

- ❖ Choose a quiet and comfortable place
- ❖ Start with Deep breathing exercise
- ❖ It is a deep relaxation technique for group of muscles used to tense one by one specific muscle group as you breathe in (Hold it for few seconds) and relax them as you breathe out.
- ❖ Feel the relaxation for few seconds
- ❖ Slowly relax and count backwards from 10 to 1
- ❖ Feel the renewed energy and feel refreshed.

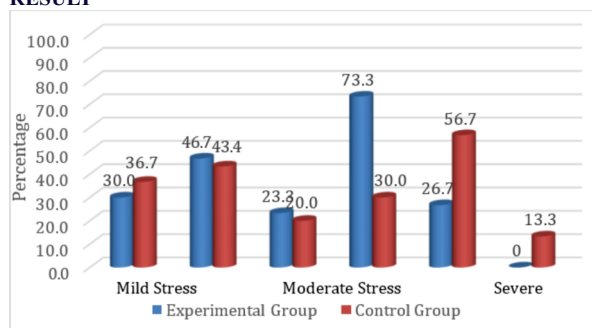
Post test was conducted by using the same questionnaire after 7 days of intervention in the experimental and control group to evaluate effectiveness the progressive muscle relaxation therapy among pregnancy induced hypertension mothers.

#### Plan For Data Analysis

Descriptive and inferential statistics are used to analyzed the data. The collected data is tabulated and analyzed by using descriptive and inferential statistics methods.

1. Frequency and percentage are used to describe the demographic variables.
2. Mean and standard deviation is used to assess the level of stress among pregnancy induced hypertension mothers.
3. Chi-square test is used to find out the association of post test level of stress among pregnancy induced hypertension mothers.

#### RESULT



**Fig 1** Depicted Percentage Distribution Of Pretest And Post Test Level Of Stress Among Pregnancy Induced Hypertension Mothers In The Experimental And Control Group.

| Group                                  | Pretest                   |      | Post Test                  |      | Mean Difference Score & %                | Paired 't' Test value       |
|----------------------------------------|---------------------------|------|----------------------------|------|------------------------------------------|-----------------------------|
|                                        | Mean                      | S.D  | Mean                       | S.D  |                                          |                             |
| Experimental Group                     | 20.06                     | 9.44 | 11.10                      | 5.46 | 8.96 (44.5%)                             | t=9.380<br>p=0.0001<br>S*** |
| Control Group                          | 19.50                     | 9.23 | 19.23                      | 9.04 | 0.27 (44.5%)                             | t=1.246<br>p=0.223<br>N.S   |
| Mean Difference & %                    | 0.56                      |      | 8.13                       |      | ***p<0.001                               |                             |
| Student Independent "t" test & p-value | t=0.235<br>p=0.815<br>N.S |      | t=4.215<br>p=0.001<br>S*** |      | S – Significant<br>N.S – Not Significant |                             |

#### Association of post test level of stress among pregnancy induced hypertension mothers with their selected demographic variables in the experimental group.

In demographic variables education ( $\chi^2=7.628$ ,  $p=0.022$ ) has and type of occupation ( $\chi^2=9.167$ ,  $p=0.002$ ) showed statistically significant association with post test level of stress among pregnancy induced hypertension mothers in the experimental group at  $p<0.05$  and  $p<0.01$  level respectively. The other demographic variables had not shown statistically significant association with post test level of stress among pregnancy induced hypertension mothers in the experimental group.

#### DISCUSSION

This study was supported by Vanita, bharathi weljale (2019) Quasi experimental study, where a pre and post-test design with control group approach was used for assessing the effectiveness of Relaxation Therapy on Stress and Physiological parameters among Antenatal mothers with PIH. The sample size was comprised of 60 ante-natal mothers with PIH, out of which 30 were in experimental group and 30 were in control group. Purposive sampling technique was used for the selection of participants who meet the purpose of the study on the basis of inclusion and exclusion criteria. In relation to respiratory rate significant percent 20% in experimental group and 13% in control group had elevated respiratory rate. Control group the mothers of 19-23 years of age had higher mean score (8.18±1.16) indicate 'moderate level' of stress.

This study was supported by Preethi Jazna B (2017) conducted the effectiveness of Benson Relaxation Therapy on Blood Pressure and stress among pregnancy induced hypertensive mothers in selected hospital, Madurai. 60 samples selected by Non probability convenient sampling. Analysis was done by Descriptive statistics- Frequency, percentage and mean. Inferential statistics- Paired "t" test, independent "t" test, Karl Pearson co-efficient and chi square. The result showed that there was a significant reduction in mean posttest stress level (MD=9., t=24.65., p<0.05) of the experimental group. The mean posttest stress score in the experimental group was 12.9, lesser than that of the control group 21.7 (MD=8.8., t=8.14., p<0.05). There was a significant positive relationship between pretest systolic BP and stress in the experimental group.

#### CONCLUSION

The progressive muscle Relaxation therapy was effectively reducing the level of blood pressure and stress among pregnancy induced hypertensive mother's. It will help to improve the mother's daily activities and promote physiological and psychological well being of the antenatal mothers.

#### Acknowledgement

We would like to thank the chief medical officer government Hospital, Tambaram for granting permission to carry out this study in hospital.

#### Source Of Support: None

#### Conflict Of Interest: None declared

#### REFERENCES

1. Borges, N. C., De Deus, J. M., Guimarães, R. A., Conde, D. M., Bachion, M. M., & De Moura, L. A. (2020). The incidence of chronic pain following Cesarean section and associated Risk factors: A cohort of women followed up for three months. *PLoS ONE*, 15(9).
2. Borges, N. C., De Moura, L. A., & Silva, T. (2016). Predictors for Moderate to Severe Acute Postoperative Pain after Cesarean Section Pain "Research and Management. Article, 2016.
3. Buhagiar, L., Cassar, O. A., Brincat, M. P., Buttigieg, G. G., Inglott, A. S., Adami, M. Z., & Azzopardi, L. M. (2011). Predictors of post-caesarean section pain and analgesic consumption. *J Anesthesia Clin Pharmacol*, 27, 185–191.
4. Chan, J., Tan, C. W., Yeam, C. T., Sultana, R., Sia, A., & Habib, A. S. (2020). Risk Factors Associated with Development of Acute and Sub-Acute Post-Cesarean Pain: A Prospective Cohort Study. *J Pain Res*, 13, 2317–2328.
5. Chen, H. H., Lai, J. C., Hwang, S. J., Huang, N., Chou, Y. J., & Chien, L. Y. (2017). Understanding the relationship between cesarean birth and stress, anxiety, and depression after Childbirth: A nationwide cohort study. *Birth*, 44(4), 369–376.
6. Souza, D. (2020). Effectiveness of Benson's Relaxation Therapy on Post Operative Pain among Mothers Delivered by Caesarean Section in a Selected Hospital at Mangalore. *Indian Journal of Public Health Research & Development*, 11(4), 446–449.