



RESEARCH ARTICLE

A STUDY TO ASSESS THE EFFECTIVENESS OF PROGRESSIVE MUSCLE RELAXATION TECHNIQUE ON REDUCTION OF STRESS AND ANXIETY AMONG ELDERLY RESIDING IN SELECTED OLD HOMES AT TVM DISTRICT KERALA

Sheeja E.

Assistant professor, CSI College of Nursing Karakonam

Manuscript Info

Manuscript History

Received: 10 May 2025

Final Accepted: 13 June 2025

Published: July 2025

Abstract

A Quasi- Experimental research design was adopted to assess the effectiveness of Progressive muscle Relaxation technique on the level of Stress and Anxiety among elderly residing in selected old age homes at TVM District Kerala. The objective of the study were to assess the level of stress and anxiety among elderly in both experimental and control group. To find out the effectiveness of progressive muscle relaxation technique on level of stress and anxiety of elderly in experimental group. To find out the association between level of stress and anxiety and demographic variables among elderly. Data will be collected from elderly people of the age group between 55 - 70yrs. Based on the Slovan's formula to determine the sample size .The sample size of the present study is approximately calculated as 50 for each group. Demographic Variables are Age, sex, religion, marital status, educational status, previous occupation, type of family, and duration of stay in old age homes. The study was conducted in old age homes by using Non Probability random sampling technique. The Inclusion criteria include elderly people residing in selected oldage homes, Male and Female, 60 years and above, Elderly who are willing to participate I the study, Who can speak ,read, write Malayalam or English and Being independent in practicing daily living activities. Exclusion criteria include Elderly who are critically ill ,Dumb and deaf, diagnosed with psychiatric illness ,having history of fracture and backpain, Who do not want to participate progressive muscle relaxation therapy, Elderly Who are having health problems regarding any medical contraindication for physical activities and taking medication for psychiatric illness. The instrument used for the study consisted of 2 sections. Sections A deals with the Semi structured interview schedule was used to collect socio demographic data and Section B consists The tools was used for this study is to assess the level of Stress and Anxiety. Hamilton Anxiety rating scale is a standardized tool to assess the level of Anxiety and Percieved Stress Scale is used to assess the level of Stress. The reliability of the tool was calculated by using Karl pearson formula and the tool was found to be reliable. The findings of the study indicated that progressive muscle relaxation is highly effective in reducing the level of stress and anxiety of elderly people. The Study findings revealed that a reduction in the level of Stress and Anxiety. The Study findings revealed that a reduction in the level of Stress and Anxiety.

"© 2025 by the Author(s). Published by IJAR under CC BY 4.0. Unrestricted use allowed with credit to the author."

Corresponding Author:- Sheeja E.

Address:- Assistant professor, CSI College of Nursing Karakonam

The mean Stress score before the administration of Progressive muscle relaxation technique was 23.57 ± 5.9 and the same after relaxation was 18 ± 5.4 . The mean reduction of stress was 3.79 ± 0.5 and the same was highly statistically significant. The mean anxiety score before the administration of Progressive muscle relaxation technique was 20.95 ± 3.04 and the same after relaxation was 17.16 ± 2.3 . The mean reduction of stress was 5.57 ± 0.5 . It was noted that there is a statistically significant differences between mean pre test and post test scores and the intervention was effective in reducing Stress and Anxiety among elderly residing in old age homes.

Introduction:-

Stress is part of life, everyone feels stressed from time to time. It is just a simple reaction to a stimulus that disturbs our physical or mental equilibrium. Stress in older adults is a significant concern that can impact their physical, emotional and mental well-being. As people age, they may face various stressors related to health declines, loss of loved ones, change in living conditions. Without stress our lives would be boring and would probably feel pointless. A certain amount of stress energizes people, improving performance and efficiency. Stress in older adults living in old age homes can occur from various factors living situation, health and social connections. Not all stress is bad, but chronic stress can cause both physical and mental harm. Anxiety can affect anyone at any age. Elderly persons face numerous anxiety inducing issues, including health problems, loss of close friends and their life transitions such as moving to a nursing home. (Langton, 2009).

The body's natural relaxation response is a powerful antidote to stress. Relaxation techniques can help you activate this relaxation response. When practiced regularly, these activities lead to a reduction in your everyday stress and anxiety levels and boost your feelings of joy and serenity.

Young and old alike have to face difficult situations and overcome obstacles. While young adults struggle to establish a career, achieve financial security, or juggle work and family demands, older people may face failing health or dwindling finances or simply the challenges of retaining their independence. Unfortunately, the body's natural defenses against stress gradually break down with age. The number of persons above the age of 60 years is fast growing, especially in India. India as the second most populous country in the world has 75.8 million people over the age group of 60, constituting above 8.7% of total population. The present study focused on the effectiveness of Progressive muscle relaxation exercise on the level of stress and anxiety among elderly residing in selected old age homes in Trivandrum District.

Operational Definition

Effectiveness

In this study effectiveness refers to reducing in the level of stress and anxiety, and as determined by significant difference in pre and post test scores among elderly.

Elderly

Elderly is defined as people who are old. In this study elderly refers to person in the age group of above 60 years and below 70 years.

Anxiety

Anxiety is defined as a multi system response to a perceived threat or danger.

Anxiety is a worried, uncertain state of mind a senior citizens experience due to aging process, admission to old age homes and separation of family members as measured by the Hamilton anxiety rating scale.

Progressive muscle Relaxation Technique

A relaxation technique is any method, process, procedure, or activity that helps a person to relax, to attain a state of increased calmness. It is a whole body activity. It helps to tensing and relaxing the muscles subsequently from head to foot. To do this activity it takes time to 10 mnts. Followed by resting period of 5 mnts. This Relaxation Technique is a technique aiming to reduce Stress and Anxiety among elderly residing in selected Old age homes.

Need For The Study

"There are currently 962 million people in the world who are aged 60 years or older.. By 2025 there will be 1,000 million populations with over in the developing world. The number of older persons expected to double again by 2050.

I selected this study because the rate of Stress and anxiety among adults aged 60 and above is higher among those who living at institutional settings such as old age homes .By giving progressive relaxation technique have an effect in reducing Stress and anxiety. So I made a trial to rule out the effect of giving relaxation technique on Stress and anxiety among the elderly residing in old age homes.

Objectives of the Study:-

1. To assess the level of stress and anxiety among elderly in both experimental and control group.
2. To find out the effectiveness of progressive muscle relaxation technique on level of stress and anxiety of elderly in experimental group.
3. To find out the association between level of stress and anxiety and demographic variables.

Assumptions

- Selected Relaxation Technique is a non pharmacological treatment and it may reduce Stress and anxiety
- Selected Relaxation Technique has influence and it may reducing the level of Stress and anxiety among elderly persons
- Practicing of Selected relaxation technique may enhances sense of well being among elderly persons.
- Elderly residing in old age home may have Stress and Anxiety

Limitation:-

1. Study is limited to elderly people who are residing in selected old age homes
2. Study is limited to elderly people who are available at the time of data collection
3. The study design adopted is Quasi experimental research design.

Research Methodology:-**Research Approach**

Quantitative research approach for the study

Research Design

A Quasi experimental design was adopted used for this study

Variables

1. Dependent variables: - level of Stress and anxiety among Elderly people in selected old age homes
2. Independent variables: - Progressive muscle relaxation technique, on reduction of Level of Stress and anxiety

Settings and Sample

The study was conducted in selected old age homes at TVM District Kerala. And sample of 100 elderly was selected

In this study the sample consists of 50 experimental and 50 control group from elderly residing in selected old homes at TVM District kerala.

Sample size determination is done by using the Slovan's formula and also based on relevant previous study reports. The sample size of the present study is approximately calculated as 50 for each group. The calculation done as follows,

Let N' be the population size and the margin of error e denotes the allows probability of committing an error in selecting a sample representative of the population.

Sampling Criteria**Inclusion criteria : Elderly who is**

1. 60 years and above
2. Male and female
3. Elderly residing in selected old age homes TVM District Kerala.
4. Who can speak, read and write Malayalam or English.

Exclusion criteria : Elderly who is

1. Who are Critically ill
2. Bed ridden

3. Dumb and deaf
4. Taking treatment for mental illness

Sampling Technique

Non probability Convenience sampling techniques was used to select the sample for the study

Data Collection Instruments

The technique used for the investigation consists of interview

Description of the Tool

The structured questionnaire consisted of two parts

Section A**Semi Structured interview schedule on Socio demographic data of elderly patients**

Semi structured interview schedule was used to collect socio demographic data of elderly residing in selected old homes. It consisting of 11 items as Sex, Age in years, Religion, Marital Status, Educational Status, Previous Occupation, Type of family, Financial Support, Psychological Support, Family Support and Duration of Old Age home stay

Section B

Research Tool which was used for the study are Ham – A scale and Percieved Stress Scale

Content validity

The tools were given for content validity to five subject expert from the department of psychiatry and Nursing. They were requested to give their comments on the adequacy and relative appropriateness of the content. The suggestions of experts were incorporated into the tool and tool was modified as per the suggestions made by the experts. The corrected tool was translated into Malayalam, and Tamil to administer to the samples. Pilot study also assured the validity of the tool.

Reliability of the tool

The reliability of the tool was assessed by Cronbach's Alpha method. Reliability coefficient ranges from -1 to +1. And 'r' value was calculated. The calculated 'r' value was 0.844. Thus, it indicated the tool was reliable to assess the knowledge. The calculation were verified and accepted by the statistician

Plan For Data Analysis

Collected data will be analyzed by descriptive and inferential statistics by using statistical software (SPSS)

- Socio-demographic data will be analyzed using descriptive statistics.
- Effect of Relaxation technique on stress before and after intervention will be analyzed by paired –t” test at 5% level of significance.
- Effect of Relaxation technique on anxiety before and after intervention will be analyzed by paired –t” test at 5% level of significance.
- The association between Stress and anxiety and selected demographic variables will be assessed by one way ANOVA at 5% level of significance
- Relationship between Stress and anxiety before and after intervention will be assessed by karl pearson coefficient at 5% level of significance

Major Finding Major findings are as follows:Section**I: Distribution of demographic variable of elderly in Stress**

- 45% were from 60-65 years of age both in experimental and control group.
- 55% & 49% were females both in experimental and control group.
- 60% & 50% were married both in experimental and control group.
- 61% & 50% of them were from nuclear families both in experimental and control group.
- 61% & 36% were had higher secondary education both in experimental and control group.
- 50% & 71% were not liable to get pension in both experimental and control group.
- 32% & 60% didn't have any history of health problem both in experimental and control group.
- 43% & 41% of them had history of family problems in recent past both in experimental and control group.

- 61% of them met their family members twice in the period of six months in experimental and 38% of them had met only once in control group.
- 55% of them had 1-3 years of stay in old age home in experimental and 29% of them had only one year stay in control group.

Distribution of demographic variable of elderly in Anxiety

- 47% were from 60-65 years of age both in experimental and control group.
- 50% & 55% were females both in experimental and control group.
- 61% & 52% were married both in experimental and control group.
- 60% & 50% of them were from nuclear families both in experimental and control group.
- 55% & 30% were had higher secondary education both in experimental and control group.
- 52% & 70% were not liable to get pension in both experimental and control group.
- 34% & 60 % didn't have any history of health problem both in experimental and control group.
- 40% & 44% of them had history of family problems in recent past both in experimental and control group.
- 70% of them met their family members twice in the period of six months in experimental and 38% of them had met only once in control group.
- 56% of them had 1-3 years of stay in old age home in experimental and 30% of them had only one year stay in control group.

Section B:

To find out the effectiveness of Progressive muscle relaxation exercise on level in experimental group

a) Pre-test and post-test stress of elderly in experimental group

In pre-test, 47% of the experimental samples had severe stress (30-40), another 47% of them had moderate stress (score 20-31) and 4% of them had mild stress (Score 10-21).

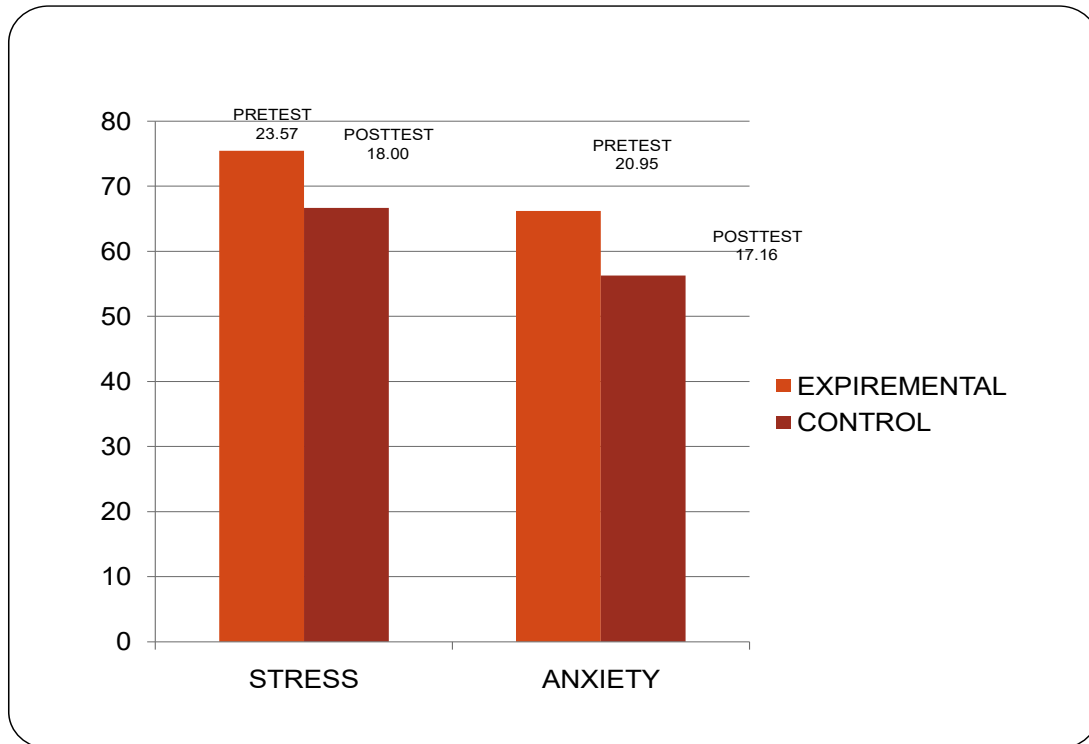
In post-test, majority of 68% of them had mild stress (Score 10-20), 23% of them had moderate stress (Score 20-31) and 3% of them had severe stress (score 30-40).

Pre-test and post-test Anxiety of elderly in experimental group

Finding indicates that there is a marked reduction in stress and anxiety of elderly people in old age homes after Progressive muscle relaxation exercise

Paired t-test for effectiveness of Progressive muscle relaxation exercise on stress and anxiety of elderly people:

- The Study findings revealed that a reduction in the level of Stress and Anxiety. The mean Stress score before the administration of Progressive muscle relaxation technique was 23.57 ± 5.9 and the same after relaxation was 18 ± 5.4 . The mean reduction of stress was 3.79 ± 0.5 and the same was highly statistically significant. The mean anxiety score before the administration of Progressive muscle relaxation technique was 20.95 ± 3.04 and the same after relaxation was 17.16 ± 2.3 . The mean reduction of stress was 5.57 ± 0.5 . It was noted that there is a statistically significant differences between mean pre test and post test scores and the intervention was effective in reducing Stress and Anxiety among elderly residing in old age homes



Reference:-

1. Mathew MA, George LS, Paniyadi N. Comparative Study on Stress, Coping Strategies and Quality of Life of Institutionalized and Non-Institutionalized Elderly in Kottayam District. Indian Journal of Gerontology. 2009;23(1):78–87. 2
2. World Health Organization (12 December 2017). Mental health of older adults. Available from <https://www.who.int/news-room/fact-sheets/detail/mental-health-of-older-adults> [Accessed Dec. 2019].
3. Mane AB. Ageing in India; some social challenges to elderly care. J Gerontol Geriatr Res. 2016;5(2):1–2.
4. Sasmita Panigrahi, Bijayalaskhmi Dash. Stress and coping strategies among senior citizens in selected old age home, Berhampur, JNEP, 2015; 1(1):21–25.
5. World Health Organization (30 September 2014). Ageing and life-course. <https://www.who.int/ageing/about/facts/en/> [Accessed Dec. 2019].
6. Harvard Medical School (June, 2016). How stress affects seniors, <https://www.health.harvard.edu/aging/how-stress-affects-seniors-and-how-to-manage-it> [Accessed Dec. 2019].
7. Juan Li, Meng-meng Zhang, Lin Zhao, Lin Zhao et al. Evaluation of attitudes and knowledge toward mental disorders in a sample of the Chinese population using a web-based approach. BMC Psychiatry 2018; Page No: 1-8. 13)
8. Vijay P, Pravinkumar B. Jadhav et al. Study of knowledge and attitude concerning mental illness in adults, 2012; Page No: 1-6. 14)
9. Shyamanta Das, Hemendra Ram Phookun et al. Knowledge, Attitude, Perception and belief (K.A.P.B) of patient's Relatives towards Mental illness Association with clinical and Sociodemographic characteristics. April 2013, Delhi Psychiatry journal Page No: 11-20. 15)
10. Carey SJ. Knowledge and attitude towards mental illness in southwest Scotland. Cited 2013 Page No: 112-114.