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## Effectiveness of Jacobson's progressive relaxation technique on anxiety among elderly people of aged 60-70 years in: A narrative review

**Sonia Mehta and N Siva**

### Abstract

**Introduction:** Old age is characterized by certain physical and psychological changes and is associated with high level of anxiety. Literature reports that 11% of elderly are suffering from anxiety and anxiety disorders. Progressive muscle relaxation technique is very effective in reducing anxiety.

**Aim:** The aim of this narrative review is to find information on the effectiveness of progressive muscle relaxation technique on anxiety.

**Methodology intervention:** Jacobson's progressive muscles relaxation technique.

**Types of studies:** Quasi experimental.

**Types of participants:** Elderly peoples, school adolescents, orthopedics elderly.

**Setting:** Old age homes, school.

**Outcome:** Anxiety, Jacobson's progressive muscles relaxation technique.

**Keywords:** Anxiety, Jacobson's Progressive Muscles Relaxation Technique.

### Introduction

The term anxiety has become a part of our everyday life. The concepts of anxiety may differ according to the individual's state of contexts and interpretations. It is recognized that certain amount of anxiety is desirable, productive and can facilitates the individuals to grow but when the anxiety exceeds disturb the normal functions. And even human body undergoes a number of autonomic physiological changes such as perspiration, restlessness, discomfort, palpitation and tightness in the chest (Ahuja N.)<sup>[1]</sup>.

Ageing is a natural process and an inevitable one. Elderly is a crucial phase where the physiological, psychological and socio-cultural changes in elderly contribute to develop anxiety. Anxiety is a normal emotion. All human beings develop it as a means of protection from danger and threat when we perceive danger. But Persistent or extreme anxiety can seriously decrease quality of life and can be a sign of other problems, such as depression, dementia, physical illness, or side effects to drug treatment. Anxiety can be a symptom associated with many medical disorders common in older adults, including heart disease, lung disease, thyroid and other endocrine problems, neurologic illness, dietary problems (e.g., excess caffeine intake or vitamin B12 deficiency), psychological illnesses, and side effects to medications. Studies have shown that generalized anxiety disorder is more common in the elderly, affecting 7% of seniors, than depression, which affects about 3% of seniors. Surprisingly, there is little research that has been done on this disorder among elderly as reported by a research study (Eric J. Lenze, 2006)<sup>[2]</sup>.

Old age is the closing period in the life span. It is a period when people "move away" from previous, more desirable period of times of "usefulness". Like every other period in life span old age is characterized by certain physical and psychological changes. The effect of these changes to determines, to a large extent whether elderly men and women will make good or poor personal and social adjustments.

Most anxiety disorders begin in early to middle adulthood, but some appear for the first time after age 60. The fragility of the autonomic nervous system in older persons may account for the development of anxiety after a major stressor. Aging is not a risk factor for anxiety but rather a protective one. However, several biological, psychological, and social risk factors for anxiety disorders have been identified for older adults. (G S Tak, S K Maheshwari, 2016)<sup>[3]</sup>.

An experimental study was conducted on effectiveness of Jacobson’s progressive muscle relaxation technique on anxiety among elderly”. The objective of study was to assess the effectiveness of progressive muscle relaxation technique on anxiety among elderly residing in selected old age homes. Sixty participant (thirty experimental and thirty in control group) were selected through convenience sampling technique for study. Data was collected through interview method using socio-demographic profile Hamilton Anxiety Rating scale. Progressive relaxation technique has been demonstrated and intervention continued for 7 days for 20-30 minutes daily to the experimental group after pre-test. Findings of study revealed that in experimental group 46.7%, 43.7%, had moderate, severe anxiety respectively and in control group 36.7%,46.7% had moderate and severe anxiety respectively before intervention and after intervention in experimental group anxiety had reduced mild (36.7%) and moderate (46.7%) and in control group 40% had moderate and sever anxiety. There is significant difference in pre and post test level of anxiety in experimental group (G S Tak, S K Maheshwari, 2016) [4].

An experimental study was conducted on effectiveness of Jacobson’s progressive muscle relaxation technique on anxiety among senior citizens in selected old age home”. The objective of the study to assess the level of anxiety among senior citizens staying in old age home before and after administering progressive muscle relaxation technique. The research design used for this study was pre experimental one group pre test post test research design. After the administration of progressive muscle relaxation technique, in the post-test there was significant reduction in the level of anxiety. Out of 50 senior citizens majority of the senior citizens (96%) had mild level of anxiety, whereas 4% of senior citizens had moderate level of anxiety. The findings clearly indicated that progressive muscle relaxation technique was an effective method in reduction in the level of anxiety of senior citizens.  $P < 0.05$  level of anxiety level revealed that there was significant reduction in the level of anxiety of senior citizens after administrations of progressive muscle (Nigam Rahul, 2016) [5].

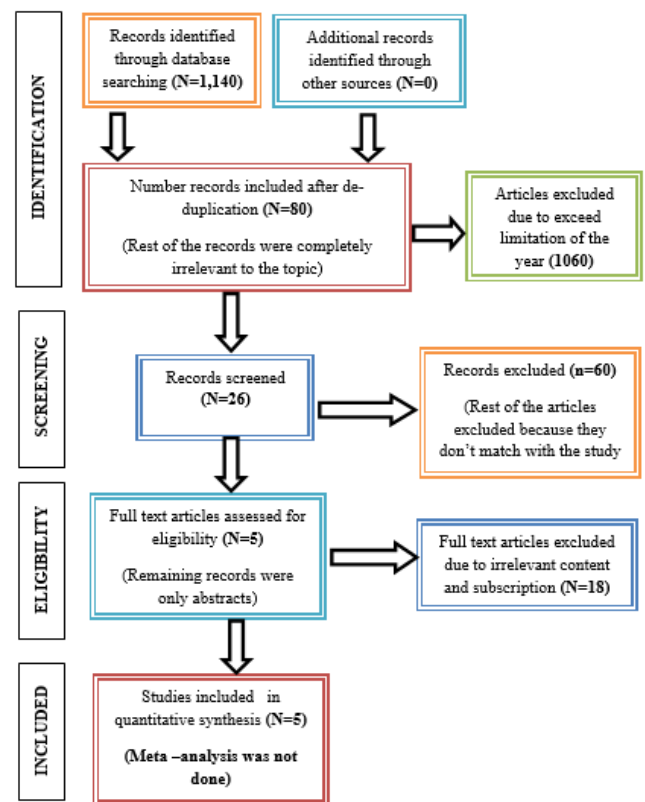
An experimental study was conducted on effectiveness of jacobson’s progressive muscle relaxation technique on generalized anxiety of elderly orthopedic patients”. The objective of the study to assess the baseline data of anxiety level in elderly orthopedic patients for experimental and control group. To determine and compare the anxiety level in elderly orthopedic patients after the interventions in experimental and control group. Experimental group design was selected for the study. 40 elderly orthopedics patients selected by random assignment technique. A modified stat trait anxiety scale was used to collect data from the subjects. In pre-intervention, maximum anxiety in control group was 74 and in experimental group it was 85, in post intervention, in control group the mean average of anxiety was 65.2 and 46.7 in experimental group. Findings has revealed that the Jacobson progressive muscle relaxation technique was effective for anxiety reduction among elderly orthopedic patients. (Barde Sheetal, 2013) [6].

An experimental study was conducted on effectiveness of Jacobson's progressive muscle relaxation technique on social anxiety among high school adolescents. Objective of study to determine the effectiveness of Jacobson's progressive muscle relaxation on social anxiety in terms of reduction in post test anxiety score. Social anxiety scale for

adolescent and tool to assess the associated factors of social anxiety. The JPMR technique was administered to the adolescents with moderate to severe social anxiety. The study found that 52(27%) adolescents were having moderate social anxiety and there was significant association  $2 (\div = 15.297, p < 0.05)$  between age of the adolescents and social anxiety. The significant related factors of social anxiety were parental strictness, parental conflict, teacher's strictness, peer rejection, troubled with appearance and being treated differently from siblings by parents. The Jacobson's progressive muscle relaxation technique was found to be effective in reducing the social anxiety. (Joy Febu Elizabeth, 2014) [7].

A study was conducted on effect of progressive muscle relaxation on anxiety in geriatric population. The JPMR technique was administered to the adolescents with moderate to severe social anxiety. The study found that mean age of participants was 64 years. In total 30 participants, 20 were males and 10 were females. On Beck anxiety score, prior to intervention, 60% (18/30) participants had moderate anxiety level, 27% (8/30) had mild anxiety level and 13% (4/30) had severe anxiety level. The pre and post mean scores of Beck Anxiety Inventory were compared with students paired 't' test. The mean score of BAI of pre training was 25.5 and of post training was 14.2. The test showed significant difference ( $p\text{-value} < 0.001$ ). Results indicated that post training of progressive muscle relaxation technique significantly lowered the anxiety symptoms in geriatric population (Dr. Reshma S.Gurav (PT, 2018) [8].

**Material and Method**



**Fig 1:** Prisma flow diagram of narrative review

**Findings**

The systematic search was done by formulating the terms anxiety and Jacobson’s progressive muscle relaxation

technique in relation to the integrative with all its synonyms and also according to search database. A manual PUBMED and Google scholar searches was done through Google search engine. An addition of 5 articles were found in the database. Initial search recovers 1140 articles over which 1060 articles were rejected due to irrelevancy. 80 articles were selected manually and 50 articles were rejected as a result of replication in the database. Replication was removed and reviewed 26 articles for acceptability. 18 more studies were rejected because of unreachable of the full text. Hence 5 articles were screened which includes experimental study.

### Discussion

These findings are supported by a study conducted by G S Tak, S K Maheshwari as an experimental study. It was reported that experimental group 46.7%, 43.7%, had moderate, severe anxiety and in control group 36.7%,46.7% had moderate and severe anxiety respectively before intervention and after intervention in experimental group anxiety had reduced mild(36.7%) and moderate (46.7%) and in control group 40% had moderate and sever anxiety. There has been significant difference in pre and post test level of anxiety in experimental group which suggest that Jacobson's progressive muscle relaxation technique should be used for reduction of anxiety.

### Conclusion

There was a significant difference between pre and post test level of anxiety in experimental group. The progressive muscle relaxation technique is effective in reducing the anxiety symptoms in geriatric population and can be used as a primary treatment or adjuvant for medical treatment of anxiety disorders.

**Source of funding:** Self-funding

### Ethical clearance

- Prior permission was obtained from the Selected old age home.
- Informed written consent was taken from each participant under the study. Objective of the study was maintained with honesty, privacy confidentiality and anonymity.

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