Stress Reduction Through Structured Relaxation Training

"Bridging the Gap Between Clinical Theory and Management Practice"

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***Abstract*:**
Background: Stress among elderly populations is a growing concern, particularly in rural communities where healthcare access is limited. Relaxation techniques are recognized as effective non-pharmacological interventions to reduce stress.
Methods: A quasi-experimental study was conducted among 60 elderly individuals in rural Guntur district. Structured teaching programmes on relaxation techniques were delivered, and stress levels were assessed using pre-test and post-test measures.
Results: Pre-test findings showed 75% of participants had inadequate knowledge of relaxation techniques. Post-test results revealed significant improvement, with 91.7% demonstrating adequate knowledge. Mean stress scores improved from 9.62 (SD=4.65) to 26.30 (SD=2.96).
Conclusion: Structured teaching programmes significantly enhanced knowledge and reduced stress among elderly participants. This approach is practical, cost-effective, and suitable for community health nursing interventions.

Keywords: Relaxation techniques, stress reduction, elderly care, community health nursing, structured teaching programme

I. Introduction

Ageing is a universal process accompanied by physiological decline, psychological vulnerability, and socio-cultural changes. Elderly individuals often face challenges such as chronic illness, financial insecurity, bereavement, and social isolation. These factors contribute to heightened stress levels, which increase the risk of hypertension, cardiovascular disease, depression, and cognitive impairment. In India, nearly 77 million people belong to the elderly population, with 75% residing in rural areas where healthcare resources are scarce. Relaxation techniques such as deep breathing, progressive muscle relaxation, meditation, and yoga are proven non-pharmacological interventions that can reduce stress and promote well-being. However, elderly populations in rural settings often lack awareness and structured guidance to practice these techniques effectively. This study was designed to evaluate the effectiveness of a structured teaching programme in improving knowledge and reducing stress among elderly individuals in Guntur District.

II. Literature Review & Need For The Study

Research indicates that the ageing process is intrinsically linked to psycho-physiological problems requiring

targeted nursing care [1]. Previous studies have demonstrated that progressive muscle relaxation techniques significantly reduce anxiety states and blood pressure [2]. However, while general systems theory provides a foundation for understanding these interactions [5], rural elderly populations in South India face unique psychosocial stressors [6]. Stress among elderly people is often underdiagnosed and undertreated, especially in rural communities. Pharmacological interventions may not always be feasible due to cost, side effects, or limited access to medical care. Non-pharmacological approaches such as relaxation techniques are simple, safe, and culturally acceptable, but their effectiveness depends on proper training and consistent practice.

Community health nurses play a vital role in educating and empowering elderly individuals to adopt stress-reduction strategies. A structured teaching programme ensures systematic delivery of knowledge, demonstration of techniques, and reinforcement of practice. By evaluating the effectiveness of such programmes, this study provides evidence for integrating relaxation training into routine community health nursing practice, thereby addressing a critical gap in geriatric care.

There is a critical gap in geriatric care regarding accessible, non-pharmacological management [7]. While structured teaching programmes are recognized as vital tools in community health nursing [8], there is limited evidence of their specific application for relaxation training in rural Guntur. This study builds upon existing knowledge that tools like deep breathing are effective for the aged [9] by evaluating a systematic delivery module within this specific demographic.

III. Statement Of The Problem

A study to evaluate the effectiveness of a structured teaching programme on relaxation techniques to reduce stress among elderly people in rural community areas of Guntur district.

OBJECTIVES

The study was conducted with the following specific objectives:

1. **Pre-test stress assessment:** To determine the baseline level of stress among elderly people before the introduction of relaxation techniques.
2. **Effectiveness evaluation:** To evaluate the effectiveness of structured teaching programmes on relaxation techniques in reducing stress among elderly people by comparing pre-test and post-test results.
3. **Association analysis:** To determine the association between post-test stress levels and selected demographic variables such as age, sex, education, occupation, marital status, and type of family.

HYPOTHESES

Based on the objectives, the following hypotheses were formulated:

- **H_1:** There will be a significant difference in the level of stress among elderly people before and after the structured teaching programme on relaxation techniques.
- **H_2:** There will be a significant association between the post-test stress levels of elderly people and their selected demographic variables.

IV. Methodology

- **Ethical Statement:** Administrative permission was obtained from the relevant community authorities. **Informed consent was explicitly obtained from all participants** prior to the commencement of the study, ensuring they were fully aware of the research objectives and their right to withdraw.
- **Research Design:** A quasi-experimental one-group pre-test and post-test design was adopted.
- **Setting & Sample:** The study was conducted in selected rural communities of Guntur District with a sample of 60 elderly individuals (aged 60–80 years) selected via purposive sampling.
- **Inclusion Criteria:** Elderly individuals willing to participate, able to communicate, and residing in the

selected rural community.

- **Intervention:** The Structured Teaching Programme (STP) covered deep breathing, progressive muscle relaxation, and guided meditation delivered over six weeks.

Research Variables

The study identifies and analyses the following variables:

- **Independent Variable:** The **Structured Teaching Programme (STP)** on relaxation techniques. This is the intervention being manipulated to observe its effect.
- **Dependent Variable:** The **Knowledge level** of the elderly regarding relaxation techniques, as measured by the structured questionnaire.
- **Sociodemographic (Attribute) Variables:** Age, Gender Religion, Type of family (Nuclear/Joint), Educational status, Occupation, Monthly income, Source of health information

Tools and instruments

- **Structured Questionnaire:** To assess baseline knowledge of relaxation techniques.
- **Stress Inventory Scale:** To measure stress levels before and after intervention.
- **Teaching Module:** Developed by the researcher, covering deep breathing, progressive muscle relaxation, and guided meditation.

V. Results And Discussion

Table 1: Effectiveness of the Structured Teaching Programme

Assessment phase	Mean score	Standard deviation (sd)	Percentage (%)
Pre-test	**9.62**	**4.65**	**32%**
Post-test	**26.30**	**2.96**	**87.6%**
Paired t-test	**25.107**	**Significant at 0.05 level**	

It was interpreted these findings by linking the physiological benefits of relaxation to the observed increase in participant awareness.

1. The transition from a 32% mean score to an 87.6% mean score demonstrates that structured educational interventions are highly effective for the geriatric population, even in rural settings like Guntur.
2. The study notes that while aging naturally reduces the body's defenses against stress, non-pharmacological interventions—specifically deep breathing and progressive muscle relaxation—are accessible tools that the elderly can use to regain a sense of control.
3. It highlights that factors such as age (60–70 years) and gender (58.3% female) influenced the baseline knowledge, but the intervention was universally beneficial across the sample group.
4. The study concludes that there is a significant deficit in baseline knowledge among the elderly regarding relaxation techniques for stress management. However, the implementation of a **Structured Teaching Programme (STP)** proved to be highly effective. The statistical analysis, showing a significant increase from a mean pre-test score of 9.62 to a post-test score of 26.30, validates that educational interventions are a successful non-pharmacological strategy for improving geriatric mental health.

The statistical analysis confirmed a significant increase in knowledge scores following the intervention. The calculated t-value of 25.107 is significantly higher than the tabulated value, leading to the rejection of the null hypothesis. These findings corroborate previous research suggesting that structured educational interventions are highly effective for the geriatric population, even in rural settings where baseline health literacy may be low [13].

VI. Conclusion And Recommendations

The study concludes that while a significant baseline knowledge deficit exists among the rural elderly regarding stress management, the implementation of a Structured Teaching Programme is a successful non-pharmacological strategy.i.e

Hypothesis Validation

The research was built upon the following operational hypothesis:

*"*There will be a significant difference between the mean pre-test and post-test knowledge scores of elderly people regarding relaxation techniques at a 0.05 level of significance. "The statistical analysis confirmed a significant increase in knowledge scores following the intervention. Therefore, the null hypothesis was rejected, and the research hypothesis was accepted. The findings of this study demonstrate that a structured teaching programme on relaxation techniques significantly improved knowledge and reduced stress among elderly individuals in rural Guntur District. The pre-test results revealed that the majority of participants (75%) had inadequate knowledge, while post-test findings showed a remarkable improvement, with 91.7% achieving adequate knowledge. This confirms the effectiveness of structured, nurse-led interventions in empowering elderly populations to adopt stress management strategies.

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Nursing Implications

The findings have direct applications across various domains of the nursing profession:

- **Nursing Practice:** Nurses working in community and clinical settings should integrate teaching sessions on deep breathing and muscle relaxation into routine geriatric care. These techniques provide seniors with a sense of self-control over their physiological stress responses.

- **Nursing Administration:** Nurse administrators should prioritize the development of health education protocols and allocate resources for community outreach programs specifically targeting rural elderly populations.

- **Nursing Research:** The study serves as a foundation for further research into long-term behavioral changes. Future studies could investigate the actual practice frequency of these techniques and their impact on clinical markers like blood pressure or cortisol levels.

Nursing Education

- **Curriculum Integration:** The effectiveness of the STP suggests that nursing curricula should emphasize geriatric mental health and non-pharmacological interventions.
- **Skill Development:** Student nurses should be trained not only in the clinical application of relaxation techniques but also in the pedagogical skills required to teach these techniques to populations with varying literacy levels.
- **Health Literacy:** Education should focus on creating simplified, culturally appropriate teaching aids (like the one used in Guntur) to ensure information is accessible to the rural elderly.

VII. Recommendations

1. **Replication:** Conduct similar studies with larger sample sizes across different geographical regions.
2. **Longitudinal Follow-up:** Perform assessments at 3 or 6-month intervals to determine the sustainability of the practice.
3. **Family Involvement:** Include family members in teaching sessions to build a home-based support system.

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