

A STUDY TO ASSESS THE KNOWLEDGE AND ATTITUDE OF SENIOR CITIZENS TOWARD NON-PHARMACOLOGICAL STRESS REDUCTION TECHNIQUES IN SELECTED COMMUNITY AREAS OF RAJASTHAN.

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ABSTRACT

Background: Ageing is often accompanied by physiological, emotional, and social stressors that negatively impact health and well-being. Non-pharmacological stress reduction techniques—such as yoga, Pranayama, meditation, music therapy, and relaxation methods—are safe, cost-effective, and culturally acceptable options for elderly populations. Despite growing evidence supporting their effectiveness, knowledge and attitude toward these methods remain limited among senior citizens, particularly in semi-urban and rural regions of India. Objectives: To assess the knowledge and attitude of senior citizens regarding non-pharmacological stress reduction techniques in selected community areas of Rajasthan. Methods: A descriptive cross-sectional study was conducted among 100 senior citizens aged 60 years and above in Sri Ganganagar, Rajasthan. Data were collected using a structured knowledge questionnaire and a five-point Likert scale to assess attitudes. Descriptive statistics were used to summarize demographic and response data, while chi-square tests and Pearson correlation were applied to assess associations and relationships. Results: Among participants, 55% demonstrated moderate knowledge, 28% had inadequate knowledge, and only 17% had adequate knowledge. Attitudes were largely favorable (38%) or neutral (40%), with only 22% expressing unfavorable attitudes. A statistically significant positive correlation was found between knowledge and attitude scores ($r = 0.492, p < 0.001$), indicating that increased awareness was associated with a more positive outlook toward these techniques. Conclusion: Senior citizens exhibited moderate awareness but a generally positive attitude toward non-pharmacological stress reduction techniques. The findings highlight the need for structured, nurse-led educational programs in community settings to promote the adoption of culturally relevant, holistic stress management strategies in the ageing population

Keywords: Non-pharmacological techniques, stress reduction, Pranayama, yoga, elderly, knowledge, attitude.

INTRODUCTION

Stress is a universal human experience that affects emotional, physical, and cognitive functioning across all ages, but its consequences are particularly significant in older adults. Ageing is often accompanied by social isolation, financial insecurity, loss of autonomy, and chronic illnesses that elevate psychological stress and reduce quality of life. The World Health Organization (WHO) reports that more than 20% of people aged 60 years and above suffer from a mental or neurological disorder, with stress and depression being among the most prevalent (1). Prolonged stress in elderly individuals has been associated with immune suppression, cardiovascular complications, sleep disturbances, and cognitive decline, highlighting the need for safe and sustainable management strategies (2). Pharmacological interventions for stress relief, such as anxiolytics and antidepressants, often produce adverse effects like sedation, dependence, and cognitive impairment in older adults (3). Consequently, there is a growing global emphasis on the integration of non-pharmacological stress reduction techniques including Pranayama, meditation, yoga, progressive muscle relaxation, guided imagery, and music therapy. A systematic review by Sharma and Trakroo (4) found that yogic breathing practices significantly reduce cortisol levels and improve psychological well-being among older adults. Similarly, a randomized controlled trial by Bhimani et al. (5) demonstrated that daily Pranayama and relaxation exercises improved cardiovascular autonomic function and reduced perceived stress in elderly participants. In India, the relevance of non-pharmacological interventions is particularly strong due to their cultural acceptability and minimal cost. Research conducted by David (6) and Saini & Godiyal (7) showed that consistent engagement in yogic relaxation practices significantly reduces depression and enhances emotional stability among older adults in community settings. Evidence further suggests that music therapy and meditation foster relaxation, social connectedness, and cognitive clarity in the geriatric population (8,9). Despite such evidence, many senior citizens remain unaware of the physiological and psychological benefits of these interventions, especially in semi-urban and rural regions. Community health nurses play a crucial role in educating and motivating elderly individuals to adopt healthy coping and stress-management behaviors. Assessing the knowledge and attitude of senior citizens toward non-pharmacological stress reduction techniques provides the foundation for developing effective community-based educational programs. Therefore, the present study aims to assess the knowledge and attitude of senior citizens regarding non-pharmacological stress reduction techniques in selected community areas of Rajasthan, with the broader goal of promoting holistic well-being and healthy ageing.

METHODOLOGY

Research Design

A descriptive cross-sectional research design was adopted to assess the knowledge and attitude of senior

citizens toward non-pharmacological stress reduction techniques. This design was selected to obtain an accurate snapshot of the existing awareness and perceptions among elderly individuals within community settings.

Setting of the Study

The study was conducted in selected community areas of Sri Ganganagar District, Rajasthan. These areas were chosen based on accessibility, population of senior citizens, and feasibility of conducting the survey within community environments.

Population and Sampling Technique

The target population consisted of senior citizens aged 60 years and above residing in the selected areas. A total of 100 participants were selected using purposive sampling. Inclusion criteria included willingness to participate, ability to understand Hindi, and absence of severe cognitive impairment. Those with diagnosed psychiatric illness or critical medical conditions were excluded.

Tool for Data Collection

A structured questionnaire was developed to assess knowledge and attitude regarding non-pharmacological stress reduction techniques. The tool was divided into three sections:

- **Section A:** Demographic data such as age, gender, education, marital status, living arrangement, and health history.
- **Section B:** A 20-item structured knowledge questionnaire covering awareness about Pranayama, yoga, meditation, music therapy, and relaxation methods.
- **Section C:** A 10-item five-point Likert scale measuring attitude toward non-pharmacological stress management techniques.

The tool's content validity was established by experts in nursing and psychology, and reliability was ensured using Cronbach's alpha method.

Data Collection Procedure

Formal permission was obtained from local authorities before data collection. The participants were approached personally, the purpose of the study was explained, and informed consent was obtained. The questionnaire was administered through face-to-face interviews in small community groups. Each interview lasted approximately 25–30 minutes.

Plan for Data Analysis

Data were coded and analyzed using descriptive and inferential statistics. Frequency and percentage were used to describe demographic variables. Mean and standard deviation were calculated for knowledge and attitude scores. Chi-square test was used to find associations between knowledge and selected demographic variables, and correlation analysis was applied to determine the relationship between

knowledge and attitude levels. A *p*-value less than 0.05 was considered statistically significant.

RESULTS

Table 1. Frequency and Percentage Distribution of Senior Citizens According to Demographic Variables (n = 100)

S.No.	Demographic Variable	Category	Frequency (f)	Percentage (%)
1	Age (years)	60–65	32	32.0
		66–70	27	27.0
		71–75	23	23.0
		> 75	18	18.0
2	Gender	Male	46	46.0
		Female	54	54.0
3	Educational Status	No formal education	21	21.0
		Primary	28	28.0
		Secondary	25	25.0
		Graduate and above	26	26.0
4	Marital Status	Married	78	78.0
		Widowed	19	19.0
		Single / Divorced	3	3.0
5	Family Type	Joint	61	61.0
		Nuclear	39	39.0
6	Monthly Income (INR)	< 10,000	35	35.0
		10,001–20,000	42	42.0
		> 20,000	23	23.0
7	Residence	Urban	64	64.0
		Rural	36	36.0
8	Living Arrangement	With family	83	83.0
		Alone	17	17.0
9	Health Condition (self-reported)	Good	47	47.0
		Average	39	39.0
		Poor	14	14.0

Table 2. Distribution of Senior Citizens According to Level of Knowledge and Attitude Toward Non-Pharmacological Stress Reduction Techniques (n = 100)

Category	Level	Score Range	Frequency (f)	Percentage (%)
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Knowledge	Inadequate	0–7	28	28.0
	Moderate	8–14	55	55.0
	Adequate	15–20	17	17.0
Attitude	Unfavorable	10–25	22	22.0
	Neutral	26–35	40	40.0
	Favorable	36–50	38	38.0

DISCUSSION

The current study assessed the knowledge and attitude of senior citizens in selected community areas of Rajasthan toward non-pharmacological stress reduction techniques such as yoga, Pranayama, meditation, and music therapy. The findings revealed that more than half of the participants (55%) had moderate knowledge, while 28% had inadequate knowledge and only 17% had adequate knowledge. Despite these gaps, the overall attitude was relatively positive, with 38% of participants exhibiting a favorable outlook and 40% being neutral. These findings indicate that although awareness is still limited among many elderly individuals, there is a promising openness and receptivity toward adopting such techniques if proper education and support are provided.

The observed knowledge levels in this study are consistent with earlier findings. For instance, Sharma and Sharma reported that many elderly individuals were interested in practicing yoga but lacked structured opportunities and formal knowledge to do so (10). Similarly, Gandhi and Kumar emphasized that awareness and understanding of Pranayama among the elderly is crucial to integrating such practices into daily life (11). Despite moderate knowledge, a majority of participants in the present study expressed a favorable or at least neutral attitude, suggesting openness to adopting these practices. This aligns with findings from Ramamurthy and T.P., who reported that elderly individuals responded positively to regular sessions of yoga and Pranayama, showing improvements in emotional well-being and reductions in depressive symptoms (12). In addition, Damor et al. demonstrated significant improvement in quality of life scores among elderly participants who practiced Pranayama consistently over several weeks (13).

The positive psychological effects of these techniques are well-supported in the literature. Kusumadewi et al. found that regular Pranayama sessions led to significant stress reduction among elderly residents of a social services home (14), while Shree et al. observed a shift from moderate to mild stress levels among senior citizens following 15 days of guided Pranayama practice (15). Likewise, Bharathi noted that Pranayama helped reduce stress and improved focus and mental clarity among older adults (16). Further supporting these findings, Hema found that relaxation techniques, including Pranayama and aerobic exercise, were effective in significantly lowering stress levels in older adults residing in care homes (17).

Shaji also confirmed that such interventions notably improved emotional stability and reduced stress among participants in Chennai-based old age homes (18). Noventi et al. extended these findings by showing that combining Mindfulness-Based Stress Reduction (MBSR) with Pranayama resulted in reduced blood pressure, improved sleep, and decreased anxiety among elderly patients with hypertension (19).

Importantly, our study found a statistically significant positive correlation ($r = 0.492$, $p < 0.001$) between knowledge and attitude, suggesting that greater awareness is linked to a more favorable outlook toward these techniques. This mirrors findings from Sheela, who observed that elderly individuals who received structured education on Pranayama showed both improved understanding and more positive attitudes toward its practice (20). Similarly, a study by Kr demonstrated that video-assisted teaching was effective in reducing stress and increasing interest in Pranayama among elderly participants (21).

In summary, the findings of this study, supported by extensive literature, underscore the value of non-pharmacological stress reduction techniques for promoting psychological well-being in elderly populations. While knowledge levels remain moderate, the generally favorable attitudes and proven effectiveness of these techniques point to a strong opportunity for nurse-led community health programs to educate, motivate, and empower older adults to adopt these culturally familiar and cost-effective methods as part of routine self-care.

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