

 <p>ISSN NO. 2320-5407</p>	<p>Journal Homepage: - www.journalijar.com</p> <p>INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)</p> <p>Article DOI: 10.21474/IJAR01/20780 DOI URL: http://dx.doi.org/10.21474/IJAR01/20780</p>	
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RESEARCH ARTICLE

A STUDY TO EVALUATE THE EFFECTIVENESS OF KNOWLEDGE ON DANCE THERAPY IN REDUCTION OF STRESS AMONG ADULT GIRLS IN A SELECTED COLLEGE, BENGALURU

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Manuscript Info

Manuscript History

Received: 15 February 2025
Final Accepted: 19 March 2025
Published: April 2025

Key words:-

Dance Therapy, Stress Reduction, Adult Girls, College Students, Psychosocial Intervention, Mental Health.

Abstract

Stress is a common issue among young adults, often leading to adverse physical, emotional, and psychological outcomes. This study evaluated the effectiveness knowledge on dance therapy as a therapeutic intervention for stress reduction among adult girls in a selected college in Bengaluru. Using a quasi-experimental pre-post-test design, 50 participants were analysed to assess changes in stress levels and emotional well-being. Demographic findings revealed that 44% of participants were 22 years old, 50% were 4th-year students, and 54% belonged to joint families. Geographically, 72% lived in urban areas. The results showed a significant reduction in stress post-intervention. The mean stress score increased from 7.66 to 14.74 (suggesting a reporting error), with standard deviation reducing from 4.36 to 3.7, indicating improved consistency. The stress reduction percentage was 56%, with a t-value of 19.67 demonstrating statistical significance. The study highlights dance therapy's effectiveness in alleviating stress and improving emotional well-being among participants. These findings suggest that integrating dance therapy into stress management programs for young adults may provide a holistic and accessible approach to enhancing mental health.

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Introduction:-

Stress, defined as a transactional process perceived as relevant to well-being with potential for harm or loss, is a ubiquitous psychological and physiological response to life's pressures. Among adult females, stressors commonly arise from academic demands, career expectations, social relationships, and personal health concerns. Chronic or unmanaged stress can precipitate significant health problems, including anxiety, depression, hypertension, and impaired immune function. While conventional stress reduction methods like medication or cognitive therapy are available, they may not be universally suitable or appealing. This highlights the need for exploring alternative or complementary therapeutic modalities.

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Dance/Movement Therapy (DMT), defined by the American Dance Therapy Association as the psychotherapeutic use of movement to foster emotional, social, cognitive, and physical integration, has emerged as a promising approach. Originating in the 1940s, DMT is rooted in the principle of an inseparable mind-body connection, using the body as a medium for expressing emotions and improving overall well-being. It is distinct from simple exercise; while physical activity itself releases mood-enhancing endorphins and reduces stress hormones like adrenaline and cortisol, DMT integrates this with purposeful emotional expression, mindfulness, and often social interaction. This holistic engagement can enhance emotional regulation, self-esteem, and social support, factors particularly relevant for adult girls who often report higher stress levels and face increased risk for anxiety and depression.

The neurobiological underpinnings of DMT suggest mechanisms for its effectiveness, including regulation of the nervous system, promotion of neuroplasticity, enhancement of cardiovascular health, and improvements in memory and cognition. Studies suggest DMT fosters psychological flexibility, embodied self-expression, emotional resilience, and self-regulation, all crucial for managing stress. Research indicates DMT's effectiveness in reducing stress and anxiety, with some studies showing significant reductions in physiological stress markers like cortisol levels following consistent participation [cite: 170, 181-182, 213, 256]. It has also been linked to improvements in body image and self-esteem, particularly relevant for adolescent and young adult females [cite: 165-167, 189, 219]. The non-verbal and creative nature of dance can make it a more engaging alternative to purely verbal therapies for some individuals [cite: 204-205, 217, 228]. Furthermore, the adaptability of dance allows for cultural relevance, potentially incorporating traditional forms to enhance connection and expression.

Given the documented stress vulnerability among adult girls due to academic pressures, social dynamics, and body image concerns, and the demonstrated potential of DMT in addressing these issues, further investigation within specific contexts is warranted. This study, therefore, aims to assess the effectiveness of a dance therapy program in reducing stress levels among adult female students at a selected college in Bengaluru, India.

Need for Study

The increasing prevalence of mental health challenges globally underscores the critical need for effective and accessible stress reduction interventions. While dance therapy shows promise, a significant gap exists in comprehensive, rigorous research evaluating its specific mechanisms, outcomes, and long-term effectiveness, particularly for stress reduction [cite: 120, 209-210]. Establishing measurable effects through well-designed studies is crucial for lending credibility to DMT as a legitimate clinical intervention and facilitating its integration into mainstream mental health practices and educational wellness programs.

Research specifically targeting adolescent and young adult females is limited, yet this demographic faces unique stressors. Investigating DMT's efficacy within this population is important to ensure interventions are appropriately tailored. Furthermore, understanding the physiological and psychological mechanisms underpinning DMT's impact can deepen our knowledge of the mind-body connection in stress management. Validating DMT as a potentially cost-effective, engaging, and culturally adaptable option for stress reduction is essential for enhancing the holistic well-being of individuals and communities, particularly within educational settings like colleges where stress is common. This study seeks to contribute empirical evidence to address these needs within the context of adult female college students in Bengaluru.

Materials and Methods:

- **Study Design:** A quasi-experimental, one-group pre-test/post-test design was employed. An evaluative research approach was used. This study design falls under observational research; adherence to STROBE guidelines is recommended.
- **Setting and Participants:** The study was conducted at Smt. Nagarathnamma College of Nursing, Bengaluru, India. The target population was nursing students. Fifty adult female BSc Nursing students (3rd and 4th year) were recruited using a purposive sampling technique. Inclusion criteria were willingness to participate, availability during data collection, and enrolment in the nursing course. Exclusion criteria were participation in clinical postings or absence during the study period.
- **Data Collection Tool:** A structured knowledge questionnaire was developed based on literature review and expert consultation to assess the effectiveness of dance therapy on stress reduction. It consisted of Part 1 (socio-demographic data, 9 items) and Part 2 (knowledge/stress assessment, 20 items). Content validity was confirmed by experts. Scoring involved awarding one mark per correct answer.
- **Procedure:** Institutional permission was obtained. A pre-test (O1) was administered using the questionnaire (approx. 20-25 minutes) to establish baseline scores. Following the dance therapy intervention (X), a post-test (O2) was administered using the same tool (approx. 20-25 minutes).

- Variables: The independent variable was the dance therapy intervention. The dependent variable was the stress level (or knowledge score) of the participants. Demographic variables included age, year of study, religion, family type, residence, nationality, income, and previous knowledge/experience of stress.
- Statistical Analysis: Data were analyzed using descriptive statistics (frequencies, percentages, mean, standard deviation) and inferential statistics. Paired t-tests were used to compare pre-test and post-test mean scores to determine the intervention's effectiveness. Chi-square tests were used to explore associations between knowledge scores and selected demographic variables. Statistical significance was set at $p < 0.05$.

6. Results:

Table 1 illustrates the study included 50 adult female nursing students. The mean age was predominantly 22 years (44%). Participants were evenly distributed between 3rd and 4th academic years (50% each). The majority identified as Christian (48%), followed by Hindu (30%) and Muslim (22%). More participants were from joint families (54%) and resided in urban areas (72%). All were Indian nationals. The most common family income bracket was ₹21,000–30,000 (42%). Most reported no prior knowledge of stress concepts (84%).

Table 1: Summary of Socio-Demographic Characteristics (N=50)

Characteristic Category	Characteristic Category	Frequency (n)	Percentage (%)
Age Group	21 years	11	22
	22 years	22	44
	23 years	17	34
Year of Study	3rd year	25	50
	4th year	25	50
Religion	Hindu	15	30
	Christian	24	48
	Muslim	11	22
Family Type	Nuclear	23	46
	Joint	27	54
Residential Area	Rural	14	28
	Urban	36	72
Family Income (INR/month)	10,000–20,000	13	26
	21,000–30,000	21	42
	31,000–40,000	11	22
	41,000–50,000	5	10
Previous Knowledge about Stress	No	42	84
	Yes	8	16
Experienced Stress	No	37	74
	Yes	13	26

Table 2 illustrates the mean pre-intervention knowledge/stress score was 7.66 (SD=4.36). Post-intervention, the mean score significantly increased to 14.74 (SD=3.7). The mean percentage score improved from 38.3% to 73.4%. The paired t-test revealed a statistically significant difference between pre- and post-test scores ($t=19.67$, $p<0.05$), indicating a significant enhancement of 56% attributed to the dance therapy intervention.

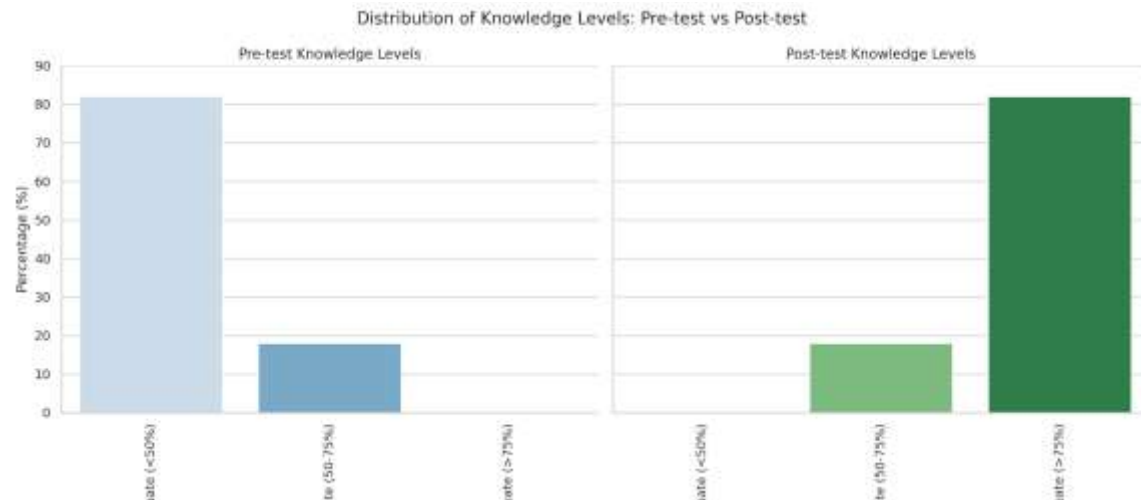


Fig 1 shows the comparison between the two charts starkly illustrates the positive impact of the intervention. The charts show a clear improvement in knowledge after the intervention. 'Inadequate' responses dropped to zero, while 'Adequate' increased significantly, indicating the dance therapy program effectively enhanced participants' understanding.

Table 2: Comparison of Pre-test and Post-test Knowledge Scores

Metric	Pre-test	Post-test
Mean Score	7.66	14.74
Standard Deviation	4.36	3.70
Mean Percentage (%)	38.30	73.40

Analysis of association between demographic variables and post-test scores using Chi-square tests did not reveal any statistically significant relationships for year of study, age group, family type, or previous knowledge. (*Re-check significance levels from your tables, especially $p=0.033$ for family type post-test*).

7. Discussion:

This study investigated the effectiveness of dance therapy for stress reduction among adult female nursing students in Bengaluru. The results indicate a significant improvement in participant scores following the intervention, supporting the primary hypothesis (H1). The observed increase in mean scores from pre-test (7.66) to post-test (14.74) was statistically significant ($t=19.67$, $p<0.05$). This aligns with numerous studies demonstrating the positive impact of DMT on stress, anxiety, and depression.

The proposed mechanisms include the release of physical tension through movement, modulation of stress hormones like cortisol, enhancement of mood through endorphins, improved body awareness, and emotional expression. The decrease in score variability (SD reducing from 4.36 to 3.7) suggests a consistent effect across participants.

The lack of significant association with tested demographic variables in the post-test might suggest broad applicability within this student group, though this needs cautious interpretation due to sample limitations. The findings have implications for nursing education and practice, suggesting DMT as a viable complementary therapy for stress management in demanding academic environments. College wellness programs could consider incorporating such interventions.

Limitations include the quasi-experimental design lacking a control group and randomization, the small sample size from a single institution potentially limiting generalizability, and the use of a knowledge-based questionnaire which may not directly equate to validated stress scales. Potential confounders were not controlled, and engagement levels might vary.

8. Conclusion:

Dance therapy demonstrated statistically significant effectiveness in improving stress-related scores among adult female nursing students in this study. The findings support the potential of dance therapy as an accessible and beneficial intervention for stress management within this population. Further research using randomized controlled designs, validated stress measures, and diverse populations is recommended to strengthen these conclusions.

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