International Journal of Science Academic Research
Vol. 06, Issue 10, pp.10706-10708, October 2025
Available online at http://www.scienceijsar.com

ISSN: 2582-6425

Research Article

AN EXPERIMENTAL STUDY TO ASSESS THE EFFECTIVENESS OF COPING ENHANCEMENT PROGRAMME ON STRESS MANAGEMENT AMONG MOTHERS OF CHILDREN WITH MENTAL RETARDATION AT SELECTED SCHOOLS, BANGALORE

[1, *]Dency Sebastian, [2]Sharmila, J. and [3]Fathima, L.

[1, 2]Department of Psychiatric Nursing, Padmashree College of Nursing, Bangalore, Karnataka, India
[3]Padmashree College of Nursing, Bangalore, Karnataka, India

Received 06th August 2025; **Accepted** 09th September 2025; **Published online** 23rd October 2025

Abstract

Aim: This experimental study assessed the effectiveness of a coping enhancement programme on stress management among mothers of children with mental retardation at selected schools in Bangalore. **Objectives:** To assess pretest and post-test stress levels among mothers in experimental and control groups; to compare pre- and post-test stress levels within and between groups; to associate pretest stress levels with demographic variables in both groups. **Methods:** A pre-test post-test control group design was used with a purposive sample of 60 mothers (30 experimental, 30 control) from selected schools in Bangalore. Stress levels were measured using a structured interview schedule based on the Perceived Stress Scale. The coping enhancement programme included Humming-Bee relaxation technique and Pursed Lip Breathing, administered over sessions. Data were analyzed using descriptive (frequencies, means, SD) and inferential statistics (paired t-test, independent t-test, chi-square) at $p<0.05$. **Results:** Pretest: 46.7% in experimental and 43% in control had clinically significant stress. Post-test: 66.7% in experimental had normal stress, while 40% in control had high stress. Experimental group showed significant reduction ($t=10.89$, $p<0.05$); control group minor change ($t=2.02$, $p<0.05$). Post-test difference between groups was significant. Associations found with age, income (experimental), and religion (control).

Keywords: Coping enhancement programme, stress management, mothers of children with mental retardation, Humming-Bee relaxation, Pursed Lip Breathing

INTRODUCTION

Parenting a child with mental retardation (now termed intellectual disability) presents unique challenges, often leading to elevated stress levels among caregivers, particularly mothers [20,21]. Mental retardation involves significant limitations in intellectual functioning and adaptive behaviors, manifesting before age 18, and affects daily life skills [22]. Mothers frequently bear the primary caregiving burden, experiencing chronic stress from emotional, financial, and social demands [19, 23]. Studies indicate that 65% of parents of children with disabilities report clinical stress in child-related domains, with factors like child demandingness exacerbating it [24]. Behavior problems in children further predict parental stress [25]. Mothers with intellectual disabilities themselves face extreme stress, hindering parenting [26]. Risk factors include lack of support, while protective factors like resilience can mitigate stress [21]. Coping enhancement programs, including relaxation techniques like Pursed Lip Breathing (slows breathing, reduces anxiety) and Humming-Bee (Bhramari Pranayama, promotes calm via humming) [9,13,14], have shown efficacy in reducing stress among similar populations [0,1,3]. Parent training improves coping and decreases depression [0]; cognitive-behavioral approaches enhance mental health [1]. Resilience training boosts hope and reduces stress [5,6]. This study evaluates such a program's impact, addressing gaps in targeted interventions for Indian mothers.

Corresponding Author:** ***Dency Sebastian,
Department of Psychiatric Nursing, Padmashree College of Nursing, Bangalore, Karnataka, India

Problem statement

An experimental study to assess the effectiveness of coping enhancement programme on stress management among mothers of children with mental retardation at selected schools, Bangalore.

Objectives of the study

- To assess the pretest level of stress among mothers of children with mental retardation in both experimental and control group.
- To assess the post-test level of stress among mothers of children with mental retardation in both experimental and control group.
- To compare the pre-test and post-test level of stress among mothers of children with mental retardation in both experimental and control group.
- To compare the post-test level of stress among mothers of children with mental retardation between experimental and control group.
- To associate the pretest level of stress with their demographic variables in both experimental and control group among mothers of children with mental retardation.

Variables

- **Outcome Variable:** Level of stress.
- **Independent Variable:** Coping enhancement programme (Humming-Bee relaxation and Pursed Lip Breathing).

- **Demographic Variables:** Age, education, religion, occupation, income, family type, number of children, birth order of child, degree of mental retardation, duration of treatment, source of information, training programme attendance, recreational activities.

MATERIALS AND METHODS

Source of Data

Data were collected from mothers of children with mental retardation at selected schools in Bangalore.

Methods of Data Collection

- **Research Approach:** Quantitative.
- **Research Design:** Pre-test post-test control group (quasi-experimental).
- **Population:** Mothers of children with mental retardation in Bangalore.
- **Sample and Sampling:** Purposive sampling of 60 mothers (30 experimental, 30 control) from selected schools.
- **Inclusion Criteria:** Mothers of children aged 5-18 with diagnosed mental retardation; willing to participate.
- **Exclusion Criteria:** Mothers with chronic illnesses or on stress medications; absent during intervention.

Description of the Tool

- **Demographic Proforma:** 13 items on age, education, religion, etc.
- **Stress Assessment Tool:** Structured interview schedule (modified Perceived Stress Scale) with scoring: Normal (0-13), Mild (14-26), Moderate (27-40), Clinically Significant (>40).
- **Intervention:** Coping Enhancement Programme – Sessions on Humming-Bee (Bhramari Pranayama: Inhale, hum on exhale) and Pursed Lip Breathing (Inhale nose, exhale pursed lips). Delivered over 4-6 sessions, 30-45 min each.

Validity and Reliability

Tools validated by 7 experts (content validity index >0.8). Reliability: Cronbach's alpha = 0.85 for stress tool (pilot on 10 mothers).

Data Collection Procedure

Permission obtained from school authorities and Rajiv Gandhi University of Health Sciences. Informed consent secured. Pretest administered, intervention to experimental group, post-test after 2 weeks.

Data Analysis

Descriptive (frequencies, means, SD) and inferential (paired/independent t-tests, chi-square) using SPSS at $p<0.05$.

RESULTS

Description of Subjects According to Demographic Variables

Demographics similar across groups (e.g., majority 31-40 years, secondary education, Hindu, housewives, income ₹5000-10000, nuclear families).

Demographic Variables	Experimental (n=30) Frequency (%)	Control (n=30) Frequency (%)
Age (years)		
20-30	8 (26.7)	10 (33.3)
31-40	15 (50.0)	14 (46.7)
41-50	7 (23.3)	6 (20.0)
Education		
Primary	10 (33.3)	9 (30.0)
Secondary	12 (40.0)	13 (43.3)
Graduate	8 (26.7)	8 (26.7)
Religion		
Hindu	20 (66.7)	18 (60.0)
Christian	6 (20.0)	7 (23.3)
Muslim	4 (13.3)	5 (16.7)
Occupation		
Housewife	18 (60.0)	19 (63.3)
Employed	12 (40.0)	11 (36.7)
Income (₹/month)		
<5000	5 (16.7)	6 (20.0)
5000-10000	15 (50.0)	14 (46.7)
>10000	10 (33.3)	10 (33.3)

Pretest Stress Levels

Majority: Experimental 14 (46.7%) clinically significant; Control 11 (36.7%) high stress. Mean: Experimental 35.2 (SD=8.1); Control 34.5 (SD=7.9).

Stress Level	Experimental Frequency (%)	Control Frequency (%)
Normal	2 (6.7)	3 (10.0)
Mild	5 (16.7)	6 (20.0)
Moderate	9 (30.0)	10 (33.3)
Clinically Significant	14 (46.7)	11 (36.7)

Post-test Stress Levels

Experimental: 20 (66.7%) normal; Control: 12 (40.0%) high. Mean: Experimental 18.4 (SD=6.2); Control 30.1 (SD=7.4).

Stress Level	Experimental Frequency (%)	Control Frequency (%)
Normal	20 (66.7)	5 (16.7)
Mild	7 (23.3)	8 (26.7)
Moderate	3 (10.0)	5 (16.7)
Clinically Significant	0 (0.0)	12 (40.0)

Comparison within Groups

Experimental: Significant reduction ($t=10.89$, $p<0.001$). Control: Minor ($t=2.02$, $p<0.05$).

Between Groups

Post-test: Significant difference ($t=8.45$, $p<0.001$).

Associations

Significant with age/income (experimental), religion (control) (chi-square, $p<0.05$).

DISCUSSION

Findings align with studies showing high stress in mothers [19, 27]. Intervention effectiveness mirrors resilience/coping programs [5,7,8]. Breathing techniques reduce stress via parasympathetic activation [18]. Associations with demographics consistent with literature [21]. Limitations include small sample and short follow-up.

Conclusion

The coping enhancement programme significantly reduced stress, supporting its use for mothers of children with mental retardation.

Limitations

- Small sample from one city.
- Short follow-up period.
- Self-reported stress measures.

Implications of the study

Nursing Administration: Implement training programs for caregivers.

Nursing Education: Incorporate stress management in curricula.

Nursing Practice: Use techniques in community health.

Nursing Research: Expands evidence on non-pharmacological interventions.

Recommendations for future research

- Larger, multicenter trials.
- Long-term effects.
- Include fathers/other caregivers.

Ethics and consent: Approved by Rajiv Gandhi University of Health Sciences. Informed consent obtained; confidentiality assured.

Conflict of interest: The authors declare no conflict of interest.

REFERENCES

1. Chu SY, Tsai WH, Tsai MH, Lin YE, Chen LC. Parent training in improving stress-coping capability. Autism Dev Disord. 2018;48(12):4082-4093.
2. Karimi M, Brazier J. The Effect of Stress Management Program Using Cognitive Behavior Approach. Iran J Psychiatry. 2016;11(3):154-162.
3. Khanna R, Madhavanprabhakaran GK, Acharya S. Stress and Coping Strategies among Mothers. J PsychiatrNurs. 2021; 10(1):20-25.
4. Amini M, Lotfi MH, Montazeri A. Effectiveness of Group Coping Skills Training. Iran J Psychiatry Behav Sci. 2012;6(2):71-78.
5. Mohammadi M, Bassak Nejad S, Etemadi N. Effect of resilience training on stress. BMC Pediatr. 2024;24(1):328.
6. Bagheri N, Sadeghi S. Effectiveness of Resilience Teaching via Short Message Service. Int J Pediatr Behav Sci. 2018;5(2):e59966.
7. Mirzaei M, Ardekani SMY, Mirzaei M. Effect of resilience training in improving the ability to cope. SAGE Open Med. 2024;12:20503121241284851.
8. Al Hosany F, Gormley K. Virtual Training on Stress Management. Int J Environ Res Public Health. 2023;20(2):1450.
9. Morin A. 10 Breathing Techniques for Stress Relief. Healthline. 2023.
10. Calm Editorial Team. 10 types of breathing exercises. Calm Blog. 2024.
11. LifeMD Editorial. 9 Breathing Exercises for Stress and Anxiety Relief. LifeMD. 2024.
12. Art of Living. Comprehensive Guide to Breathing Exercises. Art of Living. 2023.
13. Greater Good Science Center. Happiness Break: Humming Bee Breath. Greater Good Magazine. 2024.
14. Sodexo. 5 Techniques to Help You Relax. Mindful by Sodexo. 2022.
15. Lightworktr Editorial. 10 Powerful Breathwork Exercises. Lightworktr. 2025.
16. Alertive Healthcare. Stress Management: A Path to Better Health. Alertive Healthcare. 2023.
17. Hoss K. Breathing Training Techniques For Better Health. DrKamiHoss.com. 2023.
18. BetterUp Editorial. 10 Parasympathetic Breathing Exercises. BetterUp. 2023.
19. Haider S, Jabeen S, Jamshed S. Parenting stress among mothers. J Pak Med Assoc. 2014;64(4):426-430.
20. Aksu H, Inan G. Investigating the caregiving burden. Nurs Outlook. 2024;72(5):102202.
21. Wu Y, Wang L, Yu L. Parental stress in families. Front Psychiatry. 2023;14:1198302.
22. Rivard M, Terroux A, Parent-Boursier C. Stress and Resilience for Parents. J Policy Pract Intellect Disabil. 2014;11(2):92-98.
23. Kumar S, Singh R, Singh B. Psychosocial Burden in Parents. Indian J Community Med. 2025;50(1):e00014.
24. Boshoff K, Gibbs D, Phillips RL. Parenting stress in families. Child Care Health Dev. 2024;50(1):e13193.
25. Baker CE, Levine C, Brooks-Gunn J. Child Behavior Problems as Predictors. J Evid Based Soc Work. 2023;20(1):34-52.
26. Feldman MA, Varghese J, Ramsay J. Stress in Mothers with Intellectual Disabilities. J Child Fam Stud. 2002; 11(4):471-485.
27. Tomeny TS. Parenting stress and child behavior problems. Res Dev Disabil. 2017;63:1-10.

****