

Original Research Article

Effect of Self-Reliance Training on Stress and Coping Among First Year B.sc Nursing Students

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Article Information:

Received: 27 April 2026 | Revised: 29 May 2026 | Accepted: 30 June 2026 | Published: July 28, 2026

Cite this article:

Archana Jayakumar, Bincy A. P, Rajee Reghunath (2026). Effect of Self-Reliance Training on Stress and Coping Among First Year B.sc Nursing Students. *Public Health Open Journal*. 11(1):789–794. 10.17140/PHOJ-11-789

Abstract

This study examines the impact of Self-Reliance Training on stress and coping abilities among first year B.Sc. Nursing students in a specific nursing college in Central Kerala, South India. The objectives include evaluating stress and coping levels, assessing the training's effect on these levels, and exploring the relationship between stress, coping, and sociodemographic factors. Employing a pre-experimental one-group pretest-post-test design, the study focuses on first-year B.Sc. Nursing students meeting inclusion criteria. A total of 50 participants were purposively sampled. The pretest involved administering a structured questionnaire covering sociodemographic variables, along with the Perceived Stress Scale and Brief-COPE scale. Following a 6-day Self-Reliance Training, a post test was conducted after one month. Statistical analysis revealed that most participants experienced moderate stress (72%), with 24% experiencing high stress and 4% reporting low stress levels. Regarding coping mechanisms, 82% exhibited moderate coping, while 18% displayed high coping. Post-test results indicated a significant decrease in stress levels (6.0 ± 8.0) compared to pre-test levels (23.50 ± 13.25), with a highly significant reduction observed ($p = 0.0001, p < 0.05$). Additionally, post test coping levels (91.56) surpassed pre-test levels (76.76), with a highly significant improvement noted ($p = 0.0001, p < 0.05$). These findings underscore the effectiveness of Self-Reliance Training in reducing stress and enhancing coping abilities among the participants. Furthermore, a statistically significant association was identified between age and stress levels ($p = 0.019, p < 0.05$).

Keywords: Self-reliance training, resilience building, psychological empowerment, self-management intervention.

Introduction

Stress is a universal phenomenon to which every person is exposed to. It can come from any event or thought that makes you feel frustrated. It is generally agreed upon that being a student can be the best time of a person's life, there are numerous factors that could stress students out, particularly while juggling their personal and academic lives [1-2]. Several academic, personal, social, environmental, and psychological challenges are faced by college students in the new campus setting, which may have an impact on their psychosocial welfare and educational performance [3].

Today's students face a myriad of stress-related challenges, both academically and personally. These pressures contribute to a concerning rise in mental health issues and, alarmingly, suicide rates. A critical factor in these situations is the difficulty many students experience in recognizing their own stressors and understanding how to cope effectively without external support [4].

Coping strategies play a significant role in shaping how individuals perceive and handle stress. While college presents numerous challenges, mastering stress management techniques can greatly aid students in navigating academic pressures and achieving a fulfilling college experience. Students encounter a multitude of stressors, such as academic demands, the pressure to excel, uncertainty about the future, and the process of adapting to the college environment [5-7]. Nursing students, in particular, face ongoing stressors throughout their degree program and training, which can hinder their ability to learn and perform effectively [8].

A descriptive cross-sectional study was undertaken to examine the perceived stress level among 282 undergraduate student nurses in Haryana. The results indicated that female students experienced higher levels of stress (31.33%) compared to their male counterparts (26.01%) [9]. Additionally, first-year students reported the highest level of stress (29.66%). These findings underscore the necessity for implementing stress management interventions within nursing colleges [10-12]. Consequently, the researcher believes it's crucial to empower students to handle stress independently through various coping mechanisms, without necessarily relying on external assistance. Students should be taught to assess events or situations cognitively to enhance their chances of success.

Thus, the researcher is driven to conduct an intervention study investigating the impact of self-reliance training on stress management and coping abilities among first-year BSc nursing students at a chosen college in Thrissur. This initiative is aimed at identifying stressors

in students' lives early on and offering interventions to alleviate them.

In recent years, a significant body of research has focused on interventions aimed at reducing stress and improving coping mechanisms among students. These studies have often emphasized the importance of seeking help from others be it friends, family, or mental health professionals. While these approaches are undoubtedly valuable, my research shifts the focus towards fostering self-reliance, encouraging students to independently identify their stressors and develop personal coping strategies [13].

By promoting self-reliance, my study addresses a gap in existing research. It empowers students to take ownership of their emotional well-being by equipping them with tools to identify stressors and implement coping strategies independently. This self-directed approach not only fosters resilience but also prepares students for future challenges where external support may not be readily available.

Preliminary findings from my study indicate that students who engaged in self-reliance exercises reported a greater sense of control over their stress levels. They learned to recognize their unique stress triggers and developed personalized coping mechanisms, which seemed to enhance their overall well being. This stands in contrast to traditional interventions that may inadvertently foster dependence on external support systems. The effectiveness of this approach suggests that self-reliance can be a powerful tool in a student's mental health toolkit.

By facilitating an environment where students can explore their inner resources, we encourage a more sustainable form of stress management that can lead to long-term benefits. The findings of my research hold significant implications for both future studies and practical applications in educational settings. Encouraging self-reliance could shift the paradigm from seeking help as a primary strategy to equipping students with the skills necessary for independent coping [14-15]. This could reduce the stigma associated with needing help and promote a culture of self-efficacy among students. Moreover, incorporating self-reliance strategies into existing mental health programs could enhance their effectiveness, making them more holistic by combining both support-seeking and self-sufficiency.

Methodology

The research employed a quantitative pre-experimental design, specifically a one-group pretest posttest approach, with both descriptive and

inferential analyses. The population of the study consisted of 50 first-year B.Sc. Nursing students meeting inclusion criteria from Amala College of Nursing, Thrissur, in 2023. Samples were selected using purposive sampling. Data collection tools included a structured questionnaire for sociodemographic variables, the Perceived Stress Scale to gauge stress levels, and the Brief COPE Scale to assess coping levels among students.

Following Institutional Ethics Committee clearance and university approval, formal permission was taken from the Principal of Amala College of Nursing, Thrissur. Data collection took place from April 24, 2023, to May 29, 2023. After the investigator's introduction and explanation of the study's aim, informed consent was obtained from the students.

The pretest was initiated on the first day, involving data collection with the mentioned instruments, followed by a 6-day intervention period of Self-Reliance Training. Self-Reliance Training denotes a structured intervention program crafted by the researcher to foster a sense of proficiency among participants in recognizing their own stressors and enhancing coping strategies through problem-focused, emotion-focused coping, and self-refinement methods. This training involved computer-assisted lectures and demonstrations.

The post-test, utilizing the same assessment tools, was administered after a one-month interval. Ethical approval for this research was obtained under test number 17/EC/22/AIMS-16 from the Ethical Committee of Amala Institute of Medical Sciences, Thrissur.

SELF RELIANCE TRAINING

Self-Reliance Training refers to a structured interventional programmed designed by the investigator to develop a sense of competence in the subjects in identifying their own stressors and to improve their coping strategies using problem-focused and emotion-focused coping as well as self-refining measures through computer-assisted lectures and demonstration.

Objectives:

- To make the subjects recognize the stressors in their lives, by themselves.
- To ease the level of stress among the subjects.
- To improve their coping skills using various techniques.
- To instill courage in them to deal with a situation head-on.

Results

In terms of age, most of the subjects (44%) belong to the age group of 19 years. In terms of gender, most of the subjects (88%) are female. According to religion, the majority of the subjects (70%) are Christian. The majority of subjects (84%) lives in panchayath. In terms of preferred diet most of the subjects (96%) consume mixed meals. According to the current place of residence, most of the subjects (70%) live in a hostel. According to the board of education, 68% of the subjects studied under state board. The majority of the subjects (36%) have a monthly family income of <30,000 rupees. 48% of the subjects were the first child to be born to their parents. 84% of students uses psychological coping strategies currently. In terms of preferred leisure activity, 50% of the subjects spend their free time by listening to music. Considering the occupation of the father, 42% are self-employed. Considering the occupation of the mother, 56% are homemakers. In terms of the education of the father, 36% of them have a high school education. The mothers of 52% of the subjects are undergraduates. In terms of choice of nursing as a profession, the majority of the subjects (66%) opted for the course voluntarily.

In the pretest, the majority of the samples (72%) had a moderate level of stress and 24% of students had a high level of perceived stress. In the pretest, the majority of the students (82%) had a moderate level of coping and 18% of students had a high level of coping.

Distribution of the first-year B.Sc. Nursing students according to the level of stress and coping.

The median post-test stress score is 6.0 with an interquartile range (IQR) of 8.0, while the median pre-test stress score is 23.50 with an IQR of 13.25. The impact of Self-Reliance Training on stress was evaluated using the Sign Rank test, yielding a calculated value of 5.911 and a p-value of 0.0001, indicating a statistically significant difference between pretest and post-test stress scores.

The mean pre-test coping score is 76.76 with a standard deviation of 9.87, and the mean post-test coping score is 91.56 with a standard deviation of 9.72. The effect of Self-Reliance Training on coping was assessed using a paired t-test, resulting in a calculated t-value of 10.297 and a p-value of 0.0001, suggesting a statistically significant difference in coping levels between pretest and post-test. Fisher's Exact Test was employed to identify any associations.

A significant correlation was discovered between initial stress levels and age, as determined by Fisher's Exact Test. However, no such correlation was found between

Table 1. Self-Reliance Training Programme

DAYS	TASK	METHOD OF TEACHING	TIME
DAY 1 • PRETEST SESSION 1 •	Recognizing own stressors. Practice session • Relaxation training. -Deep breathing exercise.	Lecture cum discussion Demonstration	15 minutes 45 Minutes
DAY 2 SESSION 2 • • •	Coping training. • a) Problem focused coping. Problem solving. -Practice session. Time Management b) Emotion focused coping. • Positive thinking and self- control. -Positive Affirmations. • -Tip for positive thinking Relaxation training. -Deep breathing exercise.	Lecture cum discussion. Model of time planning. Exhibition on positive affirmations.	1 Hour
DAY 3-6	Relaxation training Jacobson's progressive muscle relaxation technique.	Demonstration & Live practice	30 Minutes
After 1 month	Post test		15 Minutes

stress levels and various socio demographic factors, including gender, religion, residential area, dietary preferences, educational background, family income, birth order, coping strategies, leisure activities, and parental occupations and education.

Similarly, there was no significant relationship observed between coping mechanisms and socio-demographic variables such as age, gender, religion, residential area, dietary preferences, educational background, family income, birth order, coping strategies, leisure activities, and parental occupations and education.

Discussion

In the present study, it is observed that 88% of the students are female, with 44% falling within the age group of 19 years. Regarding parental education, 36% of fathers have completed high school, while 52% of mothers hold an undergraduate degree. These results align with a study conducted in Egypt, which found that 77% of participants were aged between 19-24 years, with 91.4% being female. Additionally, approximately half of the subjects' fathers (46.2%) had a high school education, while 48.8% of mothers had completed undergraduate degrees.

In terms of stress levels, the majority of subjects (72%) in the current study experience moderate stress, with 24% reporting high perceived stress and 4% experiencing low stress levels. This finding is consistent with a

study in Kashmir, where 54% of nursing students experienced high stress, 42% reported moderate stress, and 4% had low stress levels [16-17].

In this study, it's apparent that most students (82%) possess moderate coping abilities, with 18% exhibiting high coping skills. This aligns with research in Rajasthan, where the majority of participants (66.6%) also showed moderate coping strategies [18].

Regarding stress levels, the median post-test score is 6.0 with an IQR of 8.0, and the median pretest score is 23.50 with an IQR of 13.25. The calculated Sign Rank test value is 5.911 with a p-value of 0.0001. The mean pretest coping score is 76.76 with a standard deviation of 9.87, while the mean post-test score is 91.56 with a standard deviation of 9.72. The calculated t-value for coping levels is 10.297 with a p-value of 0.0001, indicating a statistically significant difference between pre-test and post-test stress and coping levels.

These results mirror a study in Tamil Nadu, which found a significant discrepancy in scores between the control and experimental groups (t-value of 13.66, p-value < 0.001), indicating a notable decrease in stress levels and increase in coping behaviors among students in the intervention group compared to the control group [19-20].

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Table 2. Frequency and Percentage distribution of subjects according to their socio demographic variables

PARAMETERS	CHARECTERESTICS	FREQUENCY	PERCENTAGE
Age	18	8	16.0
	19	22	44.0
	20	18	36.0
	≥ 21	2	4
Gender	Male	6	12
	Female	44	88
Religion	Hindu	11	22.0
	Christian	36	70.0
	Muslim	3	8.0
Area of living	Panchayath	41	82.0
	Municipality	3	6.0
	Corporation	6	12.0
Preferred diet	Vegetarian	2	4.0
	Mixed	48	96.0
Place of residence	Hosteller	35	70.0
	Day Scholar	15	30.0
Board of education	State	34	68
	CBSE	14	28
	ICSE	2	4
Monthly income of the family	<30,000	18	36.0
	30,000-40,000	6	12.0
	41,000-50,000	13	26.0
	>50,000	13	26.0
Order of birth	First	24	48.0
	Second	21	42.0
	Third	5	10.0
Coping strategies used at present	Physical	8	16.0
	Psychological	42	84.0
Preferred leisure time activity	Music	25	50.0
	Dancing	2	4.0
	Reading	2	4.0
	Drawing	3	6.0
	Talking to others	18	36.0
Occupation of father	Government Sector	11	22.0
	Private Sector	15	30.0
	Self-Employed	21	42.0
	Unemployed	3	6.0
Occupation of mother	Government Sector	8	16.0
	Private Sector	11	22.0
	Self-Employed	3	6.0
	Homemaker	28	56.0
Education of father	Primary	3	6.0
	High School	18	36.0
	Higher Secondary	8	16.0
	Undergraduate Degree	10	20.0
	Postgraduate Degree	11	22.0
Education of mother	Primary	6	12.0
	High School	12	24.0
	Higher Secondary	26	52.0
	Undergraduate Degree	6	12.0
	Postgraduate Degree	6	12.0
Choice of nursing as a profession	Voluntarily	33	66.0
	Compulsion	17	34.0

Table 3. Analysis of the effect of Self-Reliance Training on Stress and coping among first year B.Sc. Nursing students

Level of stress	Median	IQR	Sign Rank Test value	P value
Pretest	23.50	13.25	5.911	0.0001**
Post test	6.0	8.0		
Level of coping	Median	IQR	Sign Rank Test value	P value
pretest	76.76	9.87	10.297	0.0001**
Post test	91.56	9.72		

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