



RESEARCH PAPER

Effectiveness of Integrative Laughter Therapy to Reduce Academic Stress among Undergraduate Nursing Students

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ABSTRACT

This study assessed the effectiveness of laughter therapy sessions on academic stress among undergraduate nursing students. Nursing institutes' environments are stressful, frequently hindering students' educational outcomes, physical health, and psychological well-being. Counseling therapy techniques can minimize mental issues and increase student retention. A quasi-experimental design was employed. Counseling sessions were conducted for the students. A validated self-administered questionnaire was used to gather both pre- and post-intervention data. Twenty undergraduate nursing students in Abbottabad were enrolled. The mean age of participants was 21.76 +0.89 years. Analysis of the results after the intervention showed a statistically significant reduction in academic stress scores, showing the intervention's effectiveness. The study's results in the pre-intervention phase showed that females scored significantly higher on the academic stress scale. The findings of the study provided evidence that laughter therapy is effective in reducing academic stress in undergraduate nursing students.

KEYWORDS Laughter Therapy, Academic Stress, Nurses

Introduction

Human life in today's world is inextricably linked to stress and its effects. Stress is acknowledged as a threat to one's physical and mental health as well as their quality of life (Noreen et al., 2023). Stress is a condition in which a person believes that "strains from the surroundings exceed the individual and sociological capacities the individual is capable of mobilizing." Stress does not always terminate one's mental health. However, the perception of stress might be harmful (Folkman & Lazarus, 1986). A modest amount of stress is thought to help motivate an individual to perform well for achievement, but a high level of stress was found to be devastating and subsequently resulted in a variety of physical and psychological health complications, including anxiety and depression (Slavich, 2016). Stress is a situation psychological, or emotional state that people experience when they sense pressure or a threat (Sarfraz et al., 2023).

Healthcare workers experience critically high levels of exhaustion due to the psychologically and physically demanding nature of their work (Bibi, 2024). Such elevated stress levels not only hurt physicians' physical and mental health but also directly jeopardize the standard of care that nurses can offer their patients. The quality of care nurses can offer their patients is directly threatened by such high rates of burnout, even if professional caregivers' health is of utmost importance (Mufarrih et al., 2019).

"Nursing education" refers to formal teaching and training in the nursing field. It includes a variety of specializations that both expedite and facilitate a patient's return to health, in addition to tasks and responsibilities related to providing physical patient care. Nursing and nursing education have seen significant changes over the years. The continuous battle for independence and professionalism is reflected in this history. Nursing education

entails gaining comprehensive theoretical knowledge and practical practice abilities (Abbas et al., 2023).

Several studies have revealed that a significant portion of health students, especially those pursuing degrees in nursing and medicine experience stress related to their coursework (Phiri et al., 2014). Researching the pressures faced by nursing students is vital since these conditions negatively impact their health and cognitive function, which can result in the formation of mental illnesses such as substance misuse, eating disorders, sleep disorders, depression, and anxiety (Noreen et al., 2023). Stress can also make students less productive workers and less effective communicators, which reduces the quality of healthcare services. Thus, the goal of the study was to ascertain the degree of academic performance (Mushtaq, 2024).

Literature Review

Providing healthcare is a demanding and hectic job (Page, 2004; Phiri et al., 2014). Healthcare workers may become dissatisfied with their jobs due to a variety of factors, including an inability to handle highly demanding environments, long work hours combined with extended work time, and the psychological strain of (Mushtaq & Ahmad, 2024) having to make difficult decisions for patients and ethical dilemmas (Raines, 2000).

Nursing students encounter a new setting during their clinical assignments, which is completely distinct from the institute's internal environment. Consequently, particularly in the early months of their clinical responsibilities, students are first exposed to a great deal of pressure and difficulty in a complex clinical setting (Journal et al., 2023). Because it gives students the chance to put their theoretical knowledge into practice while also improving their practical skills and understanding, clinical education is still a crucial component of nursing education (Mushtaq & Ahmad, 2024). To raise their grades and positions, nursing students have worked very hard during the semesters on their clinical rotations and involvement in nursing organizations. They then deal with psychological issues that have an impact on their performance. These issues are experienced differently by each student and vary in intensity. In a short time, nursing students must complete assignments, presentations, theory exams, midterm evaluation tests, and clinical skills.

Nursing students experience higher levels of stress. Their workload surpasses their capacity (Mufarrih et al., 2019). In addition to negatively affecting students' clinical and academic performance, stress can cause major psychological issues including depression (Page, 2004). Moreover, stress has an impact on students' quality of life, clinical routine, general health, and academic performance (Study, 2023).

Nursing students are reported to be more likely than other students to feel stress. Stress has been identified in those who are under pressure, and expected to maintain standards and fulfill deadlines as well as goals (Abbas et al., 2023). Nursing schools are thought to be demanding, which negatively impacts trainees' well-being and academic performance. Stress among nursing professionals can also negatively impact several aspects of their lives (Mushtaq, 2024), including increased absence rates, lower productivity and quality of work, and weakened coping mechanisms (Noreen et al., 2023). Additionally, it may elicit a wide range of emotional reactions, including anxiety, tension, terror, and uncertainty, and negative effects on nurses' mental health in the form of depression, a decline in their quality of life; and a drop in their speculative performance (Journal et al., 2023).

It has been acknowledged that non-pharmacologic therapies are a helpful way to lessen discomfort, tension, and worry. Nonpharmacologic interventions include yoga, music therapy, breathing exercises, superficial massage, and spiritual activities (Rouhi et al., 2020).

Laughter yoga was first proposed by an Indian physician (Kataria, 2005). It combines the practice of unconditional laughter with the breathing exercises of yoga. By using this technique, jokes and comedy can make people laugh at all. Laughter starts artificially but soon transforms into genuine laughter, which raises the body's and brain's oxygen saturation levels. Laughing yoga has several beneficial therapeutic effects, including increased confidence and a sense of security, pleasant energy, and diversion from bad thoughts.

Laughter has been used to strengthen and maintain healthy physical, psychological, and social interactions since ancient times. It does this by influencing cognitive behavior. Research has proven that laughing enhances one's quality of life (Yazdani et al., 2014). Laughter therapy has a high predictability to decrease stress reactions, such as apprehensions and hopelessness, by substantially reducing pro-stress hormones and raising mood-elevating anti-stress factors without the need for pharmacological intervention. In addition to helping to relax muscles and improve circulation, laughter can also lessen the bodily signs of stress (Yasmin et al., 2018).

Objective

The purpose of the current study was to investigate the benefits of laughter therapy for students who were experiencing stress related to their studies.

Hypothesis

Students with academic stress who received laughter therapy will show improvement in academic stress-related symptoms as compared to the students who do not get any psychotherapy.

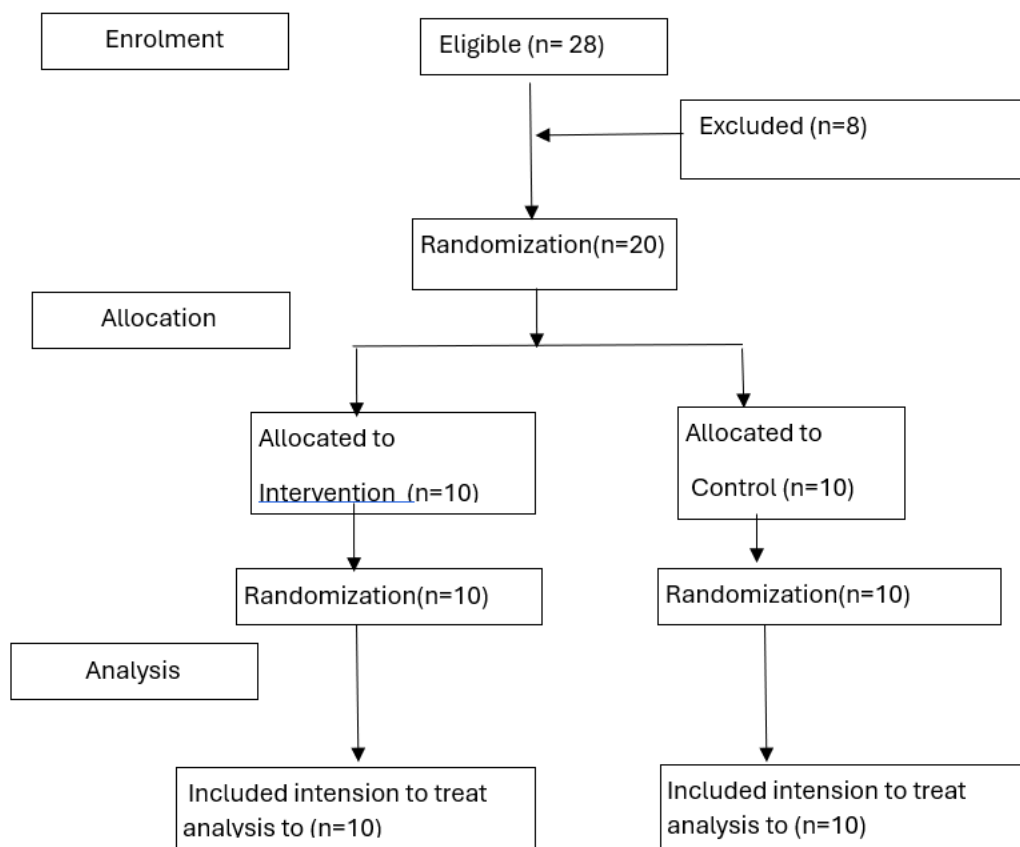


Figure 1 non-significant baseline characteristics differences among 20 study subjects graded by groups.

Sample

A sample of (N=20) academically stressed undergraduate students was gathered from the nursing colleges of Abbottabad using the purposive sampling technique. Subjects for an additional investigation were split into two groups: a control group (n = 10) and a laughter therapy group (n = 10). The inclusion and exclusion criteria listed below were used to determine which potential study participants were included in the study.

Criteria for inclusion: Students experiencing academic stress were assessed using the Lakeav Response Stress Scale (LASRS-2), with a cut-off score of 70. Additionally, participants in the main study who were undergoing periods of high academic stress, such as sessional workload and diverse projects, were not included. The following are the exclusion criteria: a score of less than 70 on the Lakeav Response Stress Scale (LASRS-2). Having a physical or intellectual limitation that prevented the pupils from using the laughing therapy technique; having a diagnosis of any other serious mental health illness; or having any other diagnosed psychological issue.

Measures

Lakeav Response Stress Scale (LASRS-2)

LASRS-2 comprises 26 items with a five-point scale (Lakaev, 2022). A score of 70 or more suggests a high level of academic stress. It measures academic stress response in four domains: Behavioral, six questions (items no. 2, 3, 10, 14, 16, and 18); Affective, seven questions (items no 5, 6, 15, 20, 22, 23, and 24). There are seven questions about cognition (items no. 1, 4, 7, 9, 13, 19, and 21) and six questions about physiology (items no. 8, 11, 12, 17, 25, and 26). Using a 5-point Adjectival Rating Scale with the anchors "None of the Time" (1), "A Little of the Time" (2), "Some of the Time" (3), "Most of the Time" (4), and "All of the Time" (5), respondents scored the frequency of their symptoms. The total LASRS-2 score was calculated by adding individual items. Higher scores reflected a higher academic stress reaction.

Intervention Laughter Therapy Procedure

The study was conducted inside the classrooms in a controlled environment. All research participants received conclusive laughter therapy sessions to treat academic stress. Both groups were pre-tested by using LASRS-2. Then a group of 10 students (experimental group) had to undergo a laughter therapy session of 50 minutes for two days a week whereas the rest of the 10 students (control group) remained unattended.

Laughter therapy consists of different phases ranging from deep breathing to voluntary laughter in a sitting or standing position. Laughter yoga is comprised of warm-up exercises, clapping, deep breathing and simultaneously moving towards the next steps including hearty laughter, silent laughter, greeting laughter, appreciation laughter, swinging laughter, lion laughter, and argument laughter and in last sitting calmly for relaxation). In the beginning, along with saying "Ho, Ho, Ha, Ha, Ha" the participants were instructed to clap their hands. Then, the participants were asked to participate in voluntary laughing.

Over the course of 12 weeks, the participants in the intervention group received twice-weekly laughter therapy sessions. According to earlier research, the duration of successful laughing therapy sessions may vary from four to eight weeks, and it may even reach twelve weeks (Cramer et al., 2013). Therefore, 12 weeks of intervention was deemed suitable for the current investigation. Every session began with a 50-minute laughter therapy session after a 10-minute briefing on laughter therapy and mental wellness. All the laughter therapy sessions were group-based interventions conducted as per the approved

protocol, and all the sessions were completed by the same laughter therapist to unify the intervention.

Table 1
Mean, the difference between the laughter group and control group on the variable of the Lakaev Academic Stress Response Scale

Variables	Pre-test (n=10)		Post-test (n=10)		t(18)	P	95% CI		Cohen's d
	M	SD	M	SD			LL	UL	
LT	83.30	4.29	66.70	18.39	11.71	.00	0.48	8.40	2.92
CON	84.74	8.47	81.90	13.12	1.94	.02	1.59	2.40	0.49

Table 1 shows significant differences in the pre- and post-test results of the intervention group. The laughter group shows a decrease in academic stress scores, however in the control group scores slightly increased. Findings revealed that laughter therapy was remarkably effective in reducing academic stress as compared to the control group which consisted of participants who did not receive laughter therapy.

Table 2
Mean comparison of stress between Experimental and Control groups (N=20)

Variables	Pre-test (n=10)		Post-test (n=10)		t(18)	p	95% CI		Cohen's d
	M	SD	M	SD			LL	UL	
EXP	83.30	4.29	78.23	6.79	5.38	.00	21.2	31.3	2.71
CON	84.74	8.47	85.44	4.80	.72	.57	-3.4	2.1	1.43

Table 2 describes the significant difference in stress between students belonging to the intervention and control groups. The study result shows that in the experimental group laughter therapy significantly lowered the stress level among undergraduate students.

Table 3
Mean comparison of Academic stress between Experimental and Control groups

Variables	Men (n=10)		Women (n=10)		t(18)	P	95%CI		Cohen's
	M	SD	M	SD			LL	UL	
EXP	63.38	11.28	46.63	12.97	2.75	.00	19.43	21.81	2.51
CON	60.50	12.80	66.38	19.46	1.37	.45	-4.7	2.25	1.43

Table 3 describes the significant difference in stress between students belonging to the intervention and control groups. The study result shows that in the experimental group laughter therapy significantly lowered the level of stress among undergraduate students.

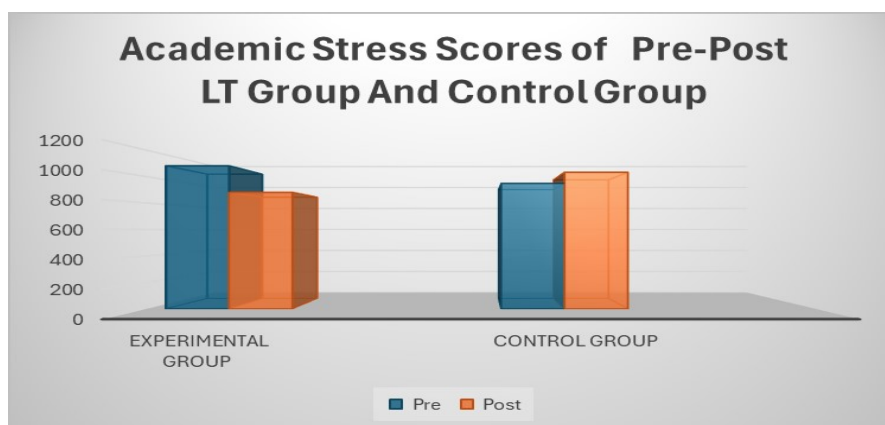


Figure 2 Bar graph of academic stress scores on the pretest and posttest of the control group and LT group

The above bar graph shows a significant level of decrease in experienced academic stress in the posttest LT group while the difference in academic stress assessment scores between pre and post in the control group is not noticeable.

Discussion

The data analysis revealed that in the experimental group laughter therapy significantly reduced the level of stress among undergraduate nurses. These results are in line with the findings of the earlier research suggesting the positive impact of laughter therapy on depression, and level of anxiety stress among participants (Yazdani et al., 2014). The findings of the present study are also in line with another study suggesting that laughter therapy has a significant impact on the experienced level of stress among teachers as well (Bal et al., 2024). A similar result was found, in the use of laughter yoga practice, resulting in a noticeable decrease in depression and aggression among study participants (Gülner et al., 2024). Another study has explored the health benefits of laughter therapy and reported that the mean scores of stresses were significantly reduced in the study group after the administration of a stress management yoga program (Asad & Fahim, 2024). The study's findings confirmed a similar effect of stress management training resulting in a significant reduction of stress and depression (Erkin & Kocaçal, 2024; Yim, 2016). Similarly, another study investigating the effects of a stress management program has proved a significant positive impact of stress management techniques on overall mental health (Yas & Incesu, 2024). The findings showed that laughter yoga helped reduce the state of anxiety and perceived stress levels related to simulation training and improved their self-confidence and satisfaction with learning (Dönmez et al., 2023). After laughter yoga, there was a significant difference concerning the experienced level of academic stress between the two groups, whereas the difference in depression scores between the control and intervention groups was not significant.

Comparing the gender base differences concerning the possible impact of laughter therapy on academic stress, study results have proved that among female nurses the effect of laughter therapy in reducing the perceived academic stress is noteworthy. It is proven that female nurses benefit more than male nurses. Similar results were reported by suggesting that females due to higher suggestibility and emotional control received high benefits from yoga and related therapeutic interventions (Yazdani et al., 2014). Female participants of laughter therapeutic sessions showed a significant decrease in state anxiety and depression (Javnbakht et al., 2009).

Conclusion

The current study revealed the impact of laughter therapy on academic stress among undergraduate nurses. According to the study, analysis proved that the application of laughter therapy noticeably decreased the level of experienced stress.

Recommendations

- There is a need to continue to explore the impacts of laughter therapy on the student population covering all cadres of education i.e., medical, nonmedical students, etc.
- This stress management strategy was formulated in India. Future researchers can test and validate these kinds of strategies at an international level by conducting multicultural studies.
- This research may serve as a baseline for formulating other yoga-embedded clinical therapies to develop stress-coping skills among the general population.

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