



INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

A TRUE-EXPERIMENTAL STUDY TO ASSESS THE EFFECTIVENESS OF LAUGHTER THERAPY ON STRESS REDUCTION AMONG NURSING STUDENTS IN SELECTED COLLEGES OF DISTRICT FATEHGARH SAHIB, PUNJAB

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Abstract

Stability of hormones are being effected by consistent stress in the human body which leads to changes in thoughts and situations that make the individual perplexed, restless or anxious. Laughter therapy is the antidote for stress. It helps to release serotonin in brain which is essential for the uplift of mood. Laughter is surely the best medicine. The importance of laughter is only realised when human being grow out of childhood days. With work stress on the rise, laughter therapy sessions are gaining attention worldwide. The benefits of laughter are many; however one may not really get into the nitty-gritty of issues at a young age. Though changes in routine due to the pandemic have increased nursing students' anxiety about clinical learning. The inadequacy experienced before graduation caused them to experience high levels of anxiety characterized by feelings of insecurity and unhappiness and negatively affected their life satisfaction. Research's shows that stress can block chemical reactions in the brain that are necessary for learning. Stress can disrupt learning and memory development as it forces the brain to revert to more primitive survival needs. According to the global survey done by the Regus Business Treeker in 2009, over 3 lakh respondents in 11,000 companies across 13 countries, it is found that, after china, 87% the most significant increase in the work place stress occurred in India, which is a much higher growth over the past 2 years. Based on these observations and evidences, a study was conducted to assess the effectiveness of laughter therapy on stress reduction among nursing students in selected colleges District fatehgarh sahib, Punjab. Sixty subjects were selected for study by simple random sampling technique. The study was approved by the institutional ethical review board and informed consent was obtained from all the respondents. The findings revealed that in post-test, majority 80% of subjects had low stress and 20% had moderate stress, no one had severe stress with the mean score of 11.53 ± 4.58 . However in posttest, 46.7% of subjects had low stress, 43.3% had moderate stress and only 10% had severe stress with mean score 15.92 ± 6.88 in the control group respectively. The findings also added that there was significant association between pre-test

level of stress with the occupation by using fisher test at 0.05 level of significance in the experimental group and no association was found with these demographic variables (age, gender, type of family, religion, education, and monthly income) in both the groups.

Key words: Assess, Effectiveness, Laughter Therapy, Stress, Nursing

INTRODUCTION

Along with routine changes such as quarantine measures implemented due to the pandemic, the integration of technology into the curriculum more than ever before has increased students' anxiety about learning. The studies conducted stated that it is not sufficient to teach clinical field courses by distance education to senior nursing students who only take practice courses throughout the year. It has been determined that students experience anxiety that they will not have the necessary professional equipment and competence when they graduate. In this process, it has been observed that the feelings of uncertainty, insecurity, and unhappiness caused by distance education and the COVID-19 pandemic lead to high levels of anxiety and stress in students.¹⁻⁷

Studies have shown that high anxiety levels affect students' adaptation to daily life and life satisfaction. Which has a negative effect? In recent years, non-pharmacological techniques have been widely used to reduce anxiety and stress. Laughter therapy is one of the methods used to reduce anxiety and stress levels. In 1995, Laughter therapy, introduced by Kataria, is a technique that combines free laughter with yoga breathing. Laughter therapy increases respiratory capacity by promoting deep breathing. It changes the mood by combining childlike playfulness with laughter exercises. This technique affects the brain and autonomic nervous system, causing physiological changes. Laughter therapy acts on a complex mechanism transmitted from the hypothalamus that stimulates different cortical areas.⁸⁻¹⁵

Laughter therapy effectively relaxes the muscles, makes you feel many emotions simultaneously, transforms negative emotions into positive ones, and significantly reduces depression and anxiety. Studies have shown that laughter therapy effectively reduces the anxiety and stress levels of nursing students, improves sleep disorders, improves social functions, reduces work stress, and improves subjective well-being levels. Studies have shown that it increases psychological well-being in adults and enhances life satisfaction and loneliness levels by improving mood in adults.¹⁶⁻²³

Studies revealed that internet-based interventions could be beneficial in evaluating people's psychosocial status, applying non-pharmacological techniques to people with psychological problems, and reducing anxiety and stress during the pandemic period.²³⁻²⁶

During the pandemic process, non-pharmacological techniques have been used to reduce the anxiety levels of individuals by using online platforms, online aerobic activities, balance and flexibility exercises, and relaxation techniques. In this process, individuals were reached worldwide through online platforms, online aerobic activities, balance and flexibility exercises, and non-pharmacological techniques were started to be used.²⁷

Although it was stated that these methods were effective in reducing anxiety levels, the lack of group interactive intervention in these studies led to the preference for laughter therapy. Laughter therapy is a technique that begins as a physical exercise and provides interaction based on establishing eye contact with other participants in the group.²⁸

During this period of quarantine and isolation group-oriented laughter therapy will increase the feeling of togetherness and happiness and positively contribute to students' life satisfaction and psychological well-being. In addition, studies have shown that laughter therapy effectively reduces anxiety and stress.^{12, 24}

A quantitative research was carried out among first year B.sc. nursing students. First-year B.sc. nursing students were recruited for this research, with the hope of determining the impact of laughing yoga on stress levels in the group before, during, and after testing. The Purposive sampling strategy was utilised in the pre-experimental design. A total of 50 people volunteered to take part in this investigation. Structured

questionnaires were utilised to collect the data. The pre-test stress level is 8.14, while the post-test stress level is 17.14. Laughter yoga exercises have a positive impact on students' mean and standard deviation scores. The study found that students in their first year of B.Sc. nursing had lower levels of stress as a result of online lessons, which supports the usefulness of laughing yoga.²⁹

Fatma Ozlem Ozturk , Ayfer Tezel et al(2021) carried out a randomised controlled research, 75 healthy university students were randomly allocated to one of two groups: one received the intervention, the other received a control group. The mean "Brief Symptom Inventory" scores before and after the intervention indicated a significant reduction (P 0.05) in the scores across groups. As a result, nursing students in their first year might benefit greatly from the use of laughter therapy to help them deal with stress and alleviate mental symptoms.³⁰

Heidari M, Borujeni MG, Rezaei P, Abyaneh S, Heidari K. et al (2020) studied laughing therapy's effect on depression and nursing home residents' quality of life. This controlled, semi-experimental research includes a pre- and post-test. 90 qualifying seniors. Senior men and women accounted up 31.11 and 68.88% of the intervention and control groups, respectively. The mean depression ratings in the intervention group were lower after laughing therapy (M = 2.57) than before (M = 6.87), and a " t " test showed a statistically significant difference before and after the intervention (p 0.001). After treatment, the mean score of quality of life measures was greater than before, and the change was statistically significant .Laughter therapy improves senior mental health and quality of life, study finds. ³¹

Siregar R et al. (2019) conducted a research on laughing therapy's impact on stress and depression Nursing home topics numbered n. 42 individuals were randomly allocated to groups of 21 using purposive selection. A group got laughing therapy 3 times a week for 4 weeks. A control group received standard care. Stress and depression scale data were obtained. In the experimental group, senior depression dropped dramatically. Control group showed no difference. Stress and depression levels differed across the two groups.³²

Shattla SI et al. (2019) conducted a research study among psychiatric nurses' in which occupational burnout was studied utilising a "structured interview questionnaire and Maslach Burnout Inventory Human Services Survey (M BI-HSS)." Purposive sample of 64 nurses, 42 females and 22 males, was split into experimental and control groups (21 females, 11 males for each group). After laughing therapy, the experimental group's burnout score was much lower than the control group's.³³

Dogan MD (2018) Assessed Laughter Therapy's Effect on University Students' Anxiety and Stress This semi-experimental research tested laughing therapy's impact on student stress and anxiety. The sample comprised 65 fourth-year nursing students who volunteered to participate. The research included pretest and posttest data collection. In the pretest, pupils filled out a personal information form with stress and anxiety scores. Stress and anxiety ratings were reevaluated after 20 minutes of laughing therapy. The average age of the 65 participants was 22.05 1.29 and 24.6% were male. Laughter therapy lowered anxiety, according to statistics.³⁴

An experimental study on the effect of laughter therapy on general health among nursing student was conducted among 38 female nursing students in Isfahan University of health science. The finding showed that significant difference in the mean scores of general health before and after laughter yoga intervention in the study group. The findings showed that laughter yoga had a positive effect on student's general health and improved the signs of physical and sleep disorders, lowered anxiety and depression and promoted their social function. The study concludes that laughter yoga can be used as one of the effective strategies on student's general health.³⁵

OBJECTIVES OF THE STUDY

1. To assess the pre-intervention and post-intervention stress reduction among nursing students in the experimental and control group.
2. To assess the effectiveness of laughter therapy on stress reduction among nursing students in the experimental.
3. To find out the association between pre-test stress among nursing students in experimental and control group with their socio-demographic variables

RESEARCH HYPOTHESES

H1: There is a statistically significant stress reduction among nursing students after post interventional therapy in the experimental group.

H2: There is a significant association between pre-test stress reduction among nursing students in both the groups with their socio-demographic variables.

METHODOLOGY

A quantitative true-experimental pre-test post-test control group research design was conducted to assess the effectiveness of laughter therapy on stress reduction among nursing students in selected colleges of District Fatehgarh Sahib, Punjab. Sixty subjects (30 in experimental and 30 in control group respectively) were selected for study by simple random sampling technique. The study was approved by the institutional ethical review board and informed consent was obtained from all the respondents. Socio-demographic data and Cohen's standardized Perceived stress scale was adopted in this study. Standardized five point likert scale was used to assess the stress among both the groups as pre-test followed by thirty minutes intervention in the form of laughter therapy per day was given to the subjects for a period of seven days in the experimental group only. On 8th day post-test was conducted to assess the stress level by using Cohen's standardized perceived stress scale in the both the groups respectively. After data collection, the data was analysed by using descriptive and inferential statistics in the form of frequency, percentage, mean, unpaired t-test and fishes' test.

RESULTS

Table 1: Pre-test Post-test mean stress reduction score among subjects in the experimental group.

Stress Reduction Score Mean				
Level	Mean	Standard	T-test	Table-value
pre-test	16.03	6.89	13.31	2.00
post-test	11.53	4.58		

The data presented in the table 1 revealed that mean post-test stress reduction score 11.53 ± 4.58 was lower than the mean pre-test stress reduction score 16.03 ± 6.89 with mean difference 4.5 ± 2.31 t-test 13.31 and table-value 2.00 which indicated that laughter therapy was effective in reducing the stress among nursing students in selected colleges of Fatehgarh Sahib Punjab.

Table 2: Pre-test Post-test mean stress reduction score among subjects in the control group.

Stress Reduction Score Mean				
Level	Mean	Standard	T-test	Table-value
pre-test	15.93	6.86	3.21	1.00
post-test	15.93	6.88		

The data presented in the table 2 revealed that mean post-test stress reduction score 15.93 ± 6.88 was same when compared with the mean pretest stress reduction score 15.93 ± 6.86 with mean difference 0 t-test 3.21 and table-value 1.00 which indicated that laughter therapy plays important role and remains effective in reducing the stress among nursing students.

Table 3:- Association between pr-interventional stress reduction score with selected demographic variables.

Socio-Demographic variables	Stress			Fisher Test Value	Df	P-Value	Remark
	Low	Moderate	Severe				
Age							
17	0	3	0	6.882	6	.288	NS
18	10	8	1				
19	01	2	1				
20	02	1	1				
Gender							
Male	4	8	1	2.045	2	.430	NS
Female	9	6	2				
Type of family							
Nuclear	9	14	3	6.036 2	2	.065	NS
Joint	4	0	0				
Religion							
Hindu	9	8	1	8.964 4	4	.193	NS
Sikh	3	5	0				
Christian	1	1	2				
Place of residence							
Rural area	11	11	3	.844	2	.656	NS
Urban area	2	3	0				
Educational qualification							
Informal education	4	3	1	6.876	6	6.326	NS
Primary	1	4	0				
Matric	0	2	1				
secondary	8	5	1				
Occupation							
Govt. Job	1	0	2	15.45	4	4 .025	S (E)
Private Job	1	5	0				
Other	11	9	1				
Monthly family Income							
<10000	0	3	1	11.170	8	.115	NS
10001-20000	0	1	0				
20001-30000	4	3	0				
30001-40000	7	3	0				
>40000	2	4	2				

The data presented in table 3 depicted that significant association was found between pre-interventional stress reduction score with this variable (Occupation) and no association was found between pre-interventional stress reduction score with all other variables in both the groups (Experimental and Control group respectively). According to data presented in the above table, revealed that the research hypothesis was accepted with one variable (Occupation) only while as null hypothesis was also accepted with other variables by using fisher test value at $p \geq 0.05$.

CONCLUSIONS

The focus of this study was to evaluate the effectiveness of the Laughter therapy in stress reduction among nursing students in selected college of Fatehgrah Sahib Punjab.. In this study quantitative approach, true-experimental pre-test post-test control group research design was used. Sixty Subjects were drawn from population using simple random sampling technique. The data was collected with the help of socio-demographic variables and the Cohen's standardized perceived stress scale. Data was analysed and interpreted by applying descriptive and inferential statistics in the form of frequency, percentage, mean, unpaired t-test and fishes' test. The findings concluded that thirty minutes laughter therapy per day in the experimental group for a period of seven days was effective. There was significant difference between the pre-interventional stress reduction and post-interventional stress reduction in the experimental group; however no change was observed in the control group. The findings revealed that in post-test, majority 80% of subjects had low stress and 20% had moderate stress, no one had severe stress with the mean score of 11.53 ± 4.58 . Where as in posttest, 46.7% of subjects had low stress, 43.3% had moderate stress and only 10% had severe stress with mean score 15.92 ± 6.88 in the control group respectively. The findings also portrayed that there was significant association between pre-interventional stress reduction with this variable (occupation) by using fisher test at 0.05 level of significance in the experimental group and no association was found with these demographic variables (age, gender, type of family, religion, education, and monthly income) in both the groups.

RECOMMENDATIONS

On the basis of the finding of the study it is recommended that:

- A similar study can be undertaken with a large sample for better generalization of the finding.
- A cohort study can be conducted to determine the incidence of stress level among nursing students.
- A descriptive study can be conducted to assess the level of stress among nursing students in different colleges.
- A Co-relational study can be conducted among students in between the different colleges and universities.
- A comparative study can be conducted among students of Medical and Nursing Colleges.
- A pre experimental study can be conducted to determine the impact of self-instructional module of laughter therapy among nursing students with regard to stress reduction.

ACKNOWLEDGEMENT

With profound gratitude, I am deeply indebted especially to Dr. Masood Ahmad Sheikh (Nursing expert and Research Associate) and all co-authors who helped me in stimulating and formulating this research project and also helped me in accomplishing this task at all the times during this period. I am also grateful to my husband and my family members who morally supported throughout the construction of view successfully.

REFERENCES

1. García-González J., Ruqiong W., Alarcon-Rodriguez R., Requena-Mullor M., Ding C., Ventura-Miranda M.I. Analysis of anxiety levels of nursing students because of e-learning during the COVID-19 pandemic. *MDPI*. 2021;9(3):252. doi: 10.3390/healthcare9030252. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
2. Kürtüncü M., Kurt A. Problems of nursing students in distance education in the COVID-19 pandemia period. *ASEAD*. 2020;7(5):66–77. [Google Scholar]
3. Fawaz M., Samaha A. E-learning: depression, anxiety, and stress symptomatology among Lebanese university students during COVID-19 quarantine. *Nurs. Forum*. 2020:52–57. doi: 10.1111/nuf.12521. [PubMed] [CrossRef] [Google Scholar]

4. Brooks S.K., Webster R.K., Smith L.E., Woodland L., Wessely S., Greenberg N., Rubin G.J. The psychological impact of quarantine and how to reduce it: rapid review of the evidence. *Lancet*. 2020;395(10227):912–920. doi: 10.1016/S0140-6736(20)30460-8. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
5. Rehab T. Effects of test anxiety, distance education on general anxiety and life satisfaction of university students. *PERR*. 2021;10(1):107–117. [Google Scholar]
6. Qiu J., Shen B., Zhao M., Wang Z., Xie B., Xu Y. A nationwide survey of psychological distress among chinese people in the COVID-19 epidemic: implications and policy recommendations. *Gen. Psychiatr*. 2020;33(2) doi: 10.1136/gpsych-2020-100213. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
7. Rogero-García J. La ficción de educar a distancia. *Rev. Soc. Educ*. 2020;13(2):174–182. doi: 10.7203/RASE.13.2.17126. [CrossRef] [Google Scholar]
8. Rogowska A.M., Ochnik D., Kuśnierz C., et al. Satisfaction with life among university students from nine countries: cross-national study during the first wave of COVID-19 pandemic. *BMC Public Health*. 2021;21:2262. doi: 10.1186/s12889-021-12288-1. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
9. Tsitsas G., Nanopoulos P., Paschali A. Life satisfaction, and anxiety levels among university students. *Creat. Educ*. 2019;10(05):947–961. doi: 10.4236/ce.2019.105071. [CrossRef] [Google Scholar]
10. Gadea M., Aliño M., Hidalgo V., Espert R., Salvador A. Effects of a single session of SMR neurofeedback training on anxiety and cortisol levels. *Neurophysiol. Clin*. 2020;50(3):167–173. doi: 10.1016/j.neucli.2020.03.001. [PubMed] [CrossRef] [Google Scholar]
11. Armat M.R., Emami Zeydi A., Mokarami H., Nakhband A., Hojjat S.K. The impact of laughter yoga on depression and anxiety among retired women: a randomized controlled clinical trial. *J. Women Aging*. 2020;34(1):31–42. doi: 10.1080/08952841.2020.1774225. [PubMed] [CrossRef] [Google Scholar]
12. Akimbekov N.S., Razzaque M.S. Laughter therapy: a humor-induced hormonal intervention to reduce stress and anxiety. *Curr. Res. Physiol*. 2021;4:135–138. doi: 10.1016/j.crphys.2021.04.002. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
13. DeCaro D.S., Brown J.L.C. Laughter yoga, adults living with Parkinson's disease, and caregivers: a pilot study. *Explore*. 2016;12(3):196–199. doi: 10.1016/j.explore.2016.02.005. [PubMed] [CrossRef] [Google Scholar]
14. M. Kataria, Laugh for No Reason, Madhuri International, Mumbai, India, 2011.
15. Kin Ö.K., Yıldırım Y. Laughter therapy and examples of use in health. *J. Anatolia Nurs. Health Sci*. 2017;20(1):63–66. [Google Scholar]
16. Heidari M., Borujeni M.G., Rezaei P., Abyaneh S.K., Heidari K. Effect of laughter therapy on depression and quality of life of the elderly living in nursing homes. *MJMS*. 2020;27(4):119–129. doi: 10.21315/mjms2020.27.4.11. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
17. Dogan M.D. The effect of laughter therapy on anxiety: a meta-analysis. *Holist. Nurs. Pract*. 2020;34(1):35–39. doi: 10.1097/HNP.0000000000000363. [PubMed] [CrossRef] [Google Scholar]
18. Lee J.S., Lee S.K. The effects of laughter therapy for the relief of employment-stress in Korean student nurses by assessing psychological stress salivary cortisol and subjective happiness. *Osong Public Health Res. Perspect*. 2020;11(1):44–52. doi: 10.24171/j.phrp.2020.11.1.07. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
19. Devi L.M., Mangaiyarkkarasi K. A comparative study to assess the effectiveness of laughter therapy versus meditation on stress and anxiety among nursing students at Selected College, Bangalore. *Int. J. Nurs. Educ*. 2019;11(4):70–74. doi: 10.37506/ijone.v11i4.3968. [CrossRef] [Google Scholar]

20. Guleria K., Manta P. Effectiveness of laughter therapy on reduction of stress among nursing students. *Indian J. Forensic Med. Toxicol.* 2021;15(1):126–132. doi: 10.37506/ijfmt.v15i1.13385. [CrossRef] [Google Scholar]
21. Yazdani M., Esmail-Zadeh M., Pahlavanzadeh S., Khaledi F. The effect of laughter Yoga on general health among nursing students. *Iran. J. Nurs. Midwifery Res.* 2014;19(1):36–40. [PMC free article] [PubMed] [Google Scholar]
22. Hatzipapas I., Visser M.J., Van-Rensburg E.J. Laughter therapy as an intervention to promote psychological well-being of volunteer community care workers working with HIV-affected families. *SAHARA-J.* 2017;14(1):202–212. doi: 10.1080/17290376.2017.1402696. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
23. Alici N.K., Bahceli P.Z. Effects of laughter therapy on life satisfaction and loneliness in older adults living in nursing homes in turkey: a parallel group randomized controlled trial. *Rehabil. Nurs.* 2021;46(2):104–112. doi: 10.1097/RNJ.0000000000000266. [PubMed] [CrossRef] [Google Scholar]
24. Aminoff V., Sellén M., Sörliden E., Ludvigsson M., Berg M., Andersson G. Internet-based cognitive behavioral therapy for psychological distress associated with the COVID-19 pandemic: a pilot randomized controlled trial. *Front. Psychol.* 2021;12 doi: 10.3389/fpsyg.2021.684540. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
25. Ozamiz-Etxebarria N., Santa-Maria M., Eiguren-Munitis A., Gorrotxategi P. Reduction of COVID-19 anxiety levels through relaxation techniques: a study carried out in northern Spain on a sample of young. *Front. Psychol.* 2020;11:1–6. doi: 10.3389/fpsyg.2020.02038. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
26. Kang C., Sun S., Yang Z., Fan X., Yuan J., Xu L., Yang J. The psychological effect of internet-based mindfulness-based stress reduction on the survivors of breast cancer during the COVID-19. *Front. Psychiatry.* 2021;12 doi: 10.3389/fpsyg.2021.738579. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
27. Aksay E. Live online exercise programs during the COVID-19 pandemic—are they useful for elderly adults? *ISJPES.* 2021;21(4):1650–1658. [Google Scholar]
28. Deshpande A., Verma V. Effect of laughter therapy on happiness and life satisfaction among elderly. *IJPP.* 2013;4(1):153–155. [Google Scholar]
29. Geetha R. A Study to Evaluate the Effectiveness of Laughter Yoga Exercises on Stress Reduction due to Online Classes among Ist Year B. Sc. Nursing Students in Mother Teresa College of Nursing, Pudukkottai. (Cited on 22-5-2022)
30. Ozturk FO, Tezel A. Effect of laughter yoga on mental symptoms and salivary cortisol levels in first- year nursing students(Cited on 22-5- 2022): A randomized controlled trial. *International journal of nursing practice.* 2021 Apr;27(2):e12924.
31. Heidari M, Borujeni MG, Rezaei P, Abyaneh SK, Heidari K. Effect of laughter therapy on depression and quality of life of the elderly living in nursing homes. . (Cited on 22-5-2022) *The Malaysian journal of medical sciences: MJMS.* 2020 Jul;27(4):119.
32. Siregar R, Gultom R. Effect of laughter therapy on depression level in elderly in a nursing home, North Sumatra, Indonesia. (Cited on 22-5- 2022) *Belitung Nursing Journal.* 2019 Dec 21;5(6):246-50.
33. Shattla SI, Mabrouk SM, Abed GA. (Cited on 22-6-2022) *International Journal of Nursing.* 2019 Jun;6(1):33-47.
34. Dogan MD. The effect of laughter therapy on anxiety: a meta-analysis. (Cited on 22-6-2022) *2020 Jan 1;34(1):35-9.*
35. Daisy, An experimental study on effectiveness of laughter therapy on stress reduction among the first year nursing students in selected College Tadepalligudem. *International Journal of Scientific & Engineering Research* Volume 9, Issue 8, Augsut-2018 610 ISSN 2229-5518 IJSER © 2018 <http://www.ijser.org>