

## EFFECTIVENESS OF LAUGHTER THERAPY ON STRESS LEVEL OF FIRST YEAR NURSING STUDENTS

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### ABSTRACT

**Introduction:** Stress has become an integral part of everyday life. Each and every person is under the grip of stress - starting from a two-year infant to an adult. Stress is experienced by all individuals in various periods of life, nursing students also experience stress related to new living environment, lifestyle, health, academic performance, competition, career selection, and relationship with peer group, high expectations from parents etc. Laughter is powerful antidote to stress, pain and conflict. Nothing works faster or more dependably to bring our mind and body back into balance than a good laugh. Laughter therapy is known to reduce stress hormones, increase muscle movement, boost immune system, increase disease fighting cells and proteins, and trigger release of endorphin (body's natural painkillers). **Objective:** To determine the effectiveness of laughter therapy on reducing stress among nursing student in selected nursing education institute at Greater Noida. **Methods:** An evaluative research approach with one group pre-test-post-test design was used to conduct the study in selected nursing education institute at Greater Noida. Convenience sampling technique was employed to select 40 GNM nursing students. The Perceived Stress Scale was used to evaluate the effect of the Laughter Therapy by measuring the reduced stress level in the nursing students. Data were analyzed using SPSS version 25. **Result:** The collected data was analysed by descriptive and inferential statistics. Improvement in stress level after laughter therapy was found to be highly significant. ( $t_{(39)}=16.83, p<0.05$ ) **Conclusion:** The data collected showed low, moderate and high stress level in first year nursing students. It was observed that 72% of the sample had moderate stress level, 12% of the sample had low stress level and 16% of them had high stress level. The mean post-test stress level score were lower than the mean pre-test stress level scores. There was significant difference between the pre-test and post-test stress level of the participants after laughter therapy ( $t_{(39)}16.83, p<0.05$ ). There was significant association between stress level and demographic variables i.e. Gender, place of resident, monthly family income and parents occupation. And no significant association between stress level and demographic variables i.e. Age, educational qualification and type of family. Thus it can be concluded that the laughter therapy was found to be effective in reducing stress level of first year nursing students.

**KEYWORDS:** Laughter therapy, First year nursing students, Perceived Stress Scale.

### INTRODUCTION

In every sphere of life, owing to social complexities or individual's own high aspirations, people are encountering stresses of various degrees very frequently. Stress impacts the health by lowering the resistance to disease and making the person more vulnerable to illness. The effect of stress on health depends heavily upon the severity of stress. Mild stress may actually improve the performance and functional efficiency of individual, where as severe stress tends to impair the integration and effectiveness. Excessive stress eventuates in breakdown of system. Many studies have shown that stressful life situations

generate changes, complexities and challenges to which if individual cannot respond adequately, illness can result.

Stress has always been present and will continue to be present irrespective of gender, age, social class, and profession.<sup>[1]</sup> We cannot eliminate stress but yes, we can reduce stress in our life.

The word stress is derived from a Latin word "stringer" that means to blind tight and it is the shortened form of distress which denote noxious human experiences. It was Hansselye, who introduces stress in life science. Stress

experience by two individuals in same time for same situation is different and it can create both positive and negative effect on its victims. This is because of the differences in perception of stress.<sup>[2]</sup>

Patty Pits in his study has shown the tension and pressure as the frequent companion of nursing students. This study was conducted in America on the stress level of health professionals and has ranked the nursing students at the top. All students respond differently to these stress according to their age, sex, personality, family, social status. Some are unable to cope with these stress and inadequate coping leads to anxiety, withdrawal, frustration, aggression, lack of motivation, low self-esteem, physical illnesses and poor coping skills such as drug use and alcohol abuse.<sup>[3]</sup>

Relaxation is essential for healing and repairing the psychological and physiological consequence. Inadequate rest worsens stress, especially through impaired mental functioning. In addition to sleep and rest, people can practice techniques to facilitate physical and mental relaxation. In today's stress full world, we need to laugh much more. The power of laughter is unrealized every time we laugh. Laughter is the over-the-counter medicine available 24hrs a day, to cure a variety of physical emotional ailments. Laughter is the human gift for coping and for survival.<sup>[4]</sup>

Laughter is powerful antidote to stress, pain and conflict. Nothing works faster or more dependably to bring our mind and body back into balance than a good laugh. Humor lightens our burdens, inspires hope, connects to others and keeps grounded, focused and alert. The link between laughter and mental health is that laughter dissolves stressing emotions, laughter helps to reduce stress and increases energy, enabling to stay focused and accomplished more; humor allow us to see situation in a more realistic, less threatening light.<sup>[5]</sup>

In order to reduce the stress level, number of relaxation techniques and exercise programm have been used. Among this laughter is considered as the best stress boosting therapy. Laughter as a therapy is found to lower the blood pressure, relieve stress, increase muscle flexion and boost the immune system by raising the level of infection fighting cells, disease fighting proteins, and beta cells. It also triggers the release of endorphin and produce a general sense of well-being. The beneficial effect of laughter is reducing the stress hormones. The positive psychological effect of laughter therapy includes mental alertness, increase in concentration, cooperation, creativity and self-confidence plus better ability to cope up with stress.<sup>[6]</sup>

Doctor Kataria cited in his book that Harvert Lefcourt from Waterloo University explored the use of laughter in changing the emotional response to stress. The positive psychological effect of laughter therapy includes mental alertness, increase in concentration, co-operation,

creativity and self-confidence plus better ability to cope with stress. With personnel experience, investigator realized that nursing students experienced life stressful because of competition, geographical mobility, new life style, and strict disciplinary hostel life, financial burden, conflict with peer group, academic pressure as well as in the clinical area as they have direct exposure with patients.<sup>[7]</sup>

A study was conducted in National Institute of Nursing Education PGIMER, Chandigarh by Lakhwinder Kaur, Indrajit Walia in 2008 with an objective to evaluate the effect of laughter therapy on the stress level of nursing students. Total 42 BSc nursing first year students available during the time of constituted the study sample. Data was collected before and after the experimentation. Experimentation involve administering laughter therapy for 15-20 minutes daily. During 10 days, laughter therapy has shown positive effect on reducing the stress level of the sample at statistically significant level ( $t_{cal} 32, df 41, p < 0.05$ ). Mean stress score was decreased from 112 to 103 after the laughter therapy.<sup>[9]</sup>

As a nurse educator, investigator during her working period observed that the first-year nursing students faces more stress and have low self-esteem. The investigator was interested in interventions to reduce the stress level of first year nursing students and was motivated by evidence reported by literature review to conduct a study on the effectiveness of laughter therapy on stress level of first year nursing students

## MATERIALS AND METHODS

An Evaluatory approach was found appropriate with one group pre-test-post-test design was used to conduct the study in selected nursing institution of Greater Noida.

Convenience sampling technique was employed to select 40 GNM nursing students from Kailash Institute of Nursing, Greater Noida. The Perceived Stress Scale was used to evaluate the effect of the Laughter Therapy by measuring the reduced stress level in the nursing students. Ethical and Administrative permission was taken from authorizes in concerned areas. The consent form was prepared for the study participant regarding their willingness to participate in the research study.

The Inclusion criteria include First year GNM nursing students who can read English / Hindi who are willing to participate. Students who are available at the time of data collection.

The Exclusion criteria include the students who are not willing to participate and who are not available at the time of data collection.

The research tool for data collection consists of two sections

### Section 1: - Demographic tool

The demographic proforma consisted of 4 items to collect

data regarding the demographic profile of the students. It consisted of items for obtaining information about student's characteristics such as age, medium of education, type of family and occupational status of the parents.

### Section 2:

The Perceived Stress Scale used by the researcher for the current study was developed by Sheldon and Cohen. This scale is most widely used psychological instrument for measuring the perception of stress. It is a measure of the degree to which situations in one's life are appraised as stressful. Items were designed to tap how unpredictable, uncontrollable, and overloaded respondents find their lives. The questions in the PSS ask about feelings and thoughts during the last month. In each case, respondents are asked how often they felt a certain way.

Perceived Stress Scale scoring each item is rated on a 5-point scale ranging from never (0) to almost always (4). Positively worded items are reversed scored, and the ratings are summed, with higher scores indicating more perceived stress.

### Section 1: Frequency and percentage of demographic characteristics.

**Table 1: Frequency and percentage distribution of demographic variables of subjects (n=40).**

S. No	Demographic Characteristics	Frequency (f)	Percentage (%)
1	<b>Age (years)</b>		
	a) Less than 20 years	33	82%
	b) 20 years to 25 years	7	18%
	c) Above 26 years	0	0%
2	<b>Gender</b>		
	a) Male	18	45%
	b) Female	22	55%
3	<b>Educational Qualification</b>		
	a) Intermediate	38	95%
	b) Graduate	2	5%
4	<b>Place of resident</b>		
	a) Rural	11	28%
	B) Urban	29	72%
5	<b>Monthly Family Income</b>		
	a) Less than 20000 Rs	12	30%
	b) 20000 Rs - 30000 Rs	13	32%
	c) More than 30000 Rs	15	38%
6	<b>Medium of Education</b>		
	a) English	28	70%
	b) Hindi	12	30%
	c) Other	0	0%
7	<b>Type of Family</b>		
	a) Nuclear	28	70%
	b) Joint	12	30%
8	<b>Parent occupational status</b>		
	a) Salaried	26	65%
	b) Businessman	14	35%

PSS - 10 scores are obtained by reversing the scores on the four positive items.

On the first day, the researcher has administered Perceived Stress Scale (pre-test) for the 40 samples who were staying in the hostel of the selected nursing education institution. After the pre-test same 40 students are selected for practicing laughter therapy. The sample were given instruction regarding practicing of laughter therapy. The samples attended exercise session for 35-40 minutes in the evening time for 4 weeks except Saturday and Sunday. A regular attendance was maintained by the researcher. The session used to start at 5:45 pm and ended at 6:25 pm. Post-test was administered after 4weeks by the Perceived Stress Scale to the samples and score was obtained. The data was analysed in terms of descriptive statistics and inferential statistics.

### RESULTS AND DISCUSSIONS

The major findings of the study were as follows

**Section 2: Calculation of stress level.****Table-2: Frequency and percentage distribution of the samples based on stress level on Perceived Stress Scale.**

Score of samples on Perceived Stress Scale	Stress level of samples on Perceived Stress Scale	Frequency	Percentage (%)
10-20	Mild	5	12%
20-30	Moderate	29	72%
>30	Severe	6	16%

In this study, the majority of samples 29 (72%) were found to have moderate stress level, whereas 6 (16%) of the samples were having high stress level and only 5

(12%) of the samples were having mild stress level as calculated by Perceived Stress Scale.

**Section 3: Effectiveness of laughter therapy.****Table-3: Frequency and percentage distribution of the pretest and post test scores of the samples based on Perceived Stress Scale.**

Score of the samples on the PSS	Stress level of the samples on PSS	Pre-test		Post-test	
		Frequency	%	Frequency	%
10-20	Severe	6	16	-	-
20-30	Moderate	29	72	09	22
>30	Mild	5	12	31	78

The data presented in the above table shows that during pretest 29 (72%) samples had moderate stress level, 6 (16%) of the samples have high stress level and only 5 (12%) of the samples have mild stress level. The posttest result shows that 31 (78%) of the samples have mild stress

level, whereas 9 (22%) of samples have moderate stress level. In contrast to the pretest, numbers of samples who have mild stress level in Perceived Stress Scale increased in the post test.

**Section 4: Effectiveness of laughter therapy on Perceived Stress Scale of Nursing students.****Table-4: Paired 't' test value between the pre-test and post-test stress level score of nursing students on Perceived Stress Scale.**

Score	Mean	SD	't' value	Level of significance
Pre-test	23.92	4.537	16.83	p<0.05 H.S.
Post-test	17.65	4.067		

$$T_{\text{tab}(39)}=2.023$$

The above table shows that the mean post-test stress score of the samples on PSS (17.65), were significantly lower than the mean pre-test stress scores (23.92) of the samples. The calculated 't' value (16.83) was more than

the table value (2.023) at 0.05 level of significance. The paired 't' test showed that laughter therapy was found to be highly effective for reducing stress of nursing students. Hence the research hypothesis was accepted.

**Section 5: Association between stress level and selected demographic variables. n=40.****Table 5: To find association between stress level and their selected demographic variables of women.**

S. No.	Demographic Variables	No	%	Stress Level				Chi square
				≥ Median 23		< Median 17		
				No.	%	No.	%	
<b>1</b>	<b>Age (In Years)</b>							
	a. Below 20	33	82.5	18	78.26	15	88.24	0.67
	b. 20-25	7	17.5	5	21.74	2	17.76	df 1
	3. Above 26	0	0	0	0	0	0	<b>N. S</b>
<b>2</b>	<b>Gender</b>							
	a. Male	18	45	15	65.22	3	17.65	5.21
	b. Female	22	55	8	34.78	14	82.35	df 1 <b>S</b>
<b>3</b>	<b>Educational Qualification</b>							
	a. Intermediate	38	95	22	95.65	16	94.12	0.5
	b. Graduate	2	5	1	4.35	1	5.88	df 1 <b>N. S</b>
<b>4</b>	<b>Place of Resident</b>							
	a. Rural	11	27.5	9	39.13	2	11.76	3.96
	b. Urban	29	72.5	14	60.87	15	88.24	Df 1 <b>S</b>

<b>5</b>	<b>Monthly Rental Income</b>							
	a. Below 20000	12	30	4	17.39	8	47.06	7.74
	b. 20000-30000	28	70	19	82.61	9	52.94	Df 1
	c. Above 30000	0	0	0	0	0	0	<b>S</b>
<b>6</b>	<b>Type of Family</b>							
	a. Nuclear	28	70	20	86.96	8	47.06	3.34
	b. Joint	12	30	3	13.04	9	52.94	Df 1 <b>N. S</b>
<b>7</b>	<b>Parents Occupation</b>							
	a. Salaried	26	65	18	78.26	8	47.06	4.54
	b. Businessman	14	35	5	21.74	9	52.94	df 1 <b>S</b>
<b>N.S- Not Significant S-Significant at p&lt;0.05 level</b>								

The above table shows that there is no significant association between the stress level and age, educational qualification and type of family at 0.05 level of significance. Hence the research hypothesis was rejected. The above table also shows that there is significant association between the stress level and gender, place of resident, monthly family income and parents' occupation at 0.05 level of significance. Hence the hypothesis is accepted.

## CONCLUSION

The following conclusions were drawn on the basis of the findings of the study.

1. Majority of the nursing students were found to have moderate stress level.
2. In the present study, practicing laughter therapy was found to be effective on improving stress level of the nursing students.
3. The mean pretest stress score of the samples were higher than the mean posttest stress score of the samples.
4. Samples with moderate and high stress level were found to have mild stress level after practicing laughter therapy.
5. Improvement in the stress level after laughter therapy was found to be highly significant.

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