

## **Effect of laughter therapy on level of stress: A study among nursing students**

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**Abstract** : A quasi experimental study was conducted in the National Institute of Nursing Education PGIMER, Chandigarh with an objective to evaluate the effect of laughter therapy on the stress level of nursing students. Total forty two BSc nursing first year students available during the time of data collection constituted the study sample. Data was collected before and after the experimentation. Experimentation involves administering laughter therapy for 15-20 minutes daily. During ten days, laughter therapy has shown positive effect on reducing the stress level of subjects 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.

### **Key words :**

Laughter therapy, stress level, nursing students

### **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

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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 can not respond adequately, illness can result.<sup>1</sup>

Studies by American Medical Association have shown the stress as a major factor causing 75% of all illnesses and diseases today. As stress is experienced by all individuals in various periods of life, nursing students also experience stress related to new living environment, life style, health, academic performance, competition, career selection, and relationship with peer group, high expectations from parents etc. 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.<sup>2</sup> All students respond differently to these stressors according to their age, sex,<sup>1</sup> personality, family, social status. Some are unable to cope with these stressors 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>. One longitudinal study also revealed the effect of stress on illness of medical students. The researcher found decrease level of body's natural killer cells, which fight against infections and tumors.<sup>4</sup>

In order to reduce the stress level, number of relaxation techniques and exercise programs have been used. Among these laughter is considered as the best stress busting. 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 T cells, disease fighting proteins (gamma interferon) and beta cells. It also triggers the release of endorphins (body's natural pain killer) and produces a general sense of well being. Dr Leeberk studied the beneficial effect of laughter in reducing the stress hormones.<sup>5</sup> Doctor Kataria also 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, cooperation, creativity and self confidence plus better ability to cope with stress.<sup>4</sup> 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. As review of literature revealed the benefits of laughter therapy, but no evidence has shown its effect on nursing students, thus need for conducting the study was recognized. The objective of this study was to evaluate the effect of laughter therapy on the level of stress among nursing students.

## Hypothesis

There will be no effect of laughter therapy on the stress level of nursing students.

## Material and Methods

Quasi experimental research design was used in this study. The study was conducted in the nursing hostel of National Institute of Nursing Education, PGIMER, Chandigarh in the month of March 2005. All the BSc nursing first year students were included in the study. Study sample comprised of 42 nursing students.

Data was collected by using assessment proforma. It was comprised of identification data (2 items) and numerical rating scale from 1-5 scores in which 1 score indicated no stress, 2 rare, 3 Sometimes, 4 Often and 5 Almost always. This scale was used to assess the level of stress experienced by study subjects on the first day and the last day of the study period. Experimentation included

conducting a session of laughter therapy for 20 minutes daily for ten days. Stress experienced by study subjects was rated as mild, moderate and severe based upon the scores obtained.

For content validity and reliability, suggestions were received from five eminent personalities (nursing educationist, psychologist and research experts) and was found valid and reliable. Ethical considerations were taken by seeking the permission from the higher authorities and also verbal consent of the study subjects. The data was analyzed as per the objectives by applying both descriptive and inferential statistics.

## Results

Mean age  $\pm$  SD of the subjects was  $19 \pm 4.2$ , ranging between 17-21 years. Table 1 depicts that 38% study subjects were of 19 years old, equal subjects (57.2%) subjects were of 18 and 20 years. (Table 1)

**Table 1: Age Wise Distribution of Subjects**

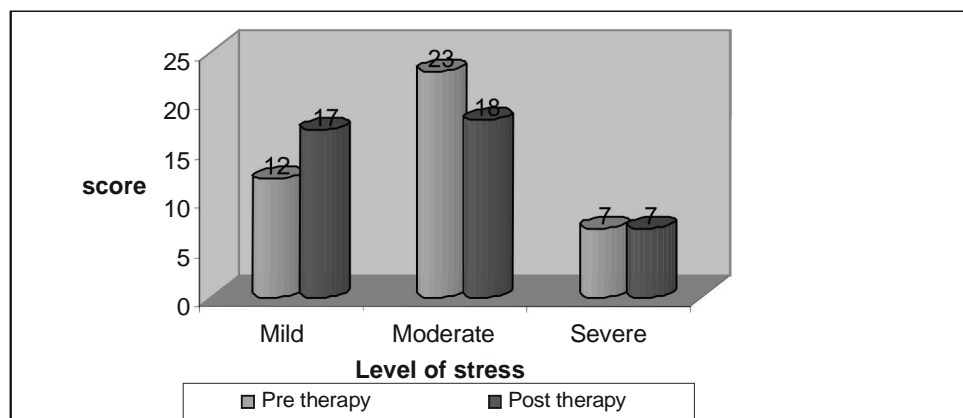
**N=42**

Age (yrs)	f(%)	
17	01 (02.4)	Range 17-21 Mean= $19 \pm 4.2$
18	12(28.6)	
19	16(38.0)	
20	12(28.6)	
21	01 (02.14)	

Regarding the level of stress before experimentation (laughter therapy) twelve (28.6%) subjects experienced mild stress, twenty three (54.7%) experienced moderate level of stress. The number of subjects experienced moderate level of stress was reduced to 18(42.8%) from 23(54.7%) after

the experimentation. Although same number of subjects experienced severe level of stress before and after the laughter therapy. It inferred that laughter therapy has positive effect in reducing the level of stress of study subjects. (Fig 1)

**Fig. - 1 : level of stress pre therapy and post therapy**



Great variation (418) in the stress score of subjects pre therapy (4740) and post therapy (4322) was observed. As the  $t_{cal} (32) > t_{tab}$  at 5% level of significance. A significant difference in the pre therapy and post therapy stress score was found. Hence

the null hypothesis was rejected i.e. laughter therapy has a positive effect on the level of stress. (Table3)..

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**Table 3 Stress Score Pre and Post Therapy**

**N=42**

	Pre therapy	Post therapy	Difference	Level of significance
Total score	4740	4322	418	t = 32
Mean score	112.85	102.9	9.9	df = 41
SD	27.6	29.6	2	P < 0.05
				Significant

## Discussion

Present era is marked as an era of stress. Every person experience different forms of stress throughout the life. It is more likely to be the reflection of interpersonal problems than the physical noxious stimuli for change and growth. Many studies have shown the negative effects of stress on the health. To get relief from stress, numbers of interventions were carried out. Among these, laughter is considered as the best one as it needs no talent. Review of literature has shown the positive impact of laughter in improving the health status. As nursing students are the part of this world, they are not screened from the shadow of stress. Present study reflects the stress level of nursing students at different levels i.e. mild (28.6%), moderate (54.7%) and severe (16.6%). Study conducted by Dr Patti pits also revealed the stress as a companion of nursing students.<sup>2</sup>

Old age saga 'laughter is a best medicine'. Many studies conducted in the medical field revealed the positive effect of laughter in improving the health by improving the immune system. Study conducted by Dr Leeberk also revealed the beneficial effect of laughter in reducing the stress hormones and improving the immune system.<sup>5</sup> Similarly in this study, stress level of study subjects was decreased at statistically significant level ( $t = 3.2, p.05$ ) following the laughter therapy session. With experimentation, decrease in the moderate level of stress was found from 23

to 18. Mean difference in stress score was 9.9. Hence the positive effect of experimentation (laughter therapy) on reducing the stress level was proved. Although review of literature has shown the positive effect of laughter in reducing the stress level but no related study is found on nursing students.

"Laugh and the world will laugh with you" an ancient old saga said. Laughter as an antidote for stress helps in the pursuit of happiness.<sup>6</sup> One must laugh every day as it has shown many benefits in improving the health status. 'A laugh a day will keep the doctor away', to proof these lines, further research studies on larger sample and for longer duration are highly recommended.

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