



# **A Study to Assess the Effectiveness of Laughter Therapy on Reducing Level of Stress Among Primary School Teachers of Selected School in Hoshangabad MP India**

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## **Authors' contributions**

*This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.*

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## **ABSTRACT**

The purpose of the study was to assess the amount of stress among primary school teachers in Hoshangabad, evaluate the efficiency of laughing therapy in lowering their level of stress, and discover a relationship between their pre-test level of stress and chosen demographic characteristics. A pre-experimental research was carried out among primary school teachers at Servite Convent English Medium School in Hoshangabd, near Housing Board Road. The data collecting period was extended from January 21 to February 21. Thirty elementary school teachers were chosen using purposive sampling. There was a pre-test, an intervention, and a post-test. Descriptive and inferential statistics were used to analyse the data. The study found that most instructors' stress levels were moderate in the pre-test and mild in the post-test. It was severe in 10% of the instructors in the pre-test, but no one showed significant stress in the post-test. The mean stress score after the exam was lower than the mean stress score before the test. A substantial relationship was discovered between the amount of stress and certain demographic characteristics such as age and stress-reduction strategies. The majority of

primary school instructors had mild to moderate stress, which was alleviated by laughing therapy. As a result, laughing therapy should be employed to relieve stress among elementary school instructors.

*Keywords: Effectiveness; laughter therapy; stress; demographic variables.*

## 1. INTRODUCTION

Teaching may be a tough job. The everyday contacts with students and coworkers, as well as the constant and dispersed demands of teaching school, can result in excessive expectations and obstacles, which can contribute to stress. In current parlance, stress is defined as prolonged emotional, mental, or social strain. A work or other typical activity is deemed stressful if it takes a high level of focus for an extended length of time. If there are several hurdles in a social context or scenario, it can be deemed stressful [1]. There are only 24 hours in a day, so re-prioritizing life's objectives and activities, focusing on what's genuinely essential, and letting the trivial stuff go, is an effective means of lowering stress. Stress is described as a situation or sensation experienced by someone when he or she feels that the demands surpass the individual's non-public and social resources. It has a negative impact on the body by effectively shutting down the digestive system (GI). During the acute stage of stress, blood is redirected from the GI tract to the muscles, where there is a greater requirement [2,3]. Teaching is a demanding profession. Daily interactions with students and coworkers, as well as the ongoing demands of teaching, can result in overwhelming expectations and obstacles, which can lead to stress. When work stress is unremitting, several unfavourable physiological, psychological, and behavioural repercussions may occur. Teacher stress is defined as "the feeling by an educator of negative emotions such as tension, annoyance, worry, rage, and despair as a result of components of work as an educator [4]."

Laughter yoga is a notion in which anyone can laugh at any time for no cause. It starts off as an exercise, but with eye contact, it transforms into genuine laughing. It is believed that anyone may laugh for no apparent reason, without anticipating humour, jokes, or comedies. Laughter might start as a simulated bodily movement in a group, with eye contact and youthful fun, but it quickly transforms into

genuine and contagious laughter. Laughing therapy is based on the discovery that the body cannot tell the difference between artificial and real laughter [5,6].

Laughter therapy is one of the most effective anti-stress treatments. It's excellent for today's stressed-out lifestyle. It is comparable to any type of meditation or relaxation. To achieve the desired result through meditation, one must make a concentrated effort to entirely separate oneself from one's own feelings and cognitive process, as well as from the physical environment to avoid distractions. Laughter is a simpler strategy that clearly aids in blood pressure regulation by lowering the release of stress-related chemicals and providing relaxation [7,8].

### 1.1 Background of the Study

Stress is a common and costly problem in today's workplace. Problems at work are most of the time associated with health complaints more so than even money issues or family issues. Job stress results from the interaction of the worker and the conditions of work. Dissimilarity of views on the importance of worker's characteristics versus working conditions is the primary cause of job stress. The differing viewpoints recommend alternative ways to prevent stress at work. Significant differences in individual characteristics like temperament and cope skills are very important in predicting whether certain job conditions can end- in stress or not.

Anxiety due to school reform efforts, poor administrative support, minimal working circumstances, lack of involvement in school decision making, the encumbrance of paperwork, and lack of resources have all been known as factors that can cause stress among educators. The no child left behind act (NCLB) and its sub sequential mandated standardised assessments, family responsibilities, continued education, low salaries, and poor working conditions can also lead to stress. Pranayama, the traditional science of breathing- is being introduced - into laughter therapy. This encompasses a powerful and immediate effect on our physiology and is being

used since about four thousand years to influence the body, mind and emotions. The essence of our life is prana. Because of stress and negative emotions, our respiration (prana) becomes irregular and shallow, thus affecting the flow of breathing in our bodies.

## 1.2 Need for Study

Stress refers to the response to pressure in the form of emotional and physical strain. Common stress reactions include tension, irritability, inability to concentrate, and a variety of physical symptoms that include headache and a quick heartbeat. The most common reason for stress in today's life is the insecurity of losing jobs.

The least increase in stress was felt in the Netherlands, with 47% reporting an increase. In India, 57 % of workers reported an increase in stress, indicating that Indian employees have felt slightly less burdened by rising stress levels during the financial downturn. Stress levels among the workers within the healthcare and pharmaceutical industries reported the highest rise, of 65 %, where as those within the retail industry showed a minimum rise, of 52 %, with the increase in stress levels among school teachers at the primary level being 35 %.

Researchers measured self- efficacy, a term used to describe a group of twelve characteristics that reflect overall work effectiveness and found that short daily laughter sessions significantly improve work performance.

The laughter therapy group may be a discipline that uses various techniques to prepare us physically and emotionally for a laugh. This technique helps people achieve a better attitude towards life, also changing the way they think. People attending laughter therapy experience a change in their emotional state and perception, becoming happy with great optimism and humour. Laughter therapy's main objective is to laugh, or to help a person who is experiencing some crisis and has come to learn to laugh. The exercises in this therapy are really beneficial, because by doing this kind of exercise we work on around 400 muscles, including some of the stomach that are only worked upon in case of laughter. Researchers found that the extent of stress is increasing day by day and also suggests that laughter contains a positive result on a person's physical and mental health. Teaching today's younger generation isn't solely an arduous work, but can be dangerously

stressful. Laughter exercises are the most economical, less time intensive, and scientifically proven techniques to reduce stress in the workplace. Laughter yoga has the power to vary one's mood in minutes.

## 1.3 Statement of Problem

"A study to assess the effectiveness of laughter therapy on reducing the level of stress among primary school teachers of a selected schools in Hoshangabad, District in MP."

## 1.4 Objectives of the Study

The objectives of the proposed study are:

- To assess the level of stress among primary school teachers of a selected schools in Hoshangabad, district in MP.
- To evaluate the effectiveness of laughter therapy in reducing the level of stress among primary school teachers of selected schools in Hoshangabad, district in MP.
- To find out an association between the level of stress among primary school teachers of a selected schools in Hoshangabad, district and their socio-demographic variables.

## 1.5 Hypothesis

H1: There will be a significant difference between the pre-test and post-test levels of stress among primary school teachers.

H2: There will be a significant association between the pre- test level of stress among primary school teachers with selected demographic variables.

## 1.6 Conceptual Frame Work

The current study's conceptual framework is based on Betty Neuman's health care system model. Betty Neuman's approach is concerned with the influence of stress on health and focuses on stress and stress reduction.

## 2. MATERIALS AND METHODS

### 2.1 Research Approach

An evaluative research approach was adopted for the study.

## 2.2 Research Design

The research design selected for this study is "one group pre-test, post-test design.

## 2.3 Variables

### 2.3.1 Independent variable

In this study, the independent variable is laughter therapy.

### 2.3.2 Dependent variable

In this study, the dependent variable is the level of stress of primary school teachers.

### 2.3.3 Extraneous variables

In this study, extraneous variable includes age, marital status, educational qualification, income, type of family, habits, and any measures adopted to reduce stress.

### 2.3.4 Research setting

The research's sites were chosen based on geographical closeness, practicality of the study, and sample availability. The current investigation was carried out in schools staffed by primary school teachers.

### 2.3.5 Population

The target population of the present study consists of primary school teachers.

### 2.3.6 Sample

A sample of 30 primary school teachers of Servite Convent English Medium School near Housing Board Road, Hoshangabad was considered as participants of the study.

### 2.3.7 Sampling technique

Purposive sampling technique.

## 2.4 Criteria for the Selection of Sample

### 2.4.1 Inclusion criteria

The following primary school teachers were included in the study:

- Who were willing to participate in the study?

- Who were present at the time of data collection.

### 2.4.2 Exclusion criteria

- Who were not willing to participate in the study?
- Who had recently undergone any significant medical or surgical ailments?
- Who were pregnant?

## 2.5 Data Collection Instruments

Perceived stress scale was used by the investigator for data collection.

## 2.6 Development of the Tool

The tool was developed based on the following:

- Review of literature (text books, periodicals and websites).
- Discussion with experts and guide (doctors, nursing faculty and statistician).

## 2.7 Development of Criteria Check list and Content Validity

A criteria check list was formulated to assess the validity of the tool (in terms of agree and disagree) for the appropriateness and relevance of the content.

## 2.8 Reliability of the Tool

Reliability of the tool was estimated using Cronbach's Alpha method. There liability obtained was ( $r = 0.79$ ). The tool was found to be valid reliable and feasible.

## 2.9 Description of the Tool

The final tool consisted of the following 2 parts:  
Section A: Demographic proforma.  
Section B: Perceived Stress Scale.

### 2.10.1 Section A: demographic proforma

It consisted of 12 items such as age, gender, educational qualification, years of experience, marital status, area of residence, monthly income, type of family, number of class hours taken perday, personal habits, adopted measures to reduce stress, and workshops attended on stress relief.

**Table 1. Various Levels of Stress**

S. No.	Range	Stress Level
1	0 - 10	No Stress
2	11 – 12	Mild Stress
3	21 – 30	Moderate Stress
4	31 - 40	Severe Stress

**2.10.2 Section B: perceived stress scale**

The Perceived Stress Scale is the most widely used psychological instrument for measuring the perception of stress. It was developed by Sheldon Cohen and is a standardized tool.

The scores in the scale are 0=Never, 1=Almost Never, 2=Some times, 3=Fairly Often, and 4=Very Often.

**2.11 Method of Data Collection**

The data collection period extended from 17-01-21 to 17-02-21. Prior to data collection, formal permission from the concerned authority was obtained for conducting the study. Before administering the tool, self-introduction and purpose of data collection were explained to the sample and consent was obtained. Confidentiality was maintained regarding the data. The tool was administered to the participants for the study. Demonstration of laughter therapy was given from the 2<sup>nd</sup> day onwards for 28 days and post-test was conducted on the 31<sup>st</sup> day.

**2.12 Plan for Data Analysis**

It was decided to analyse the data by both descriptive and inferential statistics. To compute the data, a master sheet was prepared by the investigator. Base line proforma containing sample characteristics was analysed using frequency and percentage.

**3. RESULTS AND DISCUSSION**

The data were analysed and presented under the following headings:

Section I: Description of demographic characteristics of the primary school teachers.

Section II: Severity of level of stress of primary school teachers in pre-test and post-test.

Section III: Effectiveness of laughter therapy on stress.

Section IV: Association between the pre-test stress scores and selected demographic variables.

**3.1 Section I**

**3.1.1 Description of demographic characteristics of the primary school teachers**

Data presented in Table 2 shows that majority (86.67 %) of the primary school teachers were in the age group of 21-30 years, and the remaining (13.33 %) were in the age group of 31-40 years. 93.33 % of the teachers were female and the remaining (6.67 %) were male. Majority (60 %) of the subjects had a Bachelors Degree/B.Ed, 23.33 % had a Diploma. In terms of experience 76.67 % of the teachers had 2-6 years of experience, and 16.67 % had experience of less than 1 year. Majority (36.67 %) of the primary school teachers were married and the remaining highest (63.33 %) were unmarried. Most (96.67 %) of the primary school teachers resided in rural areas and the remaining (3.33 %) resided in urban areas. The income of majority (73.34 %) of the school teachers was between INR 5001-7000, and that of 23.33 % was less than INR 5000.

Majority (70 %) of the school teachers were from joint families and the remaining (30 %) were from nuclear families. Maximum (40 %) subjects took 4 hours of class per day, followed by 36.67 % who took 5 hours of class per day, and 13.33 % who took 3 hours of class per day. 80 % of the study subjects had no personal habits. Majority (83.33 %) of the subjects had not adopted any measures to reduce stress, 63.33 % of the study subjects had not attended any workshops on stress-relief and the remaining (36.67 %) attended workshops to relieve stress.

**Table 2. Frequency and Percentage Distribution of Primary School Teachers according to Demographic Variables N= 30**

S. No.	Demographic Variables	Frequency (f)	Percentage (%)
1	Age (in years)		
	a) 21- 30	26	86.67
	b) 31- 40	4	13.33
	c) 41- 50	-	-
1.	Gender		
	a) Male	2	6.67
	b) Female	28	93.33
3	Educational qualification		
	a) Diploma/ TTC	7	23.33
	b) BachelorDegree /B-Ed	18	60
	c) MasterDegree/ M-Ed	5	16.67
	d) M- Phil/PhD	-	-
4	Yearsofexperience		
	a) <1	5	16.67
	b) 2-6	23	76.67
	c) 7-11	2	6.66
	d) 12-16	-	-
	e) >17	-	-
5	Marital status		
	a) Married	11	36.67
	b) Unmarried	19	63.33
	c) Widow/ Widower	-	-
	d) Divorced	-	-
	e) Separated	-	-
6	Area of residence		
	a) Rural	29	96.67
	b) Urban	1	3.33
7	Monthly income (INR)		
	a) <5000	7	23.33
	b) 5001-7000	22	73.34
	c) 7001-9000	-	-
	d) 9001-11000	-	-
	e) >11001	1	3.33
8	Type of family		
	a) Nuclear	9	30
	b) Joint	21	70
9	Number of class hours taken per day		
	a) <2	3	10
	b) 3	4	13.33
	c) 4	12	40
	d) 5	11	36.67
	e) > 6	-	-
10	Personal habits		
	a) Smoking	-	-
	b) Alcoholism	-	-
	c) Chewing tobacco	-	-
	d) None	24	80
	e) Any other	6	20
11	Have you adopted any measures to reduce stress ?	5	16.67
	a) Yes	25	83.33
	b) No		
12	Have you attended any workshops on		

S. No.	Demographic Variables	Frequency (f)	Percentage (%)
	stress relief ?	11	36.67
	a) Yes	19	63.33
	b) No		

**Table 3. Pre-test and Post-test Stress Levels of the Participants N=30**

Stress Level	Pre-test		Post- test	
	N	%	n	%
No stress	-	-	-	-
Mild stress	-	-	28	93.33
Moderate stress	27	90	2	6.66
Severe stress	3	10	-	-
Total	30	100	30	100

**Table 4. Comparison of Pre- test and Post- test Stress Scores N=30**

Test	Max score	Mean Score	Mean %	SD	Mean Difference	t value	Df
Pre-test	40	26.2667	65.666	3.084	8.4667	24.551	29
Post-test	40	17.8000	44.5	2.20345			

Table value =2.045

**Table 5. Results of Chi-square Test regarding Association of Stress Level with Socio-demographic Variables**

S. No.	Demographic Variables	$\chi^2$ Value	df	Table Value	P Value	Inference
1.	Age	32.192	4	9.488	0.000	S
2	Gender	0.437	1	3.841	0.509	NS
3	Educational qualification	0.723	3	7.815	0.868	NS
4	Years of experience	0.821	2	5.991	0.663	NS
5	Marital status	0.016	1	3.841	0.899	NS
6	Area of residence	0.215	1	3.841	0.643	NS
7	Monthly income	0.274	2	5.991	0.872	NS
8	Type of family	2.280	1	3.841	0.131	NS
9	No. of class hours taken per day	5.000	3	7.815	0.172	NS
10	Personal habits	1.420	1	3.841	0.233	NS
11	Measures adopted to reduce stress	10.463	2	5.991	0.005	S
12	Workshops attended on stress relief	1.239	1	3.841	0.266	NS

S: Significant, NS: Non-significant

### 3.2 SECTION – II

Severity of Level of Stress of Primary School Teachers in Pre-test and Post-test.

Data presented in Table 3 shows that in the pre-test, 90 % of the participants had moderate stress, and in post-test, 93.33 % of the subjects had mild stress and 6.66 % had moderate stress 10 % of the participants in pre-test and none in post-test had severe stress.

### 3.3 SECTION – III

Effectiveness of laughter therapy on stress.

Paired ‘t’ test was used to compare the pre-test and post-test stress score. The following null hypothesis was stated in order to test the statistical significance of the score:

H 01: There will be no significant difference between pre- test and post-test levels of stress among primary school teachers.

Data presented in Table 4 shows that the mean post-test stress score (17.8000) was lower than the mean pre-test stress score (26.2667). The calculated t value was 24.551 which was greater than the table value (2.045). This confirms the effectiveness of laughter therapy on the level of stress. Hence the null hypothesis H0 1

was rejected and the research hypothesis was accepted at 0.05 level of significance, stating that there is a significant effect of laughter therapy on the level of stress of primary school teachers.

### 3.4 SECTION IV

Association between pre-test stress scores and selected demographic variables.

This section deals with the association of the level of stress with the selected demographic variables. In order to find the association between the levels of stress of primary school teachers with selected demographic variables, the following null hypothesis was used.

#### 3.4.1 H02

There will be no significant association between the levels of stress with selected demographic variables. In order to find out the association, data on primary school teacher's level of stress and selected demographic variables such as age, gender, educational qualification, year of experience, marital status, area of residence, monthly income, type of family, number of class hours taken per day, personal habits, adopted measures to reduce stress, workshops attended on stress relief, inferential statistics and chi-square test were utilized. The hypothesis was tested at 0.05 level of significance.

The data given in table 5 shows the result of chi-square test of association computed for demographic variables such as age, gender, educational qualification, years of experience, marital status, area of residence, monthly income, type of family, number of class hours taken per day, personal habits, measures adopted to reduce stress, workshops attended on stress relief.

The results showed that the level of stress had a significant association with demographic variables such as, age ( $\chi^2=32.192$ , P-value= 0.000) and measures adopted to reduce stress ( $\chi^2=10.463$ , P-value= 0.005) at 0.05 level of significance.

The level of stress did not have a significant association demographic variables such as; gender ( $\chi^2= 0.437$ ,P-value= 0.509), educational qualification ( $\chi^2= 0.723$ ,P-value=0.868), years of experience ( $\chi^2=.821$ ,P-value= 0.663), marital status ( $\chi^2=0.016$ ,P-value=0.899), and area of residence ( $\chi^2=0.215$ ,P-value=0.643), monthly income ( $\chi^2=0.274$ ,P-value=0.872), type of family ( $\chi^2=2.280$ ,P-value= 0.131), number of class

hours taken per day ( $\chi^2=5.000$ , P-value=0.172), personal habits ( $\chi^2=1.420$ , P- value= 0.233) and workshops attended on stress relief ( $\chi^2= 1.239$ , P- value = 0.266) at 0.05 level of significance.

Hence the research hypothesis is accepted and the null hypothesis is rejected. Thus, the above mentioned results reveal that level of stress is dependent on selected demographic variables such as age and adopted measures to reduce stress.

### 4. CONCLUSION

Teaching is a highly stressful job that comes with the responsibility of students and various other challenges associated with it. Thus teachers are most of the time under a lot of stress. Laughter therapy has proved to be very helpful in reducing this stress and hence should be employed to lower the levels of stress among teachers. Similar studies to assess the effectiveness of laughter therapy in other professions should also be encouraged.

The current study examines the efficacy of laughing therapy vs meditation in reducing anxiety and stress among nursing students using the Becks Anxiety Inventory Scale and the Perceived Stress Scale. Approximately 90 nursing students were chosen at random using a computer randomization process, with 30 students participating in laughing therapy, 30 in meditation, and 30 in the control group. Pre-interventional anxiety and stress levels were examined in all three groups using the Becks Anxiety Inventory Scale and the Perceived Stress Scale to establish the degree of anxiety and stress. The treatments were administered independently to experimental I, experimental II, and the control group, and post-intervention anxiety and stress levels were measured after each intervention. According to the findings of this study, meditation is more beneficial than laughing therapy in relieving stress and anxiety in nursing students.

### CONSENT AND ETHICAL APPROVAL

As per international standard or university standard guideline participant consent and ethical approval has been collected and preserved by the authors.

### COMPETING INTERESTS

Authors have declared that no competing interests exist.



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