

A Pre Experimental Study to Assess the Effectiveness of Laughter Therapy on Level of Stress among Elderly Residents of Selected Old Age Home, Delhi

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ABSTRACT

Background: Mental health plays vital role in older age as at any other time of life. Many old age people find themselves more alone than ever before as longstanding friends and relatives die and family and friends relocate to different geographical areas. The most common emotional disorder in the elderly population is stress. Laughter therapy is very effective to reduce the stress level of elderly residents of old age home. The aim of study is to assess the effectiveness of stress among elderly residents of old age home.

Material and method: A Pre experimental design was used to assess the effectiveness of laughter therapy on levels of stress among elderly residents of old age home, Delhi. A structured stress assessment tool was administered to assess the level of stress.

Result: A pre-experimental study was conducted on 60 subjects of elderly population in selected old age home, Delhi. Pilot study was conducted on 10 subjects to ensure the reliability of the tool and feasibility of the study. The data was collected from month of February 2020 to March 2020. The finding of the study revealed that pre-test stress score, 1(1.7%) had no stress, 19(31.7%) had mild stress, 39(65.0%) had moderate stress and 1(1.7%) had severe stress and the post-test score was 6(10%) had no stress, 50 (83.3%) had mild stress, 4(6.7%) moderate stress and none had severe stress. The mean stress pre-test score was (51.7) and post-test stress score was (34.4). It was found significant association ($p < 0.05$) on reduction of stress from moderate to mild stress. Hence, laughter therapy was effective in reduction of stress among elderly residents. The association between stress and selected demographic variables (age, sex, marital status, educational status, financial support, social- support, religion, per- capita monthly income and frequency of visit by family members) was determined by using paired "t"-test and chi-square to establish statistical significance. There was no association between the pre interventional levels of stress.

Conclusion: The study highlights that Laughter therapy was effective in reducing the stress levels among elderly residents of Pita Ji old age home, Dhashrath Puri, Delhi.

Keywords: Assess, effectiveness, Laughter therapy, Stress, Elderly, Old age home.

INTRODUCTION

Old age is a period the people start realize their isolation. The stressors of old age can be many such as loss of spouse, loss of skills and competencies developed early in life, adjustment to retirement and loss of income, coping with changes in normal

transitions and social life, diminished quantity and quality of relationships and coping with loss leads to make the elderly feel a little insecure and lost. Consequently, when the family and social life is interrupted, the elderly feel a sense of loss

and they are put at a level of discomfort and leads to a slow build-up of stress. ^[1]

Old age comprises of end on life anticipation of human beings and it is the completion stage of the human life cycle (WHO, 2013). According to population census 2011 approximately more than 60 years were 104 million in which 53 million females and males 51 million. It is predictable that it will increase to 173 million by 2026. Nearly 70% elderly population will be migrating in the developing countries (WHO, 2012). Old age may tend to frustration and feeling of stress, loneliness and anxiety about their remaining life. Changing family structure and attitude of younger generation towards the old age have directed to a sharp rise in old age home. ^[2]

Laughter is universally well accepted phenomenon. Laughter therapy relaxes the muscles and improves breathing. It increases friendliness, collaboration and facilitates group identity, harmony and cohesiveness by decreasing stress-causing hormones in the blood. Eventually, laughter enhances quality of life by reducing the level of stress. ^[3]

Laughter therapy is a method that care givers can use to assist the elderly population facing the dissatisfactions, in security, physical problems and loss of loved ones in the old age. The capability to laugh at oneself and at the others, build trust, commitment and a positive sense of working together as a team for both elderly and the care giver. Laughter works as a therapy for the patient, families, staff and society who deal with the old age in the stress management. ^[4]

Laughter can be effective self-care tool to cope with stress. An ability to find laughter therapy gives as a sense of perception on our problem. Laughter provides a release for accumulated tension. Hence a study is required in using natural method like laughing in stress reduction among the elderly. ^[5]

OBJECTIVES OF THE STUDY:

1. To assess the pre interventional level of stress among elderly residents of selected old age home, Delhi.
2. To administer sessions of laughter therapy as an intervention
3. To assess the post interventional level of stress among elderly residents of selected old age home, Delhi.
4. To find out the association of pre-interventional level of stress with selected demographical variables.

MATERIAL AND METHODS

A Pre experimental research design was used to assess the effectiveness of laughter therapy on levels of stress among elderly residents of old age home, Delhi. The total enumeration sampling technique was used to select 60 elderly residents of Pita Ji old age home Dashrath Puri, Delhi. Respect of human dignity as well as anonymity and confidentiality of the subjects was maintained throughout. Informed written consent was taken from each elderly person. A structured stress assessment tool was administered to assess the level of stress. It contains 25 items to assess stress among elderly residents of old age home. This part consists of multiple statements related to stress. Validity of tool was done with experts of psychiatry and psychology. A total number of 25 questions were included and each question had a maximum score of 4 marks. The participants made their responses by choosing one option according to their level of stress. Maximum score was 100 and minimum score was 0. After the data collection, data was coded, tabulated and analysed by relevant descriptive and inferential statistics.

SCORE CRITERIA:-

Table :1 Level of stress among elderly residents of old age home is categorized into Four levels:-

LEVEL OF STRESS	SCORE
No stress	0-25
Mild stress	26-50
Moderate stress	51-75
Severe stress	76-100

Findings

Table – 2: Frequency and percentage distribution of demographic variables regarding stress among elderly resident of old age home.

Demographic Variables	Number of Participants (n=60)	Percentage (%)
Age (years)		
60-64	16	26.7%
65-69	17	28.3%
70-75	16	26.7%
> 75	11	18.3%
Gender		
Male	31	51.7%
Female	29	48.3%
Religion		
Hindu	38	63.3%
Sikh	12	20.0%
Muslim	3	5.0%
Christian	7	11.7%
Marital Status		
Married	43	71.7%
Unmarried	9	15.0%
Divorced	5	8.3%
Widow/Widowers	3	5.0%
Educational Status		
Illiterate	10	16.7%
Primary School	20	33.3%
High School	13	22.7%
Graduate	17	28.3%
Per Capita monthly Income (Rs.)		
< 5000	21	35.0%
5001- 10000	15	25.0%
10001-15000	11	18.3%
> 15000	13	21.7%
Financial Support		
Self	11	18.3%
Family	19	31.7%
Any Business/Rental	7	11.7%
Other	23	38.3%
Social Support		
Adequate	14	23.3%
Fairly Adequate	12	20.0%
Inadequate	12	20.0%
No Social Support	22	36.7%
Frequency of Visit		
Once a Week	15	25.0%
Once a Month	17	28.3%
Once in 2months	16	26.7%
Occasionally	12	20.0%

Table 2: depicts that the elderly residents of old age were 26.7% in the age group of 60-64 years, 28.3% in 65-69 years, 26.7% in 70-75 years and 18.3% in >75 years. Male were 51.7%, female were 48.3%. 26.7% 63.3% were Hindus, 20% were Sikhs, 5% were Muslims and 11.7% were Christian. 71.7% were married, 15% were unmarried, 8.3% were divorced and 3% were widowers. 16.7% were illiterate, 33.3% were primary school, 21.7 were high school and 28.3 % were graduate and above. 35% were of income (Rs) group of <5000, 25% were 5001-10000, 18.3% were of 10001-15000 and 21.7% belongs to >15000

group. 18.3% were having financial support from self- financed sources, 31.1% of from family source, 11.7% from rental and business and 38.3% from other sources. 23.3% were having adequate social-support, 20% with fairly adequate, 20% with inadequate and 36.7 with no social support. 25% were had once a week visit from the family 28.3% with once a month, 26.3% with once in 2 months and 20% with occasional visit.

TABLE 3: Percentage distribution of pre- test on level of stress

Pre Stress Score	Number	Percent
No Stress	1	1.7%
Mild Stress	19	31.7%
Moderate Stress	39	65.0%
Severe Stress	1	1.7%

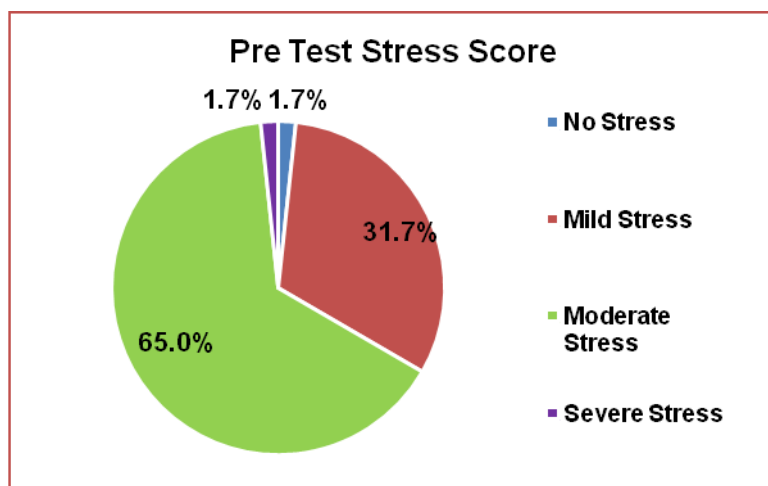


Figure 1: Percentage distribution of pre- test on level of stress among elderly residents of old age home.

Above pie- chart reveals that 1.7% of elderly residents had no stress, 31.7% had mild stress, 65% had moderate stress and 1.7% had severe stress. Mean stress score and standard deviation on level of stress among elderly residents were 51.7 ± 9.4 . Hence it was concluded that majority of

elderly residents were having moderate stress level.

TABLE: 4: Percentage distribution of post- test on level of stress

Post Stress Score	Number	Percent
No Stress	6	10.0%
Mild Stress	50	83.3%
Moderate Stress	4	6.7%
Severe Stress	0	0.0%

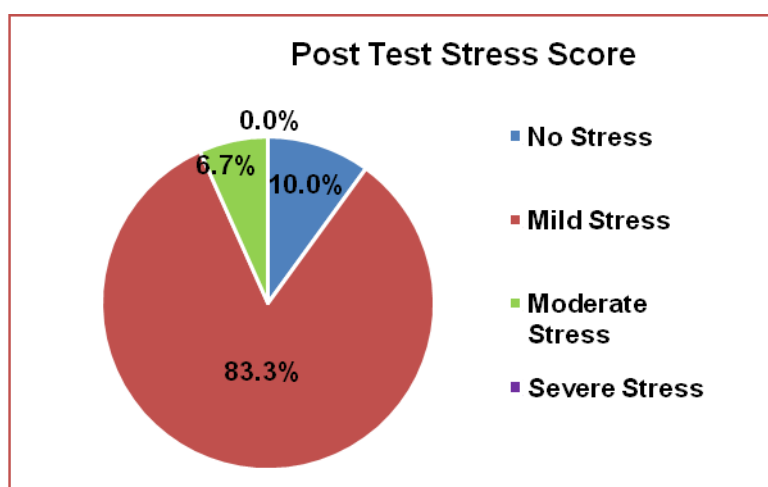


Figure 2: Percentage distribution of post - test on level of stress among elderly residents of old age home.

The pie-chart reveals that 10% of elderly residents had no stress, 83.3% had mild stress, 6.7% had moderate stress and none had severe stress. Mean stress score and standard deviation on level of stress

among elderly residents was 34.4 ± 7.3 . Hence it was concluded that majority of elderly residents were having mild stress level.

TABLE: 5 Comparison of Mean and standard deviation on effectiveness of laughter therapy

Se. No.	Stress Score	Range	Mean	Standard Deviation	Mean Difference	T-value	P-value
1	Pre test	54	51.7	9.4	17.3	12.288	0.0001*
2	Post test	36	34.4	7.3			

* $P < 0.05$ = (Significant)
 Minimum score: 0-25
 Maximum score: 75-100

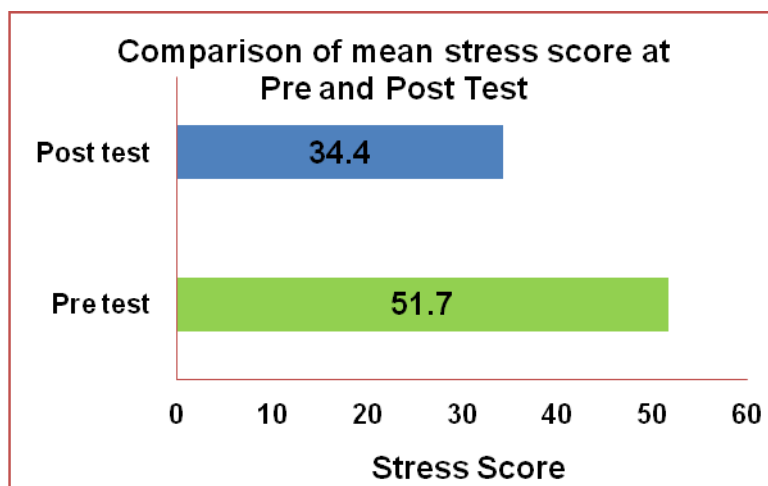


Figure: 3: Comparison of mean pre and post test Level of stress among elderly residents of old age home

It shows that pre-test (Mean±SD) 51.7 ± 9.4 was compared to the post-test stress score (Mean±SD) 34.4 ± 7.3 , post-test mean stress score was less than pre-test score with mean difference of 17.3. Paired test was performed to find the difference between pre-test and post –test stress score with t-value 12.288 and statistically significant p-value (0.0001). So the null hypothesis was rejected and research hypothesis was accepted. So statistically laughter therapy was effective in reducing the stress of elderly residents of old age home. Therefore it was inferred that the decrease in stress score was attributed to laughter therapy provides as an intervention by the researcher and not chance.

DISCUSSION

First objectives: To assess the pre interventional level of stress among elderly residents of selected old age home, Delhi.

In present study level of stress among elderly residents of old age home is 1(1.7%) had no stress, 19(31.7%) had mild stress, 39(65.0%) had moderate stress and 1(1.7%) had severe stress.

The above study is supported by the following study

Mr. Dhivagar, S, Mrs. Prabavathy, S. Dr. Renuka, K [2016] conducted a Pre- experimental study to assess the effectiveness of laughter therapy on stress in Puducherry with one group pre-test and post-test among 60 elderly residents

at selected old age home. Out of 60 elderly, 1 (1.7%) of them have no stress, 31 (51.7%) of them had mild level of stress and 28 (46.7%) of them had moderate level of stress.^[2]

Second objectives: To administer sessions of laughter therapy as an intervention

In present study, after assessing pre-intervention level of stress, laughter therapy sessions administered for 15 days (15-20 minutes) in piatji old age home to 60 elderly residents. The post- test level of stress was evaluated after 7 days concordance with the study conducted by **Vijaysaraswati et.al [2014]** –Effectiveness of laughter on stress among senior citizens in selected community settings at Kanchipuram district.^[6]

Third Objective: To assess the post interventional level of stress among elderly residents of selected old age home, Delhi.

In present study, the level of stress among elderly residents is 6(10%) had no stress, 50 (83.3%) had mild stress, 4(6.7%) moderate stress and none had severe stress. This study is in concordance with the study conducted by **E. Elamathi [2015]** To assess the effectiveness of laughter therapy in reduction of stress among the elderly people at selected old age home at Chennai. The results shown significant reduction of stress ($p= 0.001$) in score. The overall pre-test stress score among elderly people was

62.6% whereas in post-test it was 29.9%. So there was significant difference between pre-test and post- test stress score is 32.6%.^[7]

Fourth Objective: To find out the association of pre-interventional level of stress with selected demographical variables.

The present study revealed that, there was no association between the pre interventional level of stress to age, sex, marital status, educational status, financial support, social- support, religion, per- capita monthly income and frequency of visit by family members. These findings are not in concordance with a study conducted by **Vijaysaraswati et al (2014)**. The results of this study showed no significant association age, sex, education, income, marital status, source of income p (>0.05).^[6]

CONCLUSION

The study concluded that there was significant difference in level of stress before and after administration of laughter therapy among elderly residents of old age home. It was proven that laughter therapy was effective among elderly residents of old age home as evident reduction in level of stress from moderate to mild level of stress as P value < 0.05. Thus, the study strongly suggests that there is an effectiveness of laughter therapy on stress among elderly persons staying in selected old age home at Delhi.

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Conflict of Interest: None

Source of Funding: None

Ethical Clearance: It was taken by ethical committee of college.

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