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Original Research Paper

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EFFECTIVENESS OF LAUGHTER THERAPY ON LEVEL OF STRESS AMONG ELDERLY PEOPLE RESIDING IN SELECTED OLD AGE HOME": A QUASI EXPERIMENTAL STUDY.

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ABSTRACT

Old age is inevitable. Nobody can stop the aging process of the human body. But it is possible to keep the mind agile and active to a great extent. Stress management is a wide spectrum of techniques and psychotherapies aimed at controlling a person's level of stress. Laughter provides good exercise to organs and enhances blood supply. **Background:** Mental health play's vital role in older age as at any other time of life. 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. **Objectives:** 1. To assess the Effectiveness of Laughter therapy on level of stress among elderly people residing in selected old age home. 2. To assess the pre-test level of stress among elderly people residing in selected old age home. 3. To assess the post-test level of stress among elderly people residing in selected old age home. 4. To evaluate the effectiveness of laughter therapy on level of stress among elderly people residing in selected old age home. 5. To associate the level of stress with selected demographical variables. **Methodology:** A quasi experimental one group pre-test post -test design used for the study.it was conducted over 60 elderly people by using non probability convenient sampling technique. **Result:** Assessment was done by semi structure questionnaire on demographic variable and standardized perceived stress scale on level of stress, analysis reveals that, comparison of pretest and post-test stress scores of elderly people. Mean, standard deviation and mean difference values are compared and student's paired 't' test is applied at 5% level of significance. The tabulated value for n=60-1 i.e., 59 degrees of freedom was 2.00. The calculated 't' value i.e., 8.03 are much higher than the tabulated value at 5% level of significance for overall stress score of elderly people which is statistically acceptable level of significance. Hence it is statistically interpreted that the Laughter Therapy on stress score among elderly people was effective. also reveals that there is association post-test stress score with age (in years), gender and duration of stay in old age home. **Conclusion:** It is statistically interpreted that, laughter therapy is effective on level of stress among elderly people residing in selected old age home.

KEYWORDS : Laughter therapy, Stress, Elderly people

INTRODUCTION

Old age is inevitable. Nobody can stop the aging process of the human body. But it is possible to keep the mind agile and active to a great extent. Age is of two types. One kind of age is the age of the physical body and the other is the age of the mental body. The physical body never stops ageing. The mind however can be kept young and active by taking part in such kind of activities. So, Ageing is one of the crucial issues attracting the attention of public health personnel.[1]

According to World Population Prospects (2017), 962 million persons are aged 60 or older in the world and it is projected to increase to 2080 million by 2050. Especially, the older population is rapidly growing in the developing regions. Projections indicate that about 79% of the world's population aged 60 or over will be living in the developing regions by 2050.[2]

Stress management is a wide spectrum of techniques and psychotherapies aimed at controlling a person's level of stress, especially chronic stress, usually for the purpose of and for the motive of improving everyday functioning. Stress produces numerous physical and mental symptoms which vary according to each individual's situational factors. Activities like exercise, yoga, acupuncture, massage, meditation, and social support are all useful tools to try if a person is faced with stress.[3]

"Laughter provides good exercise to organs and enhances blood supply".

Laughter is one of the body's safety valves, a counter balance to Tension. When tension released, the elevated levels of the body's Stress hormones drop back to normal, thus allowing our Immune Systems to function more effectively. Sigmund Freud summarized in his theory that laughter therapy release tension and "psychic energy" it is coping mechanism for when one is upset, angry or sad. 15 minutes of laugh is equals to the benefit of two-hour sleep; 15 minutes laugh adds two days life span. It stimulates the brain, respiratory, nervous, hormonal and muscular system. Many researches evidenced that laugh increase the secretion of serotonin in brain which is essential for the uplift of mood.[4]

BACKGROUND OF THE STUDY

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.[5]

A study conducted on prevalence of depression, anxiety and stress disorders in elderly people, cross-sectional study was done on 383 elderly people referred to health centres in Khoy County. A random cluster sampling was used in this study where each health care is considered as a cluster. The Depression, Anxiety, Stress Scale 21 (DASS-21) standard questionnaires was used for data collection. The SPSS software was used for all computations. Data were analyzed using descriptive statistic, t-test, and one-way ANOVA. $P < 0.050$ was determined to be significant. The results of this study showed that 1.3% of the elderly people suffer from very severe stress, 1.3% from severe depression, and 3.1% from severe anxiety. Likewise, the comparison between anxiety, stress, and depression disorders with demographic variables showed that there is a significant association between these

disorders and sex, education, marital status, medical condition, as well as their housing conditions ($P < 0.050$).[6]

NEED OF THE STUDY

According to World health organization (2010) globally rate of growth of aging population is exceeded in general population and this would increase 1.2 billion people over 60 years. A quarter century after number of people over 60s will be doubled. 80% of older persons will live in developing countries and this would increase to 1,594 million by the year 2050. WHO also projected that elderly population in developed nation will close from 12% to 19% by 2026 and then developing countries will account for ¾ of the world's elderly population.[7]

Laughter Yoga is especially beneficial for older people. Seniors are always in need of human contact. While most of them are surrounded by likeminded peers, they still miss the bonding of a family. They need someone close with whom they can share their emotions. Laughter Yoga sessions have the power to reach beyond the healing of laughter. Laughter therapy decreases stress hormones that constrict blood vessels and suppress immune activity and reduces at least four of neuroendocrine hormones associated with stress response.[8]

By reviewing all the studies, the researcher found that stress is a common problem among elderly residing people, which having impact on their psychological, sociological and spiritual well-being. Many research study has done in different age group to reduce the stress by laughter therapy, but in specific age group in elderly people those are staying in old age home, have the few studies, they may lack physical and mental exercises, and the incidence rate gives us a clear picture about the problems of elderly people. Hence, researcher felt that to conduct study on effectiveness of laugher therapy on stress in elderly.

OBJECTIVES OF THE STUDY

Primary Objectives:

1. To assess the Effectiveness of Laughter therapy on level of stress among elderly people residing in selected old age home.

Secondary Objectives:

1. To assess the pre-test level of stress among elderly people residing in selected old age home.
2. To assess the post-test level of stress among elderly people residing in selected old age home.
3. To evaluate the effectiveness of laughter therapy on level of stress among elderly people residing in selected old age home.
4. To associate the level of stress with selected demographical variables.

DELIMITATION

This study is delimited to elderly people who are living in old age home

REVIEW OF LITERATURE

1. Literature related to stress among elderly people.
2. Literature related to effects of laughter therapy.

CONCEPTUAL FRAMEWORK

The conceptual framework for the present study is "Modified Roy adaptation Model." Roy adaptation model was developed by Sr. Callista Roy.

METHODOLOGY

In this study quantitative approach was used. In the present study the design used is Quasi experimental one group pre - test and post- test research design with the objective of assess the Effectiveness of Laughter therapy on level of stress among elderly people. The present study was conducted in old age home of the city. The independent variable in this study was Laughter therapy. The dependent variable was Level of stress. In this study the demographic variables are age, gender, religion, marital status, reason for staying at old age home, and duration of stay in old age home. The population in the study was all-Elderly people. Target population was Elderly people residing in selected old age homes. Accessible population was Elderly people residing in selected old age homes and available at the time of data collection and who were fulfilling the inclusion criteria. In this study, sample consisted of 60 Elderly people residing in old age homes of the city. In the present study non probability convenient sampling technique is used.

DESCRIPTION OF TOOL

Section – I

Semi structured questionnaire on demographic variable. It consists of demographic profile of elderly people i. e. Age, gender, religion, marital status, reason for staying in old age home, duration of stay in old age home.

Section – II

The standardized perceived stress scale (PSS) uses to assess the level of stress, which consist of 10 questionaries. 4 Point Rating Scale.

Scoring Of The Rating Scale

Low Stress 0 – 13
Moderate stress 14 – 26
High perceived stress 27 – 40

VALIDITY

The content and construct validity of the tool was determined by 20 experts; including mental health nursing speciality, MD psychiatrist, statistician and yoga trainer etc. Out of 27 tools 18 were received back. The experts include, Mental health (psychiatric) Nursing experts - 12, Statistician - 02, MD psychiatrist - 02, Yoga trainer - 02

RELIABILTY

The reliability for the perceived stress scale (PSS) which is standardized stress scale, it is found to be 0.93 and hence tool is reliable and valid.

PILOT STUDY

A sample of 10 elderly people was selected from the selected old age home of the city. The collected data was coded, tabulated and analysed by using descriptive and inferential statistics. The pilot study was feasible in terms of time, money, material and resources.

Data Collection

Main study was conducted from 19/12/2022 to 07/01/2023. Permission was obtained from selected old age homes of the city. The samples were approached in large group on a daily basis for 14 days. Consent of the samples were taken. The pre-test perceived stress scale (PSS) were distributed and collected back after 30 minutes. After collecting the pre-test score, the investigator administrated the session for laughter therapy for 20minutes in a day for 14 days on daily basis. After 14 days post-test was taken on the same subjects.

RESULTS

SECTION - I Distribution of Elderly People according to their demographic variables.

Table No.- 1: Table Showing Frequency And Percentage Wise Distribution Of Elderly People According To Their Demographic Variables.

Sr. No.	Demographic Variables	Frequency (f)	Percentage (%)
1.	Age(yrs.)		
	60-65	18	30.0

	66-70	17	28.3
	71-75	15	25.0
	76-80	5	8.3
	>80	5	8.3
2.	Gender		
	Male	32	53.3
	Female	28	46.7
	Transgender	0	0
3.	Religion		
	Hindu	57	95.0
	Muslim	0	0
	Christian	0	0
	Buddhist	3	5.0
	Other	0	0
4.	Marital Status		
	Married	41	68.3
	Unmarried	13	21.7
	Divorced	0	0
	Separated	1	1.7
	Widow/Widower	5	8.3
5.	Reason for staying at old age home		
	No children	12	20.0
	Death of spouse	12	20.0
	Children staying abroad	1	1.7
	Family problems	33	55.0
	Other	2	3.3
6.	Duration of stay in old age home		
	Less than 2 yrs.	22	36.7
	2-4 yrs.	12	20.0
	4-6 yrs.	10	16.7
	>6 yrs.	16	26.7

Section – II Assessment Of Level Of Pre - Test (before Intervention) Stress Among Elderly People Residing In Selected Old Age Homes.

Table 2: Table Showing Frequency And Percentage Wise Distribution Of Pre-test (before Intervention) Stress Score Among Elderly People

Level of pre-test stress score	Score Range	Level of Pre-Test Stress Score	
		Frequency (f)	Percentage (%)
Low Stress	0-13	20	33.33
Moderate Stress	14-26	39	65
High perceived stress	27-40	1	1.67
Minimum score	5		
Maximum score	36		
Mean stress score	16.30±5.99		

Section – III Assessment Of Level Of Post-test (after Intervention) Stress Among Elderly People Residing In Selected Old Age Homes.

Table - 3: Table Showing Frequency And Percentage Wise Distribution Of Post -test (after Intervention) Stress Score Among Elderly People

Level of post-test stress score	Score Range	Level of Post Test Stress Score	
		No of elderly people	Percentage
Low Stress	0-13	56	93.33
Moderate Stress	14-26	4	6.67
High perceived stress	27-40	0	0
Minimum score	5		
Maximum score	16		
Mean stress score	9.70±2.53		

Section - IV Evaluation Of Effectiveness Of Laughter Therapy On Level Of Stress Among Elderly People Residing In Selected Old Age Homes

Table - 4 : Significance Of Difference Between Stress Score In Pre And Post Test Of Elderly People.

Overall	Mean	SD	Mean Difference	df	Table value	t-value	p-value
Pre Test	16.30	5.99	6.60± 6.36	59	2.00	8.03	0.0001 S,p<0.05
Post Test	9.70	2.53					

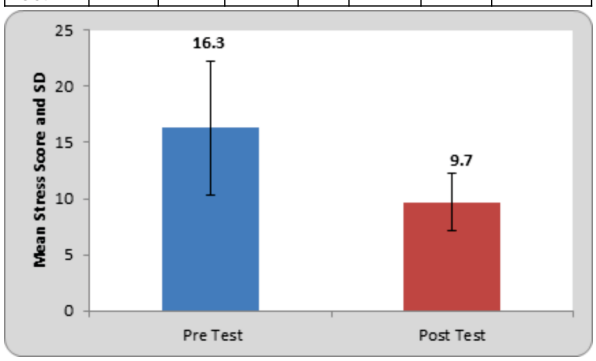

Figure I: Bar diagram showing Effectiveness of laughter therapy on level of stress among elderly people residing in selected old age homes.

Section – V Description On Association Of Level Of Post Test Stress Score Among Elderly People Selected From Old Age Homes In Relation To Demographic Variables.

Demographic variables	Calculated value			Df	Table value	Level of significance (p>0.05)	Significance
	T value	F value	P value				
Age		4.95	0.002	(4,55)	2.52	(p>0.05)	S
Gender	7.15		0.0001	(58)	2.00	(p>0.05)	S
Religion	0.72		0.47	(58)	2.00	(p>0.05)	NS
Marital status		0.26	0.85	(3,56)	2.76	(p>0.05)	NS
Reason for staying in old age home		0.74	0.56	(4,55)	2.52	(p>0.05)	NS
Duration of staying in old age home		7.70	0.0001	(3,56)	2.76	(p>0.05)	S

Key : S- significant NS: not significant

Table shows that, there is association of age, gender, and duration of staying in old age home. No association was found in religion, marital status, andv reason for staying in old age home.

DISCUSSION

A research study conducted in the year 2020, it was pre-experimental study. The present study was conducted to assess the effectiveness of laughter therapy on level of stress and assertiveness among elderly at old age homes in selected areas. A one group pre-test and post-test (pre experimental) design was used for study. Probability cluster sampling technique was used for selection of sample.60 elderly people were selected as per availability and fulfilment of the present criteria. A modified stress assessment scale and modified Lloyed SR assertiveness scale was used to assess the study variables. Before administering the laughter therapy, they had level of stress score in pertest, 53.3% of the elderly had moderate stress (Score 43-63) and 46.7% of them had severe stress (Score 64-84). After administering the laughter therapy, they had in post-test, 41.7% of the elderly had mild stress

(Score 22-42) and 58.3% of them had moderate stress (Score 43-63). This indicates that the stress level of the elderly improved remarkably after laughter therapy. Before administering the laughter therapy, they had level of assertiveness score in pre-test, 53.3% of the elderly at old age home had difficulty being assertive (score 10-20), 43.3% of them were non-assertive (Score 20-30) and 3.3% of them were naturally assertive (Score 30-40). After administering the laughter therapy, they had level of assertiveness score in post-test, 86.7% of them were non-assertive (Score 20-30) and 13.3% of them were naturally assertive (Score 30-40). This indicates that the assertiveness of the elderly at old age homes improved remarkably after laughter therapy.

The findings showed that laughter therapy had a positive effect on level of stress and assertiveness among elderly at old age homes in selected areas and improved the signs of physical, psychological as well as their social function.[9]

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. 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. The study highlights that Laughter therapy was effective in reducing the stress levels among elderly residents of Pita Ji old age home.[10]

Hence it is statistically interpreted that laughter therapy is effective on level of stress among elderly people residing in old age homes.

CONCLUSION

After the detailed analysis, the study leads to following conclusion: The study reveals mean pre test stress score was 16.30 and mean post test stress score was 9.70. the calculated t value is 8.03 is greater than table value 2.00at 0.05 level of significance. Hence it is statistically interpreted that laughter on level of stress among elderly people in selected old age home was effective. Thus, H1 is accepted and H0 is rejected. The analysis also reveals that there is association post test stress score with age (in years) gender, and duration of stay in old age home, while none of the other demographic variables were associated with post- test stress score.

Hence it is statistically interpretated that laughter therapy on level of stress among elderly people residing in selected old age home was effective. based on the above findings it was concluded that laughter therapy helped the elderly people to decrease the level of stress.

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