RESEARCH PAPER

Effectiveness Of Activity Therapy On Stress Among Old Age People

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ABSTRACT

Introduction: Stress is an inevitable part of life. People frequently deal with events and circumstances that can be stressful and leave them feeling overpowered both mentally and physically. Stress is the result of an event's reaction on our body, cognition, and behaviour. Any circumstance or thinking that causes one to feel irritated, furious, or nervous can cause stress. An extreme reaction to stress may be detrimental. The body uses stress as a way to respond to a problem. An agent or stimulus that produces stress is known as a stressor.

Objectives: To assess the level of stress among elderly residing in selected old age home at Lucknow, to assess the effectiveness of activity therapy on stress among elderly residing in selected old age home at Lucknow, to associate the level of stress among elderly residing in selected old age home at Lucknow with their selected socio demographic variables.

Methodology: A pre-experimental one group pretest post-test design was used. 40 elderly people of age 60 years and above were selected by purposive sampling method. The study was conducted in Lucknow. Pretest was conducted by Modified Psychological Stress Assessment Scale, on the first day after obtaining consent from all the subjects then Activity therapy was given 20 minutes twice a day for 5 Consecutive days (total 10 sessions) for the subjects. Post test was assessed on 7th day using the same tool.

Result: Activity therapy reduced the stress level of the elderly at the old age homes. The paired "t" test value was 5.557 (p=0.00001). This showed that there was a significant difference between the pretest and post- test level of stress. Hence it was evidenced that Activity therapy was more effective in reducing stress among the elderly. There was no significant association between post-test level of stress and demographic variables.

Conclusion: The study concluded that Activity therapy is cost effective, non-invasive, non-pharmacological complementary and alternative therapy to reduce the level of stress among elderly.

Keywords: Old age, old age home, Activity Therapy
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INTRODUCTION

Many people may experience serious mental health problems as a result of growing older in a culture that has an unhealthy fixation on youth. The aging population can be viewed as a positive development for socioeconomic advancement and public health policy, but it also presents a challenge for society to change in order to optimize the security, social involvement, and general well-being of older adults.[1]

In the last 50 years, India's average life expectancy has improved by 20 years, to 66 years at birth. Approximately 77 million Indians are over 60 years old as of right now. Physical, psychological, personality, and sociological changes are among the issues faced by the aged. The likelihood of mental health issues and psychological changes such as agitation, weeping fits, impatience, and stress is often higher in the elderly population.[2]

A genuine or perceived threat to the body's physiological, psychological, and/or behavioral response is referred to as stress. It is a physical or psychological strain brought on by circumstances that have the potential to upset an equilibrium.[3]

Emotional stress is more subtle, and if it persists over time, it may have negative effects. Stress chemicals, such as cortisol and adrenaline, provide people energy and attention in the short term, but prolonged periods of high stress can upset a person's equilibrium. Stress hormone excesses have been connected to heart disease, elevated blood pressure, and weakened immune systems. Stress management is especially crucial for older adults who are already at a higher risk of developing chronic illnesses. [4]

Stress can lead to feelings of insecurity, rejection, a desire for acceptance, and a difficulty to adjust to new situations. Stress can also be brought on by organizational and interpersonal problems.[5]

Every human being must go through the old stage of life, whether they choose to or not. One could refer to the

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twenty- first century as the "Age of Population Aging." [6]

Aging is a natural developmental process that results in a variety of changes to one's physical, psychological, hormonal, and social circumstances.[7]

The loss of a spouse, close friends, a child, or grandkids are some of the factors that lead to elderly stress and frequently make it very difficult for elderly individuals to handle, which causes stress and a sense of loneliness and isolation. Elderly stress can also be triggered by physical appearance, memory loss, and disabilities. [8]

Stress is the result of an event's reaction on our body, cognition and behavior. An agent or stimulus that produces stress is known as a stressor. Stressors are the things we react to in our surroundings, whereas stress is the emotion we have when we are under pressure. [9]

Chronic stress can negatively impact cognitive performance; transient or acute stress may have positive effects. However, there are differing findings about how life events and everyday difficulties affect cognitive performance. For instance, Sands (1981–82) found that among an elderly woman sample living in the community, women who underwent increased stress over a two-year period showed a higher loss in cognitive function.[10] One of the most upsetting things that may happen to a person is losing a loved one.[11]

From 12 million in 1901 to 57 million in 1990 and 70 million in 2001, India's old population has grown. According to projections, emerging countries would host 470 million individuals 65 years of age and above by 2020. Right now, India has the second-largest elderly population in the world.[12] In India, there are 10 crore persons over 60, according to the 2011 census. Many children in today's nuclear families do not have enough time to care for their aging parents. Because of this, a large number of the elderly are forced or voluntarily move into assisted living facilities.[13]According to UN estimates, there are 600 million elderly persons in the globe who are 60 years of age or older. This represents 10% of the global population, and by 2050, that figure is predicted to increase by 2 billion (Hazara 2009).[14]

In 1995, there were 529 elderly homes in India, according to a survey done by the Madras Institute of Ageing (Krishna Nair 1995). Prior to 1950, India had just 96 old age homes; during the following decades, around 94 more were added [1951–1970]. The number of elderly residents increased rapidly throughout the ensuing decodes. Kerala state has the eldest age homes in the nation in 1995 (102), followed by Tamil Nadu (94), and Maharashtra (65). In Uttar Pradesh total 28 senior citizen home are there and 920 beneficiaries also there.[15]

NEED FOR THE STUDY

The aging population can be viewed as a positive development for socioeconomic advancement and public health policies, but it also presents a challenge for society to change in order to optimize the security and social involvement, as well as the health and functional ability, of the elderly.[16]

According to a UN assessment on the shifting demographics and their effects on development, by 2050 there will be more elderly people than children for the first time in history. Elderly people are defined as those who are 60 years of age or older.[17]

It is possible for elderly individuals to positively influence the society in which they reside. The researcher acknowledges the significance of encouraging older people to lead happy and active lives. Their quality of life may be enhanced by recreational therapy in terms of stress reduction and cognitive function maintenance.[18]

The WHO also predicted that by 2026, issues among the elderly in wealthy countries will rise from 9% to 12%. WHO (2001). According to WHO (2004), there are 236 older individuals for every 10,000 who have mental illness as a result of stress, stress, heart disease, and stroke. Elderly people in rural areas experienced loneliness more frequently than those in cities.[20]

Two of the biggest issues in old life are social isolation and emotional loneliness. Expectations and happiness from these interactions were linked to loneliness rather than the number of interactions with friends and children. [21]

Numerous therapies, including pet therapy, exercise therapy, guided imagery, recollection therapy, laughing therapy, yoga, and hug therapy, are used to manage stress. Activity therapy is a therapeutic approach that is frequently used with those who are recovering from emotional or physical addiction.[22]

The present study's researcher investigated the topic of activity therapy since it appears to be novel. The study concluded that activity therapy is an easy and effective approach for people to de-stress, develop their potential, and make money. Additionally, the researcher determined that individuals with higher levels of stress would benefit greatly from it, thus they chose elderly patients who were experiencing stress for the trial. [23]

A study to assess the effectiveness of Activity therapy on stress among old age people in selected old age Homes at Lucknow

OBJECTIVES

- o assess the level of stress among old age before giving activity therapy.
- o assess the effectiveness of activity therapy among old age after giving activity therapy.
- o find out the association between the level of stress among old age and their selected demographic variables.

METHODS

Research approach: Quantitative research approach.

Study design: In this study, pre-experimental – one group pre- test post-test design was used to evaluate the

effectiveness of Activity therapy in reducing stress.

Study setting: This study was conducted at Old Age home, Lucknow (UP) India.

Study population
The population is the total number of cases who met the criteria that the researcher has established for the study, from whom subjects will be selected and to whom the findings will be generalized. White the target population of the study was elderly residing at old age home.

Sample size: In this study, the sample size was 40 old age people. (Cochran formula was used to compute the required sample size)

Sampling technique: Sampling Technique used in the study was Non-Probability (Purposive) sampling technique.

Study tool
The tool which is used in this study consists of two parts,
Part-I: Structured questionnaire was used to collect the demographic data. It consists of age, sex, marital status, source of income, religion, previous occupation, educational status, duration of stay at old age home, reason for joining in old age home and medical illness.
Part-II: The Modified Psychological Stress Assessment Scale is used to assess the level of stress. The tool consists of 30 items, which involves assessment of psychological, social and physical problems associated with stress.
The Modified Psychological Stress Assessment Scale scores were ranged from 0 to 90. Each item was answered on a four-point scale. Items were scored as,
0 = Never 1 = Occasionally 2 = Often 3 = Always.

Scoring & interpretation
0-30 (0 – 33%) - Mild stress
31-60 (34 – 67%) - Moderate stress
61-90 (68 – 100%) - Severe stress

Validity
Content validity of the tool was established by five experts three M.Sc., Nursing faculty with more than five years of experience, one Psychiatrist and one Clinical Psychologist. The Final tool was prepared as per the suggestions and advice given by the experts.

Reliability of the tool
The reliability for application of tool was tested using the test-retest method. The calculated value was r=0.88 which signifies that the tool is highly reliable.

Pilot study
The pilot study was done at old age home, Lucknow, after receiving a formal approval from secretary of the institute. The pilot study was conducted among 6 old age people in experimental group who were selected after screening using the Modified psychological stress Assessment Scale. The pre assessment was done. Then the activity therapy was taught for 5 days with demonstration. Then the post test was conducted on the sixth day. Analysis of the data was done by using descriptive and inferential statistics. The tool and instrument were found feasible and practicable.

Data collection
Data collection was done by using non-probability (purposive sampling) technique among them who fulfilled the sampling (inclusion and exclusion) criteria. The Modified psychological stress Assessment Scale was used to screen the old age people in experimental group. The samples from the experimental group were taught and demonstrated the activity therapy for 10 days and then they continue to do it for one month including the initial 10 days teaching period. Then the posttest was done for experimental group participants.

Statistical analysis
The data collected was analyzed by means of descriptive statistics, and inferential statistics. In Descriptive, analysis was done by using frequency, percentage, mean & standard deviation while in inferential, it was done by using 't' test & chi square test.

Ethical approval
Ethical approval was obtained from the institutional ethical committee of St. Mary's College of Nursing, Lucknow, India and permission from District Medical Officer of Lucknow. Written Informed consent was taken from the participants after explaining purpose & process of the interview.

RESULTS
Table-1 portrays that majority of elderly people 15 (38%) were in age group of 66-77 years, 23 (58%) were male, 16 (40%) were widowed, 29 (73%) were illiterate. As medical illness 14 (35%) were having diabetes mellitus, 12 (30%) have hypertension, 3 (8%) have asthma.

Table-2 depicts that in the pretest majority of the elderly 25 (62.5%) had moderate and 4 (10%) had severe level of stress. In the posttest after intervention (Activity therapy) about 19 (47.5%) had mild and 21 (52.5%) had moderate level of stress.

The **Table-3** depicts the Mean of the Pre- test and Post test was 18.88 and 12.08 respectively and Standard Deviation of the Pre- test and Post test was 14.38 and 14.19 respectively. The Mean difference was 6.8. The paired "t" test value was 5.557. This showed that there was a significant difference between the pretest and post- test level of stress. Hence it was evidenced that Activity therapy was more effective in reducing stress among the elderly.

The data presented in **Table-4** manifests the association between the post stress score of elderly and their socio demographic variables. Chi square analysis reveals that there was no significant association between post stress score and demographic variables.

DISCUSSION

The study was undertaken to determine the effectiveness of activity therapy on stress among old age people in selected old age homes at Lucknow District. Pre-experimental- one group pretest posttest design was adopted for the study for the study. The result and discussion of the study are based on the findings obtained from the statistical analysis.

The main objective of the study is to assess the stress level of old age people before and after giving activity therapy in order to assess the effectiveness of activity therapy.

With respective of demographic characteristics of the sample the majority of the elderly 15 [38%] were in the age group of 66-70 years, 14[35%] were in the age group of above 60-65 years, 9 (23%) were in the age group of 71-75 years and 2 (5%) were in the age group of 76-80 years.

While comparing the sex, majority of the elderly 23[58%] were male and 17 [48%] were females.

Regarding the marital status majority of the elderly 16[40%] were widowed, 11[28%] were Married, 10(25%) divorced and 3 (8%) were single.

While comparing the source of income, majority 15[38%] were old age pension, 12[35%] were support from children and 13[33%] were depends on old age home.

Regarding religion, most of the elderly 20[50%] were Hindus and 13[33%] were Christians and remaining 7(18%) were Muslims.

While discussing the previous occupational status majority of the elderly 17[43%] were Sel-employed, 7[18%] were employed, and 16 (40%) were unemployed.

While comparing the educational status 11[28%] were illiterate and 29 (73%) literates.

Regarding duration of stay in the old age home 21[53%] were residing for a period from 1 -3 years, 10[25%] were residing for less than 1 years and 9[23%] were residing for more than 3 years.

While discussing reason for joining the old age home, majority of the elderly 23(58%) were brought by children, 13(33%) were voluntarily and remaining 4(10%) were some other reasons.

Regarding presence of medical illness 14[35%] have diabetes Mellitus, 12 (30%) have Hypertension, 3(8%) have Asthma, 4(10%) have some other disease remaining 7[18%] did not have any medical problems.

The first objective of the study was to assess the level of stress among old age before giving activity therapy.

In psychological stress assessment scale, the analysis of pretest among 40 samples, majority of the elderly 25[62.5%] had moderate level of Stress, 4[10%] had severe level of stress, 4(10%) had mild stress.

The hypothesis was supported by Lefrancois.R. et.al., (2000) conducted study on, Stressful life events and psychological distress of the very old in Canada. The purpose of the study was to examine whether social support has a moderating effect on the relationship between exposure to stressful life events and psychological distress. To test this, 224 men and women aged 81-86 were sampled from two municipal regional countries. The French version of the Geriatric Scale of Recent Life Events, the Psychiatric Symptom Index, and the social provision scale were used. The results show that the negative aspect of social interaction may explain why social support did not have a protective effect. Also, social isolation resulting from psychological distress could reduce the opportunity for instrumental help and emotional support.

The first component of Imogene Kings Goal attainment theory is to perceive the need for intervention to relieve stress. Here the investigator perceived that, 21(52.5%) of them had moderate level of stress,19 (47.5%) of them had severe level of stress and none of them had mild level of stress. The second component of the theory is judgement. Here the investigator took decision to provide activity therapy based on the perceived need.

The study supported by Elena Commodari (2019) conducted the study investigated the impact of some sociodemographic and appraisal of the life experiences on perceived stress. 300 older adults participated in the study. A measure of psychological stress and a questionnaire assessing the appraisal of life events and beliefs on the experience to be an older person were used. Females reported higher levels of stress. Moreover, the participants who lived in a rural area were more stressed than those who lived in an urban area. Beliefs on aging and condition of life affected perceived stress more than physical and objective variables. This study showed that appraisal that old persons have of their life influences perceived stress.

The second objective of the study was to assess the effectiveness of activity therapy among old age after giving activity therapy.

In psychological stress assessment scale, the analysis of pre- test mean stress score was 61.41. The post- test mean stress score was 26.41. The paired ‘t’ value at p 0.05 level of stress 27.09, which shows that the activity therapy was effective in reducing the stress in old age peoples.

The hypothesis was supported by Jeanine L. M. Liddle et.al conducted a study on the conceptualizing older women’s participation in art and craft activities. The result explores the nature of older women’s participation in art and craft activities and conceptualizes links between participation in these activities and health and wellbeing in late life. By participating in art and craft activities, older women find purpose in their lives, contributing to their subjective wellbeing whilst helping and being appreciated by others.

the third, fourth and fifth components of the theory are action, reaction, and interaction. Here the investigator implemented Activity therapy successfully to old age people on these three steps. Based on this theory six step was transaction. Here the investigator found that there is reduction in level of stress and the goal was achieved.

The Study supported by Raj AJ. (2016) conducted a study on to evaluate the effectiveness of laughter therapy

on stress among elderly persons staying in selected old age home, at Dindigul, District, Tamilnadu. Study results revealed that pretest none of the elderly person had normal level of stress, 8 (20%) of elderly had mild stress and 32 (80%) of them had severe stress. Whereas in post intervention 10 (25%) of elderly had normal level, 30 (75%) of them mild stress and none of them had severe level of stress.

The third objective of the study was to find out the association between the level of stress among old age and their selected demographic variables.

The result shows that, In Psychological Stress Assessment Scale there was significant association between the level of stress with demographic variables reason for joining in old age home and all other variables are nonsignificant. Hence the research hypothesis (H2) rejected.

A North Indian study from a tertiary care medical university employed a descriptive quantitative design among 200 first-year undergraduate students using the Positive Mental Health Scale (PMH) and the Warwick–Edinburgh Mental Well-being Scale (WEMWBS) and findings indicated adequate levels of positive mental health and well-being, with hostel versus day scholar status significantly influencing outcomes, underscoring the role of residential environment in stress and psychological health.[48]

A comparative study from Etawah, Uttar Pradesh, examined stress among 65 working and 65 non-working women using the Perceived Stress Scale. Results showed significantly higher stress in working women (mean 25.55 ± 8.10) compared to non-working women (mean 13.17 ± 7.26), with nearly half of working women reporting high stress. Stress was strongly associated with educational qualification, socioeconomic status, and nature of work, highlighting that working women face greater stress burdens due to multiple roles demands and the need for effective stress management strategies.[49]

The study supported by Bince Varghese, Saniya Susan Issac (2020) A quantitative research approach with non-experimental survey design was used to conduct the study in selected old age homes of Uttar Pradesh. Non-probability purposive sampling technique was employed to select 30 elders. A standardized Perceived Stress Scale containing 10 items were used for assessing the level of stress among the subjects. The majority of 46.7% elders who reside at old age homes had moderate stress followed by 30% high level of stress and 23.3% low stress. There was an association found between the levels of stress among the elder people with their pattern of communication with the family members (x2 =14.7, p=0.001). The study concluded that the majority of elderly population in old age homes had moderate levels of stress. There is a need to organize any interventional packages to improve the physical and psychological health of elderly.

CONCLUSION

From the result of the study, it was concluded that the level of stress is high among old age those who are residing at old age homes. They require some interventions to reduce the level of stress. The finding of the study reveals that; there is no significant association between demographic variables and level of stress among old age people. The paired "t" test value was 5.557 (p=0.00001). This showed that there was a significant difference between the pretest and post- test level of stress. Hence it was evidenced that Activity therapy was more effective in reducing stress among the elderly.

Table:1 Distribution of elderly according to the socio demographic variables (N=40)

S.No	Demographic Variables		Frequency	Percentage
1	Age	60-65 Years	14	35.0
		66-70 Years	15	38.0
		71-75 Years	9	23.0
		76-80 Years	2	5.0
2	Sex	Male	23	58.0
		Female	17	43.0
3	Marital Status	Single	3	8.0
		Married	11	28.0
		Widowed	16	40.0
		Divorced	10	25.0
4	Source of Income	Old age pension	15	38.0
		Support from Children	12	30.0
		Depend on old age home	13	33.0
5	Religion	Hindu	20	50.0

		Christian	13	33.0
		Muslim	7	18.0
6	Previous Occupation	Employed	7	18.0
		Sel-employed	17	43.0
		Unemployed	16	40.0
7	Education	Illiterate	11	28.0
		Literate	29	73.0
8	Duration of Stay	Less than One year	10	25.0
		1-3 years	21	53.0
		More than 3 years	9	23.0
9	Reason for Joining	Voluntarily	13	33.0
		Brought by children	23	58.0
		Others	4	10.0
10	Medical Illness	Diabetes Mellitus	14	35.0
		Hypertension	12	30.0
		Asthma	3	8.0
		Any other	4	10.0
		Nil	7	18.0

Table: 2 Distribution of elderly according to the level of Stress

LEVEL OF STRESS	**PRE-TEST**		**POST-TEST**	
	F	**%**	**F**	**%**
Mild Stress	**04**	**10.0%**	**19**	**47.5%**
Moderate Stress	**25**	**62.5%**	**21**	**52.5%**
Severe Stress	**11**	**27.5%**	**00**	**0.0%**

Table: 3 Effectiveness of Activity therapy on stress among elderly people.

	Mean	**Mean Difference**	**SD**	**t-value**
Pre-Test	18.88	6.8	14.38	5.557 P=.00001 S
Post-Test	12.08		14.19	

Table: 4 Association between the post- test level of stress among elderly with selected socio demographic variables.

Demographic Variables		Mild		Moderate		DF	Chi Square
		n	f	N	F		
Age	60-65 Years	5	12.5	9	22.5	3	1.758 P=.624 NS
	66-70 Years	9	22.5	6	15.0		
	71-75 Years	4	10.0	5	12.5		
	76-80 Years	1	2.5	1	2.5		
Sex	Male	11	27.5	12	30.0	1	.002 P=.964 NS
	Female	8	20.0	9	22.5		
Marital Status	Single	2	5.0	1	2.5	3	.576 P=.901 NS
	Married	5	12.5	6	15.0		
	Widowed	7	17.5	9	22.5		
	Divorced	5	12.5	5	12.5		
Source of Income	Old age pension	8	20.0	7	17.5	2	.661 P=718 NS
	Support from Children	6	15.0	6	15.0		
	Depend on old age home	5	12.5	8	20.0		
Religion	Hindu	11	27.5	9	27.5	2	3.758 P=.152 NS
	Christian	7	17.5	6	15.0		
	Muslim	1	2.5	6	15.0		
Previous Occu-pation	Employed	4	10.0	3	7.5	2	5.527 P=.063 NS
	Self- employed	11	27.5	6	15.0		
	Unemployed	4	10.0	12	30.0		
Education	Illiterate	5	12.5	6	15.0	1	.025 P=.874 NS
	Literate	14	35.0	15	37.5		
Duration of Stay	Less than One year	6	15.0	4	10.0	2	.842 P=.656 NS
	1-3 years	9	22.5	12	30.0		
	More than 3 years	4	10.0	5	12.5		
Reason for Joining	Voluntarily	9	22.5	4	10.0	2	3.963 P=.137 NS
	Brought by children	8	20.0	15	37.5		
	Others	2	5.0	2	5.0		
Medical Illness	Diabetes Mellitus	4	10.0	10	25.0	4	8.111 P=.087 NS
	Hypertension	8	20.0	4			
	Asthma	0	0.0	3			
	Any other	2	5.0	2			
	Nil	5	12.5	2			

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