

“A PRE-EXPERIMENTAL STUDY TO ASSESS THE EFFECTIVENESS OF LAUGHTER THERAPY ON LEVEL OF DEPRESSION AMONG ELDERLY RESIDING IN SELECTED OLD AGE HOMES, PUNJAB”.

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ABSTRACT

Background of the Study: Mental disorders in elderly persons vary widely, but a conservatively estimated 25% have significant psychiatric symptoms. Major depressive disorder is a common disorder, with a lifetime prevalence of about 15%. Depression occurs in approximately 10 to 15% of all community-dwelling elderly over 65 years of age. The prevalence rate increases from 50 to 75 percent among institutionalized adults. Laughter therapy is a therapeutic method that uses positive emotions generated by laughter to cure ailments and maintain a healthy body.

Aim of study: The aim of the study is to assess the effectiveness of laughter therapy on level of depression among elderly residing in selected old age homes.

Material and Methods: A quantitative research approach, pre-experimental research in which one group pretest post test design was used to conduct this research study. Total 50 elderly were selected by non probability convenient sampling technique from selected old age homes, Punjab. Data was collected using Beck's Depression Inventory Scale. Laughter therapy was given to group for 35-45min for 7 consecutive days.

Results: The study results depicts that during pre test no elderly had normal level, where 28(56%) elderly had mild depression, 15(30%) had moderate depression and 7(14%) had severe depression and no elderly had extreme depression and during post test 14(28%) elderly had normal level, where 29(58%) elderly had mild

depression, 7(14%) had moderate depression and none of them had severe and extreme depression. The mean pretest level of depression was 21.12 and mean post test level of depression was 14.46. Statistically significant difference in mean pretest and post test level of depression among elderly was found.

Conclusion: This study concluded that laughter therapy was effective in reducing the level of depression among elderly but need to conduct same study on large sample

Keywords: effectiveness, depression, laughter therapy, elderly and old age homes.

INTRODUCTION

A good laugh heals a lot of hurts.

— Madeleine L'Engle

Aging is a natural process. It is an incurable disease which is considered as normal, inevitable biological phenomenon. Aging take place as account of influence of intrinsic factors and extrinsic factors, but the causes of aging still remain obscure.

Mental disorders in elderly persons vary widely, but a conservatively estimated 25% have significant psychiatric symptoms. In mental disorders Depression is the major important disorder affecting majority of people. Major depressive disorder is a common disorder, with a lifetime prevalence of about 15%.

WHO reports that there are 236 elderly people per 10,000 suffer from mental illness mainly due to aging, physical problems, socio-economic factor, cerebral pathology, emotional attitude and family structure. Depression occurs in approximately 10 to 15 percent of all community-dwelling elderly over 65 years of age. The prevalence rate increases from 50 to 75 percent among institutionalized adults.

Laughter therapy is a unique concept which uses laughter as a group exercise, as it is a physically oriented technique. Here the laughter is for no reason without relying on jokes, humor or comedy. The exercise can be adapted and modified according to the extend and ability of the individual with breathing techniques which brings more oxygen to the body and makes one feel more energetic and healthy.

Old age homes are particularly relevant in the context of aging and sustaining longevity in older generation of society. However many problems in well being are experienced by old age people in old age home

like loneliness, physical disabilities, lack of sleep, food, clothing and housing. It may be due to the absence of familial care and surrounding which induce feeling of loneliness among inmates of old age home.

NEED OF THE STUDY

The elderly are prized resources. We need to create a great awareness to safeguard the health and dignity of vulnerable section of society and help them live the rest of their lives with dignity. Elderly are the most rapidly growing segment of population. In India there are about 77 million elderly populations where as in Karnataka out of a population of 5.5 crores, 8 percent are elderly.

WHO released report on World Health day 2017 with Theme: “Depression: Let’s Talk”. Depression is the leading cause of ill health and disability worldwide. According to the latest estimates from WHO, more than 300 million people are now living with depression, an increase of more than 18% between 2005 and 2015. Lack of support for people with mental disorders, coupled with a fear of stigma; prevent many from accessing the treatment they need to live healthy, productive lives.

The survey found that in Punjab, the total lifetime prevalence of mental illnesses was 18% (national level: 13.6%) and the current prevalence was 13% (national level: 10.5%). “It means, there are nearly 21.9 lakh people suffering from mental illness in Punjab. Only 20% of them (4.38 lakh) have access to treatment and rest 80% are not getting any treatment,” The survey mentions that treatment gap was 80% for common mental disorders, 57% for severe mental disorders, 81% for alcohol use disorders and 82% for depressive disorders. Nearly 0.5% of the population surveyed people have suicidal risk.

A study was conducted to investigate the effects of laughter therapy on depression, anxiety, cognitive function, quality of life, and sleep of the elderly in a community between July and September 2007. The total study sample consisted of 109 subjects aged over 65 divided into two groups; 48 subjects in the laughter therapy group and 61 subjects in the control group. The subjects in the laughter therapy group underwent laughter therapy four times over 1 month. The study concluded that Laughter therapy is considered to be useful, cost-effective and easily accessible intervention that has positive effects on depression, anxiety, insomnia, and sleep quality in the elderly.

The researcher realized that there is an immense need of alleviating the stress of the elderly in order to maintain good physical and mental health. During the literature review the researcher found that laughter therapy provides good massage to all internal organs, reduces the stress hormones level, increases the circulation and

relaxes the muscles. Hence the investigator felt that, it is necessary to assess the effectiveness of laughter therapy to reduce the level of depression among elderly.

OBJECTIVES

1. To assess the pre-interventional level of depression among elderly.
2. To implement the laughter therapy on elderly.
3. To assess the post-interventional level of depression among elderly.
4. To compare the pre and post-interventional level of depression.
5. To find out association of level of depression with selected demographic variables.

HYPOTHESIS

H₀: There is no statistically significant difference in pre and post interventional level of depression among elderly.

H₁: There is statistically significant difference in pre and post-interventional level of depression among elderly at $p < 0.05$.

Delimitations

The study is delimited to:

- Elderly residing in selected old age homes, Punjab
- Sample size is 50 elderly.

METHODOLOGY

RESEARCH APPROACH:- Quantitative research approach

RESEARCH DESIGN:- Pre-experimental one group pretest post-test research design

RESEARCH SETTING:- Selected old age homes, Punjab, They are enlisted below:-

1. Old Age Home, Sri Muktsar Sahib
2. Swami Vivekanand Old Age Home, Ludhiana

TARGET POPULATION:- Elderly residing in selected old age homes, Punjab

SAMPLE SIZE:- 50 elderly residing in selected old age homes, Punjab.

SAMPLING TECHNIQUE:-Non probability Convenient sampling technique

PREPARATION OF TOOL

Section A: Demographic variables

Section B: Beck's Depression Inventory

Criterion measure for Classification of level of depression:

Level of Depression	Range of Score
Normal	1-10
Mild	11-20
Moderate	21-30
Severe	31-40
Extreme	41-63

Development of Intervention:

Laughter Therapy was given as intervention to the group. The laughter session comprises of 4 steps of laughter therapy which includes: Clapping & Chanting, Breathing & Stretching Exercises, Child like Playfulness and Laughter Exercises

The duration of laughter session was 35-45min once in a day for 7 consecutive days

Validity of the tool:

To ensure content validity of the tool, the tool was submitted to ten experts in the field of mental health nursing, psychiatrist and psychologist. The tool was also validated from the language experts in Punjabi. Experts suggested amendments in demographic variables were made after careful review and discussion with guide and tool was finalized.

Tool translation

Tool was converted to Punjabi language and validated by Punjabi expert. Necessary modification was incorporated based on expert suggestions.

Ethical considerations:

Ethical approval to conduct the study was obtained from:

- Baba Farid University of Health and Sciences, Faridkot,
- Research and ethical committee of State Institute of Nursing and Paramedical Sciences, Badal, Sri Muktsar Sahib.
- Administrative approval was taken from the Manager of Old age Home, Sri Muktsar Sahib & Swami Vivekanand Old Age Home, Ludhiana.
- Consent form was obtained from the participants for willingness. The purpose for carrying out the research project was explained to the participants and assurance for confidentiality was given. Anonymity was maintained.

Pilot study:

The pilot study was conducted in the second week of January, 2017 to ensure the reliability of the study. The sample consisted of 10 (10% of the total sample) subjects. The subjects were selected from Old Age Home, Badal, Sri Muktsar Sahib after getting administrative approval for conducting the pilot study. On the day one, pre-test was conducted to assess the level of depression among elderly residing in old age home. On the same day Laughter therapy was implemented on the group for next 7 days. After seven days, post-test was conducted. Duration of laughter session was 35-45min. Findings revealed that it was feasible to conduct the study. The plan of statistical analysis was also determined. The plan for data collection remained the same as for the main study because the investigator did not face any major problem while conducting the pilot study. The tool was found feasible, acceptable and practicable.

Reliability of the tool:

The Beck's Depression Inventory was administered to 10 elderly residing in old age home. To check the reliability, Test-retest method (0.6-1.0) was used. The reliability coefficient for the tool was calculated by Karl Pearson formula as this formula is used to check the internal consistency of the tool. It was found to be 0.91. Thus the tool was found to be highly reliable.

Data Collection Procedure:

After obtaining formal administrative Permission from Managers of Old Age Home, Sri Muktsar Sahib & Swami Vivekanand Old Age Home, Ludhiana to conduct the study and institutional ethical committee, the study was conducted on elderly residing in Old Age Home, Sri Muktsar Sahib and Swami Vivekanand Old Age Home, Ludhiana, Punjab. Data was collected in the month of March, 2017 from 2/03/2017 to 21/03/2017. The purpose of the study was explained and elderly were assured about the benefits of the intervention. Total 50 elderly were selected based on inclusion and exclusion criteria through convenience sampling technique. Informed consent was obtained.

Pre-test was conducted on group using Beck's Depression Inventory by Interview schedule technique. Laughter therapy was given to group. Duration of laughter session was 35-45min. After 7 days, post-test was conducted on elderly to assess the level of depression after intervention.

Plan for data analysis:

According to the objectives, hypothesis of the study and opinion of the expert, it was planned to organize, tabulate, analyze and interpret the data by using both descriptive i.e. calculating percentage, mean, standard deviation and inferential statistics i.e. t-test (unpaired and paired t-test), and ANOVA. Bar charts were used to depict findings of p value at 0.05 was considered statistically significant.

ANALYSIS AND INTERPRETATION

Analysis and interpretation of data was done according to the objectives and by using descriptive and inferential statistics at the level of significance at $p < 0.05$ level. It was done under two sections:

Section I: Description of selected demographic variables**Section II: Analysis of the data according to objectives of the study**

SECTION-I

DESCRIPTION OF SELECTED DEMOGRAPHIC VARIABLES

Table 1: Frequency and percentage distribution of selected demographic variables of elderly residing in selected old age homes.

N=50

S.No.	Demographic variables	Frequency (f)	Percentage (%)
1.	Age in years		
	a. 60-65	15	30
	b. 66-70	15	30
	c. 71-75	09	18
	d. Above 75	11	22
2.	Gender		
	a. Male	29	58
	b. Female	21	42
3.	Religion		
	a. Hindu	28	56
	b. Muslim	00	00
	c. Sikh	22	44
	d. Christian	00	00
4.	Education		
	a. Illiterate	18	36
	b. Primary	14	28
	c. Matric	10	20
	d. Senior secondary	03	06
	e. Diploma/Graduation/ Post graduation	05	10
5.	Previous occupation		
	a. Private service	10	20
	b. Government service	08	16
	c. Self employed	05	10
	d. Others	27	54
6.	Marital Status		
	a. Married	24	48
	b. Unmarried	05	10
	c. Widow	21	42
	d. Divorced	00	00
7.	Source of Income		
	a. Pension	27	54

	b. From Family	00	00
	c. None	23	46
8.	Duration of Stay		
	a. 1year or less than 1 year	14	28
		23	46
	b. 2-5years	06	12
	c. 6-10years	07	14
	d. More than 10 years		
9.	Stay at old age home		
	a. With partner/spouse	13	26
	b. Alone	37	74

Table 1 show various socio demographic distribution of elderly residing in selected old age homes

SECTION –II

ANALYSIS OF THE DATA ACCORDING TO THE OBJECTIVES OF THE STUDY

OBJECTIVE 1: To assess the pre-interventional level of depression among elderly.

**Table 2: Assessment of pre-interventional level of depression among elderly
N=50**

Level of Depression	Score	Frequency (F)	Percentage (%)	Mean	Standard deviation
Normal	1-10	00	00	00	00
Mild	11-20	28	56	16.35714	2.627691
Moderate	21-30	15	30	23.86667	2.972893
Severe	31-40	07	14	34.28571	3.683942
Extreme	40-63	00	00	00	00

Maximum Score=63

Minimum Score=00

OBJECTIVE 3: To assess the post-interventional level of depression among elderly

Table 3: Assessment of post-interventional level of depression among elderly
N=50

Level of Depression	Score	Frequency (F)	Percentage (%)	Mean	Standard deviation
Normal	1-10	14	28	8.785714	1.368805
Mild	11-20	29	58	14.65517	2.594993
Moderate	21-30	07	14	25	3.05505
Severe	31-40	00	00	00	00
Extreme	40-63	00	00	00	00

Maximum Score=63

Minimum Score=00

OBJECTIVE 4: To compare the pre and post-interventional level of depression.

Table 4: Comparison of pre and post-interventional level of depression
N=50

Observation	Mean	Standard deviation	t-value	Df
Pre-test	21.12	6.93	24.6222*	49
Post-test	14.46	5.52		

Maximum Score= 63

Minimum Score= 00

*Significant, at $p < 0.05$ level of significance

^{NS} Non Significant

Table 4 & Figure 1 depict the mean, standard deviation, paired 't' test values in the pre test and the post test of the experimental group. In the pre test and the post test experimental group paired 't' test value was found to be $t=24.6222^*$, $df=49$ which is significant. So there is statistically significant difference in the mean pre test and post test level of depression in the experimental group.

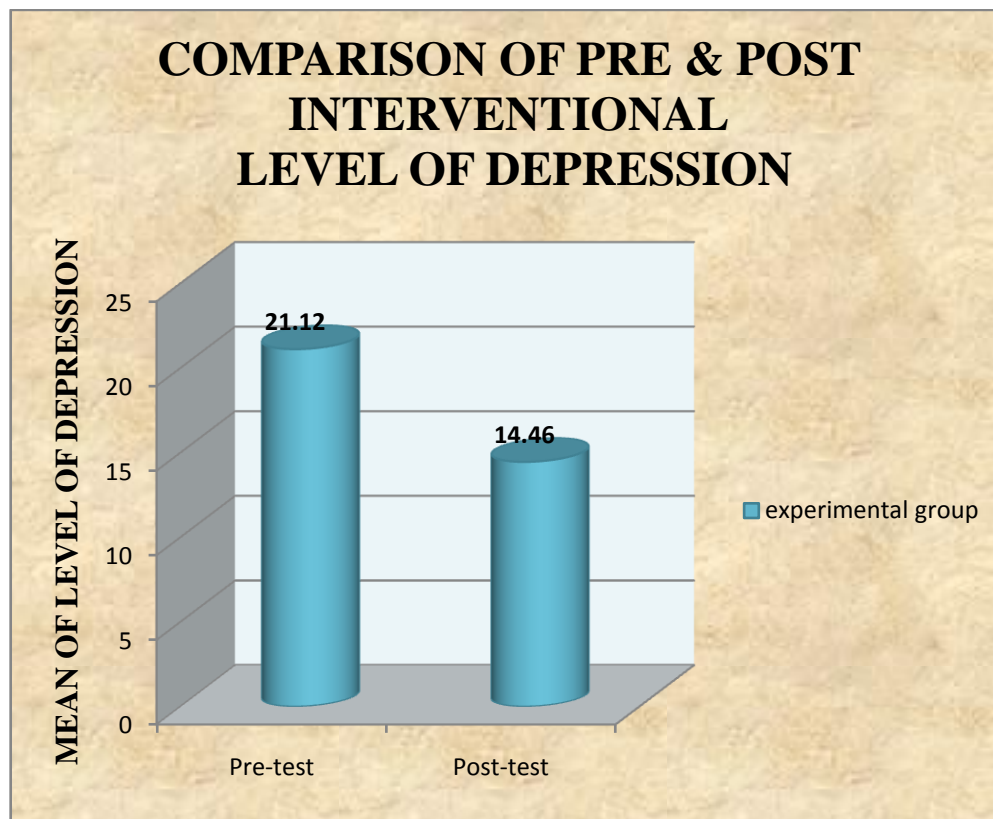


FIGURE 1: Bar Diagram showing post interventional level of depression among elderly

OBJECTIVE 5: To find out association of level of depression with selected demographic variables.

Table 5: ASSOCIATION OF PRE INTERVENTIONAL LEVEL OF DEPRESSION WITH SELECTED DEMOGRAPHIC VARIABLES.

S.No	Demographic variables	Frequency (f)	Mean	SD	Test value	Df	P value
1.	Age in years						
	60-65	15	21.93	6.79	F=3.5774 *	3, 46	0.006
	66-70	15	20.33	6.99			
	71-75	09	23.11	8.33			
	Above 75	11	19.45	6.17			
2.	Gender						
	Male	29	19.96	7.14	t=1.3977	48	0.16
	Female	21	22.71	6.45			
3.	Religion						
	Hindu	28	20	5.62	t=1.2982	48	0.2004
	Muslim	00	00	00			
	Sikh	22	22.54	8.22			

	Christian	00	00	00			
4.	Education						
	Illiterate	18	20.44	5.64	F=0.3289	4,	0.85
	Primary	14	22.07	7.44		45	
	Matric	10	22.04	7.23			
	Senior secondary	03	18.33	4.51			
	Diploma/Graduation/Post graduation	05	20	11.33			
5.	Previous occupation						
	Private service	10	21.6	8.76	F=0.9507	3,	0.42
	Government service	08	18.75	5.75		46	
	Self employed	05	17.8	6.72			
	Others	27	22.26	6.54			
6.	Marital Status						
	Married	24	21.33	7.01	F=1.0974	2,	0.33
	Unmarried	05	25	9.08		47	
	Widow	21	19.95	6.27			
	Divorced	00	00	00			
7.	Source of Income						
	Pension	27	21.59	7.42	t=0.5185	48	0.61
	From Family	00	00	00			
	None	23	20.56	6.42			
8.	Duration of Stay						
	1 year or less than 1 year	14	21.64	7.17	F=0.9661	3,	0.41
	2-5years	23	19.47	05		46	
	6-10years	06	23	9.12			
	More than 10 years	07	23.85	9.81			
9.	Stay at old age home						
	With partner/spouse	13	20.46	5.94	t=0.3948	48	0.69
	Alone	37	21.35	7.31			

Table 5 shows the association of pre test level of depression with the selected demographic variables of group. In this there is significant association of pre test level of depression with age of elderly as statistically analyzed by ANOVA value of 3.5774 at df 3, 46 and 0.05 level of significance There is no significant association of pre test level of depression with gender, religion, education, previous occupation, marital status, source of income, duration of stay and stay at old age home.

DISCUSSION

Finding

This study revealed that during the pre-test, of the group mean \pm S.D is 21.12 ± 6.93 and post-test, of the group mean \pm S.D is 14.46 ± 5.52 showing significant statistical change in pre and post test level of depression after implementing laughter therapy.

IMPLICATIONS OF THE STUDY

The findings of this study will be used in different areas of nursing like area of service, education, administration and research. Present study result has following implications:

Nursing Education

- ❖ Educational system incorporates advancement in nursing sciences into curriculum.
- ❖ Application of complementary and alternative therapies of managing depression should be taught in practical way to manage depressive symptoms in early stage.
- ❖ Skill development of nursing students to practice laughter therapy should be strengthened in clinical area.
- ❖ Family educators or nursing personnel's should also be educated to practice laughter therapy to reduce level of depression and thereby making these measures beneficial to community people.

NURSING PRACTICE

In Hospital

- ❖ In the current scenario there is need of evidence based practices so as to bring change in the current nursing practices .Such researches help in adoption of certain practices by providing necessary evidence.

- ❖ Laughter therapy needs to be implemented as a part of other therapies and to be practiced by the nurse in day to day activities.
- ❖ The nurse needs to motivate the elderly patients to practice laughter therapy in their daily life.

In Community

- ❖ The nurse who focuses on the gero-psychiatric rehabilitation in the community should know about the laughter therapy.
- ❖ Nurse should aware about the application of various assessment tools for depression in community.

In Old Age Home

- ❖ Nurses should be aware about the sign & symptoms of depression to prevent it in early stages.
- ❖ Nurses who works in old age homes and directly deal with elderly should know about laughter therapy.
- ❖ Nurse should be aware about benefits of laughter therapy in elderly showing symptoms of depression.

NURSING ADMINISTRATION

- ❖ Nurse Administrator can conduct in service education and training programme for nurses working at various departments about the use of laughter therapy to manage the depression in geriatric patients.
- ❖ Nurse Administrator should organize awareness campaign for elderly and family members regarding use and benefits of laughter therapy to reduce level of depression.

NURSING RESEARCH

- ❖ Findings of the study will act as a catalyst to carry out more extensive research in a large sample and in other settings to generalize the research findings.
- ❖ Research studies related to geriatric psychiatric problems are limited, so need to focus on this area.
- ❖ In Indian settings researches related to alternative & complementary therapy especially the effectiveness of laughter therapy on depression in community setting are limited, so nurses should focus to conduct research study in this area.
- ❖ The nurses should be encouraged to participate in research studies.

LIMITATIONS

- Sample size of the study was small i.e. 50 elderly. Hence it is difficult to make generalization.
- Study was conducted on only institutionalized elderly.

RECOMMENDATIONS

On the basis of the findings of the study following recommendations have been made:

- ❖ Similar study could be replicated on large sample to validate and generalize its findings.
- ❖ A study can be conducted in different settings.
- ❖ A comparative study can be conducted with more than one intervention like with music therapy or guided imagery technique.
- ❖ Randomized controlled trial can be done for similar type of study.
- ❖ Laughter therapy could be given for more than seven days.

CONCLUSION

The above study was conducted on 50 elderly with a view to assess the effectiveness of laughter therapy on level of depression among elderly residing in selected old age homes. Data was collected using Beck's Depression Inventory and laughter therapy was given for 7 consecutive days and after 7 days post test was conducted. Analysis was done on the basis of objectives. The findings of the study revealed that in the pre-test majority of elderly had mild and moderate level of depression and laughter therapy was effective to reduce the level of depression, in post test majority of elderly had normal level and mild level of depression and no one had severe level of depression.

So, it can be concluded that laughter therapy was effective in reducing the level of depression among elderly.

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