Original Research Article

A Pre-Experimental Study to Assess the Effectiveness of Laughter Therapy on Quality of Life among Elderly Residing at Selected Old age Homes, Punjab

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ABSTRACT

Quality of life of elderly is greatly affected by their living place. As there is drastic increase in elderly population in India; many questions arises related to their care. Quality of life of elderly living in old age homes need greater attention from caregiver for that various non pharmacological techniques are used. The Objective of this study was to assess the effectiveness of laughter therapy on quality of life of elderly residing in old age home. A Pre experimental study (one group pre-test and post-test) was conducted on 60 elderly residing at old age home selected by purposive sampling technique. The elderly allocated in three groups (20 in each group). 16 sessions (4 sessions / week) of 40 minute duration were provided to each group. Data was collected by administering WHOQOL-BREFF questionnaire. The results of study revealed that the pre-test mean±SD score of quality of life was 157.4 ±43.09 and post-test mean±SD score was 178.53±34.26. It was found that there was statistically significant difference in the pre-test and post-test score of quality of life (t=2.740) at 0.05 level. There was a significant association between pre-test score of quality of life and presence of any illness/disease and post-test score of quality of life with sex and type of admission at 0.05 level. The study findings concluded that Laughter Therapy was effective to improve the quality of life of elderly residing at old age homes.

Key words: Quality of life, laughter therapy, elderly, WHOQOL-BREFF questionnaire

INTRODUCTION

Old age is an age nearing or surpassing the average life span of human beings. The word old age have different meaning in different societies so it can't be defined exactly. 'National Policy on Older Persons' adopted by government of India in January, 1999. According to this policy 'senior citizen' or 'elderly' is defined as a person who is of age 60 years or above. [1]

Old age, it is not a problem but there are multiple factors associated with elderly people which become the major challenge of today's society. Old age means decline in physical ability, reducing mental capability, the gradual decreasing of role in socio-economic activities and a change in economic status from economic independence to economic dependence upon other's for support and elderly becomes more susceptible to chronic illness. [2]

When elderly incline towards dependency and the family members are unable to provide care, a second option of

old age home comes in pictures. An old age home is typically a home for those old people who haven't any one to look after them or the elderly are thrown out of their homes by their children. [3]

The quality of life of elderly residing at old age homes is much different from elderly living with their families. There are many dimensions like physical, psychological, social and environment that affects the quality of life of elderly. WHO defines Quality of Life as an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. It is a wide ranging concept affected in a complicated way by the person's physical health, psychological state, personal beliefs, social relationships and their relationship to salient features of their environment. [4]

CAM therapies are beneficial to the geriatric population, mainly in managing chronic conditions, relieving pain and improving the quality of life. CAM not only encourages good health practices that emphasize on a holistic model of care in strengthening the body's defense and healing abilities, but self-care and patient empowerment as well. (Siddiqui MA et al. 2014) [5]

Laughter therapy is one of the complementary therapies, which are a therapeutic method that uses positive emotions generated by laughter to cure ailments and maintain a healthy body. Laughter therapy is a unique concept which include laugh for no reason, without any humor, jokes or comedy. Laughter therapy combines laughter exercises with breathing and stretching exercises. Fake laughter provides same physiological and psychological benefits as the real laughter. One gets the same physiological and psychological benefits. [6]

Smitha PM. (2017) conducted a study to assess the effectiveness of laughter therapy on quality of life among elderly at old age home, Chennai, India and to compare the quality of life among experimental and control group after laughter therapy. In pretest, though the experimental and control group shows hardly any variation, in post test the experimental group recorded an improved quality of life after laughter therapy. In experimental group, 26 (86.7%) had higher Quality of Life and four (13.3%) had better Quality of Life. In control group, 19 (63.3%) had good Quality of Life, seven (23.4%) had better Quality of Life and four (13.3%) had poor Quality of Life. The study revealed that the Quality of Life had a significant association with education (p = 0.009) and income (p= 0.048). [7]

Research Problem
A pre-experimental study to assess the effectiveness of laughter therapy on quality of life among elderly residing at selected old age homes, Punjab.

Objectives
1. To assess the quality of life among elderly.
2. To assess the effectiveness of laughter therapy on quality of life among elderly.
3. To find out the association of pre-test and post-test score of quality of life with selected socio-demographic variables of elderly.

OPERATIONAL DEFINITIONS
- **EFFECTIVENESS:** It refers to the impact of Laughter therapy on quality of life of elderly.
- **LAUGHTER THERAPY:** It refers to set of activities which include four steps (clapping, breathing exercises, child like playful activities and laughter exercises) designed to enhance the quality of life of elderly.
- **QUALITY OF LIFE:** It is referred to the level of satisfaction in life as experienced and expressed by the elderly as measured by WHOQOL BREF questionnaire.
- **ELDERLY:** It refers to the people of age group 60 years or above residing at selected old age homes.

- **OLD AGE HOME:** An old age home is a place where old age people live and are cared for when they are too old to look after themselves.

MATERIALS AND METHODS
RESEARCH DESIGN
The present study was Pre - experimental, one group pre-test post-test design was used.

RESEARCH SETTING
The present study was conducted at Bhai Vir Singh Birdh Ghar, Tarn Taran. It is situated at Jandiala road, Tarn Taran.

TARGET POPULATION
Target population for present study includes 60 elderly residing at Bhai Vir Singh Birdh Ghar.

SAMPLING TECHNIQUE
Non-randomized Purposive sampling technique was used to select the sample for the study.
SAMPLE SIZE
The sample for the present study comprises of 60 elderly residing at old age homes.

VARIABLES UNDER STUDY
Independent variables: Laughter therapy intervention
Dependent variables: Quality of life of elderly

INCLUSION CRITERIA
Elderly people who are
- Present in old age homes, are of age 60 years or above
- Present during the time of data collection
- Willing to participate

EXCLUSION CRITERIA
Elderly people who are
- Undergone major surgery within 3 months
- Fracture of facial bones and ribs
- Have History of epilepsy
- Have severe back pain
- Bed ridden

DESCRIPTION OF TOOLS
PART -A: Socio demographic variables
PART- B: WHOQOL BREFF Questionnaire

Part A: - Socio- Demographic variables: It includes items for obtaining personal information's of patient i.e. age, sex, educational status, marital status, previous occupational status, present income source, type of family, duration of stay in old age home, type of admission, previous knowledge regarding relaxation therapy, frequency of physical activity and presence of any illness/disease.

Part B: - World Health Organization Quality of Life –BREFF (WHOQOL-BREFF) scale used to assess the quality of life. It consist of 26 questions about four domains of quality of life i.e. physical health, psychological, social relationship and environment domain.
Domains of quality of life:
- Physical health : Questions under this domain are : 3,4 10,15,16,17,18
- Psychological health: Questions under this domain are : 5,6,7,11,19,26
- Social relationships: questions under this domain are: 20,21,22
- Environment : Questions under this domain are: 8,9,12,13,14,23,24,25
- Question 1 of BREFF scale is related to perceived quality of life
- Question 2 is related to satisfaction with general health.

SCORE INTERPETATION
Quality of Life score:
Poor (0-100), Average (101-200), Good (201-300) and Very good (301-400).
Domain-wise Quality of life score:
Poor (0-25), Average (26-50), Good (51-75) and Very good (76-100).

RESULT AND DISCUSSION

Table 1: Frequency and percentage distribution of Socio-demographic variables of elderly

Sr.No	Demographic Variable	f	%
1.	**Age (in Years)**		
	60-70 yrs	40	66.7
	71-80 yrs	16	26.6
	81 and above	4	6.7
2	**Sex**		
	Male	37	61.7
	Female	23	38.3
3	**Educational status**		
	Primary education	26	43.3
	Secondary education	16	26.7
	Higher Secondary education	7	11.7
	Graduation and above	11	18.3
4	**Marital status**		
	Married	19	31.7
	Unmarried	11	18.3
	Widow/Widower	29	48.3
	Divorced	1	1.7
5	**Previous Occupational status**		
	Government job	11	18.3
	Private job	9	15.0
	Unemployed	17	28.4
	Self employed	23	38.3
6	**Present income source**		
	Yes	28	46.7
	Old age pension	21	
	Government job pension	4	
	Old age pension with other source	3	
	No	32	55.3
7	**Type of Family**		
	Nuclear	35	58.3
	Joint	9	15.0
	Living alone	16	26.7
8	**Duration of stay in old age home**		
	0-5 yrs	41	68.3
	6-10 yrs	11	18.4
	11 yrs and above	8	13.3
9	**Type of admission**		
	Voluntary	38	63.3
	Involuntary	22	36.7
10	**Previous knowledge regarding relaxation therapy**		
	Yes	27	45.0
	No	33	55.0
11.	**Frequency of physical activity**		
	Daily	18	30.0
	Occasionally	25	41.7
	Never	17	28.3
12	**Presence of any illness/disease**		
	Sensory, cardiovascular, musculoskeletal, endocrine	25	41.67
	Sensory, cardiovascular, endocrine	5	8.33
	Sensory, cardiovascular	16	26.67
	Sensory, endocrine	10	16.67
	Sensory and gastrointestinal	4	6.66

Table 2: Pre-test score of Quality of life of elderly

Quality of Life	f	%	Mean	SD
Poor (0-100)	6	10		
Fair (101-200)	44	73.33		
Good (201-300)	10	16.67	157.4	43.09
Very Good (301-400)	0	0		

Table 2 depicts that most of the elderly i.e.73.33% had fair quality of life, 16.67% had good quality of life and 10% had poor quality of life. None of the elderly had very good quality of life with a mean ± SD of 157.4±43.09.

The above findings are supported by study conducted by Rajeev MM et al. (2015) which reported that majority of the elderly (84%) had average, 14% had good and only 2% had poor quality of life in an institutionalized setting. [8]

Table 3: Domain-wise Quality of life score of elderly in pre-test N=60

Quality of Life	Physical Health Domain		Psychological Domain		Social Relationships Domain		Environment Domain	
	f	%	f	%	f	%	f	%
Poor (0-25)	5	8.3	15	25	38	63.3	5	8.3
Fair (26-50)	38	63.3	31	51.7	20	33.3	37	61.7
Good (51-75)	16	26.7	12	20	2	3.3	18	30
Very Good (76-100)	1	1.7	2	3.3	0	0	0	0
Mean±SD	44.51±13.40		41.3±17.2		24.13±15.38		47.36±12.26	

Table 3 depicts that majority (63.3%) of elderly had fair level of quality of life, 26.7% had good and 8.3% had poor level of quality of life in physical health domain only 1.7% had very good quality of life with mean ± SD of 44.51±13.40. In psychological domain nearly 51.7% of elderly had fair quality of life, followed by 25% had poor, 20% of them had good quality of life and only 3.3 had very good quality of life with mean ± SD of 41.3±17.2. As per findings in social relationship domain most of the elderly i.e.63.3% had poor quality of life, whereas 33.3% fall under fair quality of life and 3.3% had good quality of life with mean ± SD of 24.13±15.38. 61.7% of elderly had fair quality of life in environment domain with 30% had good and 8.3 had poor quality of life with mean ± SD of 47.36±12.26.

These findings were supported by findings of study done by Seelam GS et al. (2017). [9] This study findings showed that the physical health domain had highest mean (49.90) followed by environment domain (49.75), psychological domain (44.000 and lowest in social relationship domain (42.37).

Table 4 depicts that for perceived quality of life score in pre-test 45% of elderly had poor score, 26.67% had neither poor nor good perceived quality of life, 16.66% had good 11.67% had very poor perceived quality of life. For general health score in pre-test 48.33% of elderly were dissatisfied, 20% were neither satisfied nor dissatisfied, 16.67% were satisfied and 15% were very dissatisfied.

Table 4: Frequency and Percentage distribution of self rated Perceived Quality of Life and Perceived Quality of Health of elderly N=60

Indicators	Pre-test		Post-test	
	f	%	f	%
Quality of Life scores				
Very poor	7	11.67	0	00
Poor	27	45.00	15	25
Neither poor nor good	16	26.67	27	45
Good	10	16.66	18	30
Very good	0	0	0	00
General Health Scores				
Very dissatisfied	9	15	3	05
Dissatisfied	29	48.33	18	30
Neither satisfied nor dissatisfied	12	20	24	40
Satisfied	10	16.67	15	25
Very satisfied	0	00	0	00

In post-test, perceived quality of life score and general health score was improved. 45% of elderly had neither poor nor good quality of life, 25% of them had poor and 30% had good perceived quality of life. For general health score 40% of elderly were neither satisfied nor dissatisfied, 30% of them were dissatisfied, 25% of elderly were satisfied with their health and only 15% were very dissatisfied.

Table 5: Post-test score of Quality of life of elderly N=60

Quality of Life	f	%	Mean	SD
Poor (0-100)	0	0		
Fair (101-200)	45	75	178.53	34.26
Good (201-300)	15	25		
Very Good (301-400)	0	0		

Table 5 depicts that 75% of elderly have fair quality of life whereas 25% have good quality of life; none have poor and very good quality of life with mean ±SD of 178.53±34.26.

Table 6: Domain-wise Quality of life score of elderly in post-test N=60

Quality of Life	Physical Health Domain		Psychological Domain		Social Relationships Domain		Environment Domain	
	f	%	f	%	f	%	f	%
Poor (0-25)	0	0	2	3.33	38	63.33	0	0
Fair (26-50)	40	66.67	32	53.34	20	33.33	30	50
Good (51-75)	19	31.67	24	40	2	3.33	29	48.33
Very Good (76-100)	1	1.67	02	3.33	0	0	1	1.67
Mean±SD	46.97±9.57		50.90±11.62		25.83±1.32		54.83±11.76	

Table 6: Depicts that after the laughter therapy intervention the 66.67% of elderly had fair quality of life in physical health domain, 31.67% had good and only 1.67 had very good quality of life with mean ± SD of 46.97±9.57.In psychological domain 53.34% of elderly had fair quality of life whereas 40% had good and 3.33% lied in both poor and very good quality of life with mean ± SD of 50.90±11.62. The findings revealed that in social relationship domain majority (63.33%) had poor quality of life, 33.33% had fair and 3.33% had good quality of life. none had very good quality of life with mean ± SD of 25.83±1.32. 50% elderly had fair quality of life in environment domain followed by 48.33% had good and 1.67% had very good and none had poor quality of life with mean ± SD of 54.83±11.76.

Table 7: Effectiveness of laughter therapy intervention on Quality of life of elderly N=60

Quality of Life	Mean	Mean difference	SD	't' value	df	'p' value
Pre-test	157.4		43.09			
Post-test	178.53	21.13	34.26	2.740	59	.008*

*Note *<0.05 level of significance*

The data presented in Table 7 and Fig. 1 shows that mean post-test quality of life score (178.53) with SD 34.26 is higher that mean pre-test quality of life score (157.4) with SD 43.09. The computed 't' value showed that there is significant difference between the pre-test and post-test mean knowledge score (t_{59} = 2.740, p<0.005). The study conducted by Smitha PM (2017) [7] reported that in the experimental group quality of life was improved after laugher therapy as compare to control group.
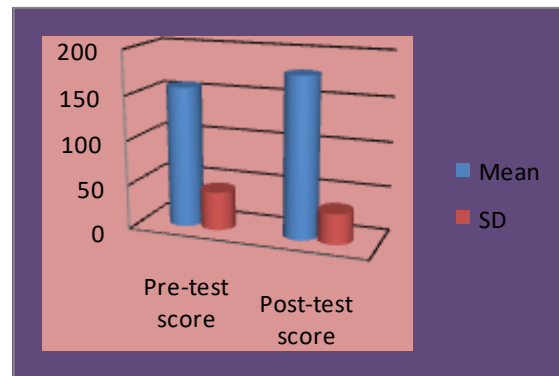

Fig.1 : Mean and SD of quality of life score of elderly in pre-test and post-test

Table 8: Effectiveness of Laughter therapy intervention on domains of Quality of life of elderly N=60

Domains	Mean		Mean difference	S.D.		't' value	df	'p' value
	Pre-test	Post-test		Pre-test	Post -test			
Physical	44.51	46.97	2.46	13.4	9.57	1.089	59	.281
Psychological	41.37	50.90	9.53	17.21	11.62	3.260	59	.002*
Social relationship	24.1	25.83	1.73	1.54	1.32	.716	59	.477
Environment	47.37	54.83	7.46	12.26	11.76	3.176	59	.002*

*Note *<0.05 level of significance*

Table 8 depicts that the computed 't' value showed that there is significant difference between the pre-test and post-test quality of life score of psychological and environment domain (t_{59} = 1.089, p<0.005). Mean post-test score of quality of life in physical health domain (46.97) with SD 9.57 is higher than the mean pre-test quality of life score (44.51) with SD 13.4. In psychological domain mean post-test score of quality of life (50.90) with SD

11.62 is higher than the mean pre-test quality of life score(41.37) with SD 17.21. As per data the mean score of post-test quality of life (25.83) and mean score pre-test quality of life (24.1) in social relationship domains shows minor variation. In environment domain mean post-test score of quality of life (54.83) is higher than the mean pre-test score of quality of life (47.37).

Table 9: Association between pre-test score of quality of life of elderly and Socio-demographic variables N=60

S.No	Demographic Variable	Poor	Fair	Good	Chi-Square value df p value
1.	**Age (in Years)**				
	60-70 yrs	4	28	8	2.055
	71-80 yrs	2	12	2	4
	81 and above	0	4	0	0.726 [NS]
2	**Sex**				1.891
	Male	3	26	8	2
	Female	3	18	2	0.389[NS]
3	**Educational status**				
	Primary education	1	20	5	
	Secondary education	0	12	4	10.79
	Higher Secondary education	2	5	0	6
	Graduation and above	3	7	1	0.095[NS]
4	**Marital status**				
	Married	2	16	1	3.411
	Unmarried	1	7	3	6
	Widow/Widower	3	20	6	0.756[NS]
	Divorced	0	1	0	
5	**Previous Occupational status**				
	Government job	2	8	1	3.511
	Private job	1	6	2	6
	Unemployed	0	14	3	0.742[NS]
	Self employed	3	16	4	
6	**Present income source**				4.018
	Yes	4	22	2	2
	No	2	22	8	0.134[NS]
7	**Type of Family**				
	Nuclear	3	28	4	8.757
	Joint	2	7	0	4
	Living alone	1	9	6	0.067[NS]
8	**Duration of stay in old age home**				
	0-5 yrs	3	30	8	3.002
	6-10 yrs	1	9	1	4
	11 yrs and above	2	5	1	0.558[NS]
9	**Type of admission**				0.078
	Voluntary	4	28	6	2
	Involuntary	2	16	4	0.962[NS]
10	**Previous knowledge regarding relaxation therapy**				1.102
	Yes	3	21	3	2
	No	3	23	7	0.576[NS]
11.	**Frequency of physical activity**				
	Daily	1	16	1	7.290
	Occasionally	3	19	3	4
	Never	2	9	6	0.121[NS]
12.	**Presence o f any illness/ disease**				
	Sensory, cardiovascular, musculoskeletal, endocrine	1	18	6	
	Sensory, cardiovascular, endocrine	0	2	3	22.217
	Sensory, cardiovascular	5	10	1	8
	Sensory, endocrine	0	10	0	0.005*
	Sensory and gastrointestinal	0	4	0	

*Note *<0.05 level of significance*

Table 9 and 10 revealed that presence of any illness/disease was statistically significant with pre-test quality of life and sex and type of admission is found statistically significant at p<0.05 level so there is a statistical association of sex and type of admission (i.e. Voluntary or involuntary admission) with post-test quality of life score.

Table 10: Association between post-test score of quality of life of elderly and socio-demographic variables   N=60

S.No	Demographic Variable	Fair	Good	Chi-Square value df p value
1.	**Age (in Years)**			0.000
	60-70 yrs	30	10	
	71-80 yrs	12	4	2
	81 and above	3	1	1.000 [NS]
2	**Sex**			3.972
	Male	31	6	1
	Female	14	9	0.046*
3	**Educational status**			2.708
	Primary education	18	8	
	Secondary education	11	5	3
	Higher Secondary education	6	1	0.439[NS]
	Graduation and above	10	1	
4	**Marital status**			
	Married	14	5	4.606
	Unmarried	10	1	3
	Widow/Widower	21	8	0.203[NS]
	Divorced	0	1	
5	**Previous Occupational status**			
	Government job	7	4	2.694
	Private job	6	3	3
	Unemployed	15	2	0.441[NS]
	Self employed	17	6	
6	**Present income source**			0.000
	Yes	21	7	1
	No	24	8	1.000[NS]
7	**Type of Family**			
	Nuclear	26	9	1.269
	Joint	8	1	2
	Living alone	11	5	0.530[NS]
8	**Duration of stay in old age home**			
	0-5 yrs	31	10	0.948
	6-10 yrs	9	2	2
	11 yrs and above	5	3	0.623[NS]
9	**Type of admission**			4.689
	Voluntary	32	6	1
	Involuntary	13	9	0.030*
10	**Previous knowledge regarding relaxation therapy**			0.022
	Yes	20	7	1
	No	25	8	0.881[NS]
11.	**Frequency of physical activity**			
	Daily	13	5	2.316
	Occasionally	17	8	2
	Never	15	2	0.314[NS]
12.	**Presence of any illness/ disease**			
	Sensory, cardiovascular, musculoskeletal, endocrine	19	6	1.880
	Sensory, cardiovascular, endocrine	4	1	4
	Sensory, cardiovascular	11	5	0.758[NS]
	Sensory, endocrine	7	3	
	Sensory and gastrointestinal	4	0	

Note *<0.05 level of significance

CONCLUSION

It was concluded from present study that the laughter therapy intervention is effective in improving the quality of life of elderly and there is great need to incorporate complementary therapies in providing care and services to elderly living in old age homes.

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