



OUTCOME OF YOGA THERAPY ON DEPRESSION AMONG ELDERLY RESIDING IN SELECTED OLD AGE HOME AT TAMIL NADU-INDIA

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ABSTRACT

Depression is the common problem in geriatric population but it is under estimated or may not be concentrated by the health professionals. Untreated depression leads to poor quality of life or ultimately loss of life. Recent studies concentrates on alternative therapy instead the pharmacotherapy which is associated with many untoward effects. This study assessed and compared the pre and post test depression and also studied the influence of the demographic variables of the elderly those residing at old age home. In the Pre experimental one group pre test post test design 48 elderly with depression were given yoga therapy for 16 weeks. Geriatric depression scale long version was used to estimate the level of depression of the elderly before and after the yoga therapy. Result of the study showed that, at the pre test all the elderly were having mild dpepression, after 16 weeks of intervention 60% of the elderly became normal. The Paired't' value was 11.6, the study concluded that yoga therapy was the effective measure in reducing geriatric depression.

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INTRODUCTION

Health is the fundamental rights of the every human being; health of human is being determined by many factors like age, gender, occupation, financial status, hereditary and life experiences. Age play the fundamental role in the health of the individual, people whatever they are able to do and tolerate in the young and middle adulthood, that may not be same in the later stage or in the old age. The world population continues to grow rapidly along with that, the elderly population also grow rapidly because the people tend to live longer. People live longer is an appreciation but older the age they prone to get many non communicable diseases that tend to increase the cost of health. People at old age are experiencing different because of many reasons like health status, chronic non-communicable diseases, loss of position and values, financial insecurity, loss of family member or spouse and friends.

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Elderly who ever able to overcome these problems may feel secure and independent. In contrast those who are not able to overcome these problems may feel insecure and ultimately ends with stress and strain finally developed depression or may lose their life. Many elderly dwell to old age facilities, it may be in the form of day care, half way homes or old age home that care the elderly 24X7 basis. Though the old age home meet all the basic needs of the elderly, the elderly feel insecure because they stay away from the place of origin, family members and culture. Old age homes are being managed by different authorities; the way they treat the elderly differ from home to home that make the elders further depressed. In India various studies on prevalence of geriatric depression reveals that the old age depression varies between 6% and 66.6%. The prevalence rate differ area to area and cultural variance. In 2013 Swarnalatha reported that the prevalence of geriatric depression in rural area was 47%. In 2015 Tamilselvi et al. reported that the prevalence of geriatric depression among elderly in old age homes at Kancheepuram, Tamil Nadu

around 66.66%. 2013 Naveen G H *et al*, in their study finding reported that yoga is the promising intervention for non-suicidal depressive clients. In 2011, Chakkaravarthy proved that yoga is effective for geriatric depression.

Statement of the Problem

A study to assess the outcome of yoga therapy on depression among elderly residing in selected old age home at Tamil Nadu-India.

Objectives

1. To assess the pre-test level of depression among elderly residing in old age home.
2. To assess the post-test level of depression among elderly residing in old age home
3. To compare the pre and post-test level of depression among elderly residing in old age home.
4. To associate the post test score of elderly with their selected demographic variable.

Assumption

1. Elderly living away from their family may experience depression.
2. Yoga therapy may reduce the depression.

Hypotheses

- H1:** there will be significant difference in pre and post test level of depression among elderly residing in old age home.
- H2:** there will be a significant association of post test depression score with the selected demographic variables of the elderly.

RESEARCH METHODOLOGY

Research approach and design: Quantitative approach with pre- experimental one group pre test post test design was used in this study.

Variables

Independent variable: Yoga therapy.

Dependent variables: Depression.

Demographic variables: Age, gender, religion, education, occupation, income, marital status, duration of stay in the home, residing status, residence, number of children, co morbidity, family history of psychiatric illness and type of family.

Research setting: The study was conducted at old age home under Duraisamy Social Education Association, Kancheepuram District, Tamil Nadu- India.

Population of this study: All the elderly aged above 55 years with depression and living in old age home under Duraisamy Social Education Association, Kancheepuram district, Tamilnadu-India.

Sample: Elderly who fulfilled the sampling criteria and who ever scored above 9 in the Geriatric Depression scale.

Criteria for sample selection

Inclusion criteria

1. Elderly who can speak and understand Tamil
2. Elderly who are willing to participate in the study
3. Both male and female elderly over the age of 55 years

Exclusion criteria

1. Debilitated elderly
2. Elderly suffering from Co morbid musculoskeletal disorder
3. Already on treatment of depression
4. Deaf and dumb
5. Already on yoga therapy.

Sampling Technique: Non probability convenient sampling technique was used to select the samples.

Sample size: Sample of 48 elderly were utilized in this study.

Development and description of tool

Section A: Demographic Variables: The demographic variables includes Age, gender, religion, education, occupation, income, marital status, duration of stay in the home, residing status, residence, number of children, co morbidity, family history of psychiatric illness and type of family.

Section B: GERIATRIC DEPRESSION SCALE long version was used to assess the level of depression of the elderly. The scale contain total of 30 items with yes or no response. The items contain both positive and negative worded questions. Each item scored 0-1 point based on the response. Total score 30, score of 00 to 09 consider as normal, 10-19; mild depression and 20-30 is consider as severe depression.

Content Validity and Reliability: The tool is standardized and public so that did not require further validity and the reliability score is 0.84. The content, appropriateness and usefulness of the yoga therapy was validated by various experts in the field of Psychiatry, Psychiatric nursing, General medicine, Geriatric medicine, clinical psychologist and yoga therapist.

Description of intervention: Hatha yoga was utilized in this study. It includes Anuloma viloma pranayama for 5 minutes in the ratio of 1:2:2 followed by 45 steps of postures for 15 minutes. Pranayama includes 5 seconds of inhalation, 10 seconds of inspiratory hold and 10 seconds of exhalation. Asana starts at upper extremities followed by lower extremities and the whole body. The asana include sitting, standing, forward bending and lying down. Each asana was done 15 seconds with 5 seconds of relaxation for two times a day.

Data collection procedure: After explaining about the study formal written permission was obtained from the Director of the old age home. Nature, purpose, procedure, risk and benefits, investigator and participant's role, alternatives, were explained to the subjects. Confidentiality was assured and informed consent was obtained. 48 elderly who met the inclusion criteria were selected as the sample. Data was collected using Geriatric Depression Scale long version. Pre

test was done on 5th January 2016, the subject whoever able to read and understand were distributed the questionnaire and asked them respond frankly and truly. Subjects those uneducated, the items in the tool were translated in their own language, that was read loudly and clearly and the responses were noted. Hatha yoga training was given for 10 days followed by the subjects underwent supervised yoga therapy for 20 minutes and two times a day for the period of 16 weeks. Post test was done using the same tool after 16 weeks of yoga therapy.

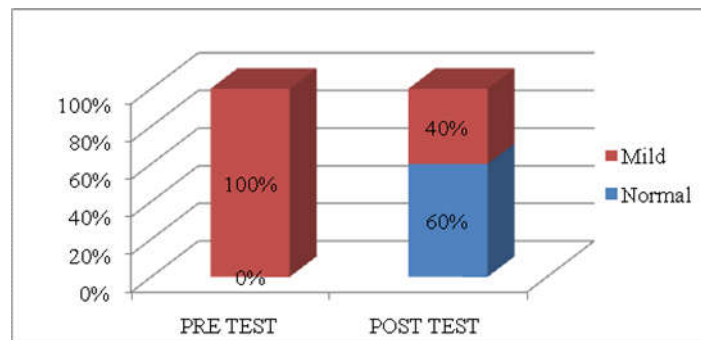
Data analysis and interpretation: Both descriptive and inferential statistics were used for this study. Frequency and percentage were used to analyze the demographic variables and number of elderly with depression.

Mean and standard deviation were used to assess the level of depression. Paired t test was used to compare the level of depression. Chi-square was used to associate the post test depression score of the elderly with their selected demographic variables

RESULTS

Demographic characteristics: The demographic distribution of the elderly showed that most of the elderly (31.2%) were aged between 66 and 70 and also 71 and 75 (32.2%) years, around 68.8% were female and 75% were belonged to Hindus. Almost 70.8% were uneducated, 75 % were not having any occupation and 72.1% had income up to 1000 rupees/month. 50% of the elderly were widows, 62.5% elderly were from

Comparison of depression before and after yoga therapy



Comparison of depression mean score before and after yoga therapy Paired Samples Statistics

Test	Mean	n	Std. Deviation	Std. Error Mean	t value
Pre-test-score	12.7917	48	1.80965	.26120	11.613**
Post-test score	8.6042	48	2.92996	.42290	

**p<0.001

Association of depression with demographic variables of the elderly

Demographic Variables	Score Normal		Mild		Chi Square	P Value	
	n	%	n	%			
1. Age	a.56-60	00	00.00	00	1.631	0.652	
	b. 61-65	05	17.20	02			10.50
	c. 66-70	09	31.00	06			31.60
	d. 71-75	10	34.50	05			26.30
2. Gender	e >75	05	17.20	06	31.60	1.522	0.217
	a. Male	11	37.90	04	21.10		
	b. Female	18	62.10	15	78.90		
3. Religion	a. Hindu	20	69.00	16	84.20	2.767	0.429
	b. Christian	05	17.20	02	10.50		
	c. Muslim	03	10.30	00	00.00		
	d. Others	01	03.40	01	05.30		
4. Education	a. Uneducated	19	65.50	15	78.90	1.381	0.71
	b. Up to High School	07	24.10	03	15.80		
	c. Higher Secondary	01	03.40	00	00.00		
	d. Graduate and Above	02	06.90	01	05.30		
5. Occupation	a. Unemployed	21	72.40	15	78.90	3.258	0.516
	b. Daily labour	02	06.90	03	15.80		
	c. Private employee	02	06.90	00	00.00		
	d. Government Employee	03	10.30	01	05.30		
	e. Self employed	01	03.40	00	00.00		
6. Income	a. No income	21	72.40	16	84.20	1.266	0.737
	b. Up to Rs 5000	05	17.20	02	10.50		
	c. Rs 5,001 - Rs10,000	02	06.90	01	05.30		
	d. Rs 10,001 - Rs15,000	01	03.40	00	00.00		
	e. Rs 15,001 - Rs20,000	00	00.00	00	00.00		
	f. Above Rs20,000	00	00.00	00	00.00		
7. Marital status	a. Unmarried	06	20.70	02	10.50	1.69	0.793
	b. Married	05	17.20	03	15.80		
	c. Widow	14	48.30	10	52.60		
	d. Widower	01	03.40	02	10.50		
8. Residence	a. Rural	14	48.30	16	84.20	8.938*S	0.011
	b. Urban	10	34.50	00	00.00		
	c. Semi urban	05	17.20	03	15.80		

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9.	Number of Children	a. No	16	55.20	10	52.60	0.431	0.934
		b. 1-2	06	20.70	03	15.80		
		c. 3-4	02	06.90	02	10.50		
10	Residing status	a. Alone	24	82.80	16	84.20	0.017	0.895
		b. Husband and wife	05	17.20	03	15.80		
11	Co-morbidity	a. Yes	15	51.70	08	42.10	0.426	0.514
		b. No	14	48.30	11	57.90		
12	Duration of stay	a. <1	08	27.60	03	15.80	2.14	0.544
		b. 1-2	13	44.80	12	63.20		
		c. 3-4	07	24.10	04	21.10		
		d. >4	01	03.40	00	00.00		
13	Family history of psychiatric illness	a. Yes	00	00.00	00	00.00	1.057	0.304
		b. No	26	89.70	15	78.90		
		c. Unknown	03	10.30	04	21.10		
14	Type of family	a. Nuclear	06	20.70	09	47.40	5.202	0.074
		b. Joint	16	55.20	09	47.40		
		c. Extended	07	24.10	01	05.30		

rural area, 54.2% did not have any offspring and 52.1% of the elderly were from joint family system. The above figure depict that at the pre test all the elderly were having mild depression after 16 weeks of yoga therapy 60% of the elderly became free from depression. The above table shows that the pre test mean is 12.79 (1.81) and the post test mean is 8.60 (2.92), at the same time the paired 't' value 11.61, $P < 0.001$ predict that there is significant difference in the level of depression among elderly before and after the yoga therapy. It shows that yoga therapy had significant impact on reducing the level of depression.

DISCUSSION

The study assessed the outcome of 16 weeks of yoga therapy on geriatric depression. Sum of 48 elderly were utilized, both pre test and post test was done using Geriatric Depression Scale. Hatha yoga was given for the period of 16 weeks. Result of the study was drawn. The first objective assessed the level of depression before intervention. At the pre test all the elderly had mild depression, the mean score was 12.79(1.81). The finding of the study comparable to the study undertaken by Rajan 2013, his study reported that around 47 % of the elderly in the old age home were depressed. In another study 2014 Kajal reported that 60% of the elderly inmates in the old age home were depressed. The second objective assessed the post test depression level of the elderly, which showed that 60% of the elderly were normal after 16 weeks of yoga therapy. The mean score was 8.6 (2.9) which showed after yoga therapy the depression mean score was significantly reduced. The study finding was comparable to the study conducted by Mencacci et al 2015. The study reported that yoga therapy significantly reduce the elderly depression. The third objective compared the pre and post test level of depression. The pre test mean was 12.79 and the post test mean was 8.6 and the paired 't' value 11.6 with $P < 0.001$ level, this showed that there is significant differences between pre and post test depression score. The finding is comparable with the study under taken by the Bhavanani et al 2017, the comparative study proved the effect of 12 weeks yoga therapy on the level of geriatric depression.

Conclusion

The study evaluated the 16 weeks of yoga therapy for old age depression. Yoga therapy had significant impact on the old age depression. Elderly area of residence had significant influence in the depression level.

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