



RESEARCH ARTICLE

EFFECTIVENESS OF “HORTICULTURAL ACTIVITY” ON DEPRESSIVE SYMPTOMS AMONG OLDER ADULTS

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Abstract

Background: Mental disorders such as depressive symptoms are widespread, often underdiagnosed, and usually inappropriately treated. The early recognition of factors that may promote depressive symptoms with the help of depression screening aid can help to plan better care for the patient. Therefore, this study aimed to assess the depressive symptoms and the effectiveness of horticulture activity to reduce depressive symptoms among older adults in selected old age homes, Dehradun Uttarakhand.

Objectives: To determine the effectiveness of horticulture Activity on depressive symptoms among older adults in the experimental group.

Methodology: Quasi-experimental approach with a non-randomized control group design was used in the study Non-probability purposive sampling technique was used to collect data, 60 older adults in the age group 60 or above were selected for the study. The subjects were given horticulture activity for approximately 45 minutes once a day for 14 days. Pre-test and Post-test were conducted by using Socio-Demographic Data, and Geriatric Depression Scale. Both descriptive and inferential statistics were used to assess the data.

Result: The result revealed that horticulture activity are effective in reduced the depressive symptoms. In experimental group the outcome 't' value was 18.41 (significant at $p \leq 0.05$) and control group 't' value was 3.15 (Significant at $p \leq 0.05$). No significant association between the score of Geriatric Depression Scale in experimental group and control group.

Conclusion: This study concluded that pranayama is effective in reducing depressive symptoms among older adults.

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Introduction:-

Chapter-I

Depression is a serious mental illness in the society. The word depression is used to describe a mood, symptom or syndrome. It can be characterized by intensity as mild, moderate and severe. Depression in elderly may be triggered by adverse life events including bereavement, loss of health, threat to bereavement and loss of health in loved ones

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and the factors which trigger the risk of depression in the elderly include being female, being single, unmarried, divorced or widowed, lack of supportive social network and stressful life event.

There are many techniques such as yoga, meditation, music therapy, laughter therapy, horticulture activities etc. used in reduction of depressive symptoms among older age people. Horticulture activities is one of the vital intervention in reduction of depressive symptoms in old age people. In terms of scale, horticulture falls between domestic gardening and field agriculture, though all forms of cultivation naturally have close links. The researcher found that horticulture activity may reduce the depressive symptoms. Acc. to WHO 2020, Depression is a common illness worldwide, with an estimated 3.8% of the population affected, including 5.0% among adults and 5.7% among adults older than 60 years. WHO's Mental Health Action Plan 2013-2030 highlights the steps required to provide appropriate interventions for people with mental disorders including depression.

Methodology:-

The research design selected for the present study was Quasi-experimental design (Pre-test and post-test design). The sample size consist of 60 older adults (30 in experimental group and 30 in control group) residing in the selected old age homes, Dehradun, Uttarakhand.

Section A – Demographic variables

Demographic variables- Structured questionnaires were used to elicit demographic variables such as age, gender, marital status, educational status, occupation history, and frequency of visit by family members, history of illness, are you taking medicine continuously, duration of stay in the old age home.

Section-B- Geriatric Depression Scale (GDS) by JA Yesavage

The Geriatric Depression Scale consists of 30 items which has YES / NO answers and is widely used in screening among the older adults population. The reliability of the tool was established by using test-retest method. (Karl Pearson co-efficient of correlation method). The main study was conducted to from 25 June 14 July 2023 at selected old age home Dehradun among depressive symptoms older adults by purposive sampling techniques.

Statistical Analysis

Table 1:- Distribution Of Elderly According To The Sociodemographic Variables N=60

S.NO	VARIABLES	FREQUENCY	%	FREQUENCY	%
1	AGE (in year)				
	a) 61-65	20	66.7	16	53.3
	b) 66-70	4	13.3	10	33.3
	c) 71-75	4	13.3	3	10
	d) 76-80	1	6.7	1	3.3
2	Gender				
	a) Male	7	23.3	8	26.7
	b) Female	23	76.3	22	73.3
3	Marital status a)				
	Married	14	46.7	17	56.7
	b) Widow/widower	12	40	10	33.3
	c) Divorced/ Separated	4	13.3	3	10
4	Educational status				
	a) Non formal education	23	76.3	22	73.3
	b) Primary education	6	20	6	20
	c) Secondary education	1	3.3	2	6.7
5	Do your family member visit you				
	a) Yes				
	b) No if yes duration of visit family member	12	40	14	46.7
	i) 6 months	18	60	16	53.3
	ii) 12 months	7	58.3	6	42.9
		5	41.7	8	57.1

6	History of illness a) Medical b) Surgical c) No any history of illness	23 3 4	76.7 10 13.3	20 5 5	66.7 16.7 16.6
7	Are you taking medication continuously a) Yes b) No if yes i) Diabetes ii) BP	10 20 6 4	33.3 66.7 60 40	18 12 10 8	60 40 55.6 44.4
8	Duration of stay in old age home (in years) a) 1-3 b) 4-6 c) 7-9 d) 10-12	8 16 3 3	26.7 53.3 10 10	10 13 4 3	33.4 43.3 13.3 10

Section II

Table 2:- Frequency and Percentage Distribution of Older Adults According to Their Level of Depressive Symptoms. N=60

	Experimental group						Control group					
	Normal		Mild depressive symptoms		Severe depressive symptoms		Normal		Mild depressive symptoms		Severe depressive symptoms	
	F	%	F	%	F	%	F	%	F	%	F	%
Pre test	0		23	38.3	7	11.6	0		27	43.3	3	10
Post test	20	33.3	10	16.6	0		2	6.66	27	48.3	1	3.33

Experimental group

In pre-test 23(38.3%) of the older adults were having mild depressive symptoms, 7(11.6%) of them were having severe depressive symptoms, none of them were having normal depressive symptoms. In post-test after receiving the horticulture activity, 20(33.3%) of the older adult were normal, 10(16.6%) of the older adults were having mild depressive symptoms.

Control group

In pre-test 27(43.3%) of the elders were having mild depressive symptoms, 3(10%) of them were having severe depressive symptoms, none of them were having normal depressive symptoms. In post-test after receiving the horticulture activity, 2(6.66%) of the older adult were normal, 27(48.3%) of the older adults were having mild depressive symptoms and 1(3.33%) of the older adults were having severe depressive symptoms.

Section III

Table 3:- Comparison of pre and post- test level of depression among older adults between experimental and control group.

	GROUP	MEAN	SD	MD	df	Unpaired T- test	TABULATED VALUE
PRE-TEST	Experimental group	15.17	3.42	1.14	58	1.4588	1.672
	Control group	14.03	2.53				
POST-TEST	Experimental group	10.06	2.97	3.34	58	4.5690	1.672
	Control group	13.40	2.67				

** Highly significant at P value <0.001

Analysis revealed that the mean value was 15.17 with standard deviation 3.42 of pre-test level of depression in experimental group and the mean value was 10.06 with standard deviation 2.97 of post-test level of depressive symptoms in experimental group. The 't' value projects 22.7 with p value 0.001 which was highly significant between pre-test and post-test level of depression in study group. (Table 4)

Table 4:- Comparison of mean and standard deviation of pre and post -test level of depression among older adults in experimental group. N=60

	MEAN	SD	MD	df	PARIED t TEST	TABULATED VALUE	P value
Pre test	15.17	3.42	5.11	29	18.41	2.045	0.0001***
Post test	10.06	2.97		29			

** Highly significant at P value <0.001

Whereas in control group the mean value was 14.03 with standard deviation 2.53 of pre-test level of depression and post-test mean value was 13.40 with standard deviation 2.67. The 't' value projects 3.15 which was statistically not significant indicates that there is no significant difference between the pre and post-test level of depression among older adults in the control group. (Table 5)

Table 5:- Comparison of pre and post-test level of depressive symptoms among older adults between post-test control group N=30+30

	MEAN	SD	MD	df	PARIED t TEST	TABULATED VALUE	P VALUE
Pre test	14.03	2.53	0.63	29	3.15	2.045	0.003**
Post test	13.40	2.67		29			

** Highly significant at P value <0.001

The analysis revealed that there is a statistical significant association between the post-test scores with selected demographic variables such as sex (p=0.08), religion (p=0.03), marital status (p=0.04) and number of children (p=0.03). It was found that there is no significant difference on relieving depression in different age groups, educational status, monthly income, previous occupation, and visit by family members, duration of stay in the old age home and reason for joining (Table 6).

Experimental group

N=30

Table 6.1:- Association of post-test level of depression among older adults with their demographic variables in experimental group.

Demographic variables		Level of symptoms	depressive	Chi square/ Yats	df	P value
		Mild depression	Severe depression			
Age (in years)	61-65	16	4	3.727	3	0.293
	66-70	4	0			
	71-75	2	2			
	76-80	1	1			
Gender	Male	6 17	1	Y=0.01	1	0.892
	Female		6			
Marital status	Married	9	5	2.71	2	0.27
	Widow/widower	11	1			
	Divorced/separated	3	1			
Educational status	Non formal education	17	6	0.55	2	0.75
	Primary education	5	1			
	Secondary education	1	0			
Do your family member visit you	Yes	10	2	Y=0.070	1	0.792
	No	13	5			
History of illness	Medical	17	6	1.01	2	0.60
	Surgical	3	0			

	No any history of illness	3	1			
Are you taking medication continuously	Yes No	8 15	2 5	Y=0.00	1	1.00
Duration of stay in old age home (in years)	1-3 4-6 7-9 10-12	7 12 3 1	1 4 0 2	4.61	3	0.20

Table 6.2:- Association of post-test level of depression among older adults with their demographic variables in control group.

Demographic variables		Level of symptoms	depressive	Chi square/Yats	df	P value
		Mild depression	Severe depression			
Age (in years)	61-65	15	1	1.80	3	0.61
	66-70	8	2			
	71-75	3	0			
	76-80	1	0			
Gender	Male	6	2	Y=0.92	1	0.33
	Female	21	1			
Marital status	Married	15	2	0.39	2	0.88
	Widow/widower	9	1			
	Divorced/separated	3	0			
Educational status	Non formal education	21	1	4.57	2	0.10
	Primary education	4	2			
	Secondary education	2	0			
Do your family member visit you	Yes	12	2	Y=0.01	1	0.90
	No	15	1			
History of illness	Medical	18	2	1.11	2	0.57
	Surgical	4	1			
	No any history of illness	5	0			
Are you taking medication continuously	Yes	16	2	Y=0.00	1	1.00
	No	11	1			
Duration of stay in old age home (in years)	1-3	9	1	4.25	3	0.23
	4-6	13	0			
	7-9	3	1			
	10-12	2	1			

Control group

N=30

Discussion:-

In the present study, it was observed that decreased depressive symptoms score after giving intervention that means depressive symptoms was improving after intervention in this study. Result of study revealed that Horticulture activity was found effective in reducing depressive symptoms with $t=18.41$ value at $p = 0.0001$. After 14 days of Horticulture activity MD was found 5.11(experimental group) and $t=3.15$ value at $p=0.0037$. after 14 days of horticulture activity MD was found 0.63(control group). Related research study conducted old age home in madurai, on 40 subject (elderly) in reduction of depressive symptoms. Non-probability purposive sampling technique is used. One group pretest and post-test design is used by researcher. Mean difference 2.62. The result

reveals that after the administration of “horticulture therapy” the level of depression among elderly were significantly reduced.

Limitation of the study

There was difficulty in providing horticulture activity to the older adults at the same time because of their mood swings.

Conclusion:-

The results of the present study demonstrated that there was significant effects of horticulture activity on depressive symptoms among older adults. This intervention has reduce depressive symptoms. A significant deference was observed in experimental group after the intervention. As the intervention reduce the depressive symptoms of older adults, it can be recommended that this intervention will reduce the depressivesymptoms.

Reference:-

- 1 Depressive disorder (depression) [Internet]. [cited 2024 Jan 3]. Available from: <https://www.who.int/news-room/fact-sheets/detail/depression>
- 2 horticulture summary | Britannica [Internet]. [cited 2024 Jan 3]. Available from: <https://www.britannica.com/summary/horticulture>
- 3 Horticulture | Definition, Types, Techniques, & Uses | Britannica [Internet]. [cited 2024 Jan 3]. Available from: <https://www.britannica.com/science/horticulture>
- 4 “25% elderly population depressed” | India News - Times of India [Internet]. [cited 2024 Jan 3]. Available from: <https://timesofindia.indiatimes.com/india/25-elderlypopulation-depressed/articleshow/11855168.cms>
- 5 A Study to Assess the Effectiveness of Horticulture Therapy on Depression among Institutionalized Elderly in Selected Old Age Homes, Kancheepuram. 2016;2(1).