

Research & Reviews: Journal of Nursing & Health Sciences

A Study to Assess the Effectiveness of Horticulture Therapy on Depression among Institutionalized Elderly in Selected Old Age Homes, Kancheepuram

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Research Article

Received date: 19/06/2015

Accepted date: 05/02/2016

Published date: 12/02/2016

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Keywords: Horticulture therapy, Depression, Social network, Mental health.

ABSTRACT

The main aim of the study was to assess the effectiveness horticulture therapy on depression among institutionalized elderly in selected old age homes, Kancheepuram District. Quasi experimental, pretest post-test design was adopted. The study was conducted with 140 (70 in study group and 70 in control group) elderly with mild depression using purposive sampling technique. There is a statistically highly significant ($p= 0.001$) difference between pre and post-test in the study group There was a statistically significant association between the post-test level of depression among elderly with their selected demographic variables such as sex ($p= 0.08$), religion ($p=0.03$), marital status ($p=0.04$) and number of children ($p=0.03$) in study and control group. There was no association found with other variables such age, educational status, monthly income, previous occupation, visit by family members, duration of stay in the old age home and reason for joining in study and control group.

INTRODUCTION

Depression is a serious medical problem 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 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.

The prevalence of depression varies throughout the world. The lowest rates are reported in Asian and Southeast Asian countries. Percentages represent the life time chance that a person will experience a depressive episode that lasts a year or more. Taiwan reports less than 2% and Korea 3%. Western countries typically report higher rates, such as Canada 7%, New Zealand 11%, France 16% and United States has rate of 6%. Also countries plagued by protracted civil war, such as Bosnia and Northern Ireland report higher rates of depression ^[1].

According to Ankur Barua et al. Community-based mental health studies have revealed that the point prevalence of depressive disorders in the elderly population of the world varies between 10% and 20%, depending on cultural situations ^[2]. A retrospective study to determine the median prevalence rates of depressive disorders in the world for the elderly population was 10.3%.

According to Stephanie Faris the World Health Organization considers depression the fourth leading cause of disability worldwide ^[3]. Depression alone impacts one in five elderly people in the UK. Worldwide, women are about twice as likely to experience depression as men. Countries with the highest lifetime prevalence of Major Depressive Episodes (MDE) are France, the Netherlands, the United States (each with over 30% of the population ever experiencing an MDE), and India (36%). High-income countries together average 28.1%, and low- and middle-income countries average 19.8% in prevalence of a lifetime MDE.

The National Institute of Mental Health suggests that major depression is a significant predictor of suicide in older adults. Unlikely, it is widely under recognized and undertreated by the medical community ^[4]. The NIMH states numerous studies have

found that many older adults pass on by suicide up to 75% have visited a primary care physician with in a month of their suicide. These findings point to the hurry of enhancing both the detection and the adequate treatment of depression as a means of reducing suicide risk among older adults.

Swarnalatha N, prevalence of depression among the rural elderly in Chittoor District, Andhra Pradesh was 47.0%. The depression was high among the elderly who were aged 80 years and above (54.3%) [5].

Horticulture therapy is a typical part of the rehabilitation program at the regional health center run by the correctional services of Canada. A lot of persons benefit from these activities includes the elderly, mentally and physically disabled adult and children or other individual who might benefit from participating in horticulture activities. Plants and natural environment may improve human well-being by causing positive physiological and psychological responses, by affecting human behaviour or by modifying physical factors of the environment such as relative humidity of the air, Positive responses to plants are observed in perception of and also in perceived health status [6].

Statement of the problem

A study to assess the effectiveness of horticulture therapy on depression among institutionalized elderly in selected old age homes, Kancheepuram District.

Objectives

1. To determine the effectiveness of horticulture therapy on depression among elderly in study and control group.
2. To associate the post-test level of depression among elderly with their selected demographic variables in study and control group

METHODOLOGY AND MATERIALS

The research design selected for the present study was Quasi-experimental design (Pre-test and post-test design). The sample size consist of 140 elderly (70 in study group and 70 in control group) residing in the selected old age homes, Kancheepuram District. Informed consent was obtained from the study participants, after explaining the nature and duration of study. The ethical guidelines were followed throughout the study.

Development and Description of the tool

Section A – Demographic variables

Structured questionnaires were used to elicit demographic variables such as age, sex, religion, marital status, number of children, educational status, monthly income, previous occupation, and frequency of visit by family members, duration of stay in the old age home and reason for joining.

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 elderly population.

RESULT AND DISCUSSIONS

The collected data was analyzed with SPSS VERSION 11.5

Table 1 represents data pertaining to demographic variables of study and control group: With regard to age in study group, majority of them 24 (34.3%) were 71–75 age group and minority of them 12 (17.1%) were in 60–65 age group. Considering the control group, majority of them 24 (34.3%) were 71–75 age group and minority of them 14 (20.0%) was 60 – 65 age group.

Table 1. Frequency and percentage distribution of demographic variables with respect to elderly in study and control group.

Demographic variables		Study group (n=70)		Control group (n=70)		Chi square test
		no	%	no	%	
Age	60-65 years	12	17.1	14	20	$\chi^2=6.91$ p=0.07
	66-70	13	18.6	15	21.4	
	71-75	24	34.3	24	34.3	
	76-85	21	30	17	24.3	
Sex	Male	24	34.3	28	40	$\chi^2=6.9$ p=0.008
	Female	46	65.7	42	60	
Religion	Hindu	37	52.9	41	58.6	$\chi^2=4.5$ p=0.03
	Christian	33	47.1	29	41.4	

Marital status	Single	20	28.6	20	28.6	$\chi^2=8.17$
	Married	8	11.4	8	11.4	$p=0.04$
	Widower	29	41.4	29	41.4	
	Divorced	13	18.6	13	18.6	
Number of children	No children	50	71.4	43	61.4	$\chi^2=9.03$
	One child	4	5.7	10	14.3	$p=0.029$
	Two children	6	8.6	8	11.4	
	More than two children	10	14.3	9	12.9	
Demographic variables		Study group (n=70)		Control group (n=70)		Chi square test
		no	%	no	%	
	Primary school	21	30	21	30	$\chi^2=3.11$
	High school	13	18.6	13	18.6	$p=0.374$
	Higher secondary school	10	14.3	9	12.9	$\chi^2=3.11$
Monthly income	Nil	70	100	70	100	$p=0.374$
Previous occupation	Labour	26	37.1	32	45.7	$\chi^2=3.29$
	Business	12	17.1	10	14.3	$p=0.19$
	Unemployed	32	45.7	28	40	
Visit by family members	Never	70	100	70	100	
Duration of stay in the old age home	Zero to one year	22	31.4	20	28.6	$\chi^2=0.574$
	After one year till three years	16	22.9	20	28.6	$p=0.90$
	After three years till six years	24	34.3	20	28.6	
	After six years and above	8	11.4	10	14.3	
Reason for joining	No one to look after	62	88.6	59	84.3	$\chi^2=5.30$
	Forced by children	7	10	10	14.3	$p=0.07$
	Neglected by home	1	1.4	1	1.4	

With regard to sex in study group, majority of them 46 (65.7%) were females and minority of them 24 (34.3%) were male. Considering the control group, majority of them 42 (60.0%) were female and minority of them 28 (40.0%) were male. With regard to religion in study group, majority of them 37 (52.9%) were Hindu and minority of them 33 (47.1%) were Christian. Considering the control group, majority of them 41 (58.6%) were Hindu and minority of them 29 (41.4%) were Christian.

With regard to marital status in study group, majority of them 29 (41.4%) were widower and minority of them 8 (11.4%) were married. Considering the control group, majority of them 29 (41.4%) were widower and minority of them 8 (11.4%) were married.

With regard to number of children in study group, majority of them 50 (71.4%) had no children and minority of them 4 (5.7%) had one child. Considering the control group, majority of them 43 (61.4%) had no children and minority of them 8 (11.4%) had two children. With regard to educational status in study group, majority of them 26 (37.1%) were illiterates and minority of them 10 (14.3%) had their higher secondary school education. Considering the control group, majority of them 27 (38.6%) were illiterate and minority of them 9 (12.9%) were higher secondary school.

With regard to monthly income, there was no monthly income for the elderly residing in the old age home of different age group category both in the study and control group. With regard to previous occupation in study group, majority of them 32 (45.7%) were unemployed and minority of them 12 (17.1%) were in business. Considering the control group, majority of them 32 (45.7%) were labourers and minority of them 10 (14.3%) were in business.

With regard to visit by family members, there was no visit by family members for the elderly residing in the old age home of different age group category both in the study and control group. With regard to duration of stay in the old age home in study group, majority of them 24 (34.3%) were after three years till six years and minority of them 8 (11.4%) were after six years and above. Considering the control group, majority of them 20 (28.6%) were zero to one year, after one year till three years, after three years till six years and minority of them 10 (14.3%) were after six years and above. With regard to reason for joining in study group, majority of them 62 (88.6%) had no one to look after and minority of them 1 (1.4%) were neglected by home.

Table 2 represents the frequency and percentage distribution of pre and post-test level of depression among elderly in study and control group. The analysis depicted that 70 [100%] have mild depression after the pre-test in the study group and none of them have severe depression in study group. Similarly in control group 70 [100%] have mild depression after the pre-test and none of them have severe depression. The analysis depicted that 49 [70%] were normal, 21 [30%] had mild depression after the post-test in the study group and none of them have severe depression. Whereas in control group 70 [100%] had mild depression after the post-test and none of them had severe depression.

Table 2. Frequency and percentage distribution of pre and post test level of depression among elderly in study and control group.

	Study group (n = 70)						Control group (n = 70)					
	Normal		Mild depression		Severe depression		Normal		Mild depression		Severe depression	
	No	%	no	%	no	%	no	%	no	%	no	%
Pre test	0	0	70	100	0	0	0	0	70	100	0	0
Post test	49	70	21	30	0	0	0	0	70	100	0	0

The mean and standard deviation of pre-test level of depression among elderly in study and control group revealed that, the mean value 15.54 with SD 1.79 and the mean value of 15.54 with SD 1.79 projects 't' value as 0 which is statistically not significant. Whereas in post-test level of depression among elderly in study group and control group depicted that the mean value of 8.67 with SD 1.61 and the mean value of 15.50 with SD 1.73 projects 't' value as 24.18 which is statistically significant at $p=0.001$ level (**Table 3**).

Table 3. Comparison of pre and post test level of depression among elderly between study and control group.

		Mean	SD	Unpaired	P Value
				t Test	
Pre test	Study group	15.54	1.79	0	NS
	Control group	15.54	1.79		
Post test	Study group	8.67	1.61	24.18	$p<0.001^{**}$
	Control group	15.5	1.73		

** Highly significant at P value <0.001

Analysis revealed that the mean value was 15.54 with standard deviation 1.79 of pre-test level of depression in study group and the mean value was 8.67 with standard deviation 1.61 of post-test level of depression in study 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. Whereas in control group the mean value was 15.54 with standard deviation 1.79 of pre-test level of depression and post-test mean value was 15.50 with standard deviation 1.73. The 't' value projects 0.13 which was statistically not significant indicates that there is no significant difference between the pre and post-test level of depression among elderly in the control group (**Table 4**).

Table 4. Comparison of mean and standard deviation of pre and post test level of depression among elderly in study and control group.

	Study group (n = 70)					Control group (n = 70)			
	No	Mean	SD	Paired	P Value	Mean	SD	Paired	P Value
				t Test				t Test	
Pre test	70	15.54	1.79	22.7	0.001	15.54	1.79	0.13	NS
Post test	70	8.67	1.61			15.5	1.73		

** Highly significant at P value <0.001

NS - Not significant

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 5**).

Table 5. Association of post test level of depression among elderly with their demographic variables in study and control group (N=140).

Demographic variables		Depression level after		Chi square	P Value
		post test			
		Normal	Mild depression		
Sex	Male	12	12	$\chi^2=6.9$ df=1	0.08
	Female	37	9		
Religion	Hindu	30	7	$\chi^2=4.5$ df=1	0.03
	Christian	19	14		
Marital status	Single	16	4	$\chi^2=8.17$ df=3	0.04
	Married	8	0		
	Widower	19	10		
	Divorced	6	7		
Number of children	No children	38	12	$\chi^2=9.03$ df=3	0.03
	One child	1	3		
	Two children	2	4		
	More than two children	8	2		

df- Degrees of freedom

CONCLUSION

The study was done to assess the effectiveness of horticulture therapy on depression among institutionalized elderly in selected old age homes, Kancheepuram district for a period of four weeks at two selected old age home that were accommodating elderly. The findings revealed that the elderly living in the old age home were exposed to horticulture therapy had significant decrease in the post-test depression score and it was concluded that the horticulture therapy was found to be effective in reducing the depression level of institutionalized elderly in the old age home.

REFERENCES

1. Geneva Prevalence of depression. World Health Organization Report, 2013.
2. Ankur Barua and NilamadhabKar. Screening for depression in elderly Indian population. Indian Journal of Psychiatry. 2013;52:150-153.
3. Stephanie Faris. Depression Statistics. Medically reviewed by George Krucik. 2012;20-30.
4. The National Institute of mental health. Subsequent Treatment Strategies for Persistent Depression Yield Modest Results. 2006.
5. Swarnalatha N. The Prevalence of Depression among the Rural Elderly in Chittoor District, Andhra Pradesh. J Clin Diagn Res. 2013;7:1356-1360.
6. Fjeld T. The effect of interior planting on health and discomfort among workers and school children. Horticulture Technology. 2000;10:46-52.