

EFFECTIVENESS OF THE GARDENING THERAPY ON DEPRESSION AMONG OLD AGE

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ABSTRACT

Gardening is a remedial process in which plants and gardening activities are used to improve the body, mind, and spirits of old age people. Whenever individual involved in gardening activity that gives pleasure, reduces stress and restores the physical and emotional balance. A quasi-experimental study to assess the effectiveness of gardening on depression among old age in selected old age homes at Bangalore. To assess the pre-test scores of depression among old age in selected old age homes. To assess the effectiveness of gardening by comparing pre test and post test scores in experimental group. To assess the effectiveness of gardening by comparing post test scores of experimental and control groups. To determine association between the pre-test level of depression and selected socio demographic variables. A quasi-experimental study, non equivalent control group pre test and post test design was selected for conducting the study with non-probability convenience sampling technique. Samples of 40 old age people above 60 years were selected from poor little sister old age home Bangalore. Modified geriatric depression scale was used to collect the data. The duration of the study was one month. The result of the study revealed that, majority of the participants fall in the category of Moderate depression. Out of the total 40 samples, in pre test 85% of the experimental group and 90% of control group were belongs to moderate level of depression. 15% of experimental group and 10% of control group subjects had severe level of depression. Post-test had normal depression 5% in experimental group. 90% of experimental group and 90% of control group subjects had moderate depression. 5% of experimental group and 10% of control group subjects had severe level of depression. The mean of the pre-test of experimental and control group subjects is 13.6 and 14.7 respectively. Post-test mean of the experimental group and control group subjects is 11.6 and 14.7 respectively. The calculated paired “t” value of experimental group is 8.89 which found to be statistically significant when compared to table value(df(19)= 2.861 at $p \leq 0.01$, level of significance. There is significant difference between the post-test scores of experimental group and control group with student ‘t’ value 3.13 which was significant at $P < 0.01$ level. The study indicated that plants can be a source of a joy and tranquillity for some residents in institutional settings. It was suggested that particularly in the case of the depressed elderly a garden environment provides aesthetic pleasure and may arouse positive affects. The result that seeing the plants may enhance the mood of the elderly and that green environment can be used in emotion regulation, emphasizes the importance of visual access to a green environment which should be made available to the residents in institutional living.

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INTRODUCTION

A human life is divided into five main stages namely infancy, childhood, adolescence, adulthood and old age. In 2009, the global population of people aged 60 and over was 680 million people, representing 11 percent of the world's population [1]. In India 2011 census projections indicate that elderly population has crossed the

100 million mark. It took more than 100 years for the aged population to double in most of the countries in the world, but in India it has doubled in just 20 years [2]. As older population increasing new generation have less attachment with their old age people as modern families are disintegrating into nuclear family. Thus new generation thinks old age people as burden of their life and they send



them to old age home [3]. In old age homes, they may have many negative experiences such as loss of autonomy, self esteem, and insomnia, sense of restlessness, loneliness, hopelessness and helplessness [4]. Depression is common among the old age as they stay in the old age homes for a longer period. According to 2011 census Depression affects 121 million people in worldwide. At its most severe depression can lead to suicide and is responsible for 850,000 deaths every year. Depression affects 36% population in India [5]. Prevention is better than cure and same applies for depression prevention, Some important ways to deal with depression includes sticking to balance diet, proper exercise, adequate sleep, relaxation, thinking positively, keeping oneself occupied and engaged as much as possible in recreational activity like listening music, watching TV, working in garden [6]. Gardening therapy is a remedial process in which plants and gardening activities are used to improve the body, mind, and spirits of old age people. Whenever individual involved in gardening activity that gives pleasure, reduces stress and restores the physical and emotional balance [7].

METHOD

The research design selected for present study was Nonequivalent control group Pre test- post-test design. This is a quasi experimental design.

Experimental group	O1	x	O2
Control group	O ₁		O ₂

Where in: O1: pre test O2: post test X: Intervention Variables

Independent variables: Gardening

Dependent variable: Depression.

Attribute variables

Age, gender, marital status, educational status, previous occupation status, type of family, presence of physical illness, presence of any recent loss, source of income, financial loss, level of social activity, activity control, respect towards them.

Setting of the study

The study was conducted at poor little sister old age home at Bangalore.

Population

The accessible population of the study included the old age people with depression at selected old age home Bangalore.

Sample size

40 old age people, 20 in experimental group and 20 in control group

Sampling technique

Non probability convenience sampling technique was used to select 40 old age people who fulfill the selection criteria.

Inclusion criteria

Old age people above 60 years willing to participate in the study

Exclusion criteria

Old age people who are not available at the time of the study and old age people who are physically handicapped

Description of the tool

After an extensive review of literature, discussion with the experts and with the investigators personal experience, socio demographic profile and modified depression scale was developed. The tool comprised of two sections.

Section A: Socio-demographic data

Socio demographic Performa which includes age, gender, marital status, educational status, previous occupation status, type of family, family monthly income, presence of physical illness, presence any recent loss, source of income, financial loss, level of social activity.

Section B: Modified Geriatric Depression Scale

After an extensive review of literature, discussion with the experts and with the investigators personal and professional experience, Modified Depression Scale was developed. Modified Geriatric Depression Scale: Consisted of 30 items.

Interpretation

As the score increases the level of depression increases that is scale rang from

0-9: Normal

10-19: Moderate depression

20-30 Severe depression

Maximum score is 30 and minimum score is 0

Data collection procedures

Formal permission was obtained from old age home authority to conduct study. Subjects were selected by convenient sampling technique and were assigned to experimental group. Investigator explained about self and the purpose of study. Written consent was taken from the participants. Anonymity and confidentiality was maintained. On 22-11-2011 pre test was conducted to all the 20 subjects. The original tool was interview technique for collecting the data and student researcher took about 5 minutes for each subject to collect the data. The intervention was given to 20 subjects in the experimental group for 3 times a week for 4 week continuously. Post-test was conducted on both the experimental and control group on 16-12-2011.



Data analysis

The data obtained are analysed in terms of the objective of the study using appropriate descriptive and inferential statistics.

Descriptive statistics

In descriptive statistics frequency, mean, mean percentage and standard deviation used.

Inferential statistics

The paired_‘t’ test used to find the difference in the pre and post test scores of depression in experimental group. The Independent_‘t’ test used to find the difference between the post test score of experimental group and control group. The chi square test used to find the association between the pre-test level of depression and selected socio demographic variable.

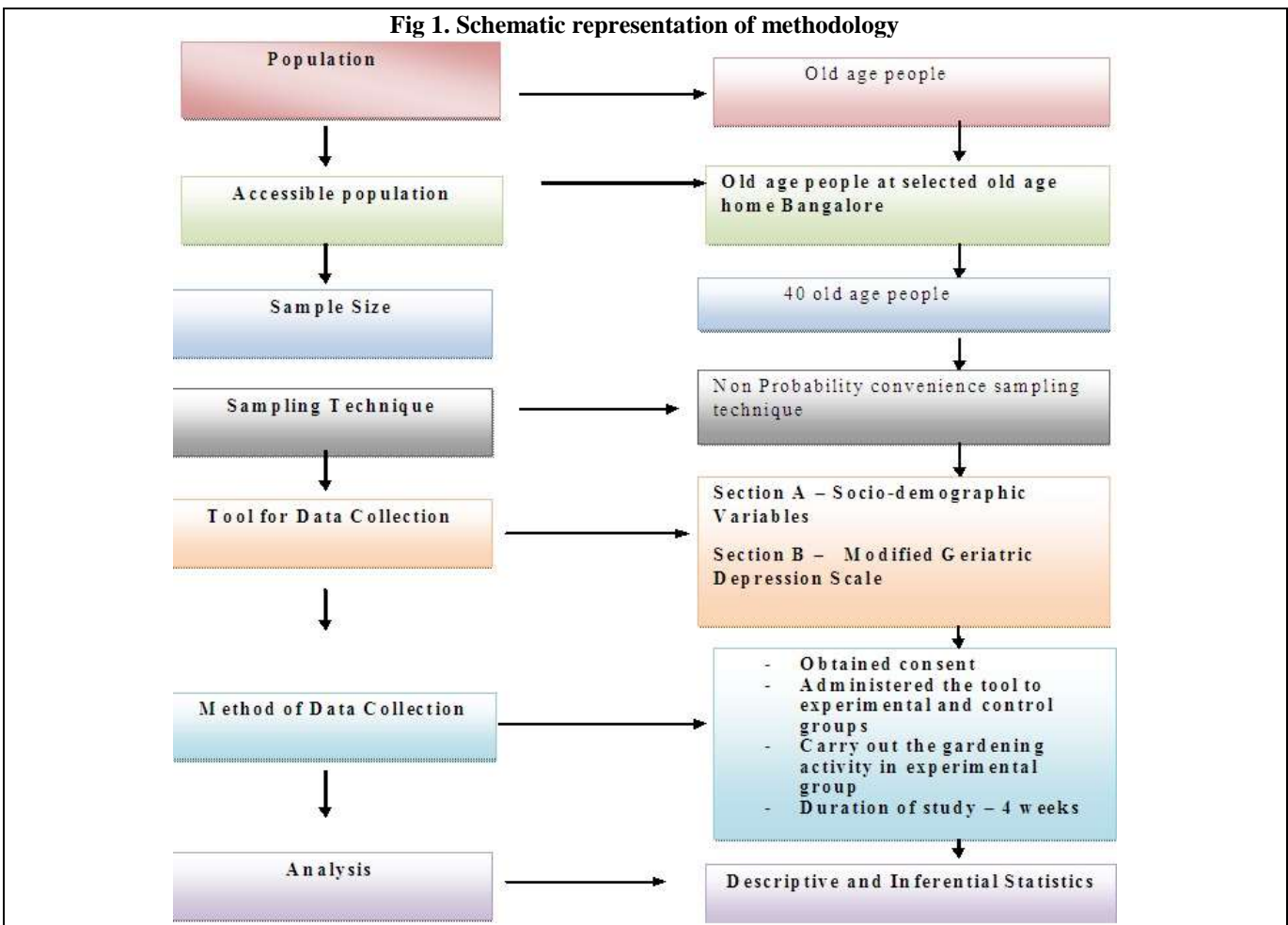
RESULTS

Objective 1: Pre-test level of depression in control and experimental group

Objective 2: Effectiveness of gardening therapy by comparing pre test and post test scores in experimental group.

Table1. Shows that calculated‘t’ (8.89) is greater than the table value (df₍₁₉₎ =2. 861 at p≤0.01) in experimental group which is found to be statistically significant. The calculated‘t’ value (3.13) is greater than the table value (df₍₃₈₎ =2.704at p≤0.01) in experimental and control groups which is found to be statistically significant. Chi-square shows that there is no statistically significant association between pre rest levels of depression with selected socio demographic data except for previous place of stay.

Table 2: shows that there is significant difference between the post-test scores of experimental group and control group with student_‘t’value 3.13 which was significant at P < 0.01 level. Hence H02 null hypotheses stated as there is no significant difference between post test level of depression between experimental and control group was rejected and restated as there is significant difference between post test level of depression between experimental and control group.



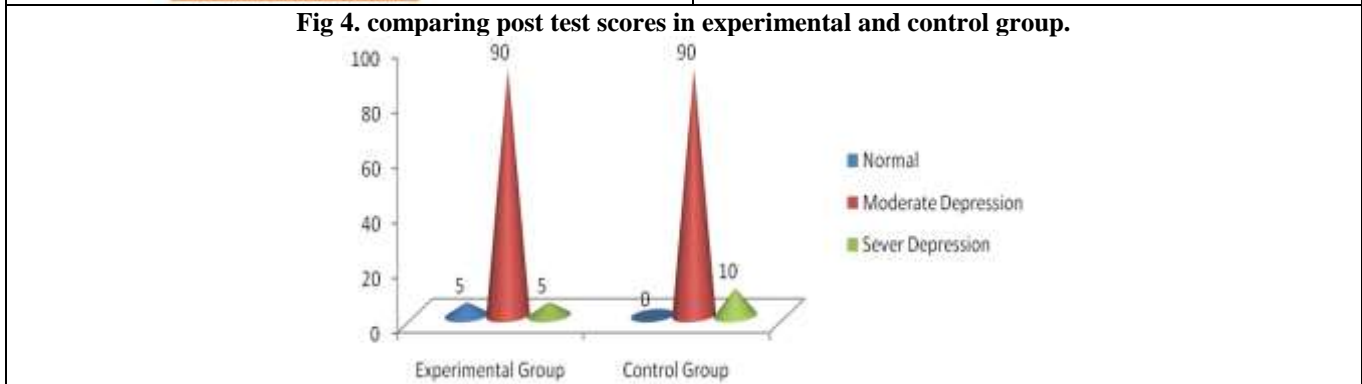
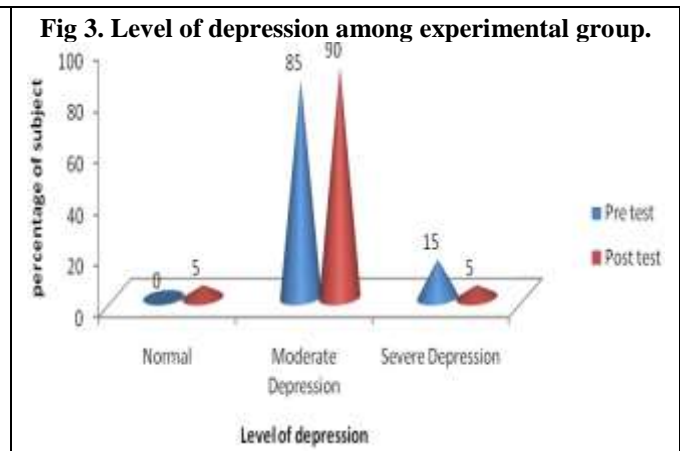
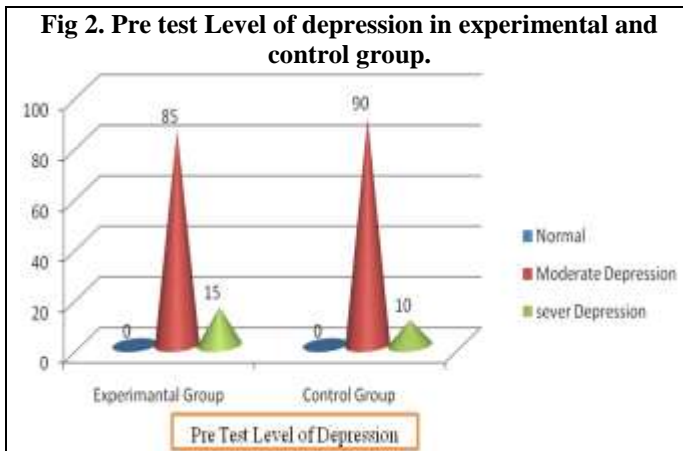


Table 1. Comparison of pretest and posttest scores of depression in experimental group n =20

SI No	Group	Pre test		Post test		“t” value	Remarks
		Mean	SD	Mean	SD		
1	Experimental group	13.6	3.515	11.6	2.86	8.89 df(19)	S

NS=not significant S=significant df (19) =2.861 at p≤0.01.

Table 2. Comparison of post test scores of depression between experimental and control groups

SI No	Group	Post test		Student “t” value	Remarks
		Mean	SD		
1.	Experimental group	11.6	2.86	3.13 df (38)	S**
2.	Control group	14.7	2.77		

S**=significant. t= 3.13 df (38) =2.704, p ≤ 0.01.

DISCUSSION

Study findings revealed that in pretest 85% of the subjects in the experimental group had moderate level of depression, 15% had severe level of depression and in control group 90% of the subjects had moderate level of depression, 10% had severe level of depression. Pretest score Mean experimental group is 13.6, standard deviation of 3.515 which shown that patients in experimental group has moderate depression.

Findings of the study revealed that the mean of the pre-test of experimental and control group is 13.6 and 14.7 respectively. Post-test mean of the experimental group and control group is 11.6 and 14.7 respectively. The calculated paired t’ value of experimental group was 8.89 which is greater than table value at P < 0.01, (df(19)=

2.861) level of significance. Hence H01 null hypotheses stated as there is no significant difference between pre test and post test level of depression in experimental group was rejected thus it is evident that there is significant difference between pre-test and post-test level of depression in the experimental group.

Effectiveness of gardening therapy was assessed by comparing the post test scores of experimental and control groups and the calculated student t’ value 3.13 which was significant at P < 0.01 level. Hence H02 null hypotheses stated as there is no significant difference between post test level of depression between experimental and control group was **rejected** and it’s evident that there is significant difference between post



test level of depression between experimental and control groups.

In order to determine the significant association of pre test depression level with selected socio-demographic variables, chi-square test was used. There is no statistically significant association was found between socio demographic variables except previous place of stay and pre test level of depression, hence the null hypothesis **H03** stated as there is no significant association between the pre test level of depression and selected socio demographic variables was rejected

CONCLUSION

The study indicated that plants can be a source of a joy and tranquillity for some residents in institutional settings, particularly in the case of the depressed old age people a garden environment provides aesthetic pleasure and may arouse positive affects. The result that seeing the plants may enhance the mood of the elderly and that green environment can be used in emotion regulation, emphasizes the importance of visual access to a green environment which should be made available to the residents in institutional living.

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STATEMENT OF HUMAN AND ANIMAL RIGHTS

All procedures performed in human participants were in accordance with the ethical standards of the institutional research committee and with the 1964Helsinki declaration and its later amendments or comparable ethical standards. This article does not contain any studies with animals performed by any of the authors.

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CONFLICT OF INTEREST

No interest

