

# A STUDY TO ASSESS THE EFFECTIVENESS OF NEUROBIC EXERCISE PROGRAM ON MEMORY AND DEPRESSION AMONG ELDERLY PEOPLE RESIDING AT SELECTED OLD AGE HOME

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## Abstract

**Objective:** This study aims to explore effectiveness of neurobic exercise program on memory and depression among elderly people residing at selected old age home. **Methods:** A Pre-Experimental One group Pre Test Post Test design and based on Purposive Sampling Technique 100 elderly people at selected old age home. **Result:** The folks who are all residing within side the vintage age domestic they began out to be by myself dealing with a few one of a kind troubles alike each daily activates and that they now no longer anticipating any helping for his or her needs. The neurobic exercises program are specially to enhance their reminiscence that assist to enhance each daily activity in order that they're melancholy degree become reduced. **Conclusion:** According to the results of the current study, neurobic exercise is beneficial to elderly patients' daily activities, levels of depression and memory. This is especially true for those who reside in old age homes.

**Keywords:** Neurobic Exercise, Depression, Memory Impairment, Old Age People.

## 1. INTRODUCTION

### “Ageing is Just another Word for Living - Cindy Joseph”

At the organic maturing results from the effect of the gathering of a wide assortment of sub-atomic and cell harm over the long run. This prompts a progressive reduction in physical and intellectual ability, a developing gamble of sickness. An expansion in age alludes to ages approaching the future of people. Mental wellbeing the capacity to obviously think, learn, and recall is a significant part of performing ordinary exercises. Mental wellbeing is only one part of in general mind wellbeing. Practice is one of the extra making circulatory framework and working on the mental capability. Neurobic practice is an extraordinary an in practice which animates brain action that make more associations between various regions and makes nerve cells produce nonpartisan and supplements called neurotrophins. By and large, neurobics makes the mind more portable and versatile, permitting it to confront any psychological test, including memory, task execution, or inventive reasoning. A Neurobic practice program could incorporate exercises like smelling various flavors and flavors, paying attention to various types of music, or getting things done with the hand that isn't predominant. Exercises of this sort push the psyche in new and various ways, assisting with building new associations and versatility of the cerebrum. Neurobics is entirely unexpected from various types of brain work out, which generally incorporate reasoning riddles, memory activities, and single practice gatherings that seem to be tests. Everything considered Neurobic rehearses. The structure blocks of memory and

the underpinning of learning are relationship for example, interfacing a name to a face or a fragrance to a food.

According to WHO (2012) issues of brain and conduct are misjudged by medical care experts and by the average person, and the disgrace encompassing psychological maladjustment makes individuals hesitant to look for help. Albeit not many examinations have been finished in old matured individuals this could be first review which is performed on old matured individuals remaining in advanced age homes, a spot away from family members. There is a need to reinforce geriatric consideration administrations in the current general wellbeing so the rising consideration requests can be met and hence the scientist has chosen to furnish the old with the neurobic practice program (NEP) to decrease the memory weakness which will diminish reliance on others and will likewise further develop confidence this in a roundabout way lessens despondency.

## 2. PARTICIPANTS AND METHODS

**2.1. Participants in this study,** a purposive sampling method was used to select elderly people residing at selected old age home. Inclusion criteria: elderly people residing at selected old age home, age of 60 years are above 60 years' peoples was selected, both gender and voluntary participation in the study. Based on the sample size calculation total 100 elderly peoples were participated in the study. Regarding Gender most of them 68 were Male and 32 Were Female people. performing any exercises most of them 93 were no, 7 were says yes they doing a mild aerobic exercise.

**2.2. Data collection** was done with 3 section of tool. Section-A self-structure Demographic Variables, Section-B Geriatric Depression scale to measure the depression level and section- C Memory Complaint Scale measured the Memory impairment level. The data collection was done in the selected old age home at poonamallee. The objective of the study was explained to the founder chancellor, Manager and supervisor of the old age home. Adequate privacy was provided to the all the participants.

During the 1st visit, the researcher introduced herself and explained the purpose of the study and confirmed the willingness of the elderly people to participate in the study by getting consent from them as per the inclusion criteria. The demographic data was collected by structure questionnaire followed by pretest was conducted. All the participants received Neurobic Exercise Program by seeing, hearing, tasting, smelling, touching and emotional sense in combining two or more senses a day, with changing the daily routine regularly.

For example: having dinner before taking a shower or changing the places where they usually have their meals. 6 Neurobic Exercise was given on every 4 days continuously for 4 weeks by researcher. The researcher conducted the training session for 60 min per day. This study was approved by the institute ethics committee and confidentiality was maintained.

### 2.3. Data analysis

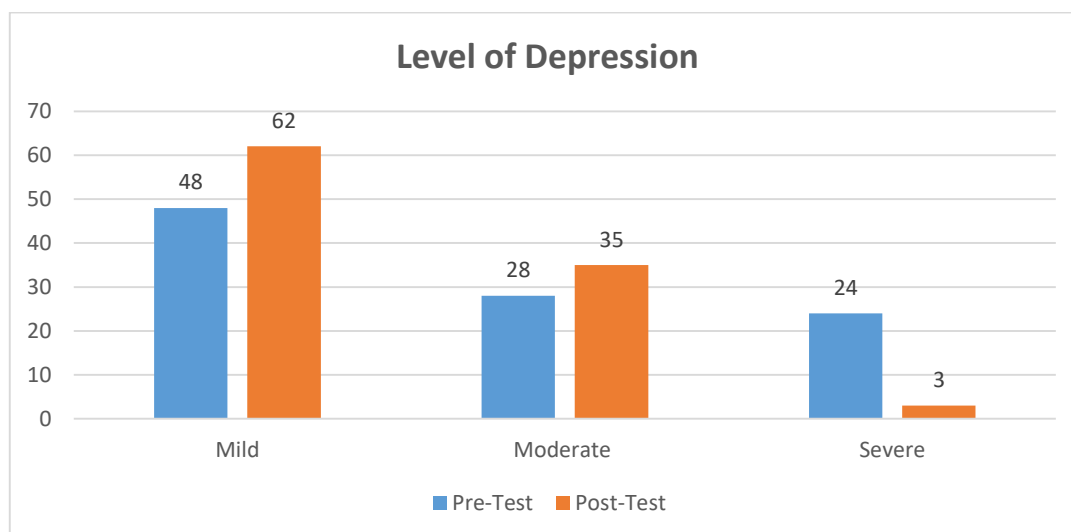
The collected data were coded and entered in Excel for further data analysis. The collected data were coded then descriptive statistics and inferential statistics were used for data analysis.

### 3. RESULTS

#### 3.1 Summary of demographic variables among elderly people.

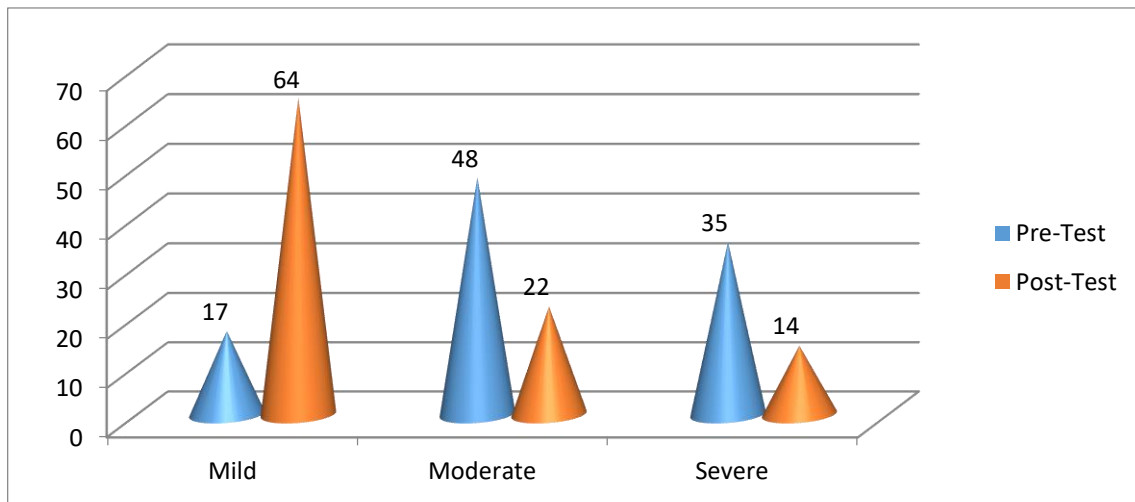
The data depicts that with respect to age, most of them 60-65 21 (21%) were aged 66-70 years, 26 (26%) were aged 71-75 years 30 (30%) and were aged above 76 Years 33 (33%). Regarding Gender most of them 68 (68%) were Male and 32 (32%) Were Female. The religion most of them 47(47%) were Hindus, 30 (30%) were Christians and 23(23%) were Muslims. With respect to education status most of them 42 (42%) were primary education 38(38%) were higher education, 20(20%) were illiterate and 10(10%) were degree. Regarding the occupation most of them 80(80%) were unemployed, 15(15%) daily wages, 5 (5%) were private sectors. With regards to income, most of them 13(13%) had a monthly income Rs.10000 toRs.15000, 5(5%) had a monthly income Rs.5000 to Rs.10000, 2(2%) had a monthly income Rs.15000 to Rs .20000, 80(80%) had a monthly income was nil. Regarding the Marital status most of them 87(87%) were married, 3(3%) were Unmarried and 5 (5%) divorce. Regarding the Diet most of them, 4(4%) were vegetarians, 96(96%) were Nonvegetarians. With regards performing any exercises most of them 93(93%) were no, 7(7%) were says yes.

#### 3.2 Percentage distribution of pre and posttest level of depression among elderly people.



**Figure 1: Percentage distribution of level of depression among elderly people**

The figure 1 shows that Pretest Level of Depression data revealed that 48(48%) had mild depression 28(28%) had moderate depression and 24(24%) had severe depression whereas in the post test, 62(62%) had mild depression, 35(35%) had moderate depression and 3(3%) had severe depression among elderly people.



**Figure 2: Percentage distribution of level of memory impairment among elderly people.**

The figure 2 shows that the Pretest Level of Memory loss data revealed that 17(17%) had mild memory impairment 48(48%) had moderate memory impairment, 35(35%) had severe memory impairment whereas in the post test, 64(64%) had mild memory impairment, 22(22%) had moderate memory impairment and 14(14%) had severe memory impairment among elderly people.

### 3.3 Effectiveness of Neurobic Exercise on Depression and Memory impairment among elderly people

**Table 1: Effectiveness of neurobic exercise on depression between Pre and Post Test. n=100**

Depression	Mean	S. D	Mean Difference & Percentage	Paired 't' test & p-value
Pre test	30.61	6.49	9.36 (32%)	t = 13.20 p=0.0001, S***
Post Test	21.25	5.07		

\*\*\*p<0.001, S – Significant

The table 1 depicts that the Effectiveness of neurobic exercise programme on depression between Pre and Post Test among elderly people. The finding reveals that Pre-Test mean and standard deviation score of depression was 30.61 ± 6.49. Whereas in the Post Test the mean and standard deviation score of depression was 21.25 ± 5.07. The calculated paired t value is t = 13.20\* It was found to be statistically significant at p=< 0.001 level. It indicates that neurobic exercise was significantly effective to decrease the level of depression among elderly people.

**Table 2: Effectiveness of neurobic exercise on memory impairment between Pre and Post Test. n=100**

Memory impairment	Mean	S.D	Mean Difference & Percentage	Paired 't' test & p-value
Pre test	17.70	5.89	7.17 (24.6%)	t = 10.22 p=0.0001, S***
Post Test	10.53	2.49		

\*\*\*p<0.001, S – Significant

The table 2 depicts that the Effectiveness of neurobic exercise programme on memory impairment and between Pre and Post Test among elderly people. The finding reveals that Pre-Test mean and standard deviation score of depression was 17.70 ± 5.89.

Whereas in the Post Test the mean and standard deviation score of depression was  $10.53 \pm 2.49$ . The calculated paired t value is  $t = 10.22^*$  It was found to be statistically significant at  $p < 0.001$  level. It indicates that neurobic exercise was significantly effective to improve the level of memory among elderly people.

**3.4 The Demographic variables** age group ( $X^2 = 2.28$ ) had statistically significant association with posttest level of depression on neurobic exercise among elderly people at  $p < 0.05$  level respectively. The demographic variables age group ( $X^2 = 1.54$ ) and Education ( $X^2 = 1.62$ ) had statistically significant association with posttest level of Memory on neurobic exercise among Geriatric people at  $p < 0.05$  level respectively and the other demographic variables had not shown statistically significant association with posttest level among elderly people.

#### 4. DISCUSSION

4.1 Effectiveness of neurobic exercise programme on depression between Pre and Post Test among elderly people. The finding reveals that Pre-Test mean and standard deviation score of depression was  $30.61 \pm 6.49$ . Whereas in the Post Test the mean and standard deviation score of depression was  $21.25 \pm 5.07$ . The calculated paired t value is  $t = 13.20^*$  It was found to be statistically significant at  $p < 0.001$  level. Effectiveness of neurobic exercise programme on memory loss and between Pre and Post Test among elderly people. The finding reveals that Pre-Test mean and standard deviation score of depression was  $17.70 \pm 5.89$ . Whereas in the Post Test the mean and standard deviation score of depression was  $10.53 \pm 2.49$ . The calculated paired t value is  $t = 10.22^*$  It was found to be statistically significant at  $p < 0.001$  level. It indicates that neurobic exercise was significantly effective to decrease the level of depression and improve the level of memory among elderly people.

The Demographic variables age group ( $X^2 = 2.28$ ) had statistically significant association with posttest level of depression on neurobic exercise among elderly people at  $p < 0.05$  level respectively. The demographic variables age group ( $X^2 = 1.54$ ) and Education ( $X^2 = 1.62$ ) had statistically significant association with posttest level of Memory on neurobic exercise among Geriatric people at  $p < 0.05$  level respectively and the other demographic variables had not shown statistically significant association with posttest level among elderly people.

The study supported to the Divya Raj, et al, (2021) Effectiveness of neurobic exercise program on memory and depression among elderly residing at old age home. The non-probability purposive sampling technique was used for sample selection. Wechsler's memory scale and Geriatric depression scale were the instruments used to assess the memory and depression among elderly during the pretest and posttest. There was a significant difference ( $p < 0.001$ ) in the level of depression had been found during the pretest and posttest in the interventional group. There was a statistically significant difference ( $p < 0.001$ ) found between the study group and in the control group. There was significant correlation ( $r = 0.417$ ,  $p < 0.05$ ) found between the memory and depression during the pretest in the study group among the elderly. A statistically significant association ( $p < 0.05$ ) found in the mean scores of depression and marital status of the elderly during the pretest in the study group and there was a significant association ( $p < 0.01$ ) found in the mean scores of depression and the gender of the elderly during the pretest and posttest in the non-interventional group were found.

## 5. CONCLUSION

Every human existence involves the process of ageing because it alters function. Exercise is one of the main things people can do to improve health status. Depression and memory impairment are common problems for elderly persons living in Old age homes. According to the study, neurobic exercise helps elderly people with their depression level were decreased and improved the memory power.

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