



## AN EXPERIMENTAL STUDY TO EVALUATE THE EFFECTIVENESS OF NEURO PSYCHOLOGICAL REHABILITATION ON COGNITION AMONG OLDER PEOPLE AT SELECTED OLD AGE HOME AT DHARMAPURI

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### ABSTRACT

Age related memory deficiencies have been extensively reported in the literature. Although short-term memory seems to deteriorate with age, perhaps because of poorer sorting strategies, long-term memory does not show similar changes. However, in nearly every instance, well educated, mentally active people do not exhibit the same decline in memory functioning as their age peers who lack similar opportunities to flex their minds. Nevertheless, with few exceptions, the time required for memory scanning is longer for both recent and remote recall among older people. This can sometimes be attributed to social or health factors (e.g. stress, fatigue, illness), but it can also occur because of certain normal physical changes associated with aging. The study was conducted in old age home, Probability sampling technique in simple random sampling techniques (lottery method) was used with select the samples. The investigator selected 60 older people as per the inclusion and exclusion criteria. The older people were introduced with the whole programme after an introduction and then a written informed consent was obtained from them for willingness to participate in the study. They were assured that their responses and details will be kept confidential and will be used only for the research purpose. Before the tool was administered some informal discussion were made with participants to establish rapport so that they would be relaxed. The total 60 older people were divided into two groups. Each group contained 30 people in (experimental group 30 and control group 30). Data collection was used in descriptive and inferential statistics.

**Key words:** *Neuro Psychological Rehabilitation, cognition, older people.*

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### STATEMENT OF THE PROBLEM

An experimental study to evaluate the effectiveness of Neuro Psychological Rehabilitation on cognition among older people at selected old age home at Dharmapuri.

### INTRODUCTION

Cognition-oriented treatments is an umbrella term referring to several non-pharmacological treatment approaches which apply a range of techniques to engage thinking and cognition with various degrees of breadth and specificity. Unlike treatments that are primarily oriented towards outcomes that are behavioural (e.g. wandering),

emotional (e.g. anxiety), or physical (e.g. sedentary lifestyle), in cognition-oriented treatments, the goals include improving or maintaining cognitive processes or addressing the impact of impairment in cognitive processes on associated functional ability in daily life. Cognitive training involves repeated practice on a set of structured and standardized tasks, designed to target one or several cognitive abilities. Cognitive stimulation consists of non-specific engagement in a variety of activities aimed at general enhancement of cognitive and social functioning, usually carried out in group settings at clinics or residential care facilities.



## AIM OF THE STUDY

Assess the effectiveness of neuro psychological rehabilitation on level of cognition among older people.

### Objectives of the Study

- To assess the pre – test and post – test level of cognition among older people in experimental group and control group.
- To evaluate the effectiveness of an neuro psychological rehabilitation on level of cognition among older people between the experimental and control group.

To associate the pre test level of cognition among older people at selected old age home with their selected socio demographic variables (age, gender, religion, education, occupation, income, present sourceofincome, durationofstay in the old age home, health status, marital status, type of food) in control group.

## METHODOLOGY

The study was conducted in Mercy old age home at Dharmapuri. Probability sampling technique in simple random sampling techniques (lottery method) was used with select the samples. The investigator selected 60 older people as per the inclusion and exclusion criteria. The older people were introduced with the whole programme after an introduction and then a written informed consent was obtained from them for willingness to participate in the study. They were assured that their responses and details will be kept confidential and will be used only for the research purpose. Before the tool was administered some informal discussion were made with participants to establish rapport so that they would be relaxed. The total 60 older people were divided into two groups. Each group contained 30 people in (experimental group 30 and control group 30). Every day the participants were gathered around 8.00AM in the Mercy old age home. The pretest structured questionnaire was administered to them and they were asked to give appropriate answers for all statements to find out the level of cognition by PGI Memory scale before neuro psychological rehabilitation. First the investigator conducts neuro psychological rehabilitation the steps to first group for 45 to 50 minutes in the morning and evening session for 5 consecutive days and its continue for 4 weeks totally 20 sessions was given. Post test was conducted after 20 sessions by same PGI Memory Scale.

### Objectives of the Study

- To assess the pre – test and post – test level of cognition among older people in experimental group and control group.
- To evaluate the effectiveness of a neuro psychological rehabilitation on level of cognition among older people between the experimental and control group.
- To associate the pretest level of cognition among older people at selected old age home with their selected socio demographic variables (age, gender, religion,

education, occupation, income, present sourceofincome, durationofstay in the old age home, health status, marital status, type of food) in control group.

### Hypotheses

**H1:** There is a significant difference between the effectiveness of neuro psychological rehabilitation on level of cognition between post test scores among experimental and control group.

**H2:** There is a significant difference between the pretest and posttest level of cognition among older people in the experimental group.

**H3:** There is a significant association between the pretest level of cognition among older people at selected old age home with their selected socio demographic variables in experimental and control group.

### Operational Definitions

#### Effectiveness

In this study it refers to the intended outcome of neuro psychological rehabilitation on level of cognition among older people measured by PGI memory scale.

#### Neuro psychological rehabilitation

In this study Neuro psychological rehabilitation refers to nursing intervention regarding physical exercise, newspaper reading, visual discrimination picture task, tracing mazes, time lapse, number cancellation, visual memory task, word memory task given 25-30 mints twice a day for 4weeks.

#### Cognition

In this study cognition refers to older people recalling their memory attention, information and concentration, verbal and visual retention, recognition of the objects in their day-to-day life.

#### Older people

In this study older people refers to who is more than 60 years of age both male and female and residing in selected old age home in Mercy home at Dharmapuri.

#### Old age home

In this study inba illam is a old age home admit male and female old age people those who are not cared by their family members.

#### Assumptions

- Increase in age may cause decreased in level of cognition.
- Older people may differ in the level of cognition.
- Psychological therapies are required during old age for better adjustment in their daily life.
- Mental readiness is needed for adaptation of various problems in old age.



- Human beings can change and grow in a genuine and loving relationship

## RESULTS AND DISCUSSION

In the pretest, experimental group majority of the older people 20 (66.6%) had low level of memory, 4 (13.3%) had below average, 4 (13.3%) had average and 2 (6.6%) had above average. In that 18 (60%) had low level of memory, 6 (20%) had below average, 4 (13.3%) had average and 2 (6.6%) had above average in the control group.

In posttest, experimental group majority of the older people 27 (90%) had excellent, 2 (6.6%) had above average, and 1 (3.3%) had average. In that 12 (40%) had low level of memory, 8 (26.6%) had below average, 6 (20%) had average and 4 (13.3%) had above average in the control group.

The effectiveness of laughter therapy. The overall pretest score among older people was 78.83 with standard deviation of  $\pm 15.71$ . And the post-test, they had scored

37.72 with standard deviation of  $\pm 5.51$ . So the difference is 41.11. The difference between pre-test and post-test structured questionnaire score is large and it is statistically significant. Differences between pre-test and posttest level of cognition analysed by using paired t-test. ( $P < 0.001$ )

This study revealed that there was a significant difference in the mean cognition scores between the pretest and posttest. Paired “t” test also showed a significant difference between the pretest and posttest. Distinction was due to the intervention, neuro psychological rehabilitation. Hence the neuro psychological rehabilitation intervention was effective in improving the level of cognition among older people.

## CONCLUSION

The study concluded that the providing neuro psychological rehabilitation to the older people was very effective in improving the level of cognition. Therefore, the investigator felt that more importance should be given for neuro psychological rehabilitation improve the cognition among older people.

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