

## ABSTRACT

**Background:** Aging is natural unrestrictive and irreversible process and elderly population is increasing day-by-day, and their number will increase twice by 2050 and approximately will get up to 2 billion as per national aging report. In old age there is loss in number and functioning of neurons which ultimately leads to decrement in cognitive functions with several causes. This decrement of cognitive functions (attention, memory, orientation, and executive function etc.) is known as cognitive impairment which changes overall personality of the elderly. Prevalence of decline cognitive functioning is directly related with age and is increasing rapidly. Apart from the pharmacotherapy, there are other approaches and programs like cognitive stimulation therapy found effective in improving cognitive functions and quality of life. Cognitive stimulation is considered as “involvement in a range of activities and discussion (generally in a group) which target at general building up of cognitive and social abilities.”

**Aim:** To explore and gain understanding about various problem related with decline cognitive functions among elderly population and also to promote and strengthen their cognitive functions and quality of life.

**Methods:** Mixed method approach with a sequential exploratory design was adopted for the study. Study was conducted in two phases. In first qualitative phase problem related to declining cognitive abilities were explored in elderly and their caregivers by adopting techniques of focused group discussion till the point of data saturation.

Following this phase intervention was developed and in second quantitative phase planned Nurse-Led Cognitive Stimulation Program (NLCSP) was taught to the experimental group biweekly for seven weeks in 14 sessions to groups of elderly. In this study multi-stage sampling technique was used to gather 100 elderlies from selected villages of district Panipat (Haryana). Tools used in the study were—socio-demographic proforma; semi-structured interview schedule for focused group discussion; and Mini Mental Status Examination of Hindi version and QOL-AD scale, which were standardized tools to assess the cognitive functions and quality of life. After the seven-week intervention immediate post-test was done followed by follow up after three months and one year of intervention in both experimental and control group to assess the retention of the program. The gathered data was edited, tabulated as well as analyzed and interpreted statistically.

**Results:** Elderly in both groups had similar demographic characteristics and also indistinguishable in pre-cognitive and quality of life scores. In thematic analysis in first phase, the reported experience was that decline in cognitive functioning is an age-related process, which has an adverse impact on life of the elderly and their caregivers. In the quantitative phase, mean post-test cognitive function score of post-test1 and follow ups at three months and one-year post intervention within the experimental group, as analyzed by repeated measure ANOVA, was significantly higher than baseline score. Also, while comparing pre-test and post-test of cognitive functions score in between groups unpaired t test result reveals remarkable differences. Mean quality of life score in control group remained same and even decreased slightly from baseline to

immediate post-test score and follow up at three months and one-year post intervention; but, within experimental group the mean post-test quality of life score was increased significantly from baseline. Comparison of quality-of-life score between groups also exhibits statistical differences at  $p < 0.05$ .

**Conclusions:** Nurse Led Cognitive Stimulation Program (NLCSP) was effective in building the level of cognitive functions score as well as improving the quality of life among elderly. The findings also reveal that age is having an impact on quality of life.

**Keywords:** Cognitive impairment, Cognitive functions, Quality of life, Cognitive stimulation, Elderly.