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Impact of Nursing Intervention on Memory Performance Among Patients with Alzheimer's Disease in Selected Hospitals

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Abstract:
Int**roduction:** Dementia, cognitive decline, and impaired ability to carry out daily tasks are hallmarks of Alzheimer's disease (AD), a neurological disorder that worsens over time. **Methodology:** The researchers used a quasi-experimental approach based on a before-and-after comparison of one group with sixty patients diagnosed with mild to moderate Alzheimer's disease as the methodology. Both the hospitals and the participants were chosen with purpose. To examine baseline memory functioning, a standardised memory evaluation scale was utilised. Over the course of eight weeks, participants received instruction on how to provide better care, recollection therapy, reality orientation, structured cognitive stimulation, memory enhancement activities, and carer education. The post-intervention assessment was conducted once the intervention was finished. **Result:** After the intervention, the average memory score increased from 18.6 ± 4.2 before the test to 25.8 ± 4.7. An improvement in memory was observed that was statistically significant ($t = 10.84$, $p < 0.001$). Memory improvement was significantly related to the selected demographic characteristics, such as age and educational status, according to the results. In conclusion, people with Alzheimer's disease can benefit from nursing interventions that improve their memory. **Conclusion:** Cognitive and quality of life improvements may be possible with structured cognitive and supportive nursing interventions integrated into standard of care.

Keywords: Alzheimer's disease, memory, nursing intervention, stimulation cognitive, therapy reminiscence.

INTRODUCTION

The world's largest public health concern, Alzheimer's disease is the most common form of dementia. Deterioration in memory, cognition, behaviour, and, ultimately, ADLs (activities of daily living) characterises this condition. According to recent estimates, millions of older individuals are currently coping with Alzheimer's disease, and this figure is expected to increase significantly due to the ageing population.

One of the first signs of Alzheimer's disease is memory loss. As the disease worsens, the person has to work harder to remember what happened recently, to identify familiar people, or to do a familiar task.

A nurse's role is very important in the care of a person with Alzheimer's disease, as they perform continuous assessments, provide cognitive support, educate patients and their caregivers, and guide them along the way. There is some evidence that support measures like cognitive stimulation, reality orientation, reminiscence therapy, and memory exercises can be beneficial in reducing cognitive deterioration and enhancing memory function. Thus, structured nursing interventions might be an effective tool to improve cognitive functions and provide for patient welfare.

Although there is increasing evidence on cognitive rehabilitation methods, there is still a need to explore the effects of nursing interventions on memory outcomes of patients in hospital environments. Hence it was decided to carry out the present study.

AIM OF THE STUDY

The study aimed to evaluate the effect of nursing intervention in Memory performance of Alzheimer patients in Selected Hospitals.

METHODOLOGY

The researchers used a quasi-experimental approach with a pre test and post test for each group. There were sixty participants in the trial, all of whom had mild to moderate Alzheimer's disease. These patients were selected using a purposive sample method.

Only patients over 60 years of age who could communicate and were willing to take part were included and those with severe cognitive impairment, serious psychiatric illness or severe sensory dysfunction were excluded. Standardized and validated memory assessment scale was used to help assess baseline memory performance. After the pretest, all participants were provided a structured (nursing)

intervention that included memory training, reality orientation treatment, remembrance therapy, cognitive stimulation activities, and education for carers. The intervention lasted for eight weeks, with three 30 to 45-minute sessions each week. To evaluate the post-test, a memory assessment scale was utilised. In order to assess the efficacy of the intervention, we utilised descriptive statistics for data analysis and the paired t-test.

Inclusion and Exclusion Criteria

Patients 60 years and over with his/her ability to communicate and willing to participate were included, diagnosed with mild to moderate Alzheimer's disease. The patients had to be cognitively normal in the absence of severe Alzheimer's dementia, major psychiatric disorders, severe sensory impairments, other neurological disorders interfering with cognition, or serious medical illnesses that would prevent the patient from participating in the study**.**

RESULT

As observed from Table 1, majority of the respondents (45%) were in the age group of 70-79 years, 53.3% of the respondents were male, and 36.7% of the respondents had primary education. Almost half (48.3%) had had their diagnosis of Alzheimer's disease for between 2 and 5 years.

As seen in Table 2, majority of the participants (53.3%) had poor memory performance before intervention. After the nursing intervention, only 13.3% were in poor condition whereas 46.7% were in good condition, which shows significant improvement.

According to table 3, the memory score mean for the post-test was 25.80 ± 4.70 while it was 18.60 ± 4.20 during the pre-test. The paired t value was found to be 10.84 indicates statistical significance.

As seen in table 4, there is a significant association between memory performance in Post-test with Age ($\chi^2 = 8.72$, $p = 0.013$) and educational status ($\chi^2 = 10.96$, $p = 0.027$). No significant correlation was seen with gender or the length of illness.

DISCUSSION

The study's findings demonstrated a considerable enhancement in the memory performance after the Nursing intervention. Participants may have had increased abilities in recall and orientation due to the cognitive stimulation and memory-enhancing activities. This study's findings support those of other research showing that non-pharmacological therapies can help persons with Alzheimer's disease.

Reality orientation and reminiscence therapy might have helped to retrieve stored memories and provide greater cognitive involvement. In addition, the effectiveness of caregiver education enhanced continuity of care for cognitive support outside of the structured interventions. The findings highlight the need to implement EBI in the routine care of people with dementia. These interventions are economical, do not carry a risk of harm and can be used alongside medication therapies.

CONCLUSION

The results showed the structured nursing intervention positively affected memory function in Alzheimer's disease patients. Incorporating cognitive stimulation, reality orientation, reminiscence therapy and caregiver education into the nursing care routine can be of benefit and should be used for the purpose of enhancing mental capacity and living standards.

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Table 1: . Distribution of Participants According to Demographic Characteristics (N = 60)

Demographic Variables	Frequency (n)	Percentage (%)
Age (years)		
60–69	18	30.0
70–79	27	45.0
≥80	15	25.0
Gender		
Male	32	53.3
Female	28	46.7
Educational Status		
No Formal Education	14	23.3
Primary Education	22	36.7
Secondary Education	18	30.0
Higher Education	6	10.0
Duration of Illness		
<2 years	16	26.7
2–5 years	29	48.3
>5 years	15	25.0

Table 2. Pretest and Post-test Levels of Memory Performance Among Patients with Alzheimer's Disease (N = 60)

Level of Memory Performance	Pretest n (%)	Post-test n (%)
Poor	32 (53.3)	8 (13.3)
Moderate	22 (36.7)	24 (40.0)
Good	6 (10.0)	28 (46.7)
Total	**60 (100)**	**60 (100)**

Table 3. Comparison of Pretest and Post-test Mean Memory Scores Among Patients with Alzheimer's Disease (N = 60)

Memory Score	Mean	SD	Mean Difference	t-value	p-value
Pretest	18.60	4.20	7.20	10.84	<0.001*
Post-test	25.80	4.70			

Table 4. Association Between Post-test Memory Performance and Selected Demographic Variables (N = 60)

Variable	χ^2 Value	p-value	Significance
Age	8.72	0.013*	Significant
Gender	1.24	0.538	Not Significant
Educational Status	10.96	0.027*	Significant
Duration of Illness	4.18	0.242	Not Significant

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