Indian Journal of Nursing Sciences

International Peer Reviewed Journal

Research Article

A Study to Assess the Effect of Planned Teaching Program on the Knowledge Regarding Alzheimer's Disease and Home Care Management among the Care Givers of Elderly in Selected Rural Area

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Abstract

Introduction: Alzheimer's disease (AD) is a progressive brain disorder that damage and eventually destroys brain cells, leading to memory loss and changes in thinking and other brain functions. Ultimately, Alzheimer's is fatal, and at present, there is no cure. India's dementia and Alzheimer's burden is forecast to reach almost 7.5 million by the end of 2030. The knowledge about the disease should be utilized to prevent or delay occurrence of disease and also to find out the symptoms of the disease at the earliest for reception of the quality care. Hence, the researcher felt a need to provide a planned teaching programme for elderly person's caregiver to create awareness on preventive aspects of AD. **Aim:** The aim of study was to assess the effectiveness of planned teaching program on the knowledge and home care management regarding AD among the care givers in selected rural area. **Subjects and Methods:** One group pre- and post-test research design was adopted, where the group was assessed with the structured questionnaire before and after. A structured teaching program and questionnaire administered to asses knowledge and management of AD among care giver. **Results:** we observed that knowledge measured after planned teaching was significantly better ($P \leq 0.05$). There were no association of knowledge with any of demographic variables. **Conclusion:** Planned teaching was effective measure to improve knowledge and home care management regarding AD among the care givers in selected rural area.

Key words: Alzheimer's disease, Care givers, Home care management, Planned teaching

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Introduction

Alzheimer's disease (AD) is the most common cause of dementia. It is most psychogeriatric disorder, the most common cause of emotional suffering in the elderly and associate with a poor quality of life in caregivers. There has been an exponential growth in the number of elderly population in India.[1]

The nervous system is the master controlling and communicating system of the body. Every thought, action and emotion reflects its activity. Its electric impulses, which are rapid and specific, can cause immediate responses. The nervous system divided into central nervous system and peripheral nervous system. The central nervous system consists of brain and spinal cord. Brain is the intellectual centre that allows thought and memories, senses, and movements and creativity. They also help to control the organs and such as heart and bowels.[2]

Aging of the brain is a continuous linear process that begins at conception. Two-thirds of all people eventually experience some significant loss of mental lucidity and independence as a result of aging. People age 60 years and older experience significant cognitive declines in memory, concentration, and

Access this article online	
Website:http://www.innovationalpublishers.com/Journal/ijns	e-ISSN: 2581-463X
DOI: 10.31690/ijns.2021.v06i04.003	

How to cite this article: Pednekar S, Rawade M. A Study to Assess the Effect of Planned Teaching Program on the Knowledge Regarding Alzheimer's Disease and Home Care Management among the Care Givers of Elderly in Selected Rural Area. Indian Journal of Nursing Sciences 2021;6(4):84-87.

clarity of thought, focus and adjustment with an increase in the onset of several neurological problems.[3,4]

The researchers felt the need for people who are suffering from AD, with the progressive changes in the disease condition, so the caregivers can be taught to take care at home to prevent from the further consequences.

Subjects and Methods

Sixty care givers of the elderly who were fulfilling the inclusion criteria were selected through convenient sampling technique. One group pre- post-test design was used. The care givers were included who were available at the time of data collection and was willing to participate the study. The subjects excluded were if they already had knowledge regarding disease and medically unfit in case of nuclear family.[5-7]

Study tool

The study tool used for data collection was questionnaire consisted of two section, section 1 contained demographic variables of the subjects. The demographic variables included were age gender educational status, place of residence, family history of AD, habits, previous information on AD and if yes the sources of information among elderly clients. Section II contained the questions regarding the disease and home management of AD.[5-7]

Data collection procedure

Before starting the study, researcher was obtained written permission from Medical officer of Public Health Centre at rural area. The procedure was explained to the participants. The consent was obtained and data collected using structure questionnaire. After this procedure, the patients were subjected to structure teaching program. Post-test was done on the 7th day after intervention. The same tool was used to assess the effectiveness of Structured Teaching Program. The total duration spent with each patient for conducting pre-test, Structured Teaching Program and post-test was 2 h. The score obtained was calculated and considered as pre- and post-test score.[5-7]

Statistical analysis

Data were presented as frequency, percentages, mean and standard deviation. Paired t- test was used to compare means within group. Chi-square test was used to measure association between demographic variables. $P < 0.05$ was considered significant.

Results

Demographic variables

Table 1 depicts distribution of sample in relation to their age, habits and family history. Maximum elderly 23 (38.3%) were from age group of 60–64 years. The majority of the elderly that is 24 (40%) had the habit of chewing tobacco, 6 (10%) elderly had the habit of smoking. Very few 2 (3.3%) caregivers used to consume alcohol. Majority caregivers 58 (96.7%) replied that they had no family history of Alzheimer disease.

Table 2 depicts distribution of sample in relation to the age, gender and education of caregivers and information status.

Table 1: Distribution of sample in relation to their age, habits and family history. *n*=60

Demographic characteristic	Frequency F	%
Age of elderly (years)		
55–59	4	6.7
60–64	23	38.3
65–69	22	36.7
70–75	11	18.3
Habits of elderly		
Smoking	6	10.0
Alcoholism	2	3.3
Tobacco chewing	24	40.0
None	28	46.7
Family history of Alzheimer disease		
Yes	2	3.3
No	58	96.7

Table 2: Distribution of sample in relation to the age, gender and education of caregivers and information status. *n*=60

Demographic characteristic	Frequency F	%
Age of caregivers (years)		
20–29	29	48.3
30–39	13	21.7
40–49	14	23.3
50–59	4	6.6
Gender of caregivers		
Male	29	48.3
Female	31	51.7
Educational qualification		
Illiterate	0	0
Primary	28	46.7
Secondary	14	23.3
Graduation and above	18	30.0
Previous exposure to information on Alzheimer disease		
No	40	66.7
Yes		
Television/radio	2	3.3
Magazine/newspaper	2	3.3
Family members/friend	5	8.3
Health personnel	11	18.3

Maximum caregivers 29 (48.3%) were from age group of 20–29 years, and both males and females were almost equally divided as 31 (51.7%) were females and remaining 29 (48.3%). The most of caregivers 28 (46.7%) studied up to primary education. Around 40 (66.7%) participants had no information and 11 (18.3%) got information on Alzheimer disease from a health personnel.

Effect of planned teaching program on knowledge about AD and its home management

Table 3 depicts that in pre-test majority 27 (45%) caregivers had average knowledge and none of the caregivers were in excellent knowledge range. Whereas, the post-test score shows shift of sample from lower knowledge levels to higher knowledge levels, maximum 30 (50%) sample had excellent knowledge and none of the caregivers were in poor knowledge range.

Table 4 shows comparison of pre and post mean scores of overall knowledge. The calculated t value is found to be 11.34 for overall knowledge. As the calculated "t" value is greater than the table "t" value 2.00 at 0.05 level of significance with the degrees of freedom being 59 so null hypothesis (H0a) is rejected and alternate hypothesis (Ha) is accepted for knowledge. This shows that there is a significant difference in the mean of pre- and post-test knowledge of the sample.

Association of demographic variables with knowledge score

All the calculated "F" values are less than their respective "F" table value at 0.05 levels. Thus, there is no statistical significant difference between the groups of the demographic variables Age, Education, Family history of AD, and previous exposure to AD with respect to their pre-test knowledge means scores. Hence, null hypothesis (H_{0b}) is accepted.

Discussion

AD also referred to as Alzheimer's chronic neurodegenerative disease that usually starts slowly and gradually worsen over time. It is cause of 60–70% cases of dementia. As the disease advances symptoms can include problem with language, disorientation (including easily getting lost) mood swings and loss of motivation, not managing self-care and behavioral issues. The study conducted by Hamilton L, Fay S, Rockwood K on Misplacing object as signs of dementia found that 58% of them aware about same.[8]

The aim of this study was to find out the need for people who are suffering from AD with the progressive changes in the disease condition so the caregivers can be taught to take care at home to prevent from the further consequences as the researcher Walddorff FB, Buss DV and Lawyer who also conducted the study on efficacy of psychological intervention for the patients with mild dementia and their caregivers found the positive effect.[9]

Although the AD one of the emerging diseases for older people the peoples knowledge for it is still very limited which can cause the careless toward the person from the family embers as well as care givers. Making care giver aware about this is the important aspects as even said by other research studies.

There was significant differences in pre- and post-test mean score as well as t value regarding knowledge, which showed that planned teaching was effective. The study also can be correlated with other study conducted by Wolters Kluwer Lavina Rodrigues and Thereza who conducted study on effectiveness of planned teaching program on knowledge regarding AD among the family members of elderly in urban community at Mangalore. The finding reveals that the planned teaching program is an effective strategy for improving the knowledge of the care giver.[10]

Table 3: Distribution of pre- and post-test knowledge scores. *n*=60

Overall knowledge levels	Percent range (%)	Pre test		Post test	
		F	%	F	%
Poor knowledge	0–40	2	3.3	0	0
Average knowledge	40–60	27	45.0	1	1.7
Good knowledge	60–80	31	51.7	29	48.3
Excellent knowledge	80–100	0	0	30	50.0
Total		60	100	60	100

Table 4: Comparison of pre and post mean scores of overall knowledge. *n*=60

Comparison	Mean	S. D.	M.D.	SEMD	t-value	*P*-value
Overall knowledge						
Pre test	18.42	3.58	5.72	0.50	11.34	0.001
Post test	24.13	2.72				

df=59, level of significance is 0.05 for table value of 2.00

The study also can be correlated with the study carried out by Laura N. Githlina Katherine. Marxb Daniel. Scerpellac. Holly Dabelko-Schoenyd Keith A. in their study on embedding care giver support in community based services for older adults also valued the benefits of such intervention.[11]

The importance of such study also can be correlated with the study conducted by Werner PL on knowledge of relative regarding AD found that the knowledge level was fair.[12]

Conclusion

As Cameron Diaz says, it is privilege to get older but along with that possibility of getting different illness is as high an Alzheimer is one among them having knowledge regarding same will help to provide burden free care to such people. This research also help the researcher to understand the importance providing knowledge to the people and home management of same.

Acknowledgment

Authors are thankful to all who helped them directly or indirectly to complete research.

Funding

Research was not funded by any outside agency.

Conflicts of Interest

All authors declare they have no conflicts of interest.

References

1. NIA Alzheimer's and Related Dementias Education and Referral (ADEAR) Center. Available from: http://www.nia.nih.got/alzhiemers
2. Available from: https://www.who.int/news-room/fact-sheets/detail/ageing-and-health
3. Marieb ME. Essentials of Human Anatomy and Physiology. 8th ed. India: Pearson Education; 2007. p. 221-65.
4. Health Effect of aging Brain. Available from: http://www.wenindia123.com
5. Suresh KS. Textbook of Nursing Research and Statistics. 2nd ed. New Delhi, India: Reed Elseiver Private Limited; 2014. p. 101.
6. Polit-O'Hara D, Hungler BP. Nursing Research Principles and Methods. Philadelphia, PA: JP Lippincott Company; 2008.
7. Polit DF, Beck CT. Nursing Research Principles and Methods. Philadelphia, PA: JP Lippincott Company; 2008.
8. Hamilton LI, Fay S, Rockwood K. A descriptive analysis from VISTA clinical trial study was conducted in Mispalcing Objective in mild to moderate Alzheimer's disease. J Nerurol Neurosurg Psychiatry 2009.
9. Walddorff FB, Buss DV, Lawyer CI. Study on Efficacy of psychological intervention for patients with mild dementia and their caregivers; the multicentre, rater blinded, randomized Danish Alzheimer intervention study. BMJ 2012;17:e4693.
10. Kluwer W, Rodrigues L, Mathias T. Effectiveness of planned teaching program on knowledge regarding Alzheimer's disease among the family members of elderly in selected urban community at Mangalore. Indian J Psychiatry 2016;58:44-8.
11. Gitlin LN, Marx K, Scerpella D, Dabelko-Schoeny H, Anderson KA, Huang J, *et al*. Embedding caregiver support in community-based services for older adults: A multi-site randomized trial to test the adult day service plus program (ADS Plus). Contemp Clin Trials 2019;83:97-108.
12. Werner P. Knowledge about symptoms of Alzheimer disease correlates and relationship to help-seeking behaviour. Int J Geriatr Psychiatry 2003;18:1029-36.