

EFFECTIVENESS OF VATM ON WARNING SIGNS OF ALZHEIMER'S DISEASE AMONG ADULTS

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Abstract

A pre-experimental study was conducted to evaluate the effectiveness of video assisted teaching module on warning signs of Alzheimer's disease among adults in rural area of Mangalore. Data was collected from 40 adults, selected by purposive sampling technique. The mean of overall pre test knowledge score was 13.83 ± 3.52 and the mean of overall post test knowledge score was 18.13 ± 2.45 . Improvement in the knowledge score of the samples from the pre-test to post-test is tested for statistical significance using paired t-test ($t=8.89$), shows significant difference between pre and post-test score ($p < 0.05$).

Keywords- VATM, Warning signs, Alzheimer's disease

Introduction

Alzheimer's is a type of dementia that causes problems with memory, thinking and behavior. Symptoms usually grow slowly and get worse over time, becoming severe enough to interfere with daily tasks¹.

The most common form of dementia is Alzheimer's disease. It is a widespread term for memory loss and other intellectual abilities, serious enough to disturb the daily life of an individual. Alzheimer's disease attacks the brain parts that control thinking, recalling and language. The onset of the disease is gradual and the person's decline is usually slow².

Dementing illness are the most common disorders among elderly and

thought to be the fourth leading cause of death among adults in many developed nations, following heart disease, cancer and stroke. Dementia robs the quality of not only the elderly, but also the family members who are forced to devote their lives caring for their impaired loved ones.³

Alzheimer's disease affects all groups in the society and is not linked with social class, gender, ethnic group or geographical location and although Alzheimer's disease is more common among elderly persons, but also seen rarely in younger population⁴.

Currently about 18 million people are affected by Alzheimer's disease worldwide. This figure is projected to more

or less double by 2025 to 34 million. Developing countries will be more affected by this illness, Currently, more than 50% of people with Alzheimer's disease live in developing countries and by 2025 , this will be more than 70%.However, At present developing countries are undergoing a demographic transition so that more and more people are surviving to an old age⁵ .

The rate of growth is highest in India, China, South Asia, and western Pacific regions and the lowest in developed regions. Based on 2001 global population reports, the people living with dementia is 24.3 million and 4.6 million incident or new cases are added yearly⁶ . Researcher felt need that, India, being a country of diverse ethnicity and culture, have great advantages to carry out such kind of studies. The information may be useful for undertaking corrective measures to trim down the medical and social issues and deficiencies, so that the stakeholders can take adequate preparation to provide assistance to the dementia patients and the population who are at risk. It is expected

that the medical and scientific community will pay interest to the medical problem with the assistance of governmental and non-governmental agencies, and the political leadership will be motivated to take on the issue of providing socio economic benefit to families of the Alzheimer's patients.

The objectives of the study

1. To assess the level of knowledge regarding the warning signs of Alzheimer's disease among adults
2. To assess the effectiveness of VATM on warning signs of Alzheimer's disease
3. To find out the association between the level of knowledge and selected demographic variables

Hypotheses

- H1. There is a difference in the level of knowledge before and after the VATM
 H2. There is a significant association between the pretest level of knowledge score and selected demographic variables

Methodology

Research design:

Pre-experimental design i.e. one group pre-test and post-test was adopted to conduct the study, the research design used was:

Table 1: pre-experimental design

Group	Pre test	Treatment	Post test	Effectiveness
Adults in rural areas of Mangalore	O1	X	O2	O2-O1

Research approach:

Experimental research approach was used to determine the effectiveness of video assisted teaching module on Alzheimer's disease.

Setting of the study:

The setting of the study was, selected rural areas at Mangalore

Population:

The population of the study was, adults above 21 yrs to 50 yrs irrespective of gender

Sampling:

The sample comprised of 40 Adults residing in rural areas of Mangalore and the sample was selected by using purposive sampling technique.

Tool description:

Tool used

Part 1: Demographic Proforma

Part 2: Knowledge questionnaire on warning signs of Alzheimer's disease.

Part 3: Video assisted teaching module on warning signs of Alzheimer's disease

Part 1: Demographic Proforma

The demographic Proforma is used to collect the information of sample characteristics. It comprised of 6 items which include age, gender, annual income, educational status, history of Alzheimer's disease, previous information on Alzheimer's disease.

Part 2- Knowledge questionnaire

Knowledge questionnaire is a series of questions about warning signs

Alzheimer's disease which are asked to individuals to obtain statistically useful information.

Part-3- Video assisted teaching module on warning signs of Alzheimer's disease

It is refers to a systematically organized video prepared by the investigator and certified by the experts about warning signs of Alzheimer's disease and shown to adults using projectors to improve their knowledge, which includes the Definition, its warning signs, etiology, clinical manifestation, management of Alzheimer's disease.

Validity & Reliability

Content validity of the tool was established by obtaining suggestions from experts. The tool was validated by experts in the field of psychiatry, psychiatric nursing and clinical psychologist. Modifications were made on the basis of recommendation and suggestions of the experts.

Pilot study was conducted among 10 subjects (M/F). The data was used to find out the reliability of the questionnaire. Chronbach's alpha was used for the calculation which was 0.703 which weighs the tool is reliable

Data Collection

The closed ended multiple choice questionnaire was used to collect the data from the adults, after obtaining formal permission from authority and consent from subjects. The investigator collected data from 40 adults. Pre-test was

conducted for all and on the same day video assisted teaching module was conducted by the investigator for a period of 45 minutes by using LCD projector in Kannada language. The same closed ended questionnaire was used to collect the post test data also on 8th day after implementation of structured teaching programme.

Major Findings

Depiction of samples according to demographic characteristics

Demographic proforma containing sample characteristics was analyzed by using frequency and percentage. The frequency of the subjects by their demographic characteristic is presented in Table 2.

Table 2: Depiction of samples according to the sample characteristics, (n=40)

Demographic Characteristics		Frequency (f)	Percentage (%)
Age	21-31	13	32.5
	31-41	14	35
	41-51	13	32.5
Gender	Male	22	55
	Female	18	45
Educational status	No formal	6	15
	Primary	15	37.5
	Secondary & higher secondary	10	25
	Graduation & above	9	22
Annual income	< 1Lakh	8	20
	1-5	14	35
	5-10	12	30
	>10	6	15
Previous history of Alzheimer's disease in family	Yes	14	35
	No	26	65
Previous knowledge on Alzheimer's disease	Yes	18	45
	No	22	55

The above table 2 describes the following finding.

- Less than half, 13 (32.5%) of the subjects are in between the age group of 21-31years followed by 14 (35%) are in 31-41 and 13 (32.5%) are in 41-51 years. Males are 22 (55%) and females are 18 (45%) Majority of the samples 15(37.5%) had primary education, followed by 10 (25%) of them had secondary education, 9 (22%) were graduated and 6 (15%) was not formally educated Majority of the samples 14 (35%) have annual income in between 1-5 lakhs, 12 (30%)

were in between 5-10 lakhs, 8 (20%) were below 1 lakhs and 6 (15%) were above 10 lakhs in Indian rupees In most cases 26 (65%) do not have previous history of Alzheimer's disease in family members and rest 14 (35%) had family history of Alzheimer's disease Highest number of sample 22 (55%) have No previous knowledge about Alzheimer's disease rest 18 (45%) members had previous knowledge about Alzheimer's diseases

Table:3
Mean, SD, range of knowledge among the subjects before and after VATM regarding warning signs of the Alzheimer's disease

Mean, SD, range	Pre Test	Post test
Mean	13.83	18.13
Standard deviation	3.52	2.45
Minimum	4	13
Maximum	20	24

From the above table it is cleared that the Pre test knowledge score ranged between 4-20 with mean knowledge score 13.83 ± 3.52 and the Post test knowledge score ranged between 13-24 with mean score 18.13 ± 2.45 .

Effectiveness of VATM on the level of knowledge regarding warning signs of Alzheimer's disease among subjects was analyzed by using Paired t-test, to test the significance following hypothesis is

stated. H1- There will be a difference in the level of knowledge before and after the VATM

Table 4: Effectiveness of VATM on the level of knowledge regarding Alzheimer's disease

n=40

Score	Mean	Standard deviation	t Value	P Value
Pre test	13.83	3.52	8.89	<0.001
Post test	18.13	2.45		

From the above table it is cleared that, Calculated 't' value is 8.89 and it is more than the 't' table value 2.021. Also the p value is < 0.001 and is < 0.05. Hence there is a difference in level of knowledge before and after VATM. It indicates VATM is effective at 5% level of significance.

Association between the level of knowledge and selected demographic variables.

Association between the level of knowledge regarding warning signs of Alzheimer's disease and selected demographic variables was analyzed by using Chi-square and Fishers exact test

TABLE 5(a): Association between level of knowledge regarding warning signs of Alzheimer's disease with selected demographic variable.

A. Chi-square test

n=40

Demographic characteristics		≤14 (Median)	>14 (Median)	Test statistic	P Value
gender	Male	13	9	0.017	0.897
	Female	24	16		
Previous history of Alzheimer's disease in family members	Yes	9	5	0.165	0.685
	No	15	15		
Previous knowledge on Alzheimer's disease	Yes	10	8	0.269	0.604
	No	14	8		

From the above table it is clear that the calculated Chi-square values are less than the chi-square table value (3.841) and the 'P' values are more than 0.05 hence these variables are not associated with level of knowledge at 5% level of significance.

Table 5(B) Fishers exact test

Demographic Characteristics		≤14 (Median)	>14 (Median)	Test statistic	P Value
Age	21-31	8	5	20.881	0.044*
	31-41	9	5		
	41-51	7	6		
Educational status	No formal education	4	2	1.793	0.615
	Primary	7	8		
	Secondary	7	3		
	Graduation and above	6	3		
Annual income (lakhs)	< 1	6	2	8.337	0.027*
	1-5	4	10		
	5-10	9	3		
	>10	5	1		
	No	11	11		

From the above table it is cleared that the 'P' values are less than 0.05 for age and income. Hence there is an association between these variable with level of knowledge at 5% level of significance. For level of education 'P' value is more than 0.05 hence this variable is not associated with level of knowledge.

Discussion

In the present study, result showed that less than half of the subjects (35%) in between the age group of 31-41. Present study findings is supported by the study conducted on the level of knowledge regarding Alzheimer's disease among adults in Canada ,shows that less than half of the participants are between the age group of 31-41 years ⁷.

The present study shows that males (55%) and females (45%) this is supported by a study conducted in Japan to investigate the frequency of co-morbidity and to demonstrate the best method for increasing the knowledge among primary

school teachers regarding Alzheimer's disease showed that 55% were males and 45% were females⁸.

Present study shows that most of the subjects (70%) have average level of knowledge regarding warning signs of Alzheimer's disease. This is supported by the study conducted in Japan to assess the knowledge regarding Alzheimer's disease among adolescence. Results showed that most of the subjects (70%) have average knowledge about Alzheimer's disease. ⁹

Recommendations

- 1.The study can be repeated by taking a large sample in other parts of the country.

2. A similar study can be conducted on assessment of knowledge regarding warning signs of Alzheimer's disease among high risk population for primary prevention.
3. An experimental study can be carried out to find out the effectiveness of lifestyle practices on prevention of Alzheimer's disease.

Conclusion

The knowledge of Adults regarding the warning signs of Alzheimer's disease was inadequate. After the implementation of video assisted Teaching Module, the knowledge level of Samples was significantly increased. Hence the VATM on warning signs of Alzheimer's disease can be used as an effective tool in enhancing the level of knowledge of general public.

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