



## **A Study to Assess the Knowledge Regarding Alzheimer's Disease among Adults at Selected Urban Community Area at Udaipur City with a View to Develop an Information Booklet**

Sawan Choubisa<sup>1\*</sup> and Satyaveer Singh Pundhir<sup>2</sup>

<sup>1</sup>M. Sc. Nursing Student, Venkteshwar College of Nursing, Ambua Road, Udaipur, Rajasthan, India

<sup>2</sup>HOD, Mental Health Nursing, Venkteshwar College of Nursing, Udaipur, Rajasthan, India

### **ABSTRACT**

Alzheimer's disease is a major public health challenge in today's scenario. Alzheimer's disease is the 4th leading cause of death in adults. It robs the quality of not only the elderly but also the family members who are forced to devote their lives to caring for their impaired loved ones. The present study aims to assess the knowledge regarding Alzheimer's disease among 100 adults in a selected urban community (Ashok Nagar & Bhupalpura) in Udaipur city with a view to develop an information booklet. The quantitative research approach and descriptive research design were adopted for this study. The convenient sampling technique was used for data collection. The data were collected by interview to assess the level of knowledge of adults by using structured questionnaires. The collected data were tabulated and analyzed by descriptive and inferential statistics. The findings showed that out of 100 adults 16% had adequate knowledge 37% had moderate knowledge and 47% had inadequate knowledge regarding Alzheimer's disease. There were a significant association found between educational level ( $\chi^2=23.44$ ), marital status ( $\chi^2=12.67$ ), family size ( $\chi^2=9.99$ ), and Source of Information on Alzheimer's disease ( $\chi^2=14.99$ ), but there was no significant association between other variables. They are age, gender, occupation, religion, income, type of family, family history of mental illness, and family member suffering from Alzheimer's disease.

### **KEYWORDS**

*Knowledge; Alzheimer's disease; Adults; Urban Community; An Information Booklet*



## INTRODUCTION

Dementia is a progressive brain dysfunction that results in the restriction of daily activities and in most cases leads long term to the need for care<sup>1</sup>. Dementia illness is the most common disorder among the elderly and is the 4<sup>th</sup> 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 to caring for their impaired loved ones<sup>2</sup>.

Dementia is the most feared and divesting disorder of late life. Current estimates reveal that there are about 18 million cases of dementia in the world and by 2025, there will be about 34 million suffering from dementia. The overall prevalence of dementia ranges from 5% to 7%. Alzheimer's disease is the most common dementia disorder accounting for 80 percent of all cases of dementia<sup>3</sup>. Alzheimer's disease attacks the parts of the brain that control thought, memory and language. The onset of the disease is gradual and the person's decline is usually slow<sup>4</sup>. Alzheimer's disease affects all groups in society and is not linked to social class, gender, ethnic group, or geographical location and although Alzheimer's disease is more common among elderly persons, younger persons can also be affected.

According to ICD classification, the various type of dementia in Alzheimer's disease are dementia in Alzheimer's disease with early onset, dementia in Alzheimer's disease with late onset, dementia in Alzheimer's disease atypical or mixed type, and dementia in Alzheimer's disease unspecified<sup>5</sup>. Clinical signs of Alzheimer's disease are characterized by progressive cognitive deterioration together with, declining activities of daily living and by neuropsychiatric symptoms or behavioral changes. The ultimate cause of Alzheimer's is unknown. In Alzheimer's disease, there are mainly three stages of the disease; they are early stage, middle stage and late stage. In the early stage the patients tend to become less energetic or spontaneous though changes in their behavior often go unnoticed even by the patient's immediate family. The early stage of Alzheimer's disease is often overlooked and incorrectly labeled as normal old age outcomes<sup>6</sup>.

## NEED FOR STUDY

Alzheimer's and other forms of dementia are becoming more prevalent among the elderly. The prevalence of Alzheimer's disease is projected to quadruple by the year 2047. Very little is



known about the prevalence of dementia outside the more developed countries. The idea that an illness like Alzheimer's is a disease is an affluent developed nation myth. Alzheimer's disease can occur to any adult at in any age. Women are three times more likely to be affected than men.

In the Indian context prevalence of Alzheimer's disease is one in every five elderly citizens suffers from Alzheimer's. In Kolkata, there are about 46,000 patients with Alzheimer's. In Delhi, it accounts for about 50,000 Alzheimer's patient and in Udaipur, there are 30,000 elderly patients suffering from Alzheimer's disease. Today in India 32,00,000 people are affected by dementia. The figure is expected to double every 20 years<sup>7</sup>. An estimated 4.5 million Americans are afflicted with Alzheimer's disease and other 20 million families must care for them. There are currently 800,000 people living with dementia in the United Kingdom today, a number expected to double within twenty years. The number of people with dementia in the Asia Pacific region will rise from about 14 million today to 65 million by 2050<sup>8</sup>.

Alzheimer's is a major public health challenge since the median age of the industrialized world's population is increasing gradually. In the fight against Alzheimer's disease, awareness is key. As baby boomers age, it is expected that the number of people will triple by the year 2050. Alzheimer's disease in the media, to Indian context a Malayalam movie Thanmathra, 2005 directed by Blessy portrays the effect of Alzheimer's disease which affects in the life of an individual and his family<sup>9</sup>.

Nurses are vital sources in educating the public on various health-related issues. Hence the investigator is interested to assess the knowledge of adults regarding Alzheimer's disease. Furthermore, a study of this kind will serve as guidelines for future nurses to provide comprehensive care for Alzheimer's disease and remember those who cannot remember.

## PROBLEM STATEMENT

“A study to assess the knowledge regarding Alzheimer's disease among adults in a selected urban community area at Udaipur city with a view to develop an information booklet”

## OBJECTIVES

- To assess the pre-existing knowledge regarding Alzheimer's disease among adults at selected urban community area.



- To find out the association between the level of knowledge and selected demographic variables.
- To develop an information booklet on Alzheimer's disease.

## HYPOTHESIS

**H<sub>0</sub>:** There will be no significant association between the knowledge scores of adolescents with the selected demographic variables at a 0.05 level of significance.

## MATERIALS AND METHODS

**Research Approach:** A quantitative research approach was used in the study.

**Research Design:** Descriptive research design was used.

**Sample:** In the present study, the sample comprises 100 adults aged between 21-50 years.

**Sampling Technique:** In the present study, the samples were selected through a convenient sampling technique.

**Setting:** In the present study, the setting was selected nursing colleges in Udaipur city.

**Population:** In the present study, the target population was adults aged between 21-50 years living in the selected urban community area at Udaipur city.

**Description of tool:** Structured questionnaire to assess the knowledge. It consisted of two parts:

**Section A:** It consists of 12 demographic data, including the age, gender, educational status, marital status, occupational status, religion, monthly income, type of family, family size, family history of mental illness, family members suffering from Alzheimer's disease, and source of information regarding Alzheimer's disease.

**Section B:** It consists of 30 structured questionnaires, that was considered appropriate for assessing knowledge score regarding Alzheimer's disease; the selected aspects are- meaning, definition, incidence, prevalence, etiology, signs and symptoms, investigations, management, and rehabilitation. The maximum total score of the knowledge questionnaire was 30 (for each correct response 1 mark will be given and 0 mark for an incorrect answer).

### Ethical consideration

- Approval from the ethical committee of Venkateshwar College of Nursing Udaipur.
- Before data collection, written permission was obtained from the concerned authority of the nursing college, at Udaipur.



- Anonymity and confidentiality of subjects were maintained.
- Informed consent was obtained from the subjects.

### Plan for data analysis

The data analysis will be done according to the study objectives by using descriptive and inferential statistics. The plan of data analysis would be as follows:

- Frequency, percentage, mean, and standard deviation will be calculated.
- The chi-square test will be used for association with demographic variables.

## RESULTS AND DISCUSSION

The data obtained are divided into sections for easy and accurate interpretation of data. The data finding has organized under the following section:

**Section A:** Description of the demographic variables of the respondents.

**Section B:** Description of area-wise knowledge score of adults regarding Alzheimer's disease.

**Section C:** The findings related to the knowledge level of the respondent regarding Alzheimer's disease.

**Section D:** The findings related to the association between the knowledge and selected demographic variables

### Section A: Description of the demographic variables of the respondents:

The demographic data consists of 12 items seeking information about the age, gender, educational status, marital status, occupational status, religion, monthly income, type of family, family size, family history of mental illness, family members suffering from Alzheimer's disease, and source of information regarding Alzheimer's disease.

**N = 100**

**Table 1** Description of the demographic variables of the respondents

S. N.	Demographic Variables	Frequency (n)	Percentage (%)
<b>1</b>	<b>Age</b>		
A	21-30 yrs	34	34
B	31-40 yrs	39	39
C	41 – 50 yrs	27	27
	<b>Total</b>	<b>100</b>	<b>100</b>
<b>2</b>	<b>Gender</b>		
A	Male	56	56
B	Female	44	44
	<b>Total</b>	<b>100</b>	<b>100</b>
<b>3</b>	<b>Educational status</b>		



<b>A</b>	High school	35	35
<b>B</b>	PUC	22	22
<b>C</b>	Graduate	34	34
<b>D</b>	Postgraduate	9	9
<b>Total</b>		<b>100</b>	<b>100</b>
<b>4</b>	<b>Marital Status</b>		
<b>A</b>	Bachelor	18	18
<b>B</b>	Spinster	11	11
<b>C</b>	Married	64	64
<b>D</b>	Divorced	7	7
<b>Total</b>		<b>100</b>	<b>100</b>
<b>5</b>	<b>Occupational Status</b>		
<b>A</b>	Private	29	29
<b>B</b>	Government	16	16
<b>C</b>	Laborer	11	11
<b>D</b>	Housewife	25	25
<b>E</b>	Business	19	19
<b>Total</b>		<b>100</b>	<b>100</b>
<b>6</b>	<b>Religion</b>		
<b>A</b>	Hindu	68	68
<b>B</b>	Muslim	13	13
<b>C</b>	Christian	19	19
<b>Total</b>		<b>100</b>	<b>100</b>
<b>7</b>	<b>Family Monthly Income</b>		
<b>A</b>	Up to 5000	27	27
<b>B</b>	5001 – 10000	49	49
<b>C</b>	Above 10000	24	24
<b>Total</b>		<b>100</b>	<b>100</b>
<b>8</b>	<b>Type of the Family</b>		
<b>A</b>	Nuclear	65	65
<b>B</b>	Joint	29	29
<b>C</b>	Extended	6	6
<b>Total</b>		<b>100</b>	<b>100</b>
<b>9</b>	<b>Family Size</b>		
<b>A</b>	3 – 4	52	52
<b>B</b>	5 – 6	36	36
<b>C</b>	6 and above	12	12
<b>Total</b>		<b>100</b>	<b>100</b>
<b>10</b>	<b>Family history of mental illness</b>		
<b>A</b>	Yes	6	6
<b>B</b>	No	94	94
<b>Total</b>		<b>100</b>	<b>100</b>
<b>11</b>	<b>Family members suffering from Alzheimer's disease</b>		
<b>A</b>	Yes	2	2
<b>B</b>	No	98	98
<b>Total</b>		<b>100</b>	<b>100</b>
<b>12</b>	<b>Source of Information on Alzheimer's disease</b>		
<b>A</b>	Television/radio	11	11
<b>B</b>	Magazines/newspaper	13	13
<b>C</b>	Family member/friends	9	9
<b>D</b>	No	67	67
<b>Total</b>		<b>100</b>	<b>100</b>



**Age in years:** Table 1 revealed that regarding age the majority of adults 39 percent in the age group of 31 – 40 years followed by 34 percent in the age group between 21 – 30 years and 27 percent in age group between 41 – 50 years.

**Gender:** Table 1 shows that out of 100 adults, the majority of adults 56 percent were males and 44 percent were females

**Educational Status:** Table 1 depicts that out of 100 adults 35 percent were educated up to high school level, 34 percent were graduates and 22 percent adults were having educational qualifications till PUC. In this study, only 9 percent were post-graduates.

**Marital Status:** Table 1 revealed that among total respondents 29 percent were private employees, 25 percent were housewives, 16 percent were government employees and only about 11 percent were laborers.

**Religion:** Table 1 showed that out of 100 respondents the majority of the respondents 68 percent belonged to the Hindu religion, 19 percent belonged to the Christian religion, and 13 percent belonged to the Muslim religion.

**Family Monthly Income:** Table 1 Showed that among the total respondents, 49 percent were earning Rs.5001-10000 per month, 27 percent were earning below Rs.5000 and 24 percent were earning above Rs.10,001 monthly family income.

**Type of the family:** Table 1 depicts that out of 100 respondents 65 percent respondents were belongs to the nuclear family, 29 percent belong to the joint family and only 6 percent respondents belong to an extended family.

**Family Size:** Table 1 revealed that out of 100 respondents 52 percent were from a family size of 3–4 members, 36 percent were from a family size of above 5 – 6 members, and 12 percent respondents were over 6 members of a family size.

**Family history of mental illness:** Table 1 showed that out of 100 majority of respondent 94 percent had no family history of mental illness and 6 percent had family history of mental illness.

**Family members suffering from Alzheimer's disease:** Table 1 depicts that out of 100 majorities of respondent 98 percent had no family members suffering from Alzheimer's disease and 2 percent had family members suffering from Alzheimer's disease.

**Source of Information:** Table 1 showed that about 67 percent respondents were not having any source of information regarding Alzheimer's disease, 13 percent of respondents were receiving a source of information through magazine and newspapers, 11 percent of respondents were



receiving a source of information through television and radio, 6 percent respondents were receiving a source of information through family members and friends.

### Section B: Description of area-wise knowledge score of adults regarding Alzheimer's disease:

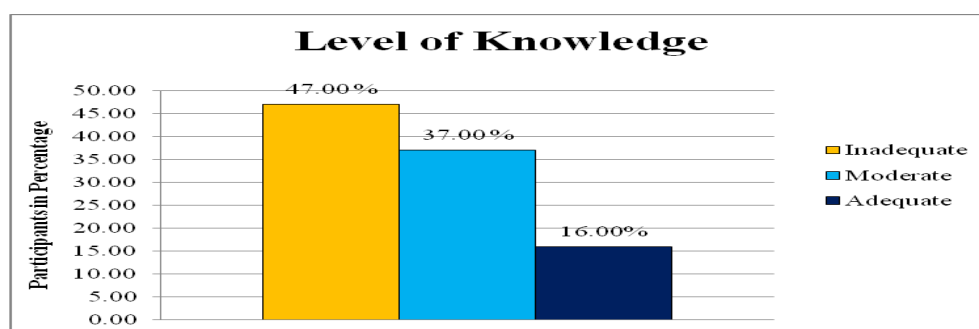
This section deals with the analysis and interpretation of the data related to Alzheimer's disease knowledge of adults and the ranking of knowledge scores. This helps in identifying the deficiencies in knowledge and to decide the priority needs of adults. Knowledge scores of adults were obtained by structured questionnaires schedule. **N=100**

**Table 2** Area-wise mean knowledge of respondents regarding Alzheimer's disease

S. N.	Area	Statements	Max score	Range Score	Mean	Mean ( % )	SD
1	Meaning & Definition	3	3	0-3	1.87	62.20	29.70
2	Incidence & Prevalence	2	2	0-2	1.00	50.00	39.10
3	Etiology	3	3	0-3	1.50	50.00	25.70
4	Signs & Symptoms	10	10	01-10	5.07	50.70	24.40
5	Investigation & management	12	12	01-11	6.73	56.10	20.00
<b>Total</b>		<b>30</b>	<b>30</b>	<b>09-26</b>	<b>16.17</b>	<b>53.90</b>	<b>15.50</b>

Table 2 reveals the aspects wise of the mean knowledge score of adults regarding Alzheimer's disease. The highest mean percentage 62.2 percent of knowledge score in the area of the meaning definition of Alzheimer's disease. (SD of 29.7, mean 1.87), the least mean percentage of 50 percent of knowledge score is found in the area of incidence and prevalence and cause, (SD of 39.1, mean 1), (SD of 25.7, mean 1.50) in the area of signs and symptoms the mean percentage of knowledge score 50.7 percent (SD of 24.4, mean 5.07) in the area of investigation and management mean percentage of knowledge score. 56.1 percent (SD of 20, mean 6.73), total knowledge score mean percentage 53.9 percent, SD of 15.5, mean 16.17.

### Section C: The findings related to the knowledge level of the respondent regarding Alzheimer's disease: **N=100**



**Figure 1** Knowledge level of the respondent regarding Alzheimer's disease





Figure 1 depicts the knowledge level on Alzheimer's disease, out of 100 respondents 16 percent were having adequate knowledge, 37 percent were having moderate knowledge, and 47 percent were having inadequate knowledge of Alzheimer's disease.

#### Section D: The findings related to the association between knowledge and selected demographic variables: N = 100

**Table 3** Associate between knowledge level and selected demographic variables

S. N.	Demographic Variables	df	P value (0.05 level)	Calculated $\chi^2$ Value	Inference
1	Age	4	9.48	2.49	NS
2	Gender	2	5.99	0.53	NS
3	Educational Status	6	12.59	23.44	S
4	Marital Status	6	12.59	12.67	S
5	Occupational Status	8	15.50	5.85	NS
6	Religion	4	9.48	5.11	NS
7	Family Monthly Income	4	9.48	5.47	NS
8	Type of the family	4	9.48	5.79	NS
9	Family Size	4	9.48	9.99	S
10	Family history of mental illness	2	5.99	5.70	NS
11	Family members suffering from Alzheimer's disease	2	5.99	2.80	NS
12	Source of Information on Alzheimer's disease	6	12.59	14.99	S

S = Significant / NS = Non Significant

Table 3 shows that there was a significant association found between educational level ( $\chi^2=23.44$ ), marital status ( $\chi^2=12.67$ ), family size ( $\chi^2=9.99$ ), and Source of Information on Alzheimer's disease ( $\chi^2=14.99$ ), but there was no significant association between other variables. They are age, gender, occupation, religion, income, type of family, family history of mental illness, and family member suffering from Alzheimer's disease.

## CONCLUSION

The present study aims to assess the knowledge regarding Alzheimer's disease among 100 adults a selected urban community (Ashok Nagar & Bhupalpura) in a Udaipur city with a view to develop an information booklet. The quantitative research approach and descriptive research design were adopted for this study. The convenient sampling technique was used for data collection. The data were collected by interview to assess the level of knowledge of adult by using structured questionnaires. The collected data were tabulated and analyzed by descriptive and inferential statistics. The findings showed that out of 100 adults 16% had adequate



knowledge 37% had moderate knowledge and 47% had inadequate knowledge regarding Alzheimer's disease. There was a significant association between the level of knowledge and the selected demographic variables. The research was effective to develop an information booklet.



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