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## Level of knowledge and attitude towards alzheimer's disease among people in Sanglah General Hospital, Denpasar, Bali



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### ABSTRACT

**Background:** Alzheimer's disease (AD) is a kind of dementia that causes impair of memory, intuition, and social life in elderly particularly. This study aims to know the public awareness, attitude, and knowledge of AD in Denpasar, Bali

**Methods:** A cross-sectional study was conducted among 70 participants at Sanglah General Hospital by using self-administered questionnaire during April-May 2018 period. Subjects selection using simple random sampling method. Statistical analysis was carried out by using SPSS ver. 17 to know the percentage or

proportion regarding with attitude and knowledge of AD.

**Results:** About 39% of participants have a good knowledge, followed by 20% poor knowledge, and 41% don't know about AD. The study found that 50% of participants have a good attitude, 25% poor attitude, and don't have attitude regarding with AD. Data comparison showed that students scored higher for attitude than knowledge about 11%.

**Conclusion:** Most of the participants at Sanglah General Hospital have a poor knowledge and attitude regarding with HD

**Keywords:** Alzheimer's disease, Attitude, Level of Knowledge

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### INTRODUCTION

Alzheimer's disease (AD) is a kind of dementia that causes impair memory, intuition and social life. The disease progress gradually and deteriorate over time. However, based on the epidemiological and clinical evidence study have suggested that manifestations of AD extend beyond the brain.<sup>1</sup> AD is not an ordinary piece of maturing, even though the best-known fundamental element is the larger part of individuals with AD are 65 years. Up to 5% of individuals with the ailment have early-onset AD and regularly found in their 40s or 50s of age.<sup>2</sup>

Alzheimer's disease is the 6<sup>th</sup> leading cause of death in the United States. Those with AD live a normal for eight years after their side effects get influenced to social life, yet the survival can extend from four and 20 years, contingent upon age and wellbeing conditions.<sup>3</sup> The pathogenesis of AD is complex which involving tau hyperphosphorylation, reactive glial and microglial changes, as well as abnormal amyloid- $\beta$  ( $A\beta$ ) metabolism as a major hallmark of AD.<sup>4</sup> The cerebrum has 100 billion nerve cells (neurons). Every nerve cell associate with numerous others to shape correspondence systems.<sup>4</sup> Some parts are

included in considering, learning and recalling process. Others help us see, hear and smell. Nerve cells are like a storage data and speak with different cells. Continuing everything running obliges coordination and also a lot of fuel and oxygen.

Researchers accept Alzheimer's malady forestalls parts of a cell's plant from running great. Plaques and Tangles play a vital role, especially for  $A\beta$  plaques.  $A\beta$  levels (in both peripheral tissues and the brain) are known to be higher in AD patients than cognitively normal elderly individuals.<sup>5</sup> Despite the fact that many people build up a few plaques and tangles as they age, those with AD tend to grow plaques much more. They likewise tend to create them in an anticipated example, starting in ranges vital for memory before spreading to different districts.

An increasing prevalence of AD, many countries have been stated as a public health priority due to huge impact on the community.<sup>6</sup> This study aims to assess level of knowledge and attitude about Alzheimer's disease (AD) among people at Sanglah General Hospital.

### METHODS

A cross-sectional study was carried out among

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70 people during April-May 2018 by using simple random sampling technique. Bilingual self-administered questionnaire was conducted among participants which meet inclusion and exclusion criteria. The questionnaire consisted of several question regarding knowledge and attitude. Level of knowledge was scored based on questionnaire results such as >70 indicate for good knowledge, 50-70 was poor knowledge, and <50 suggest for don't know about AD. The attitude scoring system was also similar where >70 indicate for good attitude, 50-70 was a poor attitude, and <50 suggest for don't have attitude about AD. The inclusion criteria were volunteering people who agreed and sign for informed consent as well as above 20 years old. Data analysis was done descriptively using SPSS ver. 16 software.

## RESULTS

All the 70 students gave consent to participate in the study with a 100% response rate. The total participants for this study are 70 from random people in Sanglah Hospital, Denpasar. The age range to answer this questionnaire was above 20 years old. The overall knowledge and attitude score of the participants on Alzheimer's disease ranging from minimum score 0 to maximum score 2 while for attitude there were only six questions based on prevention aspect.

Based on Table 1, about 39% of respondents had good knowledge about Alzheimer's disease. However, 20% of random people had poor knowledge, and 41% don't know about Alzheimer's disease. In attitude measurement, 50% of respondents have a good attitude, 25% have a poor attitude, and another 25% don't have any attitude.

**Table 1.** Distribution of the level of knowledge and attitudes towards Alzheimer's disease among random people in Sanglah Hospital, Denpasar.

Variables	Percentage (%)
Level of knowledge :	
Good	39%
Poor	20%
Don't know	41%
Attitudes:	
Good	50%
Poor	25%
Don't know	25%

Comparison between the data has shown that students scored higher for attitude than knowledge with 11% difference.

The level of knowledge had been tested based on definition, etiology, sign and symptoms, management and treatment and prognosis. Responses were recorded regarding "true," "false" or "don't know." The table shows that only 43% of the participants knew the definition of Alzheimer's disease while 13% answered wrongly and 31% answered don't know. About 39% of participant had given the correct answer for etiology while 20% of them responded incorrectly and 41% answered don't know. 43% of participant thinking forgetfulness in elderly people is a part of aging and doesn't need any medical condition because the participants mostly believe it is due to genetic transmission. As for sign and symptoms 45% of people aware of the early sign and symptoms but 55% of them don't even have basic knowledge of the sign and symptoms. In spite of this, 82% of participants don't know about the treatment that they supposed to go through. The knowledge about prevention among the participant so low which is 37%, 68% answered false and 47% answered don't know. But 51% of students had a good knowledge about the prognosis of where it can't be cured only can prevent the progression of Alzheimer's disease.

The attitude scale consisted of 6 questions on participate attitude. Based on Table 3 when asked regarding antioxidants can keep brain conditions healthy to prevent the emergence of Alzheimer's, 36% of participant gave positive answer, 7% were wrong, and 46% of them don't know the answer. Controlling consumption of excess fat can cause as prevention 31% of participant gave the right answer but 55% of the participant don't know the answer. Only 29% out of the 100% participant responded positively for regular exercise as one of the prevention method. 21% of the participant answered correctly that study reading improve the chance of not getting Alzheimer's while 31% answered as no and 48% of them answered as don't know. 51% of participant choose correctly that consumption of alcohol beverages, smoking increase the chances of getting Alzheimer's disease. As last question participants were asked about regular health check as prevention for Alzheimer's disease whereas only 63% participant knew the right answer, 7% gave a negative response, and 21% couldn't answer.

## DISCUSSION

Dementia is a major health problem worldwide as there will be a threefold increase in people living with dementia globally by 2050. Alzheimer's disease is the most common form of dementia in the elderly

**Table 2. Question type of questionnaire about the level of knowledge towards Alzheimer's disease among people**

Questions Category	Answers		
	True (%)	False (%)	Don't know (%)
Definition	30 (43%)	9 (13%)	31 (44%)
Etiology	27 (39%)	14 (20%)	29 (41%)
Symptoms and Signs	32 (45%)	13 (19%)	25 (36%)
Management and treatment	12 (17%)	21 (30%)	37 (52%)
Prevention	26 (37%)	11 (16%)	33 (47%)
Prognosis	36 (51%)	7 (10%)	27 (39%)

**Table 3. Attitudes of respondents towards Alzheimer's disease based on questions**

Question	Answers		
	True (%)	False (%)	Don't know (%)
1. Can Will Antioxidants keep brain conditions healthy to prevent the emergence of Alzheimer's?	17 (24%)	7 (10%)	46 (66%)
2. Will Consumption of excess fat can cause various diseases such as heart, stroke, and also Alzheimer's disease?	22 (31%)	10 (14%)	38 (55%)
3. Do exercises regularly prevent a person from getting Alzheimer's disease?	20 (29%)	18 (26%)	32 (46%)
4. Does study improve the chance of not getting Alzheimer's disease?	15 (21%)	22 (31%)	33 (48%)
5. Will consumption of alcohol, beverages, and smoking increase the chances of getting Alzheimer's disease?	36(51%)	6 (9%)	28 (40%)
6. Do we need to see doctor for a regular check?	44(63%)	5 (7%)	21 (30%)

(60-80% of all cases of dementia) which is chronic progressive, an and irreversible degenerative disease of the brain. Unfortunately, there was only 39% of people in Sanglah Hospital had god knowledge about Alzheimer's disease. A cross-sectional study was carried out among undergraduate nursing students at a Govt. College of Nursing, Institute of National Importance, Bangalore, India, in 2013 where about 56% participants had insufficient knowledge regarding dementia related to Alzheimer's disease. It's revealed that knowledge about Alzheimer's disease among medical field people also not satisfactory.<sup>7</sup> The overall attitude of people towards Alzheimer's disease is good compared with knowledge. For attitude, 50 % of people showed a good attitude. A similar study was conducted by Jacinto et al in 2016 whereas changes in lifestyle play more significant role in Alzheimer's disease.<sup>8</sup>

Family history has first-degree relatives with Alzheimer's disease. When heredity comes is specific rare gene mutations guarantee that you'll

eventually develop Alzheimer's disease, while others significantly increase the risk of having it. When coming to health condition like obesity, diabetes, hypertension, and cardiovascular disease (CVD), the risk of AD increases. A similar study found that at least 80% of people with Alzheimer's disease also have CVD.<sup>9</sup> In addition, about 34% of participants in this study know that antibiotic can't cure AD. This outcome was also similar to the previous study where approximately 40% of random people not aware of the treatment of AD.<sup>10</sup>

Based on attitudes, this study found that most of students aware consumption of alcohol beverages, smoking increase the chances of getting Alzheimer's and also that see a doctor for regular check can prevent if there are any symptoms of Alzheimer's. A similar study was conducted among medical students and residents in Brazil where they believed that a healthy lifestyle could prevent Alzheimer's disease.<sup>11</sup>

## CONCLUSION

Our findings suggest that level of knowledge among people at Sanglah General Hospital about Alzheimer's disease is need to be improved due to most of them still having poor knowledge and don't know about AD itself. However, the attitudes of people about AD is already good, and this situation can represent the public awareness and behave of participants preventing AD in the future.

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