

ORIGINAL RESEARCH

The Relationship Of The Level Of Elderly Knowledge About Dementia And The Risk Of Dementia

Anisya Virotika Zhahira¹, Raden Siti Maryam^{2*}, Eska Riyanti², Yeti Resnayati², Aan Nurhasanah², Pudjiati²

Affiliation

¹Student of Nursing Study Program Applied Bachelor Program, Poltekkes Kemenkes Jakarta III, Indonesia

²Department of Nursing Poltekkes Kemenkes Jakarta III, Indonesia

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Corresponding Author:

Raden Siti Maryam

Department of Nursing Poltekkes
Kemenkes Jakarta III, Indonesia

Email:

raden.maryam@poltekkesjakarta3.ac.id

Abstract

Background:The growing elderly population will bring many changes that impact health problems, such as dementia which affects cognitive function. **Objective:** Analyzing the relationship between the level of knowledge of the elderly about dementia and the risk of developing dementia at the Mekarsari Village Health Center.

Methods:This study uses a quantitative approach that is descriptive analytic, using a cross sectional design. The sample in this study were 85 elderly who were taken using purposive sampling. Data analysis used the chi square test. The instrument used to measure the possibility of dementia in respondents is a modified standard instrument of the HVLTL (Hopkins Verbal Learning Test Version) and modified DKAS (Dementia Knowledge Assessment Scale).

Results:The results showed that there was a relationship between the level of knowledge of the elderly about dementia and the risk of dementia with a total p value of 0.030 (<0.05).

Conclusion:The level of knowledge about dementia in elderly respondents is mostly knowledgeable. The majority of the risk of dementia in the elderly is in the normal category. It is hoped that through health education to the community regarding dementia knowledge it can prevent the incidence of dementia in the elderly

Background

The elderly are individuals aged 60 years or more who have experienced anatomical, physiological, and biochemical changes in the body that have affected the body's overall function and abilities (Permenkes, 2015). The elderly are an age group of humans who are in the final stages of their lives. This group of elderly people will experience a process called the aging process. This condition has resulted in an increase in the number of elderly people. According to the population census results, in 2025, it is estimated that the number of elderly people will increase to 36 million. According to Depok City BPS data for 2019–2020, the number of elderly residents in the Cimanggis District Health Center has increased. In 2019, the elderly population was a total of 1,351 people, and the total elderly population in 2020

increased to 1,453 people. Meanwhile, in 2020, the elderly population in Mekarsari Village will reach 4,651 people.

This growing elderly population is likely to bring many changes that impact health problems, such as dementia, which affects cognitive function. Elderly dementia is a disease with systemic and progressive cognitive impairment and is related to the physical health of the elderly. Cognitive decline in the elderly can cause family anxiety and cause physical, psychological, economic, and social burdens on the family (Kurniasih & Pradana, 2022). Research by (Yuda, Saraswati, and Uli Na'mah, 2019) found that the majority of knowledge about dementia prevention was poor (44.45%), respondents had sufficient knowledge (37%), and respondents had good knowledge (18.5%). This is in line with research by (Pranata et al, 2022) that found that the majority of respondents had a poor level of knowledge with a frequency of 64 respondents (83.1%), a sufficient level of knowledge with a frequency of 13 respondents (16.9%), and a good level of knowledge with a frequency with a frequency of 0 respondents (0%).

According to data from the WHO (World Health Organization), dementia has become a global disease, affecting around 50 million people worldwide, with a total of 7.7 million new cases each year, 60% of whom live in developing countries. The number of dementia sufferers is expected to increase to 82 million in 2030 and 152 million in 2050. The number of dementia sufferers is increasing from year to year, and of course there is concern at this time. The complete dependence required by dementia patients can sometimes trigger physical and emotional exhaustion in family members. Behavioral problems and psychological symptoms that occur in dementia patients, as well as sociodemographic factors and psychological factors from the family (Pradana & Rohayati, 2021). As quoted from Maryam (2020), a risk factor for dementia that can be changed is the level of education. The higher a person's level of education, the better the level of knowledge they have, and vice versa (Marjan, 2018).

Dementia is influenced by various factors, including genetic factors, age, education level, diet, nutritional status, intake of macro- and micronutrients, and other degenerative diseases. With the increase in the number of elderly people, the chance of dementia in the elderly also increases. Dementia prevention can still be done at the early age of 60, when you are just entering the cycle of becoming an elderly person. An effort that can be made by an elderly person is to modify the factors that cause dementia (Kurniasih & Pradana, 2022). The family plays a very important role in improving the health of the elderly, and the family is one of the units that has a big influence in preventing the occurrence of dementia in the elderly. Therefore, increasing awareness regarding correct knowledge about dementia will be depicted in the results of this study.

Method

This research is quantitative research using a cross-sectional method which aims to measure two variables at one time. This research was conducted at the Mekarsari Village Health Center in May 2023. The sample in this study was elderly people aged 60 years and over who visited the health center as many as 85 respondents using a purposive sampling technique.

The data collection tool uses a standard instrument modified by Maryam, et al. (2020) from Annear, et al. (2017) Dementia Knowledge Assessment Scale (DKAS). The instrument used to measure the risk of dementia is the modified standard instrument HVLTL (Hopkins Verbal Learning Test Version) from the cognitive examination questionnaire for the elderly by the Ministry of Health (2016) in Maryam, et al. (2020). The independent variable in the study was the elderly's level of knowledge about dementia, while the dependent variable was the risk of dementia. This research is declared to have passed the ethical test based on the ethical permit number, No. LB.02.02/04715/2023 by the Ministry of Health Jakarta III Health Polytechnic Ethics Commission on May 8 2023.

Results

Table 1. Frequency Distribution of Characteristics of Elderly Respondents (n = 85)

Variable	Category	Frequency (n)	Percentage (%)
Age	60-70 years old	74	87.1%
	>70 years	11	12.9%
Gender	Man	34	40.0%
	Woman	51	60.0%
Level of education	No school	5	5.9%
	Elementary school	22	25.9%
	Junior high school	26	30.6%
	Senior high school	23	27.1%
	College	9	10.6%
Work	Self-employed	12	14.1%
	Laborer	11	12.9%
	Private sector employee	1	1.2%
	Doesn't work	61	7.1%
Disease History	There is no history of disease	41	48.2%
	Hypercholesterolemia	1	1.2%
	Diabetes mellitus	6	7.1%
	Hypertension	37	43.5%
Physical Activity	No	69	81.2%
	Yes	16	18.8%
Social activity	No	29	34.1%
	Yes	56	65.9%

Table 1 shows the results that there were 74 respondents aged 60-70 years (87.1%), 61 respondents who did not work (71.8%), 26 respondents with junior high school education (30.6%), female respondents. as many as 51 people (60%), respondents who had no history of illness were 41 people (48.2%), respondents who did not carry out routine physical activity were 69 people (81.2%), and respondents who took part in social activities were 56 people (65.9%). %).

Table 2. Frequency Distribution of Level of Knowledge About Dementia and Dementia Risk (n = 85)

Variable	Category	Frequency (n)	Percentage (%)
Risk of Dementia Events	Dementia Risk	39	45.9%
	Normal	46	54.1%
Knowledge level	Good	53	62.4%
	Not enough	32	37.6%

From table 2 it shows that of the 85 respondents in the dementia risk category, 39 were elderly (45.9%), while in the normal category there were 46 elderly (54.1%), while for the level of knowledge in the good category there were 53 elderly (62.4%), while in the good category there were 53 elderly (62.4%). less than 32 elderly people (37.6%).

Table 3. The Relationship between the Level of Knowledge of the Elderly and the Risk of Dementia Events

Level of Knowledge About Dementia	of Risk	Risk of Dementia Events	Normal	Total	P value	OR
Not enough	n	20	12	32		
	%	62.5%	37.5%	100.0%		
Good	n	19	34	53		2,982
	%	35.8%	64.2%	100.0%	0.030	(1,201-7,406)
Total	n	39	46	85		
	%	45.9%	54.1%	100.0%		

Table 3 above shows a p value of 0.030 ($p < 0.05$) which shows that there is a relationship between the level of knowledge of elderly people about dementia and the risk of dementia. From the OR value, it can be concluded that elderly respondents who have a poor level of knowledge experience a risk of dementia that is twice as likely as elderly people with a good level of knowledge. The table above illustrates that elderly respondents with a lower level of knowledge tend to be at risk of dementia.

Discussion

The findings from the frequency distribution analysis of knowledge levels indicate that the majority of elderly participants possess good knowledge (62.4%), whereas a significant portion have poor knowledge (37.6%). (Ridwan et al., 2021) suggested that knowledge originates from empiricism (sensory experiences) and rationalism (reasoning) cultivated through educational and learning processes. This trend may be attributed to the active engagement of most elderly individuals in social activities like posbindu and regular visits to healthcare facilities, facilitating adequate health education. Regarding the frequency distribution analysis of dementia risk, 45.9% of elderly individuals were found to be at risk. Additionally, the research highlighted a history of hypercholesterolemia, diabetes, and hypertension among them. (Maryam et al., 2019) identified a lack of cognitive stimulation as a risk factor for dementia, which was observed in many respondents who reported insufficient cognitive activities in their daily lives, such as reading or playing games.

Furthermore, the study revealed that individuals above the age of 70 were predominantly at risk of dementia. Advanced age is a significant contributing factor to dementia development (Dewa et al., 2020). The risk escalates with age, with a 10% risk at 65 years, 15% at 75 years, and a substantial increase to 35-50% by the age of 85 (Maryam et al., 2019). In the context of the correlation between employment status and dementia knowledge among the elderly, most respondents exhibited a good level of knowledge irrespective of their work status. This underscores that knowledge acquisition isn't solely dependent on employment but rather stems from human curiosity, employing specific methods and tools (Cahyono et al., 2019). Senja & Prasetyo (2019) noted that cognitive impairment may lead to changes in behavior, potentially affecting an individual's ability to work, aligning with Notoatmodjo's (2012) assertion that knowledge can heighten awareness and induce behavioral changes.

Furthermore, the bivariate analysis between dementia knowledge levels and the incidence of dementia risk confirmed a significant relationship. The Chi-Square test yielded a p-value of 0.030 (<0.05), indicating a substantial association between dementia knowledge and the risk of dementia. Pender, Murdaugh, and Parsons (2011) proposed that knowledge enhancement can be achieved through targeted information dissemination aimed at fostering individual, familial, group, or societal change.

Conclusion

Most of the elderly respondents were in the 60-70 year age group with female gender and the majority of respondents were at elementary, middle school and high school education levels. The level of knowledge about dementia among elderly respondents is mostly good knowledge. The majority of the risk of dementia is in the normal category. There is a relationship between the level of knowledge of elderly people about dementia and the risk of dementia in elderly respondents at the Mekarsari Village Health Center.

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