04. Profile of dementia in rural area of Indonesia

by Andika Hilman Pramudita

Profile of dementia in rural area of Indonesia

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Abstract
Introduction: Dementia is the ability degradation of remembering and thinking that interrupts one's daily activity, which will be an additional burden to the elderly. The purpose of this study was to find out the profile of dementia in elderly.
Methods: This was an observational descriptive cross-sectional study. The data were obtained using Mini-Mental State Examination (MMSE) questionnaire.
Results: The respondents were dominated by females (54%), elderly who had caregiver (86%), non-smokers (60%), people who did not complete elementary school (36%), and people who were already married (66%). Most elderly were categorized as without dementia (62%). Among people who were identified as having dementia, 22% had mild dementia.
Conclusion: The most common grade among elderly in rural area who visited the Geriatric Healthcare Center is mild dementia.

Keywords: dementia, rural, MMSE

INTRODUCTION

Shift in physical, emotional, and social dimensions due to the aging process can have significant impacts on the health of the elderly if help is not given very quickly (Amelia et al. 2018, Siregar et al. 2018). Data from WHO (2019) stated that there is currently a trend of increasing life expectancy throughout the world (World Health Organization 2017). This of course has an impact on the increasing population of the elderly in the world. The elderly population in Indonesia is also projected to continue to increase from 9% of the population (23.0 million) in 2015 to 19.7% of the population (61.4 million) in 2045 (Badan Pusat Statistik 2018). The high population of the elderly will have an impact on the social and economic security of a country where the population of productive age must bear the elderly who are not working (Yenilmez 2015). The elderly can be classified as young-old (ages 65-74 years), middle-old (75-84 years), and oldest-old (over 85 years) (Zizza et al. 2009).

There are some specific problems related to aging, such as cognitive and psychological changes, social and environmental changes, more hospitalization, functional impairment, and chronicity of disease (Chee et al. 2015,

Jaul et al. 2017). The aging process makes it difficult for the elderly to do their daily activities independently, making them dependent on others. This can cause memory disturbances, impaired concentration, changes in sleep patterns, inability to perform daily activities such as wearing clothes or driving, as well as changes in behavior such as depression, hallucinations, disinhibition, to the idea of suicide (Cerejeira et al. 2012, Grober et al. 2008). However, depression can also affect various ages (Alkaff et al. 2018). In other words, depression can be the cause and effect of memory dysfunction (Thalib et al. 2018). In the elderly, the frequency of occurrence of changes in cognitive and mental function tends to increase so that it can bring up manifestations in the form of dementia (Jorm 2000, Saczynski et al. 2010).

The incidence of dementia worldwide in 2015 is estimated at 47 million people. The Asian region has new cases of dementia of approximately 3.6 million

Table 1. Characteristics of subjects (N=50)

Characteristics	n	%
Sex		
Male	23	46
Female	27	54
Caregiver		
Yes	43	86
No	7	14
Smoking history		
Yes	20	40
No	30	60
Education		
Not completed in elementary school	18	36
Graduated from elementary school	15	30
Graduated from middle school	5	10
Graduated from high school	3	6
Bachelor degree and higher	9	18
Marriage status		
Single	0	0
Married	33	66
Divorced	0	66
Dissolved by death	17	34

Table 2. Results of Mini Mental State Examination Assessment

Categories	n	%
Normal	31	62
Mild Dementia	11	22
Moderate Dementia	8	16
Severe Dementia	0	0

history, level of education, marital status, and Mini Mental State Examination (MMSE) for screening for cognitive impairment and dementia that were valid and reliable with Cronbach's Alpha 0.763 (Khairunnisa et al. 2014). The tabulated data were then processed using the SPSS 17.0 Statistical analysis program (Fallah et al, 2009).

RESULTS

Table 1 shows that the highest frequency of subjects is female with a frequency of 27 subjects (54%), accompanied by caregivers as many as 43 subjects (86%), no smoking as many as 30 subjects (60%), not graduated from elementary school 18 subjects (36%), and marital status as many as 33 subjects (66%).

Table 2 displays the result of MMSE assessments. Most subjects were normal (Score 24-30) with a frequency of 31 subjects (62%), while mild dementia (Score 18-23) was 11 subjects (22%), moderate dementia (Score 10-17) was 8 subjects (16%), and no subjects were found with severe dementia (Score 0 - 9).

DISCUSSION

The profile of the elderly in the Pesanggaran Public Health Center of Banyuwangi Regency has the highest degree of dementia, namely mild dementia. The presence of cognitive disability is critical to cognitive screening tools for the elderly (Rambe et al. 2017). The results of this study are in accordance with research in Arabic. The study used more respondents, as many as 944 elderly people aged 65 years. The study showed normal prevalence as the majority category with mild dementia as the highest degree of dementia. According to the study, the high prevalence of dementia is thought to be due to genetic factors (Afgin et al. 2012).

The incidence of dementia worldwide in 2015 was estimated at 47 million people. The Asian region has new cases of dementia of approximately 3.6 million people (46%) each year, especially aged 75-84 years. The incidence of dementia is estimated to double with every 5.9 years of age increase. Increased dementia is from 3.1/1000 people at the age of 60-64 to 175/1000 people at the age of >95 years (World Health Organization 2015). Higher life expectancy and high prevalence of Alzheimer disease dominantly occur in older and very old women compared to men (Post et al. 1998). Earlier study showed that in 82 patients with mean age 71.2±7.9 years, patients diagnosed with dementia and Mild Cognitive Impairment (MCI) were

people (46%) each year, especially aged 75-84 years (World Health Organization 2015). Pesanggaran Public Health Center in Banyuwangi Regency faces problems related to mental health services and elderly health services. Based on recapitulation data analysis on the Performance Assessment of Puskesmas (PKP) Pesanggaran in 2018, it was found that mental health services had not reached the target, which was 66.6% of 100%, and elderly health services also had not yet reached the target, namely 58.12% of 100%. There are no specific data related to dementia in the Pesanggaran public health center (Puskesmas Pesanggaran 2018). The purpose of this study was to find out the profile of dementia in elderly (Anton Syroeshkin et al., 2019).

METHODS

This was a descriptive study to find out the profile of dementia in the elderly in the work area of Pesanggran Public Health Center Banyuwangi Regency, East Java, Indonesia. The study design chosen was observational with a cross-sectional approach. The population in this study was the elderly in the work area of the Pesanggaran Public Health Center in Banyuwangi Regency, namely adult communities with more than 60 years of age. Sampling was carried out in the elderly healthcare center with non-probability sampling by applying the inclusion criteria of this study to all adult communities over the age of 60 years who came to the elderly integrated healthcare center (Posyandu). Whereas, the exclusion criteria were the elderly who were not willing to fill out the questionnaire, were illiterate, and were unable to fill in the questionnaire. The number of samples obtained was 50 subjects.

The data collection of this study was performed using primary data, namely data taken directly by researchers with questionnaires and guided interviews. Two questionnaires were used, namely the respondent demographic data questionnaire, including the respondent code, age, gender, caregiver, smoking

46% and 34%, respectively, with 78% of them found markers of cerebral vascular abnormalities through magnetic resonance imaging (MRI) (de Heus et al. 2020).

This study found that the majority of respondents did not experience dementia, and respondents who had dementia were in mild and moderate degrees of dementia. This might have happened because most of the respondents were drawn from those who came to the elderly integrated healthcare center (Posyandu). Whereas, subjects who did not come to the Posyandu for the elderly were likely to have severe dementia, who could not be invited to the Posyandu for the elderly. The number of respondents who did not experience dementia was suspected because respondents were still active in carrying out daily activities. Physical activity is an effort to maintain cognitive function, manage behavior, and train the elderly to be more independent, so it can be a good preventive action against dementia (Savica et al. 2011). Researchers also assume that activities carried out in the elderly Posyandu such as elderly gymnastics, health counseling, and regular health checks can be one of the factors that reduce the risk for a person becoming severe dementia.

Preventive action on the elderly must be done because it is estimated that delaying onset of dementia by five years can reduce half of dementia incidents. Therefore, we need knowledge about risk factors and existing evidence. Risk factors for dementia can be divided into two, modified and non-modified. Age and sex are risk factors that cannot be modified. A study showed that the risk factors for dementia progression differ among men and women (Livingston et al. 2017). This study is also in line with previous studies which showed that as many as 75% of elderly are accompanied by caregivers in America. The existence of caregiver for people with dementia greatly affects the quality of life of the elderly. A caregiver can help people with dementia in carrying out their daily activities (shopping, taking care of finances, and reminding appointments or meetings), and with a heavier degree of dementia, caregiver can also help sufferers in performing basic functions (eating, controlling urinating or defecating, dressing), which the patient cannot do independently (Schlomann et al. 2020). People with dementia who are not accompanied by a caregiver have more problems in solving problems or daily activities, decreased cognitive function, increased various diseases, and other factors (Brodaty et al. 2009).

A previous study stated that the prevalence of dementia decreases with increasing the education levels (Afgin et al. 2012). The education levels are related with dementia (Maryam et al. 2015). The function of education itself is to eliminate the suffering of the people from ignorance and backwardness. It is assumed that educated people will avoid ignorance and poverty because with the capital of knowledge and skills they have, they will be able to overcome the life problems they face. The higher the level of education of a person, the more they tend to have better cognitive function despite being of the same age (Yahya et al. 2019). Besides, married people entail a decreased risk of dementia compared to widows and single persons for a lifetime. Married couples can adjust their exposure during their future lives to additional protective and risk factors; this is supported by our analysis of conflicting factors that affect this risk and proof that married people are likely to have a healthier way of life (Sommerlad et al. 2017).

This study has several limitations, including research conducted only descriptive in nature, and the sample population is limited to the work area of the Pesanggaran Community Health Center. Further research needs to be done to determine the correlation between determinant factors with dementia carried out in several areas to provide a clearer picture of the dementia problem in the elderly in rural areas.

CONCLUSION

The profile of the elderly in the Pesanggaran Public Health Center of Banyuwangi Regency has the highest degree of dementia, namely mild dementia. The majority of respondents did not experience dementia, were women, were accompanied by caregivers, were not smokers, did not graduate from elementary school, and were married. The suggestions from the authors suggest to the Pesanggaran Public Health Centre to focus on preventing and reducing the incidence of dementia, especially in the elderly.

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