



The Analysis of Independency Level of Elderly Having High Risk of Dementia in Surabaya Indonesia

Hidayatus Sya'diyah^{1,2}, Nursalam Nursalam³, Mahmudah Mahmudah³, Ferry Efendi⁴, Yoga Kertapati², Firman Suryadi Rahman^{1*} 

¹Doctoral Program of Public Health, Universitas Airlangga, Surabaya, Indonesia; ²Stikes Hangtuah, Surabaya, Indonesia; ³Faculty of Nursing, Universitas Airlangga, Surabaya, Indonesia; ⁴Faculty of Public Health, Universitas Airlangga, Surabaya, Indonesia

Abstract

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*Correspondence: Firman Suryadi Rahman, Doctoral Program of Public Health, Universitas Airlangga, Surabaya, Indonesia.

E-mail: firmansyahrahman@gmail.com

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BACKGROUND: Elderly with dementia through a decline in degenerative brain function is characterized by a progressive loss of memory function and other cognitive abilities, the number of which is increasing in almost all countries. Dementia is a degenerative disease that requires long-term treatment, experienced by a number of the elderly population (over 60 years) (Vega *et al.*, 2018). Dementia can ultimately affect social activities so that in general, it affects the independence of the elderly in daily activities.

METHODS: The research design used in this research is descriptive analytical research design. The population involved in this study is the elderly in Surabaya, Indonesia, which is also the research sample for those who meet the criteria. These criteria include the elderly who are 60 years old, the elderly who are registered at the Community Health Center or Integrated Service Post, are diagnosed with dementia, do not include confirmed cases of COVID-19, live with family, have family members with a minimum high school education of at least 20 years, have and are able to operate Android mobile media, and do not suffer from complications. The sampling technique used in this study was simple random sampling with 100 respondents.

RESULTS: There are three levels of independence for the elderly with dementia, namely, low independence as many as 35 respondents (35%), moderate independence as many as 51 respondents (51%), and high independence as many as 14 respondents (14%). These results are influenced by the characteristics of the elderly, family factors, and health services.

CONCLUSION: Furthermore, the most of the level of independence of the elderly is moderate independence. It is hoped that the elderly can increase their level of independence. The role of various lines is needed to support this including families and health workers, but the role of the elderly itself is also an important point to increase the independence of the elderly.

Introduction

Elderly with dementia through degenerative decreased brain function is characterized by a progressive loss of memory function and other cognitive abilities, whose amount has increased in almost all countries [1]. Dementia is a degenerative disease that requires long-term treatment, which is experienced by a number of the elderly population (over 60 years old) [2]. Dementia is a cognitive decline that occurs in the elderly and can eventually affect their social activities so that it generally affects the independence of the elderly in daily activities such as toileting, dressing, eating, and others [3]. Neuropsychiatry and social deficits also develop in many dementia symptoms resulting in depression, withdrawal, hallucinations, delusions, agitation, and insomnia [4].

In 2000, the prevalence of the elderly reached 7.28% and was projected to reach 11.34% in 2020. Meanwhile, the number of people with dementia in 2030 is around 75.6 million and will increase 3 times

in 2050 (135.5 million). Based on the Health Index and Matrix Evaluation data [5], the number of elderly people increased by 40.9% from 2007 to 2017. The Indonesian elderly people have increased and became higher than the global one and this can cause problems in various aspects, including medical, psychological, and social economy (Data and Information Center, Ministry of Health, 2015). The results of the previous research in 2016 conducted by Alphen claimed that the elderly with dementia in the nursing home/hospital carried out 23.5 less activities, while the elderly who lived with the family/community carried 21.6% smaller than healthy elderly. The quality of life of the elderly is influenced by the level of independence, physical and psychological conditions, social activities, and interactions, as well as family functions [6].

Meanwhile, according to Basic Health Research (2018), the elderly in East Java experience mild dependence by 22%, total dependence by 1.6%, and severe disabilities by 1% in a state of needing other people's help or long-term care. This Figure becomes higher when accumulated with other provinces in

Indonesia. According to a preliminary study at several Public Health Centers in Surabaya, the average of 3% of the elderly who were registered in the Public Health Center program activities did not participate in the activities. As for the independence of the elderly with dementia such as communicating, completing tasks/ADL, cognitive, and controlled/non-aggressive behavior), it shows that out of ten elderly people with dementia, six of them experienced less independence, including not being able to communicate well, unable to complete daily tasks such as toileting, eating, decorating, and showing aggressive behavior.

In accordance with the general objective of the elderly health service policy which is to improve the health status of the elderly to achieve healthy, independent, active, productive, and efficient life of the elderly people for families and communities, it is necessary to develop an elderly health program, one of which is to improve the quality of elderly health care in independence and long-term care [7]. In addition, it is supported by the Regulation of the Minister of Health No. 25 of 2016, concerning the national action plan for elderly health for 2016–2019 which has the following missions: (1) Realizing health service efforts for elderly courtesy with a life cycle, holistic, and integrated approach, starting from family, community, first level health facilities, and advanced health facilities level referral and (2) Indonesia has also made several global commitments including the 2016 Resolution World Health Assembly, Regional Strategy of Health Aging, Response to Aging Societies and Dementia to increase the empowerment of elderly people, families and communities to create healthy, independent, active, and productive elderly people as long as possible.

Based on this phenomenon, researchers were interested in conducting research on the independency level of the elderly with dementia.

Research Methods

The research design in this study used a descriptive analytic research design with a cross-sectional approach. The population in this study were the elderly in Surabaya, Indonesia. The sample in this study was the elderly in Surabaya Indonesia as many as 100 respondents who met the sample criteria in this study, including the elderly aged 60 years old in November 1, 2020, willing to be a respondent, registered at Primary Health Center, diagnosed dementia by a nurse, not included in a confirmed COVID-19 case, lived with their family, had family members with a minimum education level of junior high school aged at least 20 years old, own and able to operate an android mobile media, and did not suffer from complications.

The sampling technique used in this study was simple random sampling. The variable in this study is the level of independence of the elderly who are at high risk of developing dementia.

Results

The results of this study will be described in the form of a frequency distribution, including elderly factors, family factors and health service factors, and the level of independence of the elderly with dementia. A more complete explanation will be described in Table 1:

Table 1: Characteristic of elderly

Indicator	Category	Frequency	Percentage
Age	60–74 years old	87	87.0
	75–90 years	13	13.0
	>90 years	0	0.0
Gender	Male	50	50.0
	Female	50	50.0
Education	Did not attend school	7	7.0
	Primary school	27	27.0
	Junior high school	16	16.0
	Senior high school	40	40.0
	University	10	10.0
Income history	Below the Government salary standard	54	54.0
	According to Government salary standard	40	40.0
	Above the Government salary standard	6	6.0
Emotional	Cognitive Appraisal	51	51.0
	Suppressed	49	49.0
Spiritual	Low	18	18.0
	Middle	51	51.0
	High	31	31.0
Time to suffer from dementia	1 year	50	50.0
	2 year	40	40.0
	3 year	10	10.0
	4 year	0	0.0
	5 year	0	0.0

Table 1 shows that the most of the elderly aged 60–74 years as many as 87%, men and women in the same number 50%, mostly at the high school level as many as 40%, most of whom have a history of income below the government salary standard 54%, most of them have emotional cognitive appraisal 51% and have a medium spiritual category 51%, and the average elderly experience Dementia for 1 year 50%.

Based on Table 2 shows that the most of the family factors have a good function in social and family culture as many as 73 people (73%), the family

Table 2: Identification of family

Indicator	Category	Frequency	Percentage
Family Social and culture	Severe dysfunction	4	4.0
	Moderate dysfunction	23	23.0
	Good function	73	73.0
Family environment	Good	27	27.0
	Enough	69	69.0
	Poor	4	4.0
Family structure and function	Good	35	35.0
	Enough	43	43.0
	Poor	22	22.0
Family stress	Normal	20	20.0
	Mild stress	44	44.0
	Moderate stress	34	34.0
Family coping	Severe stress	2	2.0
	Incompetent	3	3.0
	Moderate competent	46	46.0
Family interaction	Good competent	51	51.0
	Good	71	71.0
	Enough	22	22.0
	Poor	7	7.0

environment is mostly in the sufficient category as many as 69 people (69%), family structure and function most are in the moderate category as many as 43 people (43%), family stress mostly in the category of mild stress as many as 44 respondents (44%), family coping mostly in the category of good competence as many as 51 people (51%), and most family relationships/interactions in the good category as many as 71 respondents (71%).

Based on Table 3 shows that health service factors with service access indicators are mostly in the good category as many as 70 people (70%), the attitudes and services of health workers are mostly in the good category 58 people (58%) and health facilities and infrastructure are mostly in the good category good as many as 64 people (64%).

Table 3: Health services factor

Indicator	Category	Frequency	Percentage
Access	Good	70	70.0
	Enough	28	28.0
	Poor	2	2.0
Health officer	Good	58	58.0
	Enough	38	38.0
	Poor	4	4.0
Facilities Health services	Good	64	64.0
	Enough	34	34.0
	Poor	2	2.0

Based on the Table 4, it shows that most of the levels of independence of the elderly with dementia are in the moderate independence category as many as 51 people (51%).

Table 4: Independency level of elderly with dementia

Category	Frequency	Percentage
Low Independency	35	35.0
Moderate Independency	51	51.0
High Independency	14	14.0

Discussion

Based on research results, it shows that the majority of the elderly independency were in the moderate category that supported by the age of the elderly with the most distribution being the early elderly (60–74) years, emotional with cognitive appraisal and spiritual was good category. In addition, it is supported by family factors, including family structure, family environment, family coping, and family interactions in the sufficient and good categories so that it can support the independence of the elderly with dementia. Besides that, it is also supported by good access from health services, adequate facilities, and good service from the health officers.

Independency comes from the basic word self, the development, which in Carl Rogers' concept is called self by Brammer and Shostrom, because self is the essence of independence. Independency is defined as a condition where a person does not depend on others in making decisions and the presence of self-confidence attitude (Hidayat, 2004) [8].

Independence (self-reliance) is the ability to manage everything that is owned by oneself, namely, knowing how to manage time, walking and thinking independently, accompanied by the ability to take risks and solving problems. With independence, there is no need to get approval from others when they want to step in to determine something new. Independent individual does not need continuous detail about how to achieve the final product, he can rely on himself. Independence refers to an independent, creative, and independent person, namely, having self-confidence that can make someone able as an individual to adapt and take care of everything by himself. The function of independence in the elderly contains the meaning of the ability of the elderly not to depend on others in carrying out their activities, everything is done by themselves with their own decisions to meet their needs (Hidayat, 2004) [8].

According to a Taiwanese study, participants (n = 221) completed the China Cohen-Mansfield Agitation Inventory. This study classified agitating behavior into five main subtypes: Physical agitation behavior, destructive behavior, verbal agitation behavior, handling behavior, and aggressive behavior. This shows that the elderly with dementia experience a decrease in their independence in daily life, including in terms of communication and behavior [9]. Independence is an attitude that allows someone to act freely, do something on their own encouragement for their own needs, pursue achievement, be full of perseverance, and desire to do something without the help of others, able to think and act original, creative and full of initiative, able to influence environment, have self-confidence in one's own abilities, respect their own condition, and get satisfaction from their efforts [10].

Although several health-status (need) variables had significant and direct effects on functional adaptations, the effects of ADL limitations were diminished at higher levels of impairment. Among the financial (enabling) variables, subjective income measures and supplemental insurance had significant and direct effects on functional adaptations. Promotion of functional adaptations among elderly people may benefit from a proactive approach that targets elders with few limitations and a consideration of financial factors in addition to health status [11].

Other studies suggest that the elderly are activated in agriculture and plantations, where older people with dementia participate in outdoor activities and engage in nature-based activities, such as gardening and caring for animals, establishing community gardens and developing hybrid plants. The usual activities are gardening, preparing food and caring for farm animals, sitting and walking in the garden, and attending presentations and excursions [12].

In addition, the elderly living in nursing homes were surveyed about the psychological behavior of the elderly during dementia. Overall, dysphoric symptoms are most common in people with moderate

cognitive impairment. Dysphoria is a condition when a person experiences feelings of discomfort or deep dissatisfaction. Dysphoria is the opposite of euphoria, the symptoms that appear are aggressive behavior, verbally distracting/attention-seeking behavior, hallucinatory, and behavioral symptoms [13].

Steinberg in [10] distinguished the characteristics of independence into three forms: Emotional independence, which is independence which states changes in the closeness of emotional relationships between individuals, behavioral independence, which is the ability to make decisions without depending on others and do them responsibly, value independence, which is the ability to interpret a set of principles about right and wrong, and about what is important and what is not. Based on the three dimensions of independence from Steinberg above, it can be concluded that the aspects contained in independence are emotional independence, and independence of behavior, and independence of values. Dauvan also stated that independence has three dimensions, namely, emotional independence, independence in behavior, and independence in values.

According to the previous research [14], the prevalence of elderly dependence was 14.03%. Elderly dependence was significantly related to age, job, residence, financial management, dementia, depression, malnutrition, and stroke disease in the bivariate analysis. Independence allows elderly to take on the unique challenges of aging and overcome them with a sense of accomplishment. Even if a senior is limited by mobility, they can still gain a sense of purpose through involvement in volunteer activities.

Laman, Avery, and Frank in [10], the characteristics of independent individuals are: Having the ability to make decisions without influence from others, can relate well to other people, have the ability to act according to what is believed, have the ability to seek and get their needs without the help of others, can choose what should be done and what should not be done, creative and courageous in seeking and conveying ideas, having personal freedom to achieve his life goals, trying to develop himself, and can accept criticism to evaluate himself.

Parker, 2006 in [10] further added that independence is characterized by the ability to have self-determination, be creative and initiative, be able to regulate behavior, be responsible, be able to hold back, be able to make their own decisions, and be able to solve problems without any influence from other people. The characteristics of independence mention several things, namely, self-confidence, being able to work alone, mastering skills, respecting time, and being responsible. Independence has certain characteristics that have been described by Parker and Mahmud as follows: According to Parker, an independent person has the following characteristics: responsibility means having a task to complete something and being held

accountable for the results of its work, independence means a condition in which a person does not depend on authority and does not need direction. Independence also includes the idea of being able to take care of oneself and solve one's own problems, autonomy and freedom means to determine one's own decisions and being able to control or influence what will happen to himself, problem solving skills, means that with marked support and direction, individuals will be motivated to reach solutions for their own practical relational problems.

According to the previous studies [15], the results revealed that the most of the 75-year-old elderly were in good condition from a subjective and objective point of views and capable of continuing independent living. It is noticeable that partly different factors were associated with subjective and objective health and functional capacity.

This means that health-care professionals may have different views of the factors that are associated with and can threaten independent living of older people than the older people themselves. This study highlights that health-care professionals should take into account older persons' subjective views on their life situation, health, and functional capacity. This is very important when assessing the capability of living at home or trying to support it. In the previous studies, older persons' personal point of view has been found to be more important from the perspective of independent living than objective view.

The development of independence is a process that involves normative elements. This implies that independence is a directed process. Since the development of independence is in line with the essence of human existence, the direction of this development must be in line with and based on the purpose of human life. The development toward independence and personal freedom normally develops until a person has attained emotional, financial, and intellectual freedom. Independence, like other psychological conditions, can develop best if it is given the opportunity to develop through constant practice and is done from an early age. The exercise can be in the form of assigning tasks without assistance and of course, the tasks are adjusted according to the child's age and abilities. Given that independence will have many positive impacts on individual development, it is better if independence is accustomed to as early as possible. As has been admitted, everything that can be worked on from an early age will be lived out and will progressively develop toward perfection.

Conclusion

Dementia is a degenerative disease that requires long-term treatment, which is experienced by

a number of the elderly population and can eventually affect their social activities so that it generally affects the independence of the elderly in daily activities such as toileting, dressing, eating, and others. Neuropsychiatry and social deficits also develop in many dementia symptoms resulting in depression, withdrawal, hallucinations, delusions, agitation, and insomnia. Elderly factors, family, and health services have an effect on increasing the independence of the elderly with dementia. This will be something that can be developed to support the independence of the elderly with dementia which requires support for the elderly factor, family factors, and health service factors.

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