

Relationship of Demographic Characteristics, Elderly *Posyandu* Membership, Organization Activities to Ability of Daily and Instrumental Elderly Activity

Yuly Sulistyorini, Nunik Puspitasari and Windhu Purnomo

Public Health Faculty, Universitas Airlangga, Campus C Mulyorejo, Surabaya, Indonesia

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Abstract: The results of National Socio Economic Survey in 2008, 2009 and 2012 showed that the percentage of elderly population in Indonesia has reached > 7% of the total population. The aging population structure is one indicator of improving the quality of health and social conditions of the community (Kemenkes R.I., 2013). A large number of elderly people must be managed to become a nation's asset rather than a state burden. The purpose of this study was to know the relationship of demographic characteristics, participation of *posyandu* elderly, organizational activity to the ability of daily activities and instrumental elderly. This research was observational and cross sectional study. The population was elderly citizens in Surabaya City. The samples were elderly, who aged > 60 years old, in Tambaksari Sub District. The sample number of 80 people was determined by Multi Stage Random Sampling. Data were analyzed by using spearman correlation test. The results showed that there was correlation between demographic characteristics, elderly *posyandu* membership, organization activity with ADLs and IADLs ($p < 0,05$). ADLs includes activities in toilet, feeding, dressing, grooming, physical ambulation and bathing. IADLs includes ability to use telephone, shopping, food preparation, house keeping, laundry, mode of transportation, responsibility for own medication and ability to handle finance. The results showed that these factors can contribute to the ability of elderly activity. Elderly are endeavored as the nation's assets. Although realizing the independence of elderly should be supported by other factors such as health care, social support and mental readiness. The ability of these activities will achieve the independence of elderly, healthy and productive elderly amid increasing number of elderly in Indonesia. Factors associated with increased independence of the elderly can assist the state in preparing and making policies to keep the elderly active and productive.

1 INTRODUCTION

The structure of Indonesia population includes in it the state of the aging structure which is seen from the percentage of elderly population in 2008, 2009 and 2012 that has reached > 7%. The aging population structure is one of the indicators in the achievement of human development globally and nationally. This situation is related to the improvement of health quality and social condition of the community. An increasing number of elderly people will also be a challenge in future development programs (Kemenkes R.I., 2013). The increasing population of elderly in Indonesia is caused by the increase of life expectancy, the decreasing of mortality rate and the number of births, the increase of health status and the welfare

of the population (Kemenkes RI, 2014). BPS (2012) data explained that there has been an increase in life expectancy in Indonesia. In 2000, life expectancy in Indonesia was 64.5 years (7.18% of the elderly population) increased to 69.43 years in 2010 (7.56% of the elderly population). This number increased in 2011 to 69.65 years (7.58% of the elderly population). This makes Indonesia in the 3rd position of the world with the most elderly population. The large number of elderly people affects the dependency ratio in Indonesia. The result of National Socio Economic Survey (2012) stated that the old dependency ratio was 11.90. Dependency ratios vary between males and females. The dependency ratio of elderly female population was higher than the elderly male population. Data National Socio Economic Survey (2012) also stated that 11% of elderly were in poor condition and low

health status. The majority of elderly (52.12%) had health complaints in the past month. 50.22% of elderly men has health complaints while 53.74% of elderly women does. The percentage of elderly population who experienced health complaints from 2005-2012 has increased. This shows that the health status of the elderly population was still low.

The process of growing old is natural and normal. Every human being will experience the aging process. This aging process will result in human changes in various aspects including physical, mental and social aspects. Physical changes that can occur are white hair, wrinkled skin, thin, dry and loose, lack or loss of vision due to refractive or cataract disorders, a lack of functioning olfaction, taste buds are less sensitive to sweet and salty taste, lack or loss of hearing, stiff and sore joints and incontinence. Mental changes due to feeling of losing someone, especially spouses or relatives or close friends (bereavement), often aloof, feeling of isolation to become forgetful (dementia). The most prominent social change due to aging is the inability to care for one self in terms of daily activities (Activities of Daily Livings/ADLs) for example: bathing, bowel movement, dressing, grooming hair, eating so gradually that the person should be assisted by a informal or formal caregivers. While the instrumental activities (Instrumental Activities of Daily Livings/IADLs) are such counting money, using a telephone or computer, using a washing machine and so forth will decrease its ability as quality of life decreases (Abikusno, 2013).

The existence of elderly with health problems due to the aging process, the decline in the function of body cells (degenerative), and decreased function of the body's immune system emerges degenerative diseases, malnutrition, infectious diseases, dental and oral health problems (Kemenkes R.I., 2016). East Java Province was the second province with the largest number of elderly in Indonesia. The most elderly population is found in Surabaya, the capital of East Java Province. Posyandu (Integrated Service Center) for elderly was one of the activities undertaken in Surabaya City to improve their health status and quality of life. However, not all elderly are active in this Posyandu's elderly activities. Therefore, various efforts are needed to increase knowledge and awareness of elderly so that healthy, independent, active and productive elderly can be realized. At least the elderly can perform various activities that are necessary to support their daily life. Thus, the study about the condition of elderly and various related factors to realize the

independence of the elderly and provide information for policy makers is crucial.

2 METHOD

This research was an observational and cross sectional study. The population of the study is elderly (> 60 years) in Tambaksari Village, Tambaksari Sub-district, Surabaya City. The samples of the study are the elderly who were selected randomly in the Tambaksari Village, Tambaksari District, Surabaya City. Determination of respondents was done using Multi Stage Random Sampling. The number of respondents in this study was 80 people. Data were taken by interview with questionnaire tool. The instrument used in this study is a questionnaire developed from the measurement of The Physical Self-Maintenance Scale to identify the ability of daily activities of the elderly (Dowell, 2006).

Research variables used are demographic variables (age, education level, kind of work) and daily activities of the elderly. In the daily activity variables, the elderly were given score in each category. If they do activities with full help or assistance they will get one score. If the activity is done independently they will get maximum score. The data obtained were analyzed using Spearman's correlation test in order to see the relationship between demographic characteristics of elderly and the elderly's daily activities.

3 RESULTS

The majority of the elderly were 61-65 years old which consist of 28 males (35%) and 58 females (72.5%). The education level of the majority is high school graduates as many as 23 people (28.8%) with marital status and 48 people (60%) with widow status. 65 people (81.3%) of elderly have worked and the majority of them worked as trader as many as 15 people (18,75%). 51(63.80%) of elderly were active in Posyandu which was conducted once per month. Similarly, there were 63 people (78.70%) of elderly who were active in social activities such as active in *PKK* (Family Welfare Development) activities, Posyandu for <5 years children, Posyandu for elderly, and other organization activities in society.

The ability of elderly activity is seen based on their ability to perform daily activities. This

activity's ability is called Activities Daily Livings (ADLs). While its supporting activities are called as Instrumental Activity (IADLs) such as using telephone, shopping, preparing food, house keeping, washing clothes, using transportation, taking medicine and arranging finance. All these activities are either done by oneself or need for assistance from others. Assistance from others can be a little help to full help. Independent elderly is shown from their ability to perform daily activities.

The result of the correlation test with $\alpha = 0.05$ showed that there was a correlation between age, education level, kind of work, and participation in Posyandu elderly with ADLs. There was also a relationship of age, education level, activities in community organizations, and participation in Elderly Posyandu with IADLs. The relationship is shown in Table 1.

Table 1: Correlation of demographic characteristics with ADLs and IADLs

Activity	Demographic Characteristics	p	Coefficient
ADLs	Age	0.000	-0.49
	Education level	0.006	0.30
	Kind of work	0.020	0.20
	Elderly Posyandu	0.018	0.26
IADLs	Age	0.000	-0.50
	Education level	0.001	0.36
	Posyandu	0.006	0.31
	Organization Activity	0.018	0.26

4 DISCUSSION

The large population of elderly in Surabaya City, East Java Province shows that life expectancy of society is increasing. The majority of elderly people can perform their own daily activities. WHO (2002) explained that the increasing number of elderly population is necessary to realize healthy, active, and productive elderly. Every human being will experience the aging process. Therefore, making elderly healthy, active and productive is a must. The existence of elderly should not be a burden to families, communities, and countries. Currently the existence of elderly should be viewed as a valuable country potential. In order for the elderly to become the potential of the country, making qualified elderly becomes a necessity. Many factors are

related to being able to realize healthy and quality elderly people such as biological, psychological, social, economic, behavioral and social services, and health (WHO, 2002).

The coefficient value of -0.49 showed that there is a relationship between age and ADLs with $p = 0.00$. This means that the elderly in the older age group have the ability to indulge in daily activities more independently, because the direction of the relationship was negative. The elderly instrumental activity has a relationship with age ($p = 0.000$) with a coefficient value of -0.50. The Spearman correlation test showed that the elderly educational level was related to the ability of ADLs with coefficient value of 0.30 and elderly instrumental activity of 0.36. The type of work indicates that there is a relationship between the type of work and the daily activity of the elderly (ADLs) with $p = 0.02$. Meanwhile, the type of work showed no relationship with elderly instrumental activity.

This demographic characteristic has a role in shaping an independent elderly to be able to own activity in fulfilling their needs. Independent and prosperous elderly are influenced indirectly by their level of knowledge and education (Cho, *et al.*, 2014). This shows that knowledge is very important to provide information to the elderly about how to live their life when at such age. One way to obtain knowledge is from formal education. High level of education certainly provides a wider range of insights. So does with work, working certainly makes them to always do physical activity or interact in social environment. Physical activity from work can contribute to make elderly to be more independent. Working activities can help the elderly to be active so that daily mobility activities are always done (Zacher, 2015).

Table 1 shows that there is a relationship between being active in Elderly Posyandu with ADLs and IADLs. The strong relations are 0.26 (ADLs) and 0.31 (IADLs). This means that being more active in Elderly Posyandu activities will increase elderly's independence in doing activity, either daily or instrumental activity. This was in accordance with the research of Pertiwi (2013) which stated that the elderly who are active in Elderly Posyandu activities need to get family support. The family support always encourages elderly to try to maintain health and independence in performing daily activities. This independence will make the elderly healthy, active and productive.

Table 1 also shows that the elderly will be able to organize in society which is supported by the independence of elderly in activity especially in

activities other than daily needs at home. Gardner (2014) said that one's involvement in social activities can provide a strong motivation to be useful to others and to themselves, that is, to make the body healthy by always being active in physical activity in society. The ability to perform additional activities will not be possible if the elderly are not healthy.

5 CONCLUSION

Age, education level and type of work are related to the ability of elderly to do activity independently. These characteristics contribute to the formation of an independent elderly. Improved social characteristics (level of education) and economic characteristics (type of work) will provide the potential to realize an independent elderly. Elderly who actively participate in Elderly Posyandu activities are associated with their ability to perform daily activities. Activities in Elderly Posyandu are very useful for elderly to remain healthy, active and productive. Age, education level, Elderly Posyandu membership and activities in community or organization are connected to the ability of elderly to perform instrumental activity.

The variables that corelated with elderly's daily and instrumental activities can be basic asset to make elderly independent. In order to make the elderly as an asset of the nation, the elderly must be independent, healthy, active and productive. Independence of the elderly can be realized if supported by other factors such as health care, social support and mental readiness. The ability of this activity will produce the independence of elderly, healthy and productive elderly amid increasing number of elderly in Indonesia. Factors associated with increasing the independence of the elderly can be used to prepare and create policies for elderly's independence. Healthy, active and productive elderly will certainly be one of the targets in the development activities of Indonesian society.

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