

# ACTIVITY DETERMINANTS IN POSYANDU ELDERLY ACTIVITIES ON THE QUALITY OF ELDERLY LIFE IN SUDIANG COMMUNITY HEALTH CENTRE MAKASSAR

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## ABSTRACT

The realization of healthy, independent, quality, and productive elderly must be done with health development as early as possible during the life cycle to an advanced stage by taking into account the factors that must be avoided and protective factors that can be done to improve the health of the elderly. Elderly integrated service post (Posyandu Elderly) focuses on health services on promotive and preventive efforts needed by the elderly with the aim to improve quality of life through improving health and well-being. This study aims to analyze the determinants of posyandu activity on the quality of life of the elderly. This research was conducted in the Sudiang Health Center in Makassar City. The research design used was quantitative research with cross sectional design. The sample of this study was screened by 403 elderly people selected using cluster random sampling technique. To see the determinants of activeness of the elderly posyandu using the chi square test. The results showed that there was an effect of distance, history of disease, health perception, perceived benefits, family support and health worker support ( $p < 0.05$ ) on the activeness of the elderly posyandu, while there was no effect of education ( $p = 0.737$ ) on the activeness of the elderly posyandu. After further test analysis with multiple logistic regression, it is known that the variables that most contribute to the activeness of the elderly in posyandu are the staff support ( $p = 0,000$ ; OR (95% CI) = 33,572 (13,683 - 82,375). Mann Whitney test results showed there was an influence of the activeness of the elderly posyandu ( $p = 0.02$ ) on the quality of life of the elderly. Based on the results of the study, it was concluded that the health worker support was the most influential factor in the activeness of the elderly in the Posyandu.

**Keywords:** Activity, Elderly, Health Worker Support, Integrated Service Post, Quality of Life.

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## INTRODUCTION

According to population census data in nearly five decades, the percentage of elderly Indonesians has doubled (1971-2017), ie to 8.97 percent (23.4 million) where elderly women are around one percent more compared to elderly men (9.47 percent vs. 8.48 percent)<sup>1</sup>. In addition, the elderly in Indonesia are dominated by the age group of 60-69 years (young elderly) whose percentage reaches 5.65 percent of the Indonesian population, the rest is filled by the 70-79 year age group (middle aged) and 80+ (elderly). This year, there are five provinces that have an old population structure where the population has reached 10 percent, namely: Yogyakarta Special Region (13.90 percent), Central Java (12.46 percent), East Java (12.16 percent), Bali (10.79 percent) and West Sulawesi (10.37 percent). The percentage of the elderly population in the province of South Sulawesi was ranked in the top 10 provinces in Indonesia with an elderly population structure, where the percentage of elderly was 8.8% in 2015 and 9.8% in 2017<sup>2,3</sup>.

The realization of healthy, independent, quality, and productive elderly people must be done with health development as early as possible during the life cycle to enter the elderly phase by taking into account the risk factors that must be avoided and protective factors that can be done to improve the health of the elderly<sup>4</sup>. One effort to empower the elderly in the community is through the formation and fostering of elderly groups in several areas called the Elderly Group (Poksila), Elderly Integrated Service Post (Posyandu Elderly) or Integrated Elderly Development Post (Posbindu Elderly). Elderly Posyandu focuses on health services on promotive and preventive efforts needed by the elderly in order to improve quality of life through improving health and well-being. Besides Posyandu Elderly helps spur the elderly to be able to indulge and develop their potential<sup>2</sup>.

According to the health profile of the South Sulawesi province in 2016, the presentation of elderly health services in Makassar city was 59.27%. Coverage of elderly services in 2017 in the working area of Sudiang is 65.69%<sup>5</sup>. Meanwhile, according to the results of the initial data collection at the Sudiang Community Health Center, the percentage of elderly who attended the elderly Posyandu was 37.86%. This coverage is still below the expected target of 70%. According to Purwadi (2013) states that there is a significant influence on sex, marital status, perception of sick health and perceived quality of service on the use of elderly posyandu<sup>6</sup>. In addition, Rugbeer (2017) found that increasing the participation of the elderly in group sports can improve the quality of life of the elderly<sup>7</sup>. Yen & Lin's research (2018) shows that older people who are more involved in physical activity have a better quality of life than those who are less active<sup>8</sup>. Different locations and community structures will give different results, so researchers want to know what factors are most related to the activeness of the elderly in posyandu activities on the quality of life of the elderly in the work area of the Sudiang Community Health Center.

## **METHODOLOGY**

### ***Research design***

This type of research is an observational study with cross sectional design. This research will be conducted in the working area of Sudiang Public Health Center, Biringkanaya District, Makassar City, which will be conducted from April to July 2019.

### ***Population and Samples***

The population in this study were all elderly in the working area of the Sudiang Community Health Center, Biringkanaya District, Makassar City, which totaled 1978 people. The sampling technique uses a cluster random sampling method that takes samples based on inclusion criteria set by researchers, the overall sample size is 403 people.

### ***Data collection***

Data collection was obtained through secondary data from reports and other official documents, especially data in the Sudiang Community Health Center in Biringkanaya District. Primary data obtained by interviews guided and directed from house to house using a questionnaire to get information about the variables to be analyzed in this study.

### ***Data analysis***

The collected data is then processed and analyzed using SPSS. Data analysis was performed univariate, bivariate with chi square and mann whitney statistical tests, and multivariate with logistic regression tests.

## RESULTS

**Table 1. Distribution of Respondents by Variables in Posyandu in the Work Area of Sudiang Public Health Center in Makassar City 2019**

No	Characteristics	n	%
1	Active Posyandu		
	Active	69	17,1
	Less Active	334	82,9
2	Education		
	High	59	14,6
	Low	344	85,4
3	Distance to Posyandu		
	Close	310	76,9
	Far	93	23,1
4	History of Disease		
	0 or 1 disease	240	59,6
	More than 1 disease	163	40,4
5	Health Perception		
	Well	177	43,9
	Less	153	38
6	Perception of Posyandu Benefits		
	Well	383	95
	Less	20	5
7	Family support		
	Well	162	40,2
	Less	241	59,8
8	Support Officers		
	Well	86	21,3
	Less	317	78,7
9	Quality of Life for the Elderly		
	Well	298	73,9
	Less	105	26,1
	Total	403	100

Table 1 shows that most respondents were less active in joining the posyandu for the elderly, as many as 334 people (82.9%), while those who actively participated in the posyandu for the elderly were 69 people (17.1%). Respondents with low education level ( $\leq$ SMP) were 344 people (85.4%), the most distance to the nearest posyandu was 310 people (76.9%), the majority of respondents did not have a history of disease or only one type of disease namely 240 people (59.6%), most respondents had good health perceptions namely 177 people (43.9%), respondents who had a good posyandu benefit perception were 383 people (95%), respondents who were less supported by their families were 241 people (59.8%), 317 respondents (78.7%) lacked official support from officers, and 298 respondents had a good quality of life (73.9%)

**Table 2. Determinants of activeness in elderly posyandu activities in the Sudiang Puskesmas Makassar City Working Area 2019**

Activity Variables	Liveliness				Sig
	Active		Less Active		
	n	%	n	%	
<b>Education</b>					
High	11	18,6	48	81,4	0,737
Low	58	16,9	286	83,2	
<b>Distance</b>					
Close	69	22,3	241	77,7	0,000
Far	0	0	93	100	
<b>History of Disease</b>					
0 or 1 disease	56	23,3	184	76,7	0,000
More than 1 disease	13	8	150	92	
<b>Health perception</b>					
Well	69	18	314	82	0,000
Less	0	0	20	100	
<b>Perception of Benefits</b>					
Well	65	46,1	76	53,9	0,000
Less	4	1,5	258	98,5	
<b>Family support</b>					
Well	49	30,2	113	69,8	0,000
Less	20	8,3	221	91,7	
<b>Support Officers</b>					
Well	61	70,9	25	29,1	0,000
Less	8	2,5	309	97,5	

Table 2 shows that there is no relationship between education and the activeness of the elderly in posyandu activities ( $p = 0.737$ ). Elderly people who actively participate in posyandu are more likely to have high education as many as 11 people (18.6%) than low (16.9%). There is a relationship between the distance to the posyandu to the activeness of the elderly in the activities of the posyandu ( $p = 0,000$ ), the elderly who actively participate in the posyandu are more likely to have respondents who are close to the posyandu as many as 69 people (22.3%) than those far away (0%). There is a relationship between the history of the disease and the activeness of the elderly in posyandu activities ( $p = 0,000$ ). Elderly people who actively participate in posyandu are more likely to have respondents with no history or only have one disease, namely as many as 56 people (23.3) than those who have more than one history of the disease (8%).

Table 2 also shows that there is a relationship between health perceptions of the activeness of the elderly in posyandu activities ( $p = 0,000$ ). Elderly people who actively participate in posyandu are more likely to have respondents who perceive good health as many as 69 people (18%) than those who lack (0%). There is a relationship between the perception of the benefits of posyandu to the activeness of the elderly in the activities of the elderly posyandu ( $p = 0,000$ ), indicating that older people who actively participate in the posyandu are more likely to have

respondents who perceive the benefits of posyandunya as good as 65 people (46.1%) compared to the less (1, 5%). There is a relationship between family support to the activeness of the elderly in the activities of the elderly posyandu ( $p = 0,000$ ), the elderly who actively participate in the posyandu are more likely to have good family support at 49 people (30.2%) than the less (8.3%) . There is a relationship between the support of officers to the activeness of the elderly in the activities of the elderly posyandu ( $p = 0,000$ ), the elderly who actively participate in the posyandu are more likely to have a good support of respondents, as many as 61 people (70.9%) than the less (2,5%).

**Table 3. Relationship of Active Elderly Posyandu with Elderly Quality of Life in the Work Area of Sudiang Public Health Center Makassar City 2019**

Liveliness	Quality of life						Nilai p
	Well		Less		Total		
	n	%	n	%	n	%	
Active	66	95,6	3	4,3	334	100	0.020
Inactive	232	69,5	102	30,5	69	100	
Total	105	26,1	298	73,9	403	100	

Table 3 shows that there is a relationship between the posyandu activeness to the quality of life of the elderly, the quality of life is more good for respondents who actively participate in the posyandu for the elderly, as many as 66 people (95.6%) compared to the less active (69,5%).

**Table 4. Multivariate Analysis Between Independent Variables and Elderly Active Variables Using Logistic Regression Analysis Backward Wald Method**

No	Variable	B	Value of p	OR (95% CI)
1	Perception of Benefits	2.587	0.000	13.285 (4.187 – 42.152)
2.	Support Officers	3.514	0.000	33.572 (13.683 – 82.375)

Nagelkerke  $R^2 = 0,689$   
Hosmer and Lemeshow Test for Goodness of fit: p value Chi Square = 0.456 which means the data can explain the model.

Table 4 shows the variables that influence the activeness of the elderly is the perception of the benefits and support of officers. The OR value on perceived benefits is 13,285 with Upper-Lower values = 4,187 - 42,152, which means that respondents with a good posyandu benefit perception have the possibility of 13,285 times active in the elderly posyandu compared to respondents whose perception of posyandunya benefits is less. The OR value in the support of officers is 33.572 with Upper-Lower value = 13.683 - 82.375, which means that respondents with good support officers have 33.572 times the possibility to be active in elderly Posyandu compared to respondents whose support is less.

**DISCUSSION**

The results showed that most respondents were less educated than those of tertiary education and there was no relationship between education and the activeness of the elderly.

Generally, the higher a person's education, the more knowledge he has. But this does not become a person's influence to take advantage of elderly exercise. The test results of this variable are in line with the research of Tantinis et al (2016) which states that the elderly with an active agreeing attitude towards elderly gymnastics are found in the elderly with a high school education<sup>9</sup>. Unused elderly gymnastics by highly educated elderly can be caused by the decision to choose other sports that are heavier and risk damaging than the elderly because they are considered sufficient to improve health<sup>9,10</sup>. The results of this study are not in line with other studies which state that there is a significant relationship between education and the activeness of the elderly attending posyandu. Less educated individuals have less knowledge and therefore are less aware of the benefits of the Posyandu Seniors. The education level of respondents who are highly educated is considered to understand and know about nutrition and health sciences and the importance of visiting elderly Posyandu<sup>11</sup>.

Statistical tests show that there is a relationship between the distance to the posyandu and the posyandu activeness, where the elderly who are close to the posyandu are more likely to have active attendance at the posyandu. This is in line with Ariyanthi's research (2016), which states that there is a significant relationship between distance and the use of elderly Posyandu with a correlation coefficient of 0.517 and  $p = 0.000$ . Distance to the posyandu will make it difficult for the elderly to reach the posyandu for the elderly<sup>12</sup>. This can also influence the elderly not to visit the elderly Posyandu. Research shows that distance to health facilities is an extraordinary determinant of health service utilization, which is also comparable to observations in previous studies conducted in Vietnam<sup>13</sup>. Research conducted by Goel Pk et al shows that around one sixth of the respondents mentioned the distance that must be taken or the long waiting time as a barrier to the use of health facilities<sup>14</sup>.

Short walking distance is preferred for elderly mobility because walking does not require the assistance of others, has no cost, and does not require the ability to drive or ride a vehicle<sup>15</sup>. Patients tend to use more health facilities if they are near them than if they are far away. The issue of patient distance to centers is seen as one of the main determinants of the use of health services<sup>16</sup>.

Statistical tests show there is a relationship between the history of the disease and the activeness of the elderly in attending the posyandu, where the elderly who have no history of disease or have only one disease are more likely to be actively participating in the posyandu. Research says there is a relationship between the history of the disease with the activities of the elderly, compared with the group that is not physically active, the chance of multimorbidity decreases<sup>17</sup>. Elderly who have a history of more than one disease tend to be less active because the disease they have sometimes makes their activities limited. An increase in the number of chronic diseases is directly related to greater functional disability. Brazilian and international studies have shown a significant relationship between chronic illness, functional disability and the quality of life of the elderly<sup>16,18,19</sup>. An increased level of multimorbidity is associated with poorer quality of life related to health, especially physical health<sup>20</sup>.

Statistical tests show that there is a relationship between health perceptions and activeness in elderly Posyandus, where older people who have good health perceptions are more likely to be actively participating in elderly Posyandus. Research conducted by Purwadi showed that after analysis, 2 influential variables were found, namely the perception of the quality of posyandu services and perceptions of sick health. Individuals who have bad perceptions about

the quality of posyandu for the elderly and also have bad perceptions about health and illness have a probability of not utilizing posyandu for the elderly <sup>6</sup>.

Healthy perception of illness has an influence on the use of elderly posyandu. The results of this study are consistent with what was expressed by Notoatmodjo who stated that the perception of healthy sickness affects a person using health services, if the community's perception is the same as the perception of health service providers then the community will tend to utilize health services, and vice versa <sup>6</sup>. Research shows the importance of individual health perceptions rather than only focusing on the number of chronic diseases. Health management programs must provide a holistic approach to maximize health outcomes and to promote successful aging <sup>21</sup>.

Statistical tests show that there is a relationship between the perception of the benefits of posyandu with the activeness of the elderly in posyandu, where the elderly who have the perception of the benefits of posyandu both have a greater active presentation in the activities of the elderly posyandu. Test results on this variable are in line with Puspitosari (2016) research that the elderly with a high perception of benefits regarding posyandu activities, the elderly will do elderly exercise becomes more routine <sup>22</sup>. It was also said that the elderly with high perceived benefits would have a 26.95 times more likely to do gymnastics for the elderly (Puspitosari et al, 2016). The benefits of posyandu activities felt by respondents include socializing with fellow seniors, getting health easily, detecting illness early and increasing elderly knowledge about how to live clean and healthy through health counseling at posyandu <sup>23</sup>.

Statistical tests show there is a relationship between family support and active elderly in posyandu, where the elderly who have good family support are more likely to have an active participation in the elderly posyandu. The family as the main support for the elderly is expected to motivate, maintain, and facilitate the needs of the elderly in maintaining their health <sup>22</sup>. Research shows that most respondents do not get support from their families. In fact, family support plays an important role in the use of elderly Posyandu <sup>24</sup>. The family is the main supporter of care for the elderly and represents an informal support network, because care is done voluntarily <sup>25</sup>. The effect of adequate family support on health and well-being is proven to reduce mortality, accelerate healing from illness, improve health cognitive, physical and emotional <sup>26</sup>.

The statistical test shows that there is a relationship between the support of officers and the activeness of the elderly in posyandu, where the elderly who have the support of good officers are more active in the elderly posyandu. According to Subarniati in Pertiwi (2013) defines that the community will utilize services depending on the assessment of the service. If the service is less good or less quality, then the tendency to not use it will be even greater <sup>27</sup>. Cadre support is an assessment based on cadres' perceptions of support so that the elderly are willing to utilize the services of the elderly posyandu. The results showed that cadre support was related to the use of elderly Posyandu services <sup>28</sup>.

Statistical tests show that there is a relationship between activeness and the quality of life of the elderly, which can be seen that the elderly who are less active in joining the posyandu have a lower quality of life compared to the elderly who actively participate in the posyandu. This is in line with research conducted by Septia, which states that there is a relationship between the activeness of the elderly in participating in the Posyandu Elderly activities with the quality of life physically, psychologically, social relations and the environment of the elderly<sup>29</sup>.

Other research states that, the higher the activeness in the prolanist club, the better the quality of life of people with type 2 diabetes <sup>30</sup>.

A good quality of life is comparable to the ability of the elderly to carry out various daily activities, social life and relationships with their families, and economic conditions. The poor quality of life is proportional to the decline in his health so that health is a good indicator of the quality of life of the elderly. Therefore, health checks at elderly posyandu are very important activities. This activity is one form of elderly health services in the community that utilizes and engages the community (including its farmers) to the maximum extent possible, with local health centers and private practice doctors (DPS) as the backbone of services <sup>31</sup>.

However, research conducted by Arbi'ah (2016) shows that there is no significant relationship between elderly visits to Posyandu and quality of life in the physical health domain, social domain, and environmental domain <sup>32</sup>. This is caused by the lack of counseling and socialization of the importance of Posyandu for the elderly among the community, in addition it is necessary to review internal and external factors for respondents.

## CONCLUSION

Distance, history of illness, health perceptions, perceived posyandu benefits, family support, and staff support have an influence on the activeness of the elderly in posyandu activities. In addition, the activeness of the elderly in posyandu affects the quality of life of the elderly. The most influential factor on the activeness of the elderly Posyandu is the support of health workers. To succeed the posyandu program for the elderly, it is hoped that cadres and health workers will further enhance health education information dissemination and dissemination and invite the elderly to attend and participate in posyandu activities. Puskesmas should provide counseling and training to cadres to pay more attention to the quality of life of the elderly by maximizing activities in the posyandu as well as activities that are not in the posyandu. Further research needs to be done using a qualitative approach in order to explore and assess other factors that can affect the activity in posyandu and the quality of life of the elderly.

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