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CORRELATIONS BETWEEN THE INDEPENDENCE LEVEL OF ELDERLY AND DEPRESSION AT SENTRA TERPADU PANGUDI LUHUR

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Abstract

Depression as one of the major mental health issue in the world is known to only 12.7% of sufferers who have received medical treatment, while the majority of them have not received it. The purpose of this study is to analyze the correlation between the independence level of the elderly and depression at Sentra Terpadu Pangudi Luhur (STPL). This study is a quantitative correlative study with a cross sectional approach using primary data from 68 respondents from Sentra Terpadu Pangudi Luhur (STPL) based on predetermined inclusion and exclusion criteria. Univariate analysis showed that most respondents experienced mild dependence (50%) but did not suffer from depression (75%). The results of the Spearman Rank correlation hypothesis test between the independence level of the elderly and depression showed a strong significant relationship in the negative direction (Correlation Coefficient -0.515) between the ADL Barthel Index score and the Geriatric Depression Scale-15 score. It means that the higher the level of dependence (not independent) of an elderly person, the higher the likelihood of depression. Currently, the elderly need a program to prevent dependency so that they can prevent depression in the future.

Keywords: Depression, Independence, Elderly

Introduction

Depression is one of the major contributors to mental disorders in the world (12). Depression is defined as a mental disorder characterized by low mood or loss of happiness or interest in activities for a long period of time. Around 3.8% of the world's population experiences depression (16). Meanwhile, the Indonesian Community Mental Health Index Data found 9,162,886 cases of depression with a prevalence of 3.7% in 2023. (8). In this group (depression sufferers), it is known that only 12.7% were treated by doctors or health workers at health care facilities. Meanwhile, 87.3% of depression sufferers were not recorded as undergoing treatment (2). People who are no longer productive tend to experience higher symptoms of depression (8). The elderly group who are no longer productive is one of the groups that is vulnerable to depression. Depression that occurs in elderly person without a previous history of depression is known as Late-Life Depression. Depression in elderly is rarely diagnosed and often not treated adequately (13). The average prevalence of depression that experienced on elderly is 31.74%. The prevalence of depression in the elderly is higher among developing countries (40.78%) than in developed countries (17.05%) (18).

Meanwhile, the independence level of elderly person can be assessed based on their ability to carry out daily activities (11). Independence is so important for the elderly because it is one of the factors that affect the economic status of a country. If the number of elderly who are not independent in a developing country increases or is high, then the per capita income in that country will tend to be

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low. A study of 35 countries with high level of dependency in 2021 found that there was a permanent negative impact on per capita income. (7).

Based on World Bank data: Health Nutrition and Population Statistics in 2023, it is known that the world's old-age dependency ratio in 2017 was 13.4, increasing to 15.1 in 2023. It means that 100 people of productive age in the world must support 15 elderly people (17). The situation is quite similar in Indonesia. The old-age dependency ratio in Indonesia increased from 14.02 in 2017 to 17.08 in 2023 (3). Dependency level in elderly is known to be a significant risk factor for modifiable depression (4).

Method

The method that researcher used in this study is descriptive quantitative study of the correlative type with a cross-sectional approach, meaning that data is only taken once at a certain time. The data used are primary data obtained directly from the elderly who are respondents in the study. The location of data collection in this study is the Sentra Terpadu Pangudi Luhur (STPL) which is managed by the Ministry of Social Affairs that has a work area coverage included at least 7 regencies and cities in West Java (10). The accessible population in this study were all elderly people in West Java with the target population being all elderly people in STPL. The sampling method that researcher used in this study is simple random sampling. Minimum sample size of 68 respondents was obtained. The inclusion criteria in this study are elderly people (over 60 years old), able to communicate verbally and willing to be respondents. While the exclusion criteria are elderly people who had hearing limitations (deaf).

The independent variable in this study is the independence level of the elderly, namely the level of ability of the elderly's functional status in carrying out daily activities (11). The level of independence of the elderly is assessed based on the Activity Daily Living Barthel Index (ADL Barthel Index) score which is categorized into independent (20), mild dependence (12-19), moderate Dependence (9-11), severe dependence (5-8), total dependence (0-4) (1). The dependent variable in this study is depression based on the Indonesian version of the Geriatric Depression Scale-15 score which is categorized into normal (0-5), probable depression (6-10) and depression (>10) (15). The results of the univariate analysis are displayed in a frequency distribution table. Bivariate analysis uses the Pearson or Spearman Rank Test (as an alternative non-parametric test if the data distribution is not normal).

Results

Univariate frequency distribution of the independence level of the elderly STPL can be seen in the following table 3.1:

Table 3.1. Frequency Distribution based on The Independence Level

The Independence Level	f	%
Independent	26	38.2
Mild Dependent	34	50.0
Moderate Dependent	2	2.9
Severe Dependent	4	5.8
Total Dependent	2	2.9
Total	**68**	**100**

Source : Primary Data, 2024

Univariate frequency distribution of Depression can be seen in the following table 3.2:

Table 3.2. Frequency Distribution based on Depression *S*creening

Depression Screening	**f**	**%**
Normal	51	75.0
Probable Depression	15	22.1
Depression	2	2.9
Total	**68**	**100**

Source : Primary Data, 2024

Bivariate Analysis between two variables can be seen in the following table 3.3

Table 3.3. Correlation between The Independence Level of Elderly and Depression

Correlation		**The Independence Level of Elderly (ADL Barthel)**	**Depression (GDS-15)**
The Independence Level of Elderly (ADL Barthel)	*Correlation Coefficient*	1.000	-0.515**
	Sig. (2 Tailed)	.	0.000
	N	68	68
Depression (GDS-15)	*Correlation Coefficient*	-0.515**	1.000
	Sig. (2 Tailed)	0.000	.
	N	68	68

Source : Primary Data, 2024

Discussion

Table 1 shows that most respondents have mild dependency (50%) and a small proportion have moderate dependency (2.9%) and total dependency (2.9%). The results of this study are in line with research conducted by Sihaloho (2022) on 35 elderly people in Padang Bulan Village, Medan Bahru District. The results of that study showed that elderly people who experience mild dependency were 37.1%, moderate dependency 11.4%, severe dependency 8.6% and total dependency 5.7%. Independent and mild dependent in elderly people have the largest proportion, namely 37.1%. (14). The results of this study are also in line with research conducted by Rohaedi (2016) on 21 elderly people at the Senjarawi Nursing Home in Bandung City, which showed that the largest percentage of elderly people were partial dependency (72%). While the small proportion were independent elderly people (14%) and total dependency (14%) (11).

Table 2 shows that the percentage of depression in elderly at STPL is 2.9%. This is in line with the statement from the National Council on Aging (NCOA) that the percentage of elderly people experiencing depression in the general population is in the range of 1-5% (9). In addition, the results of this study are also in line with the results of a study conducted in Banjarmasin, South Kalimantan where this study also used the GDS-15 as a research instrument. The results showed that 73% of the elderly (the majority) did not experience depression. (4). Data normality test of the numeric scale variables (ADL Barthel score and GDS-15 score) was conducted using the Kolmogorov-Smirnov test. The results

concluded that the data were not normally distributed ($p<0.005$) so that bivariate analysis in this study used the Rank-Spearman test as an alternative test and the results presented in the table 3.

Table 3 shows the correlation coefficient between the independence level of the elderly and dementia is 0.515. It means that there is a strong correlation (0.51-0.75) between the independence level of the elderly (independent variable) and depression (dependent variable) with a negative direction so that the correlation between the two variables is opposite. Negative direction indicates more independent an elderly person (high ADL Barthel score), further away from depression (low GDS-15 score). The next step is to test the hypothesis by looking at the * or ** (star) sign on the correlation coefficient to find out whether H0 can be accepted or rejected. If later the * sign is found, the correlation is significant at a number of α: 0.05. While if there is a ** sign on the correlation coefficient, the correlation is significant at a number of $\alpha = 0.01$.

The result in table 3 shows the Sig. or significance (2-tailed) value of 0.000. Therefore, the Sig. value. (2-tailed) 0.000 <0.01 then H0 is rejected and Ha is accepted so that it can be seen that there is a significant negative correlation between the independence level of the elderly and depression. This is in line with the results of a study involving 93,829 respondents aged ≥ 60 years in Indonesia based on data from Riset Kesehatan Dasar (Riskesdas) and the 2018 Socio-Economic Survey which was carried out in 34 provinces and 514 districts / cities. The study concluded that the highest likelihood of depression was found in the elderly who had dependency (6).

Conclusion

There is a significant relationship with a strong degree in the negative direction between the independence level of elderly and depression. It means that the lower independence level of elderly (more dependent), the higher possibility of depression. The limitations of the research duration and the number of researchers in this study are enough to make this study have a long data collection duration. In addition, the use of the cross-sectional method is still considered to need further analysis because it cannot provide a picture of cause and effect.

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