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Correlations of Depression Level with Gender and Family Support Among Elderly with Chronic Diseases

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ABSTRACT

Chronic disease often causes depression in the elderly, especially for women. Elderly need family support to deal with the depression. This study was aimed to analyze whether there was a correlation between family support, gender, and depression levels in the elderly. Utilizing the DASS-21, the family support assessment, and questions about characteristic of respondent, data was obtained which were then analyzed using the Spearman method, with confidence level was 95%. The Spearman's analysis yielded a correlation coefficient of -0.026, and a Sig. (2-tailed) of 0.817 between depression and family support. Likewise, the correlation coefficient was 0.070, and Sig. (2-tailed) was 0.537 between depression and gender. It can be concluded that there was a weak correlation between the three variables, but it was not statistically significant. Further study is needed to analyze the influence of confounding factors as a predictor model of depression levels in the elderly.

KEYWORDS:
elderly, depression, family support, gender

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INTRODUCTION

Physically, elderly people experience degenerative processes. This process can cause chronic diseases in the elderly. Chronic diseases that are not treated properly will become a mental burden for some elderly people.[1]

The elderly is often associated with being susceptible to emotional disorders. Health factors, level of education, experience of losing a loved one, and so on, play a role in causing emotional disturbances.[1]

The prevalence of elderly people suffering from depression, based on Riskesdas 2013, found that 1 in 3 elderly people suffer from depression. More elderly women suffer than men.[2]

Family are people who should have emotional closeness to the elderly. They expect support from their family, especially when they are suffering from chronic diseases.

Better family support will reduce the risk of elderly people getting depression, or reduce the severity of the depression. As the opposite, without good support, elderly people can become more mentally disturbed. This results in disease management in the elderly becomes compromised.[3,4]

This study was aimed to determine the correlation between depression and the level of family support and gender in elderly people with chronic diseases.

METHODE

This study was conducted using a cross-sectional approach and purposive random sampling to obtain more valid results.

The independent variable was the gender and quality of family support for the elderly health. Meanwhile, the dependent variable was the level of depression in elderly people suffering from chronic diseases.

The samples were taken from two cities, Salatiga and Karanganyar, located in the Province of Central Java. These two areas were chosen as research locations because their population and regional characteristics are almost the same. With geographic conditions, population demographics, and various facilities that were not much different, it was hoped that the two regions would have a homogeneous population.

In order to make the sample more homogeneous, we chose respondents who were participants in the National Health Insurance program. Respondents were also elderly who had a medical history of chronic diseases for more than two years.

Samples were taken randomly from both cities, resulting in 50 respondents in each city. Utilizing a questionnaire sheet, data were collected from 100 respondents.

The questionnaire consists of three things, the characteristics of the respondent, assessing the quality of family support, and measuring the respondent's level of depression. In giving answers, respondents were accompanied by researchers who would help explain the meaning of the questions when asked. This method was intended to reduce bias in respondents' answers.

The questionnaire about family support consisted of four aspects of family support, namely emotional support, appreciation, instruments and information. There were twelve questions that must be answered by respondents. Each question was given four answer options, which was Always, Often, Rarely, and Never. Respondents were asked to choose according to the conditions they experienced in the last month.[5,6]

The assessment of depression levels used the DASS-21 measurement tool, which was short model for DASS-42. The DASS-21 measuring instrument had been validated and the results were equivalent to DASS-42. DASS-21 is a measuring instrument for depression, anxiety, and stress. The answers to be analyzed were answers related to measuring the level of depression.[7]

In this study, the measuring instrument had been tested for validity and reliability. It was tested by Hakim and Aristawati. [8] The data collected from both instruments were then analyzed using the Spearman Rho correlation method with a 95% confidence level.

RESULT

Of the one hundred questionnaires filled out by respondents, 80 questionnaires met the requirements for analysis. Meanwhile 20 respondents were later confirmed to be diagnosed for diabetic less than two years. Next, eighty respondents' data would be processed for analysis.

The results of measuring the level of depression and family support and gender were converted into ordinal scale. Depression levels were grouped into normal, mild, moderate, severe, and extremely severe. Meanwhile, the family supports were grouped into Good, Moderate, and Poor.

Respondent characteristics in the form of gender, age, monthly income, and education level were analyzed in descriptive form.

More female respondents were involved than male respondents. This is in accordance with visits to primary health facilities which are mostly women.[9]

Most respondents (65%) had completed primary and secondary education, at least senior high school education.

According to data on monthly income, many respondents (80.1%) admitted to earning an income of under two million rupiah monthly. Meanwhile, the minimum wages for workers in the two research areas were above two million rupiah per month.[10,11]

Most respondents are retirees, so even though what they earn is lower, they still receive a regular income every month.

Table 1 below displays descriptive characteristics of respondents.

Table 1. Respondent's characteristics

		Number	%
Sex	Male	33	41,3%
	Female	47	58,8%
Education	Elementary school	20	25%
	Junior high school	8	10%
	Senior high school	26	32,5%
	Diploma	6	7,5%
	Bachelor	20	25%
Monthly income (in million rupiah)	< 1	19	23,8%
	1 – 2	45	56,3%
	2 – 3	10	12,5%
	> 3	6	7,5%

Family support consists of four aspects, those are emotional, appreciation, instrumental, and information support. This questionnaire utilized 12 questions divided into four aspects.

The following data shows that the family support variable was grouped into three categories, which were Good (score 25-36), Moderate (score 13-24), and Poor (score 0-12).

The results of measuring family support on the elderly indicated that most of them (53.8%) received good support from their families.

Table 2 shows the distribution of family support for respondents.

Table 2. Family support level

	Number	%
Good	43	53,8%
Moderate	30	37,5%
Poor	7	8,8%

The DASS-21 instrument was utilized to measure a person's level of depression, anxiety, and stress.[8]

This study only included the results of measuring the respondent's level of depression. The data showed that most respondents (62.5%) suffered

from mild to moderate depression. None suffered from severe depression.

Table 3 shows the results of the DASS-21 in three aspects, in order to determine the mental condition of the respondents.

Table 3. The results of DASS-21

		Respondent Numbers		
		Depression	**Anxiety**	**Stress**
Level	Normal	30 (37,5%)	24 (30%)	53 (66,3%)
	Mild	24 (30%)	7 (8,8%)	18 (22,5%
	Moderate	26 (32,5%)	26 (32,5%)	8(10%)
	Severe	0	12 (15%)	1(1,3%)
	Extremely Severe	0	11 (13,8%)	0

Next on table 4 shows crosstabulation of gender and deppresive level of patients. From this table we know that women are more susceptible to depression.

Table 4. Crosstab of gender and depressive level

		Gender	
		Male	**Female**
Depressive Level	Normal	13 (39%)	17 (36%)
	Mild	11 (33%)	13 (28%)
	Moderate	9 (27%)	17 (36%)
	Severe	0	0
	Extremely Severe	0	0

Table 5 shows crosstabulation of family support and depressive level of patients. It appears in the table that depression also occurs in patients with good support from their families.

Table 5. Crosstab of family support and depressive level

		Family Support		
		Good	**Moderate**	**Poor**
Depressive Level	Normal	17 (40%)	9 (30%)	4 (57%)
	Mild	13 (30%)	10 (33%)	1 (14%)
	Moderate	13 (30%)	11 (37%)	2 (29%)
	Severe	0	0	0
	Extremely Severe	0	0	0

Next, the data was analyzed to determine whether there was a correlation between the level of family support and the level of depression.

Before analyzing the correlations among variables, determind whether the data collected has a normal distribution. Distribution analysis uses the Kolomgorov-Smirnov Test method.

The test results obtained data distribution was not normal (Asymp. Sig. (2-tailed) <0.001). Thus, to analyze the data using the Spearman Rho method with a confidence level of 95%. The results of the analysis obtained the correlation coefficient value between depression and family support was -0.026. This value indicates an inverse correlation between the two variables. This means that the better the family support, the less the risk of depression. But this correlation was considered very weak.

Another correlation analysis between depression and gender yielded correlation coefficient value was 0.070. This means female more vulnerable to depression than male. But this correlation was also considered very weak.

The Sig. (2-tailed) value was higher than 0.05, which indicates that the correlation among variables were not statistically significant.

Table 6 shows the results of the correlation analysis using the Spearman Rho method.

Tabel 6. Spearman's rho analysis

		Depression	Family Support	Gender
Depression	Correlation coefficient	1.000	-0.026	0.070
	Sig. (2-tailed)	.	0.817	0.537
	N	80	80	80
Family Support	Correlation coefficient	-0.026	1.000	-0.009
	Sig. (2-tailed)	.817	.	0.935
	N	80	80	80
Gender	Correlation coefficient	0.070	-0.009	1.000
	Sig. (2-tailed)	0.537	0.935	-
	N	80	80	80

This analysis did not enter confounding factors such as age, education level, and average income. Looking at the results of the analysis above, if confounding factors were included it was unlikely to change the significance of the correlation among variables.

DISCUSSION

Women are more likely have risk of chronic disease than men. But women pay more attention to their health condition rather than men. This condition will affect the differences in stress coping between women and men.[9]

On the other hand, women tend to be more prone to depression, anxiety, or stress when facing unfavorable situations.[14,15,16]

Chronic diseases can increase mental stress for the elderly, especially women. Suffering from illness for years makes elderly people bored with the treatment. This becomes a trigger for depression for them. [2,15]

Another data was about level of education. The level of education affects the elderly in understanding about their disease. The higher the level of education, the better they have of understanding. A good understanding can also be obtained from their life experiences.[2]

A good understanding of a disease reduces the risk of depression. On the other hand, depression can get worse if they do not understand the management of their disease.[2,16,17]

The regional minimum wage in both research areas was arranged by the government not less than two million rupiah per month. Meanwhile in this study, most respondents admitted that their income was below the minimum wage. This could be a cause of depression in the elderly.[16,17]

However, when the elderly receive support from the family, it can reduce their risk of depression, even if their income is less than minimum wage.[2,18,19,20]

From the discussion above and other research, the opinion emerges that there is a correlation between depression and family support and gender in the elderly.

However, the results of this study show that there was no significant correlation between depression and family support and gender in the elderly. It was similar to research conducted by Gaffar et all.[21]

This study did not enter factors that may be confounding factors. Even without confounding factors, the result showed no correlation. Similar researches with more samples are needed to analyze the correlation between the three variables.

CONCLUSION

The conclusion of this study was that there was no statistically significant correlation between depression and family support and gender in elderly people with chronic diseases.

However, the DASS-21 results above still require special attention from family doctors.

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