The relationship between the role of the family and the use of control card with the level of compliance with medication in elderly patients at UPTD Puskesmas Wonokromo

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ABSTRACT

Introduction: Non-compliance is the cause of therapy failure, which has an impact on the worsening of the patient's condition because of complications and damage to organs. Family support plays an important role for the elderly because the family is a support system, which requires the presence of the family to assist in daily activities, for example in terms of reminding you to take medication regularly and so on. The purpose of this study was to analyze the relationship between the role of the family and the use of control cards with the level of adherence to medication in elderly patients.

Methods: This research is an analytic correlation with a cross-section approach. The population in this study was all elderly in the UPTD Puskesmas Wonokromo, with a total of 993 elderly. The number of samples studied amounted to 285 respondents. The data collection technique used non-probability sampling purposive sampling, the instrument used was a family role questionnaire, a Morisky Medication Adherence Scale (MMAS) medication adherence quasi-satire, and a drug control card sheet. Data analysis using a rank- spearman statistic test with a significant value of $p < = 0.05$.

Results: The results showed that of the 285 respondents, almost half (49.1%) had good family roles, most (55.4%) had routine control cards and most (55.4%) medication adherence was obedient. Based on the Spearman rank test found that the significance level $< = 0.05$, so there is a relationship between family roles and the use of control cards with the level of adherence to taking medication for elderly patients.

Conclusion: There is a relationship between the role of the family and the use of control cards with the level of adherence to taking medication in elderly patients.

Keywords: *Family Role, Control Card, Compliance Level, Elderly.*
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INTRODUCTION

Non-compliance is the cause of therapy failure, this has an impact on the worsening of the patient's condition because of complications and damage to organs.[1] Family support plays an important role, especially among the elderly because the family is a support system that will need the presence of a family who can help them in their daily activities, for example in terms by reminding them to take medication regularly and so on.[2] Support can be influenced by the presence of internal motivation and desire to recover so that the elderly will comply with taking medication and also providing adequate information from health facilities can obtain a good knowledge of the elderly along with routine Medical Check Up.[3] Hypertension is called the silent killer because it is often without complaints, so the patient does not know he has hypertension, and is only known after complications occur. In East Java, the prevalence of Diabetes Mellitus reaches 10.7%.[4] In the city of Surabaya, based on the health profile of Surabaya in 2014-2016 the prevalence of Diabetes Mellitus increased from 3.34% to 10.43%, and the achievement in the Non-Communicable Diseases Program: Hypertension at the Wonorkomo Health Center was 33.7% or 3,381 people with hypertension. already served. Diabetes Mellitus At the Wonorkomo Health Center 98.3% or 1,286 residents with Diabetes Mellitus have been served and 532 elderly with hypertension and 461 elderly with Diabetes Mellitus.[4]

An initial study at the Wonokromo Health Center in December 2021 on 10 elderly patients with hypertension and diabetes mellitus showed 4 elderly controls regularly and 6 elderly controls irregularly with an explanation of forgetting the date of return as many as 3 elderly, no family takes them to the Puskesmas so they don't drink as many as 2 elderly people, and 1 elderly answered that the family did not understand their parents' illness so they did not take regular medication. The impact of non-adherence to taking medication for the family is the occurrence of a subjective burden in the form of emotional burden and anxiety, and the objective burden felt by the family includes the occurrence of family relationship disorders and patient

limitations in carrying out activities.[5] Therefore, medication adherence is very important for patients with hypertension and diabetes mellitus to prevent a recurrence. Adherence is a term used to describe a patient's behavior in taking medication correctly regarding the dose, frequency, and timing. One way that can be used to monitor adherence to medication in patients with hypertension and diabetes mellitus is to use a medication adherence control card.[6] The results of this control card monitoring were associated with the Adherence to Refills and Medications Scale (ARMS) compliance score, the results of measuring blood pressure, blood sugar levels, and blood levels of antihypertensive drugs. The use of hypertension and diabetes mellitus medication adherence control cards provides a significant change in patient compliance as seen from the ARMS score.[1]

However, the change in the level of compliance as measured by the ARMS score was not related to changes in the results of measuring blood pressure, blood sugar levels, and levels of antihypertensive drugs in the blood. Some patients were noted to be non-compliant, but their blood levels of the drug were normal. In addition to the control card, the role of the family is very valuable and will add to the peace of his life. The role of the family given to the patient with love and attention will be able to understand its meaning well as a supporter/supporter of his life. So, it is clear that in theory the role and support of family affect compliance.[7] Therefore, this study aims to analyze the relationship between the role of the family and the use of control cards with the level of adherence to medication in elderly patients.

MATERIALS AND METHODS

Materials

Study design and location: This study used a cross-sectional. This research was conducted in June-July 2022 at the UPTD Puskesmas Wonokromo Surabaya. Eligibility criteria: Inclusion Criteria: Elderly patients with hypertension and diabetes mellitus who live at home with their families, Elderly patients with hypertension and diabetes mellitus aged 60 years, and Elderly patients with hypertension and diabetes mellitus who

are willing to be respondents. Exclusion criteria: Patients with hypertension and recurrent diabetes mellitus who are in a state of unconsciousness/coma, senile and mental disorders, or complications at the UPTD Puskesmas Wonokromo Surabaya.

The population in this study was elderly with hypertension 532 and diabetes mellitus 461 at the UPTD of the Wonokromo Health Center. So, the total population taken is 993 elderly. The samples to be taken for this study were elderly people with hypertension and diabetes mellitus at the UPTD of the Wonokromo Health Center, which amounted to 285 people. Sampling using nonprobability sampling technique with purposive sampling, where each patient meets the predetermined criteria.

The instrument used to measure the family role variable uses an instrument that has been tested for validity and reliability. The research instrument used in this study was a control card. The drug consumption control card is a card that has the benefit of reminding patients every day to take medication. This monitoring card is a form of encouragement or motivation for patients to take medication regularly. The medication reminder tool in the study was in the form of an independent medication-taking card issued by the Indonesian Ministry of Health. This card consists of column number, name of the drug, method of administration, 4-time divisions (morning, afternoon, evening, and night), number of drugs, control time, and information. The card is made for each elderly patient. These tools were provided by the researchers according to the research group.[8] The instrument used in this study was a standardized questionnaire based on the medication adherence questionnaire (MMAS) which consisted of 8 questions sourced from research.[9]

Data collection procedures

This research was conducted in June-July 2022. Data were collected in the Polyclinic and Outpatient UPTD Wonokromo Health Center. Patients were selected as respondents by looking at medical records when they came for treatment at the Polyclinic and who were undergoing inpatient care. Patients were selected based on a sampling technique that matched

the inclusion criteria. At this stage, the patient will fill out a questionnaire to the respondent for 10-15 minutes. The data collection stage was assisted by 2 assistants who had been given an understanding or equalized perceptions about the criteria of the patients to be taken as samples. The distribution of the questionnaire was accompanied by the nurse in charge. After filling out the questionnaire the respondents, the results were recorded and analyzed. After the data is analyzed by a computer program, the results and conclusions of the research that has been carried out are made.

Data analysis

In this study, the data analysis of the family role, control card, and medication adherence. The data will be processed using a computer for analysis. Analyze data by describing and interpreting research results. The results of the research after being analyzed obtain the meaning or meaning of the research. After all the data was collected, data analysis was carried out using the Spearman-Rho correlation test. Spearman Rho correlation test was chosen because the purpose of the test was a correlation, the number of samples was 285 people, with semi-quantitative variables (ordinal scale). The results of the significance are determined at 0.05. If the statistical test shows 0.05, then H1 is accepted, meaning that there is a relationship between family support, treatment delivery services, and the regularity of taking medication in patients with hypertension. All processing techniques use SPSS.

RESULTS

Based on table 1 below, it shows that of the 285 respondents, most (51.9%) were aged 36-45 years, and most of them (54.7%) worked.

Based on table 2 below, shows that of 285 respondents, 140 respondents had good family roles, almost entirely (99.3%) of routine control cards, and 117 respondents of enough family roles, almost entirely (84.6%) of non-routine control cards, while 28 respondents with not enough role of the family are almost entirely (96.4%) non-routine control cards.

Table 1. Frequency distribution based on age and job in the working area of the Wonokromo Health Center Surabaya in 2022

Variables	Frequency	Percentage (%)
Age		
26 – 35 years	106	37.2
36 – 45 years	148	51.9
46 – 55 years	31	10.9
Job		
Work	156	54.7
Does not work	129	45.3

Table 2. Cross-tabulation of family roles with control cards in the work area of the Wonokromo Health Center Surabaya in 2022

Family role	Control card			
	Routine		Not routine	
	N	%	N	%
Good	139	99.3	1	0.7
Enough	18	15.4	99	84.6
Not enough	1	3.6	27	96.4

Table 3. Cross-tabulation of control cards with medication adherence in the work area of the Wonokromo Health Center Surabaya in 2022

Control card	Medication Regularity			
	Regular		Irregular	
	N	%	N	%
Routine	158	100	0	0
Not Routine	0	0	127	100

Table 4. Cross tabulation of the control card with the role of the family in the work area of the Wonokromo Health Center Surabaya in 2022

Control card	Family role						p-value
	Good		Enough		Not enough		
	N	%	N	%	N	%	
Routine	139	88	18	11.4	1	0.6	<0.001
Not Routine	1	0.8	99	78	27	21.3	

Based on table 3 above, shows that out of 285 respondents, 158 respondents had a routine control card entirely (100%) taking regular medication regularly, while 127 respondents with non-routine control cards entirely (100%) taking irregular medication.

Based on table 4 above, shows that of 285 respondents, 158 respondents have family support for routine control cards, almost entirely (88%) have good family roles, while 127 respondents with non-routine control cards mostly (78%) have adequate family roles. Based on the Spearman rank test for the SPSS 23 for Windows program, it was found that the significance level $< = 0.05$, which means Ho is rejected, there is a relationship between family roles and the use of control cards with the level of adherence to taking medication for elderly patients at the UPTD Puskesmas Wonokromo.

DISCUSSION

The use of control cards can motivate people with diabetes mellitus to be more obedient in managing their disease because the control card can record all management activities that have been carried out by patients which include diet, physical exercise, and drug consumption. Whether or not the process of managing diabetes mellitus is seen from the results of measuring blood sugar levels. Patients with chronic complications have lower levels of compliance compared to patients with acute complications.[10] This happens because patients with diabetes mellitus and hypertension with acute complications always try to prevent a worse disease condition through their diet. The public is aware of the importance of maintaining health and is starting to realize the importance of obeying the orders of health workers in terms of administering drugs, and being on time in taking medicines, as health workers always provide information regarding how to prevent hypertension because it is better to prevent than to treat, especially to the suitability of the existing control card. on the patient.[6]

Support from family is needed to increase self-confidence and motivation to face problems and improve good quality of life. The role of family must be involved in meeting needs, advising, accompanying, and supporting compliance to reduce the risk of recurrence and complications. Families can help with the disorders experienced by the elderly so that it interferes with their quality of life. Compliance is the main key to success in the management of diabetes mellitus, which consists of 4 pillars, namely education, diet, physical exercise, and pharmacological therapy. The factors related to the success of diabetes mellitus management are knowledge, exercise regularity, diet, and medication adherence, while the factors that influence the success of diabetes mellitus management are exercise regularity in type II diabetes mellitus patients. These four pillars must be applied continuously and thoroughly, and the need for strong motivation and an optimistic attitude from patients regarding the successful management of diabetes mellitus is used as a medium for documentation and reminders because diabetes mellitus management activities include diet, physical exercise, drug therapy, and control. Blood sugar is recorded on this card, so it can be easier to monitor. Strong family ties are very helpful when people with hypertension face problems because the family is the person most closely related to medication adherence. The results also showed that almost half of the hypertension patients in Indonesia had high self-regulation and high self-acceptance to themselves.

Someone with high self-acceptance believes that they can live a healthy lifestyle and try harder to overcome problems so that it will strengthen in self-regulation which includes setting goals, regulating emotions, self-instruction, self-monitoring, self-evaluation to self-defined contingencies to maintain their health status.[11]

The explanation can be said that the less the role of the family is given, the higher the level of hypertension and diabetes mellitus in family members who suffer from hypertension and diabetes mellitus in the working area of the Wonokromo Health Center Surabaya. The role of the family is carried out together with members of a group/family and not done separately. But in reality, sometimes that role changes along with changing conditions and situations. This can be known if one of the family members is sick. Several studies on treatment say that non-adherence focuses on the treatment itself.[12] Pound, also emphasizes that sufferers are motivated by the hope to minimize the drugs they take in the hope that the body does not work too hard to metabolize and reduce side effects. A major risk factor for recurrent vascular events or death is non-adherence to treatment.[12] Hypertensive patients need the role of the family, if family support is given, hypertension sufferers will increase their behavior in controlling blood pressure to keep it stable in the right direction. better so that controlled blood pressure will reduce the risk of complications.

CONCLUSION

The role of the family and the use of control cards can reduce blood pressure levels and reduce the risk that blood pressure does not get worse due to good patient medication adherence. This means that the better the role of the family and the use of control cards with the patient's medication adherence level, the lighter the blood pressure level experienced by hypertension sufferers and diabetes mellitus patients. According to Friedman

(2010), strong family ties are very helpful when people with hypertension face problems because the family is the person who is closest to them.

AUTHOR CONTRIBUTION

All authors contributed equally to this study.

ETHICAL STATEMENT

This research has been declared ethically feasible by the Ethics Commission of the Chakra Brahmanda Lentera Institute with No. 031/005/VII/EC/KEP/LCBL/2022.

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