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Compliance with Drug Use in Hypertension Patients Reviewed from Age Factors, Education Level and Length of Hypertension Suffering

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ABSTRACT

Compliance with hypertension treatment is important because hypertension is an incurable disease but must always be controlled or managed so that complications that can lead to death do not occur. This study is an analytical observational study with a cross-sectional study design. The researcher used a cross-sectional design because in this study, observation or measurement of variables was carried out at a predetermined time with a population of 757 respondents. The sampling used in this study was purposive sampling with a sample size of 30 respondents. From the results of this study, it can be concluded that the last level of education factor with a sig value of 0.000), f age factor with a sig value of 0.016, duration of hypertension with a sig value = 0.000, has a relationship with compliance in undergoing hypertension treatment. Compliance is a form of behavior that arises as a result of interaction between health workers and patients so that patients understand the plan with all its consequences and agree to the plan and carry it out. Hypertension treatment is a long-term treatment, maybe even lifelong, treatment using standard triple therapy (STT) is the basis for hypertension treatment. The goal of hypertension treatment is to reduce morbidity rates so that efforts to find antihypertensive drugs that meet expectations continue to be developed.

Keywords: compliance factors; treatment; hypertension

INTRODUCTION

Technological advances in developing countries have resulted in demographic and epidemiological transitions characterized by changes in lifestyle and the growing prevalence of non-communicable diseases (NCDs). This transition is caused by socio-economic changes, the environment and changes in population structure. When society has adopted an unhealthy lifestyle such as smoking, lack of physical activity, high-fat and high-calorie foods and alcohol consumption which are suspected to be risk factors for NCDs (Yonata and Pratama, 2016). Based on basic health research in 2018, NCDs consist of hypertension, diabetes mellitus, asthma, cancer, stroke, chronic kidney disease, joint disease, and obesity. Hypertension or better known as high blood pressure has become a major problem in Indonesian society and in several countries in the world (Wirawan et al., 2015). Hypertension is a condition in which there is an increase in systolic blood pressure reaching ≥ 140 mmHg and diastolic ≥ 90 mmHg. Hypertension is a non-communicable disease (NCD) that is very dangerous (silent killer) (Yonata and Pratama, 2016).

METHOD

This study is an analytical observational study with a cross-sectional research design. The researcher used a cross-sectional design because in this study, observation or measurement of variables was carried out at a time determined by the researcher and can explain factors related to compliance of hypertension patients in undergoing treatment because cross-sectional research is a study that studies the relationship between risk factors (independent) and effect factors (dependent) (Riyanto Agus, 2011:28).

RESULTS

Table 1.
The Relationship Between Respondents' Education and Compliance in the Use of Hypertension Medication in the Outpatient Clinic (n=30)

Education	Compliance						Total	%	Sig value
	Low (< 6)	%	Moderate (6-7)	%	High (8)	%			
Low educated	2	6,6	4	13,5	0	0	6	20,1	
High educated	0	0	10	33,3	14	46,6	24	79,9	0,000
Total	2	6,6	14	46,8	14	46,6	30	100	

Table 1 shows that the respondents' last education has a relationship with the level of compliance in the use of hypertension medication at the Outpatient Clinic of Al Islam H. M. Mawardi Hospital, Sidoarjo with a p value of less than 0.000 or less than 0.005.

Table 2.
The Relationship Between Age and Compliance in the Use of Hypertension Medication in the Outpatient Clinic n=30)

Age	Compliance						Total	%	Sig value
	Low (< 6)	%	Moderate (6-7)	%	High (8)	%			
Adult (26-45 years old)	2	6,6	4	13,5	0	0	6	20,1	
Elder (46-55 years old)	0	0	7	23,3	9	30	16	53,3	0,016
Old eldely (>65 years old)	0	0	3	10	5	16,6	8	26,6	

Table 2 shows that there is no relationship between the age of respondents and compliance in undergoing hypertension treatment because the significance value (sig = 0.016) or less than 0.05). Most respondents were aged 46-55 years (elderly, there were 7 elderly who were in the moderately compliant category).

Table 3.
The Relationship Between Respondents' Duration of Suffering and Compliance in Using Hypertension Medication at the Outpatient Clinic (n=30)

Duration	Compliance						Total	%	Sig value
	Low (< 6)	%	Moderate (6-7)	%	High (8)	%			
< 5 years	1	3,3	0	0	0	0	1	3,3	0,000
> 5 years	1	3,3	14	46,8	14	46,8	29	6,7	

Table 3 shows that the length of time the respondents suffered was related to the level of compliance in using hypertension medication at the Outpatient Clinic of Al Islam H. M. Mawardi Hospital, Sidoarjo with a sig value of less than 0.000 or less than 0.05.

Table 4.
The Relationship Between Respondents' Duration of Suffering and Compliance in Using Hypertension Medication at the Outpatient Clinic (n=30)

Duration	Compliance						Total	%	Sig value
	Low (< 6)	%	Moderate (6-7)	%	High (8)	%			
< 5 years	1	3,3	0	0	0	0	1	3,3	0,000
> 5 years	1	3,3	14	46,8	14	46,8	29	6,7	

Table 4 shows that the length of time the respondents suffered was related to the level of compliance in using hypertension medication at the Outpatient Clinic of Al Islam H. M. Mawardi Hospital, Sidoarjo with a sig value of less than 0.000 or less than 0.05.

DISCUSSION

Relationship Between Respondents' Education Level and Compliance in Using Hypertension Medication in the Outpatient Clinic

Based on the results of the bivariate analysis, it shows that there is a relationship between the last level of education and compliance in undergoing hypertension medication with a value of p = 0.002. The results of this study are reinforced by research conducted by Vincent Boima (2015) which states that there is a relationship between education level and compliance with hypertension medication (p = 0.001). This is because in the results of the study, from the total respondents who were highly educated (graduated from high school or college) there were 24 elderly (80.9%) with details of 10 people with moderate compliance and 14. Similar to the study conducted by Vincent Boima (2015), this study also found that respondents with higher education would be 85% more compliant compared to respondents who were not compliant 15%.

Based on the results of field research, most respondents who are included in the non-compliant category are those with low education, namely 2 respondents (19.1%), while respondents with higher education 80.9% are compliant in undergoing their treatment. This indicates that respondents with low education are at high risk of being non-compliant in undergoing treatment. Non-compliance in respondents with low education can be caused by the lack of knowledge they have, this is shown in respondents with low education also having low knowledge about their disease. Education is closely related to knowledge, education is a teaching and learning process so that a set of behaviors, activities or activities will be formed. By learning both formally and informally, humans will be able to increase intellectual maturity and have knowledge. With the knowledge gained, hypertension patients will know the benefits of advice or advice from health workers so that they will be motivated to be more compliant in undergoing treatment recommended by health workers.

Relationship Between Respondents' Age Level and Compliance in Using Hypertension Medication in the Outpatient Clinic

From this study, it can be seen that there is a relationship between respondents' age and compliance in undergoing hypertension medication because the sig value is 0.016) or less than 0.05). Most respondents were aged 46-55 years (there were 7 elderly who were categorized as moderately compliant. Furthermore, middle adulthood in women is when women start to re-enter the workforce, namely after women are free from their responsibilities as housewives or taking care of children. When entering this period, women have more life satisfaction compared to women who do not work, so middle-aged women who work have lower stress levels compared to women who do not work. However, in women who enter late adulthood, namely 60 years and over or who have entered menopause due to hormonal changes in women. In contrast to men who have started to enter the workforce in early adulthood and tend to get monotonous jobs until retirement, which can make stress levels higher compared to women. Thus, middle-aged men are considered to have a higher risk of experiencing chronic diseases compared to middle-aged women. Furthermore, based on the category of compliance scores for consuming medication based on the age of hypertension patients, it can be said that both subjects aged 45 to 51 years are more likely to not comply with the process of consuming medication, namely 16 respondents or 53.34%. The results of this categorization differ from the statements of Jaya (2009) and Ramadona (2011) who stated that in terms of age factors, hypertension patients aged 45 to 59 years tend to be more compliant in taking medication, because the age of 45 to 59 years is the initial age when individuals experience chronic diseases so that the sense of curiosity and recovery is greater.

Relationship Between Duration of Respondents' Suffering and Compliance in Using Hypertension Medication in Outpatient Clinic

Based on the results of bivariate analysis, it shows that there is a relationship between the duration of hypertension and compliance in undergoing hypertension treatment with a p value of 0.001. The results of this study are in accordance with the study conducted by Suwarso (2010) which showed that there is a relationship between the duration of hypertension and non-compliance of hypertension patients with a p value of 0.002. This is based on the results of the study that patients who suffer from hypertension for >5 years tend to be non-compliant in taking their medication, similar to Suwarso's study, in this study respondents who suffer from hypertension for >5 years were found to be 29 respondents (98.2%) with details of 1 respondent having low compliance, 14 elderly people having moderate compliance, 14 elderly people having high compliance in taking the hypertension medication they are undergoing.

Based on field research, respondents who suffered from hypertension ≤5 years as many as 1 elderly (1.8%) were low compliant in undergoing their treatment, while in respondents who had suffered from hypertension >5 years only 98.2% were compliant in undergoing treatment. The results of this study are in accordance with the theory that states that the longer a person suffers from hypertension, the lower the level of compliance (Ketut Gama et al, 2014). This is because most sufferers will feel bored undergoing treatment while the level of healing that has been achieved is not as expected. This is also related to the amount of medication taken, in general, patients who have suffered from hypertension for a long time but have not yet achieved healing, the doctor treating the patient will usually add types of drugs or increase the dose slightly. As a result, the patient tends to be non-compliant in taking medication. Compliance is a form of behavior that arises from the interaction between health workers and patients so that patients understand the plan with all its consequences and agree to the plan and implement it (Ministry of Health of the Republic of Indonesia, 2011). Types of non-compliance with drug therapy include failure to fill prescriptions, neglecting doses, errors in the timing of drug consumption, and premature discontinuation of drugs. Non-compliance will result in under-use of a medication. Thus, the patient loses the benefits of therapy and may result in a gradual worsening of the condition. Non-compliance can also result in over-use of a medication. If the dose used is excessive or if the medication is taken more frequently than intended, there is an increased risk of adverse reactions.

Hypertension is a disease that arises due to the interaction of various risk factors that a person has. There are several risk factors for hypertension that cannot be changed such as family history, age, gender, and ethnicity. However, the fact that often occurs is that external factors are the biggest triggers for hypertension with complications of stroke and heart attack, such as stress, obesity, and nutrition (Nurrahmani, 2014). Hypertension is the most common disease suffered by the Indonesian people which can occur due to one of the problems that often arise from lifestyle changes, such as consuming foods with high salt content, hypertension is thought to be the cause of various serious diseases and their complications. Various factors related to hypertension in the elderly from modifiable risk factors such as headaches, obesity, nutrition and lifestyle and non-modifiable risk factors such as genetics, age, gender (Widjaya, 2009).

Compliance is a form of behavior that arises from the interaction between health workers and patients so that patients understand the plan with all its consequences and agree to the plan and implement it (Ministry of Health of the Republic of Indonesia, 2011). Compliance with taking medication for hypertension patients in Indonesia who have suffered from hypertension for 1-5 years tend to be more compliant with the process of taking medication, while patients who have suffered from hypertension for 6-10 years tend to have worse compliance with taking medication due to factors such as long suffering, work, boredom with taking medication, lack of support from family (WHO, 2010).

Types of non-compliance with drug therapy include failure to fill prescriptions, neglecting doses, errors in the timing of taking medication, and premature discontinuation of medication. Non-compliance will result in the use of a drug that is lacking. Thus, patients lose the benefits of therapy and are likely to cause their condition to gradually worsen. Non-compliance can also result in excessive use of a drug. If the dose used is excessive or if the drug is taken more often than intended, there is an increased risk of adverse reactions. This problem can develop, for example, a client finds out that he has forgotten a dose of medication and doubles the next dose to fill it (Padila, 2012).

CONCLUSION

The conclusion of this study found that there was a relationship between compliance in undergoing treatment in hypertensive patients with the level of education and duration of suffering from hypertension, but there was no relationship between compliance in undergoing treatment with age in hypertensive patients in the outpatient clinic of Al Islam H.M. Mawardi Sidoarjo Hospital.

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