Description of adherence of diabetes mellitus type 2 patient at universitas airlangga hospital

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Abstract: Diabetes mellitus is metabolic disease with hyperglycemia characteristic because insulin secretion disorder, insulin mechanism or both. The study aims to describe adherence in diabetes mellitus type 2 patient in Universitas Airlangga hospital. This study was a descriptive research. 100 respondents was taken with simple random sampling. The variable was adherence of type 2 diabetes mellitus patient. Data collection used questionnaires. Data analysis used frequency distribution and percentage. This study showed that 53% respondent was female, age respondent between 56-65 years old was 56% and education level of patient was 33% senior high school. Adherence of patient at Universitas Airlangga hospital was moderate adherence. Diet adherence was 74% respondent with moderate level, physical activity adherence was 44% respondent with moderate level and medication adherence was 40% respondent with moderate level. This study can give hospital input to make innovative and interesting health education to increase adherence level in type 2 diabetes mellitus patient at Universitas Airlangga hospital.

1 INTRODUCTION

World Health Organization (WHO) predicts an increase in the number of patients with DM (Diabetes Mellitus) which became one of the global health threats. The condition of DM that is not managed well in the long term will cause various chronic complications. Adherence is not simply defined by taking medication but can be interpreted more broadly and is a joint activity in which people not only follow medical advice but must understand, agree with and apply the regimen described (Boas, Lima and Pace, 2014). Diabetes mellitus is a metabolic disease with hyperglycemia characteristic because insulin secretion disorder, insulin mechanism or both (PERKENI, 2015)

Preliminary study results conducted by researchers 3 of 10 patients with type II DM lack of medication according to medical advice and late came the control to take the drug. DM patients choose to avoid side effects of drug use by not taking it without reporting to a doctor. 7 out of 10 patients who said they were not too restrictive on the dietary on the grounds that they were taking drugs and meals that did not fit the DM patient’s dietary while attending the wedding so they could consume the food they liked without regard to the amount and type of food. Phisical activity adherence has not been studied at Universitas Airlangga Hospital.

2 METHOD

The design of this research is descriptive quantitative with cross sectional approach which aims to know description of adherence of dm type 2 patient. The research population is patient of type 2 DM in universitas airlangga hospital. The sample in this study is 100 people. The sampling technique used simple random sampling. The inclusion criteria in this study, ie Patient DM type 2 in Outpatient Hospital Airlangga University, patients aged 31-59 years, can communicate verbally well, able to read, write and speak Indonesian, not experiencing deaf

Exclusion criteria in this study, ie Patient DM type 2 with complications and suffering from interference that inhibits communication. Research variables were patient adherence. Research instrument using adherence questionnaire (dietary adherence, physical activity adherence
and medication adherence). Dietary questionnaire using modified PDAQ (perceived dietary adherence questionnaire) (Asaad et al., 2015), physical activity and medication adherence using physical activity and medication adherence questionnaires. These questionnaires have been tested for validity and reliability with corrected total correlation $> r$ table. (0.632), alpha cronbach dietary adherence = 0.976, alpha cronbach physical activity adherence = 0.924, and alpha cronbach medication adherence = 0.911). Questionnaire Data is analyzed descriptively. Data is presented in the form of frequency distribution and proportion / percentage.

3 RESULT

The result of the research showed that the number of respondents with age 56-65 years is 56 people (56%), with a minimum age of 33 years and a maximum age of 59 years. The respondents' gender consisted of 53 women (53%) and 47 (47%) male. While for the education level of respondents consists of elementary school (primary school) 25 people (25%), junior high school (16%), high 33 people (33%) and 26 colleges (26%). (Table 1)

The result showed that average of adherence of type 2 diabetes mellitus at universitas airlangga hospital is moderate. Dietary adherence consists of low adherence of 1 person (1%), moderate adherence 74 people (74%) and high adherence 25 people (25%). Physical activity adherence of low adherence 30 people (30%), moderate adherence 44 people (44%) and 26 high adherence (26%). Medication adherence consists of low adherence of 32 people (32%), moderate adherence 40 people (40%) and high adherence 28 people (28%). (Table 2)

![Table 1: Description of age of respondent, gender and level of education of respondent.](image)

4 DISCUSSION

The results obtained data that the age of respondents are in the age range 56-65 years as many as 56 people (56%). This indicates that the respondent entered the final elderly. Age ≥ 45 years is a risk factor for the occurrence of diabetes mellitus (Association, 2017). Age is an uncontrollable risk factor for diabetes. (Stanhope, M & Lancaster (2004) suggests that age is one of the risk factors for health problems such as DM disease. The incidence of DM disease increases with age (Suyono, 2009). This is in line with data from the 2010 United Nations National Health and Nutrition Examination Survey (NHANES), showing that DM patients are more likely to be aged 60 and above. In addition, at the age of 45-65 years will experience anatomical, physiological and biochemical changes of the body, according to WHO after age 30 years of blood glucose levels will rise 1-2 mg / dl / year at the time of fasting and will rise 5.6-13mg / dl at 2 hours after meals (Sudoyo, 2006), so that the body's susceptibility to that age against chronic disease will increase.

The result of the research shows that the proportion data is based on gender more women, 53
The prevalence of diabetes mellitus in women tends to be higher than for men. This is in line with the results of (RISKESDAS (2013) which states the prevalence of diabetes based on doctor's diagnosis and more symptoms in women and increases with age, but from age 65 years tends to decline. This is in accordance with (Adi Pratama, 2013) study that gender is a risk factor for type 2 DM although it can not be modified. In women this factor is greater because of the increase in estrogen hormone that can affect and trigger the occurrence of elevated blood sugar levels The results of this study is different from the results of the 2005 American Diabetes Association survey found that male DM patients more than women is 10.9% for men and 9.7% for women (Allender J.A, Rector C, 2010).

The results obtained data that is the level of high school education as much as 33 people (33%), (Irawan, 2010) states the level of education affects the physical activity of a person because it is related to work. People with a high level of education usually work more in the office with little physical activity, whereas people with low levels of education usually have more physical activity at work. The results of this study did not match with other studies suggesting that patients with higher education levels had better conditions for learning, self-care, blood glucose monitoring, and other medical care (Kakhki AD, Saeedi ZHA, Yaghmaie F, Majd HA, 2004). When individuals get an education, then the education will be a means to develop the cognitive abilities and knowledge that became the basis in the formation of self-belief in behavior (Bandura A, 2008). People who have a high level of education will usually have a lot of knowledge about health, so that people will better maintain their health by living a healthy lifestyle.

The results obtained data that is the adherence of respondents 74 respondents (74%) have moderate adherence. 40 respondents are women. Smelzer and Bare (2002) suggest that early adult males have a disobedient tendency because of their productive activity, whereas in the elderly shows a low level of compliance due to decreased memory function or degenerative disease. men are more likely to ignore adherence than women. (Adisa R, Fakeye TO, Fasanmade A, 2009). Adherence is an assessment of the patients used to determine whether a patient has followed the rules of therapy. The adherence rate of dietaryary was measured using a PDAQ questionnaire tool consisting of 9 question items. One of the factors that play a role in the failure of blood glucose control in patients with diabetes mellitus is non-adherence to the dietaryary. Based on the results of the study, the majority of respondents are in the medium compliance category.

The result of this research is data of 44 respondents (44%) adherence of physical activity of respondent had moderate category while 25 of them were female. Gender consistently affect sports activities, where men have higher levels of sports activity than women (Dominic, 2006), but the results of this study show that males are more disobedient than women. Possible Factors The cause is that men do not have a lot of time to do sports. Time spent on work, doing community activities. According Raj et al. (2017) that men strongly uphold togetherness in living a good life family environment, relatives and the wider environment. This condition causes men rarely do sports activities. Possible other factors are the type of sports that tend to lead to many types of sports fitness such as gymnastics, cycling and the road relax, where this type of physical activity much liked by women. This is in accordance with research conducted by Shenoy, S, Guglay, R, Shandhu (2010) on the effectiveness of sports programs, showing the result that aerobic and road programs can lower blood glucose by 37%.

The results obtained data that medication adherence of respondents as much as 40 people (40%) have moderate adherence. 40 people were divided into 28 women (28%) and 22 men (22%). This is in contrast to research by Adisa et al. (2009) that gender differences have an effect on patient compliance where men tend to forget to take medication. The results of the low compliance study were 32 people (32%) divided into 22 men (22%) and 10 women (10%). This is in accordance with research by Adisa et al. (2009) that gender differences have an effect on patient compliance where men tend to forget to take medication.

5 CONCLUSIONS

Adherence is important in the management of type 2 diabetes mellitus. The results of this study indicate that the average patient dm type 2 at the universitas airlangga hospital has moderate adherence level of dietary, activity and medication. Patient adherence data dm type 2 is expected to be used as input for universitas airlangga hospital to make interesting and innovative health education so that patient adherence can increase. High level of adherence required To be able to carry out the management of type 2 diabetes mellitus well so that complications can be avoided.
REFERENCES


