Description of the Level of Ansietas of Patients of Diabetes Mellitusin Kendal District

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Abstract: Introduction: Diabetes Mellitus is a chronic metabolic disorder associated with a system in the body, due to various factors, characterized by hyperglycemia and hyperlipidaemia, due to a lack of secretion or ineffectiveness of insulin secreted by the pancreas. Diabetes Mellitus patients should perform various management therapies for Diabetes Mellitus to prevent complications and control the stability of blood sugar levels. The therapy can have physical and psychological effects. The psychological effects that can be felt one of them are anxiety. This study aims to determine the description of anxiety levels in patients with Diabetes Mellitus in the area of Djazariyah family doctor Kendal District. Method: quantitative descriptive method. The measuring tool used is a questionnaire of Depression Anxiety Stress Scale consisting of 42 questions. The sample was 37 respondents. Results: Most Diabetes Mellitus patients experienced mild anxiety. Discussion: Further investigators are recommended to use the modified Depression Anxiety Stress Scale questionnaire to make it easier for respondents to understand and answer questions.

Keywords: Anxiety, Paient, Diabetes Mellitus

1. Preliminary

Diabetes Mellitus (DM) is a chronic metabolic disorder, associated with a system in the body, due to various factors, which are characterized by excessive amounts of blood sugar (hyperglycemia) and excessive amounts of fat (hyperlipidemia), due to lack of insulin secretion, or the ineffectiveness of the work of insulin secreted by the pancreas. [1] DM becomes the parent of various diseases, so that DM patients will experience physical effects and psychological effects. This will affect the motivation of DM patients to maintain their quality of life.

The prevalence of DM from year to year is increasing. Data obtained from the World Health Organization (WHO), there are 422 million DM patients in the world. [2] The prevalence of DM in Indonesia according to the results of the Regional Health Research (Riskesdas) continues to increase, from 1.1% in 2007 to 2.1% in 2013. [3] DM prevalence in Central Java also increases every year, Central Java Health Office reports that there were 13.6% of DM patients in 2013, in 2014 it increased to 14.96%, and in 2015 it increased to 16.69 %. [4] DM prevalence in Kendal Regency reaches

2,954 people. This number makes DM the second highest case of Non-Communicable Diseases (PTM) after hypertension. [1]

DM patients must carry out management therapy so that their health status can be controlled and avoid complications. [5] Management therapy that is done well will help DM patients to live like normal people in general and have a longer life. The Indonesian Endocrinology Association (Perkeni) classifies two types of management therapy for DM patients, namely pharmacological therapy (drugs) and non-pharmacological therapy (food regulation, physical exercise, and education). Therapy that must be done can have an impact, both physically and psychologically. [6] Physical effects that can be felt in the form of changes in body weight, changes in appetite, often experience pain, fatigue, and sleep disorders, while psychologically DM patients can experience stress, anxiety, fear, often feeling sad, feeling hopeless, helpless, not useful, and hopeless. [7] DM patients can experience a variety of emotional problems such as denial of their illness so that they are not obedient in applying a healthy lifestyle, irritability and frustration because of many restrictions or feel they have undergone various types of therapy but no significant changes

in blood sugar levels, fear against complications and the risk of death, saturation of taking medication, or even depression. [6] The results of a preliminary study conducted in September 2016, on DM patients who are members of the Chronic Disease Management Program (Prolanis) in the Djazariyah family doctor's area of Kendal Regency, have 54 DM patients. The average DM patient in Prolanis is a woman. The results of interviews that have been conducted found that 2 out of 3 DM patients do not control blood sugar levels routinely because of cost constraints, and no family members deliver. They experience some changes such as changes in appetite, often feeling tired, often feeling sleepy, experiencing sleep disorders, feeling sad, feeling helpless, anxious, and feeling afraid that if the disease gets worse it can cause other diseases.

2. Method

This study uses descriptive quantitative research methods. Quantitative research is research that emphasizes an objective phenomenon that is studied using numbers, statistical processing, structure, and controlled experiments. [7] Descriptive research is research that describes a phenomenon or problem situation in certain places. [8]

This research was conducted in the working area of the Djazariyah family doctor in Kendal Regency. Population is a group of individuals who live in the same area, or a group of individuals who have the same characterist. [9] The population in this study were DM patients who were enrolled in the last Prolanis activity in September 2016 in the working area of the Djazariyah family doctor in Kendal District, which amounted to 54 people. The sample is a small portion of the population that is considered to represent the entire population, and is used in a study. [10] Determination of the sample from a population that is used as the subject of research, is done using a technique called the sampling technique. The sampling technique used in this study was purposive sampling. The purposive sampling technique is a technique for determining the sample by selecting samples among the population, which is in accordance with the will of the researcher, the objectives and problems of the study, so that the sample can represent the characteristics of the existing population. [9]

3. Result

The following is a description of the characteristics of DM patients in the working area of the Djazariyah family doctor in Kendal Regency.

Table 1. *Frequency distribution of characteristics of respondents (n = 37).*

Characteristics	f	%
a. Age:		
1) 18-25 years	0	0
2) 25-60 years	20	54,0
3)> 60 years old	17	46,0
b. Gender:		
1) Men	17	46,0
2) Women	20	54,0

Characteristics	f	%
c. Level of education:		
1) No school	3	8,0
2) SD	6	16,0
3) Middle School	10	27,0
4) High School	13	35,0
5) Universities	5	14,0
d. Work:		
1) Does not work	22	59,0
2) Work	15	41,0
e. Economic level:		
1) <Rp. 1,639,600	16	43,0
2)>Rp. 1,639,600	13	35,0
3) = Rp. 1,639,600	8	22,0
f. Marital status:		
1) Not married	3	8,0
2) Married	23	62,0
3) Divorced	11	30,0
g. Long suffering from DM:		
1) <6 months	1	3,0
2)> 6 months - 5 years	13	35,0
3)> 5 years	23	62,0

Table 1 shows that most DM patients aged 25-60 years, female, senior high school, unemployed, have less income than UMR in Kendal Regency, get married, and suffer from diabetes for more than five years.

Table 2. *Frequency distribution psychological level of DM patients (n = 37).*

Anxiety level	f	%
1) Normal	7	19,0
2) Light	14	38,0
3) Medium	9	24,0
4) Weight	7	19,0
5) Very Heavy	0	0

4. Discussion

The results of this study were analyzed using univariate analysis. The analysis illustrates the distribution of respondents based on the characteristics of DM patients, and analyzes the description of anxiety levels in DM patients.

4.1. Characteristics of DM Patients

4.1.1. Age

The results showed that there were 20 respondents (54.0%) aged 25-60 years. The results of this study are in line with the research conducted by Nursalam (2007) that 47.5% of the age group that suffered the most DM were the 45-52 year age group. [11] The aging process in this age group causes a reduction in the ability of pancreatic beta cells to produce insulin, in addition there is a decrease in mitochondrial activity in muscle cells which triggers insulin resistance. [12] The results of Jelantik and Haryati (2014) show that there is a relationship between age and the incidence of type 2 DM, which is that most respondents have more than 40 years of age. [13] The results of Yusra'sstudy state that with increasing age in a person, it can cause a physical, psychological, or intellectual change. These changes can cause vulnerability to various diseases and can lead to failure to maintain homeostasis against stress. The researcher draws

the conclusion that age can increase the risk of DM. Someone with increasing age will experience changes and decreases in anatomical, physiological, and biochemical functions, besides that age can also affect a person's psychology in dealing with a problem that arises in daily life.

4.1.2. Gender

The results showed that there were 20 respondents (54.0%) female. The results of this study are in line with the research of Zainuddin, Wasisto, and Herlina (2015) in their study there were 53.3% of female patients with DM. [14] Women are more at risk of developing DM, because physically women have a greater chance of increasing the Body Mass Index (BMI), monthly cycle syndrome (premenstrual syndrome) and post menopause will also make the distribution of fat in the body easily accumulated. Taylor's (2008) opinion, says that hormonal changes (decreased estrogen and progesterone) due to menopause can affect blood sugar levels. [15]

Research results from Hasanuddin, Kristofel, Mahatrisni, Winasis and Satrio (2011), state that women with DM can experience a decrease in quality of life such as experiencing disruption in activity, experiencing role changes and changes in physical conditions, this will trigger psychological problems. [16] The study is not in line with Yusra's (2010) research, his results show that there is no onship between sex with quality of life, men and women have the same ability to solve problems, men and women respond and behave according to what is expected to manage the disease. [17]

The researcher draws the conclusion that women are more at risk of developing diabetes because women have several factors that can affect tolerance to blood sugar which can increase the risk of DM. In addition to the important role possessed by a woman in everyday life in the environment and family, then women with DM will experience changes in ability to carry out their roles, this can increase the risk of psychological problems.

4.1.3. Education Level

The results showed that there were 13 respondents (35.0%) with high school education. The results of this study are in line with the research conducted by Yusra (2010), that there is a relationship between the level of education and quality of life. [17] Opinion Notoatmodjo (2007), says that the level of education will determine whether or not someone is easy to understand the knowledge provided. [9] The same opinion was also expressed by Mihardja (2009), the level of education can affect one's ability and knowledge in applying a healthy lifestyle, one of the efforts to prevent DM. [18]

The researcher draws the conclusion that the level of education does not affect the risk of developing DM, but DM patients who have a high level of education will be more mature in the process of change themselves so that it will be easier to accept external influences that are positive, objective and open to various information related to understanding DM disease, self-care, and implementing DM care management including the implementation of blood sugar level control.

4.1.4. Work

The results showed that there were 22 respondents (59.0%) not working. Most DM patients are housewives and retirees. Physical activity carried out by people who do not work like retirees and housewives is likely to be less than those who have activities or work outside the home. The results of this study are in line with Trisnawati's research (2013), one's work can influence the level of physical activity undertaken. [19] Physical activity causes insulin to increase so that blood sugar levels will decrease. The results of this study are in line with the research of Ramadhanisa, Larasati and Mayasari (2013), there were 96.3% of respondents in the study had less activity and had poor HbA1c levels. [20] Research conducted by Hartono (2012) found that most type II DM patients work as office employees including BUMN, PNS, TNI and POLRI. Work affects a person's physical activity, besides consuming foods that are high in calories and do not do regular exercise, can increase the risk of obesity. [21] Another trigger factor was suggested by Suiraoka (2012), that technological progress and economic stability make a person's lifestyle change. [22] This opinion supports the research of Sunjaya (2009), it is known that people who have mild physical activity have a risk of 4.36 times greater suffering from DM. [12] The researcher draws the conclusion that mild physical activity experienced by people who do not work can increase the risk of DM.

4.1.5. Economic Level

The results showed that there were 16 respondents (43.0%) having income below the UMR of Kendal Regency. The economic capacity of the community will determine the level of participation in development, for example participation in maintaining health. This opinion supports the research of Izzati, Wisnatul and Nirmala (2015), most DM patients are over 60 years old (56.3%), at that age physical changes occur so that respondents cannot move as usual and have an impact on economic problems. [23]

The researcher draws the conclusion that the economic level can affect the DM conditions that they experience. Economic limitations can limit the ability to seek information, care and treatment of DM, besides that economic limitations can also cause psychological problems that can worsen his health condition.

4.1.6. Marital Status

The results showed that there were 23 respondents (62.1%) who had marital status, namely marriage. This research is in line with the research of Sari, Thobari and Andayani (2011), a married person has a better quality of life. [24] A person who is married will have a higher self-esteem and has an adequate source of coping from his partner so that he can develop a coping that is adaptive to the stressors that arise in daily life. [23] The study supports Putri's research, Yeni and Handayani (2013), there are 76.2% of DM patients who have a good family role, have controlled blood sugar, while 23.8% of DM patients have uncontrolled blood sugar. [25] Coffman

Research (2008), DM patients will get various social support that can increase self-confidence. The main social support is family support and other support obtained from friends and health workers. Researchers draw the conclusion that someone who has a marriage bond will have better support from his partner, it will increase the motivation of DM patients to have a good quality of life and avoid psychological disorders. [26]

4.1.7. Long Suffering from DM

The results showed that there were 23 respondents (62.0%) who had suffered from DM for more than five years. Rahmat's opinion (2010), said that DM patients can experience a decrease in quality of life after suffering from DM for at least one year, this is because in that time the patient has experienced and felt various changes or physical and psychological complaints due to the disease. [27] This opinion is not in line with the research of Izzati and Nirmala (2015), there were 87.5% of respondents who had suffered from DM for more than five years. [23] The duration of suffering from DM causes various experiences such as the emergence of DM complications, so that DM patients are motivated to adhere to the DM diet, reduce stress, adhere to taking medication, so as not to experience elevated blood sugar levels. The researcher draws the conclusion that the duration of suffering from DM can affect changes in accepting and responding to DM disease suffered, so that DM patients become more motivated to control their blood sugar levels by adhering to DM management therapy. [28]

4.2. Overview of Anxiety Levels in DM Patients

The majority of respondents in this study experienced mild anxiety as many as 14 respondents (38.0%). It can be seen from the DASS questionnaire questions that have been used in this study, there are 94.5% of DM patients who feel that their lips are often dry. DM patients often experience polidipsi, this is one of the body's responses in giving a signal or an order to meet the needs of fluids or drink in sufficient quantities. If DM patients do not immediately meet their fluid needs when they feel thirsty, then the lips will feel dry. In addition, there are 91.8% of DM patients who are afraid that they will be hampered by trivial tasks that are not usually done. The results of this study are supported by the research of Suwardianto and Andynugroho (2016), there are 51% of respondents in the study having a poor level of functional independence or having to depend on other people or certain tools around them to carry out daily activities such as bathing, eating, toileting, move and dress. [29] Respondents in the study often feel weak, this affects their ability to carry out daily activities.

The fear experienced by DM patients is not only related to limitations or inability to carry out activities, as stated in the research of Kresnasari, Budhiarta, and Saraswati (2011), DM patients experience fear of insulin therapy which must be done, among others, fear of syringes, fear of pain or pain caused, fear of fat, fear of hypoglycemia or other complications, fear of expensive insulin prices, confusion on how to use insulin injection therapy, fear of negative environmental responses, and trauma. [29]

Based on the results of research conducted by researchers, and previous studies, the authors draw the conclusion that psychologically someone who is declared exposed to DM tends to not be able to accept the reality of a decrease in his ability due to DM he suffered, this can allow the emergence of psychological disorders, which ultimately have an impact bad for their health, when they face the fact that diabetes mellitus cannot be cured, DM patients will find it difficult to enjoy life because they have to control their disease by doing various management therapies. The DM patient's view of his future will also change, then a pessimistic attitude will emerge and their self-confidence will diminish, causing anxiety and anxiety.

5. Conclusions and Suggestions

5.1. Conclusions

The researcher draws the conclusion that the characteristics of DM patients in this study are mostly 25-60 years old, female, senior high school, unemployed, have less income than UMR Kabupaten Kendal, get married, and suffer from diabetes for more than five years, there are 38 % of DM patients experience mild anxiety.

5.2. Suggestion

For the nurse profession, it is expected to be able to provide appropriate nursing care services in a holistic and comprehensive manner by paying attention to the psychological aspects that can be experienced by DM patients with different levels, in addition nurses are expected to provide support to improve DM patient compliance in controlling blood sugar and in motivating DM patients to form effective individual coping so that DM patients can avoid psychological disorders such as anxiety.

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