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Self-Care Management Description in Mellitus Diabetes Patients in Urban Area

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Abstract: ***Background****: Diabetes Mellitus (DM) is a chronic chronic disease wherein increasing glucose levels can cause macro-vascular, micro-vascular disease and neurological complications (Wijaya & Putri, 2013). The prevalence of DM continues to increase every year in the world , it is predicted that there will be a threefold increase from 2000 to 2030 (WHO, 2013). DM prevalence in West Kalimantan (Kal-Bar) is around 0.8% who have been diagnosed from the age of 15 years (Riskesdas, 2013). Pontianak is the highest incidence of DM in Kal-Bar at 8.6% with 649 cases in 2013 (Ramanda, 2014 cited in West Borneo Office of Deputy Ministry of Health, 2013). The importance of self-management in patients with diabetes mellitus to minimize the risk of complications and control blood glucose levels so that patients can improve the quality of life of patients, by the reason that researchers want to study more broadly related to the self-management of diabetes mellitus patients in the city of Pontianak*

Materials and Methods*: This study is a descriptive cross-sectional retrospective study with a sampling method that is convenience sampling , with a large sample of 62 patients in the Pontianak Kitamura clinic. Data will be presented in descriptive form or overall description of the self-management of patients with diabetes mellitus.*

Results*: The description of the respondent's self-management regarding diabetes treatment is sufficient (77.4 %) . This is followed by supporting aspects which are divided into aspects of the overall picture starting from the respondent's experience of diabetes as well as a description of the respondent's self care seven days back to see the latest summary activities carried out by the respondent. The picture management self-diabetes patients are taken using DSMQ illustrates that most of respondents (93.5%) did not come check up at the doctor recommended for the treatment of diabetes, more than half those who still consume sweets and carbohydrate-rich foods, and many respondents were not doing physical activity in which the above three activities are activities that can help respond e n in controlling blood sugar and treat diabetes. Apart from these three aspects, it is balanced by the results of studies that show the average patient is adherent or good in routine blood sugar checks, taking medication and feeling good or even very good in diabetes self-care to reach a percentage value of 82.3%.*

Conclusion: *The results of this research indicate that the self-management ability of DM patients who were respondents in this study as a whole was sufficient (77.4%). Overall, the description of the self-management of DM patients in this study began when the respondent had diabetes and the description of the self-care of the respondent for the past seven days to see the latest summary of activities undertaken by the respondent.*

Key Word*: Diabetes; Self-Management;Description*

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I. Introduction

Diabetes Mellitus (DM) is a complex chronic disease in which increased glucose levels can cause macro-vascular, micro-vascular disease and neurological complications (Tapan in Long, 1996; Wijaya & Putri, 2013). Based on the World Health Organization [WHO] DM is defined as a chronic disease that produces less insulin than the body needs. DM has 2 types; Type 1 DM is a decrease in insulin production which is commonly known as juvenile onset which means requiring routine insulin administration and type 2 DM which is also known as non-insulin dependent due to ineffective use of insulin (WHO, 2015).

The prevalence of DM continues to increase every year in the world, it is predicted that there will be a threefold increase from 2000 to 2030 (WHO, 2013). Data from Daniel, Benno, Roderick, and Harald (2011) and Aguirre et al. (2013) showed that 347 million people were diagnosed with DM and around 5.1 million people died. In 2004, around 3.4 million people died due to the effects of increased blood glucose levels (WHO, 2009). More than 80% of deaths caused by DM are in poor and developing countries (Mathers, Dele, Taghreed, & Monica, 2007).

Indonesia is one of the developing countries where WHO predicts the prevalence of DM patients in Indonesia around 8.4 million people in 2000 and 21.3 million in 2030, this is the third position in the world for developing countries and followed by India with 31.7 million inhabitants and China with 20.8 million

inhabitants (Darmono, 2007 cited in Wild et al., 2004). Based on data from the Health Research Association [Riskesdas] regarding DM in Indonesia increased from 1.1% in 2007 to 2.4% in 2013. Sari (2013) showed that patients with diabetes in Indonesia About a r 7.6 million. DM prevalence in West Kalimantan (Kal-Bar) is around 0.8% who have been diagnosed from the age of 15 years (Riskesdas, 2013). Pontianak is the highest DM incidence in Kal-Bar at 8.6% with 649 cases in 2013 (Ramanda, 2014 cited in West Borneo Office of Deputy Ministry of Health, 2013).

The risk impact of DM patients is micro-vascular and macro-vascular disease (Li et al., 2015 in Fioretto et al., 2010 in The Emerging Risk Factors Collaboration , 2010).

Macro-vascular diseases such as atheroscellosis, metabolic syndrome (Fowler, 2008), cardiovascular disease, coronary heart disease, stroke and ischemic disease (Fowler, 2008; Roglic et al., 2005; WHO, 2013). While microvascular diseases such as DM retinopathy, Nepropathy DM and DM Neuropathy (Fowler, 2008). According to Muller et al. (2005), DM patients are at high risk for respiratory infections, urinary system infections, mucous membrane infections and bacterial skin infections.

Disease diabetes can not be cured, but with good control of blood sugar, patients with diabetes live healthy lives as people and not with DM (Sibuea, Soedjodibroto & Ndraha, 1997). The same thing was stated by Lawrence (in Moerdowo, 1989) that DM could not be cured but could be controlled. Prevention needs to be done by patients so that complications and death do not occur, efforts to prevent and control behavior need to be done by DM patients (Wahyuningsih, 2014) . Some DM patients claim to have been bored doing sports, some even do not care and deliberately violate a healthy diet, other than that they assume that if it has violated a healthy diet then it will be overcome by taking medication (Wahyuningsih, 2014) . Problems with self-management bad of p asien DM when therapy would worsen disease (Wahyuningsih, 2014) .

Self-management is the ability to recognize, cultivate oneself (physically, emotionally, emotionally, thoughtfully, spiritually, and spiritually) so that he is able to manage other people and various resources so as to create the reality of life in accordance with the mission and purpose of his life (Rinanda, 2006) . In DM patients , self-management is a way for DM patients to regulate diet, exercise, routine examination, and taking drugs. This is very necessary to prevent complications by controlling blood glucose levels in the normal range (Sigudardottir, 2004)

The importance of self-management in patients with diabetes mellitus to minimize the risk of complications and control blood glucose levels so that patients can improve the quality of life of patients, that's why researchers want to examine more broadly related to the self-management picture of diabetes mellitus patients in Pontianak.

II. Material And Methods

This research is a quantitative study with cross sectional retrospective approach .This research was conducted at the Kitamura Clinic from August 2018 to January 2019. The instrument of this study was the DSMQ (Diabetes Self Management Questionnaire) Questionnaire and Summary of the Care of Diabetes Patients. The population in this study were patients with diabetes mellitus in Pontianak Kitamura. The sample is part of the population to be studied or a part of the total number of characteristics possessed by the population. Sampling uses convenience sampling where the sample is taken for a specified time limit (5 months) with a minimum sample size of 10% of the total population of about 600 DM patients. The sample in this study was 62 patients. Univariate analysis was carried out to describe the frequency distribution of a single variable namely blood sugar testing, adherence to the recommended doctor, diet, physical activity, foot care, medication adherence and client perceptions of self-care about diabetes.

III. Result

A. The description of respondent's self management

The results of the study using the DSMQ questionnaire are described in the tables below:

Table 3.1 Self Management

DSMQ

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Baik	8	12.9	12.9	12.9
	Cukup	48	77.4	77.4	90.3
	Buruk	6	9.7	9.7	100.0
	Total	62	100.0	100.0	

Based on the data above it was found that there were 12.9% of good self-management respondents, 77.4% of adequate self-management and 9.7% of bad self-management.

B. Overview of aspects of self management

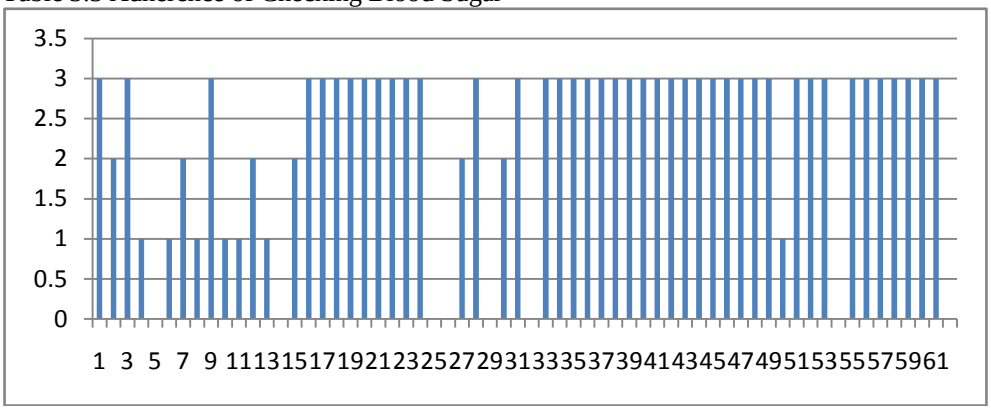
Table 3.2 Distribution management aspects of self

Self management aspects	Compliant (%)	Not obey (%)
Compliance with blood sugar checks	66.1	33.9
Compliance with seeing the doctor recommended	6.5	93.5
Kepatuahn does not consume sweets and carbohydrate-rich foods	40.2	59.8
Compliance Conduct regular physical activity	22.6	77.4
Dietary management recommended by a doctor or a diabetes specialist	54.8	45.2
Take adherence to diabetes medication	62.9	37.1
Diabetes self-care perception	82.3 (Good)	17.7 (Poor)

C. Distribution Overview of aspects of self management

1. Picture of compliance with blood glucose examination

Table 3.3 Adherence of Checking Blood Sugar

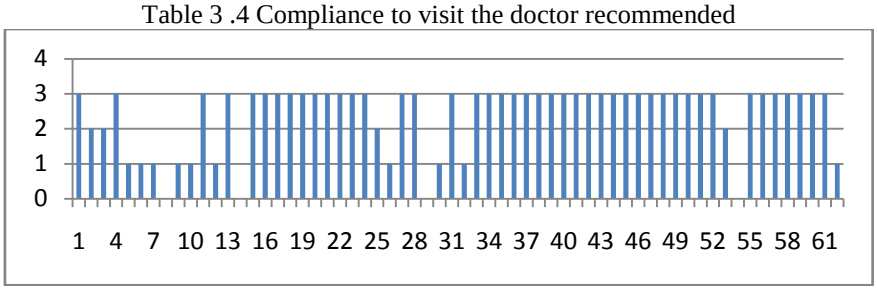


Note: 0 = Never, 1 = Rarely, 2 = Sometimes, 3 = Always

The results of research on examining blood sugar attentively by respondents found that 12.9% of respondents never had blood sugar checked, 11.3% rarely checked blood sugar, 9.7% sometimes and 66.1 always routinely checked their blood sugar.

2. Overview Compliance enemy's doctor recommended for DM treatment

Table 3 .4 Compliance to visit the doctor recommended

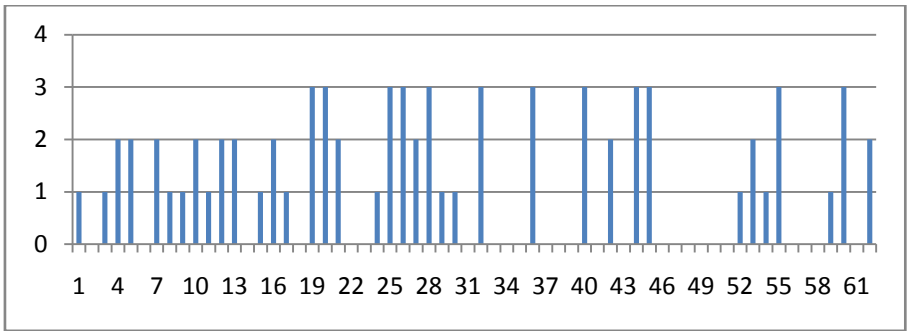


Note: 0 = See the recommended doctor, 1 = See the recommended doctor (rare), 2 = See the recommended doctor (sometimes), 3 = Always see the recommended doctor

The results of research on the description of how the respondent consulted with doctors recommended for self-care respondents showed that there were 71% of respondents did not see the recommended doctor, there were 6.5% and 16.1% of respondents who met doctors who were recommended with intensity sometimes and rarely, and there were 6.5% of respondents who always see a recommended doctor.

3. Overview Kepatuh a n not mengk onsumsi sweets and carbohydrate rich foods

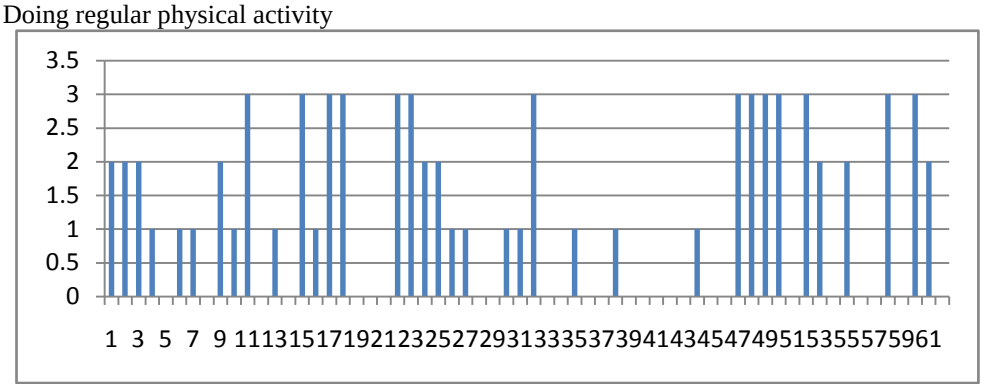
Table 3.5 submission of mengk not onsumsi sweets and carbohydrate rich foods



Note: 0 = never, 1 = ever (rarely), 2 = ever (sometimes), 3 = ever (often)

The results showed there bhawa 59.8% of patients who mengkonsusmsi sweets and carbohydrate-rich foods with different intensity and contained 40.2% of t idak ever consume sweets and carbohydrate-rich foods.

4. Compliance Overview Conduct regular physical activity
Table 3.6 Doing regular physical activity

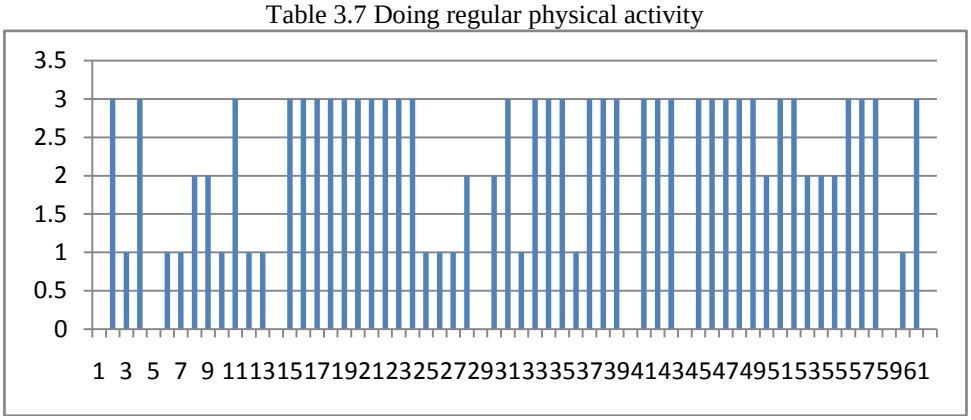


Note: 0 = never, 1 = rarely, 2 = Sometimes, 3 = Always

The results of research on the physical activity of respondents showed that there were 41.9% of respondents never doing physical activity, 21% rarely, 14.5% sometimes and only about 22.6% who routinely or always do physical activity.

5. Overview Kepatuh a n diet suggested by your doctor or diabetes specialist

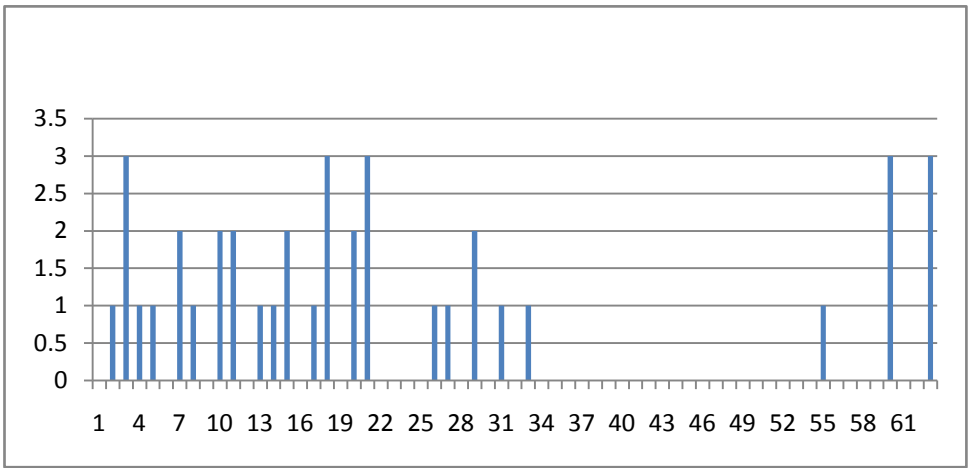
Table 3.7 Doing regular physical activity



Note: 0 = never, 1 = rarely, 2 = Sometimes, 3 = Always

The study of dietary compliance of respondents indicate that there are 54.8% of respondents adhere to the diet given and approximately 45.2% of respondents did not adhere to the diet y a ng d iberikan.

6. Overview of compliance Taking diabetes medication
Table 3 .8 Compliance with taking medication diabetes

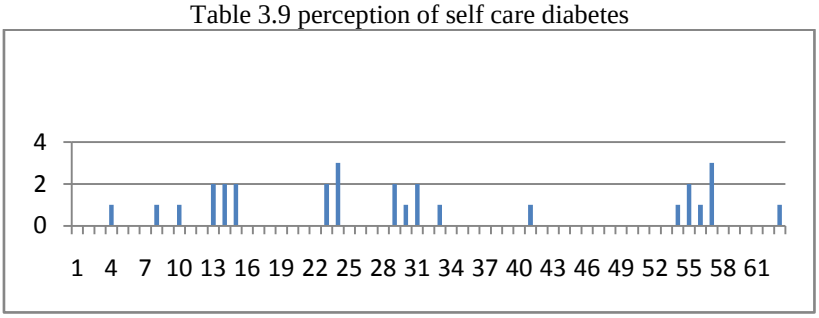


Information: 0 = Never forget to take medicine, 1 = Rarely forget to take medicine, 2 = sometimes forget, 3 = never take medicine

The results showed that there were 62.9% of respondents who never forgot to take medicine and about 37.1% of patients had forgotten and did not even take medication.

7. Description of diabetes self-care perception

Table 3.9 perception of self care diabetes



Remarks 0 = very good, 1 = good, 2 = bad, 3 = very bad

The results showed that 71% of respondents felt that their self-care was very good, 14.5% felt good, 11.3% felt bad and 3.2% felt very bad in their diabetes self-care.

D. An overview of diabetes self-care

The results of this study describe the self-care activities of respondents during the last 7 days.

Table 3.10 diabetes self-care

Self care aspects	**Well (%)**	**Bad (%)**
Dietary habit	50	50
Physical activity (Sports)	25.8	74.2
Check blood sugar	32.3	66.7
Foot care	11.3	88.7

The results showed that there were 50% of respondents who have polamakan good and bad, there is haya 25.8% of patients who had physical activity is good, 32.3% were routinely check blood sugar properly and only about 11.3% of respondents who have perawata n good foot in 7 days backward for diabetes self care.

Table 3.11 Behavior Smoking

Yes (%)	**No (%)**	**No answer (%)**
8.3	91.7	3.2

The results showed that there were 91.7% of respondents who did not smoke and there were 8.3% of respondents who still smoked in the past 1 week.

IV. Discussion

The description of the respondent's self-management regarding diabetes treatment is sufficient (77.4 %) . This is followed by supporting aspects which are divided into aspects of blood sugar testing, compliance with the recommended doctor, diet, physical activity, foot care, medication adherence and client's perception of self care about diabetes. The overall picture begins when the respondent has diabetes as well as the self-care description of the respondent seven days back to see the latest summary of activities undertaken by the respondent. The picture man a gement self-diabetes patients are taken using DSMQ illustrates that KEB a nyakan respondents (93.5%) did not come check up at the doctor recommended for the treatment of diabetes, more than half those who still consume sweets and carbohydrate-rich foods, and many respondents were not doing physical activity in which the above three activities are activities that can help respond e n in controlling blood sugar and treat diabetes. Apart from these three aspects, it is balanced by the results of studies that show the average patient is adherent or good in routine blood sugar checks, taking medication and feeling good or even very good in diabetes self-care to reach a percentage value of 82.3%.

Picture of self-management of diabetes respondents also identified through the activities of seven h a ri Last respondents where didapatka n overview of the diet balanced between good and bad, physical inactivity, blood sugar checks are also poor, as well as foot care respondents reached 88.7% bad. The data also illustrates smoking related activities where there were still respondents who smoked (8.3%) in the past week.

Based on the results of the research described in Chapter V previously, it can also be concluded that in general DM patients are compliant in conducting blood sugar checks. This means that DM patients have a good effort in conducting routine blood sugar checks (66.1%). This behavior can be caused (Fahra, Widayati, & Sutawardana, 2017) The most important thing is to improve the methods of techniques and strategies in promoting adherence to therapeutic treatment in diabetic patients (Funnell & Anderson, 2004)

The next self-management compliance of DM patients is the consumption of sweets and carbohydrate-rich foods, where in general DM patients in this study continue to consume sweets and foods rich in carbohydrates (54.8%). This is possible because of the motivation of the patients themselves in maintaining behavior in reducing consumption of sweet foods and high in carbohydrates. Although many patients already have good knowledge and get information about DM, how to prevent it and how to treat DM, but if the motivation is lacking from the patient then it will reduce the behavior and adherence to the patient's own diet. The description of research results from Putri, Yudianto, & Kurniawan (2013) shows that the average respondent is on a good diet because the respondent has been suffering from diabetes for more than 5 years. Respondents who have long had diabetes will easily get used to adjusting their diets so that they will have routines that are patterned in their personal lives (Moser, Vander, Widdershoven, & Spreeuwenberg, 2008)

The results of previous studies related to determinants of DM patients' qualitatively are lacking knowledge of the diet of DM patients, lack of confidence in the effectiveness of the diet, wrong perceptions about the seriousness of the disease in which patients consider DM suffered by dry DM without risk of complications, lack of availability and facilities education and nutritional counseling, advice from friends not to consume various functional foods, lack of family support, and lack of education and counseling support from health workers (Al-Tera, 2011)

During the study, it was found that most families did not understand the illnesses suffered by the respondents even more related to how a good diet in DM patients. This is supported by a study that shows that family support has a significant relationship in controlling good diets in DM patients where family support is a process that occurs throughout the lifetime of interacting, family support is able to make the family function both knowledge and actions in improving health and adaptation within the family itself (Susanti & Sulistiyarini, 2013) .

The next aspect in the self-management of DM patients is physical activity. Compliance behavior in carrying out physical activities in DM patients in this study showed that 58.1% were categorized as good. This means that more patients do physical activity than those who have never done physical activity. Physical activities that can be performed by DM patients include walking and doing gymnastic movements. This activity is important because it can reduce the calories produced from high blood sugar levels in the body. While the lack of physical activity in DM patients can cause blood sugar levels in the body to be difficult to lower. According to Safitri (2013) feeling lazy is also one of the factors causing DM patients not to do physical activity or sports.

The aspect of diet in the management of DM patients' self-care is also very important. In this study DM patients have a good level of adherence in dieting for DM disease that is equal to 54.8%. This shows that DM patients' knowledge is also good in terms of regulating the diet they must live. In addition to knowledge, dietary compliance was also influenced by the attitudes and behavior of the patients themselves in me to do the selection and pengolaha n food. This is in line with research conducted by Safitri (2013) which states that diabetic patients are often difficult to keep food consumed because it is still tempted by all kinds of foods that can worsen the patient's health konsisi diet in maintaining food consumed often hinder .

Compliance in taking medicine is also a matter of study in this study. There are as many as 62.9% of patients have good adherence to taking drugs that can reduce patient's blood sugar. Adherence in taking this drug is also influenced by the patient's motivation in efforts to reduce symptoms and even recover from his DM. The results of Fahra, Widayati, & Sutawardana (2017) research also showed that patients who have good motivation to recover will also show their adherence in taking the recommended medicines. An increase in blood sugar levels that are too frequent or uncontrolled can result in damage to blood vessels, sarf and other internal structures (Mulyani, 2016) . In general, people who feel they receive the comfort, attention, and help they need from a person or group are usually more likely to comply with medical advice, than patients who lack social support (Fahra, Widayati, & Sutawardana, 2017)

The last aspect of self-management in this study is the awareness of DM patients' self-care. The results of this study indicate that almost all DM patients have good self-awareness in self-care, which is as much as 96.8%. Based on these numbers, it means that the patient is very aware that they have taken care of themselves in an effort to control the condition of their DM disease . Self care is among other treatments performed by a diabetic patient where this context refers to the ability of the patient unt u k naturally understand their condition and adjust the level of concern in performing self-care (Ismonah, 2008). A fund of good self-care ability is also supported by knowledge, attitudes, motivation and support from those closest to them who also want healing from their illness. Good knowledge affects the self-care of DM patients so that good metabolic control can be achieved (Fahra, Widayati, & Sutawardana, 2017). The factors that influence kepatuha n the characteristics of the treatment, communication between patients and doctors, perceptions and expectations of patients and social variables (Taylor, 1991 ; Fahra, Widayati & Sutawardana, 2017).

V. Conclusion

The results of this research indicate that the self-management ability of DM patients who were respondents in this study as a whole was sufficient (77.4%). Overall, the description of the self-management of DM patients in this study began when the respondent had diabetes and the description of the self-care of the respondent for the past seven days to see the latest summary of activities undertaken by the respondent.

References

[1]. Daniel C, Benno, Roderick and Harald. (2011). Prevention of Type 1 Diabetes in Mice by Tolerogic Vaccination with a Strong Agonist Insulin Mimetope. **Journal of Experimental Medicine Vol. 208** no. 7. 1501-1510. doi: 10.1084 / jem.20110574

[2]. Darmono. (2007). **Diabetes in pathology (Diabetes in pathology area).** Agung Semarang: Semarang [in Indonesia]

[3]. Dr. Soedarso Pontianak. (2015). **RSU Dr. sudarso ptk: general hospital (Dr. Sudarso Pontianak: general hospital)** . Retrieved on April 01, 2015 from http://rumah-sakit.findthebest.co.id/l/578/RSU-Dr-Sudarso-Ptk

[4]. Fowler, MJ (2008). Microvascular and macrovascular complications of diabetes. **Clinical Diabetes, 26** (2)

[5]. Li, L., Linong, J., Xiao, G., Qiuhe, J., Weijun, G., Xinyue, Z., Xing, L., Hongyu., Benli, S., Jinhua, Y., & Xilin , Y. (2015). Prevalence of microvascular disease among tertiary care Chinese with early versus late onset of type 2 diabetes. **Journal of Diabetes and Its Complication, 29** ; 32-37

[6]. Masters, Kathleen. (2012). **Nursing Theories: A framework for professional practice.** Jones & Bartlett Leaning: Mississipi

[7]. Mathers, Dele, Taghreed and Monica. (2007). **The Burden and Costs of chronic disease in low income and middle-income countries** . DOI: 10.1016 / S0140-6736 (07) 61696-1

[8]. Muller, LMAJ, Gorter, KJ, E. Hak, WL, Goudzwaard, FG, Schellevis, AIM, Hoepelman, and Rutten, GEHM (2005). Increased risk of common infections in patients with type 1 and type 2 diabetes mellitus. **Clinical Infectious Disease, 41** : 281-8 .

[9]. Pontianak Post. (2014). **Hypertension and Diabetes are the highest number of Disease in Pontianak.** Pontianak. Available from http://www.jpnn.com/read/2012/11/05/145902/index.php?mib=berita.detail&id=146426

[10]. Ramanda, R. (2014). **Description of depressed patients with type 2 diabetes mellitus in Pontianak full moon health center in 2013 (Description of depression level with DM patient type 2 in Pontianak primary health care in 2013)** . Undergraduate thesis in medical doctor, Tanjung Pura University

[11]. Al-Tera, HB (2011). Determinants of Diet Non-compliance Patients with DM Type 2. Thesis .

[12]. Fahra, RU, Widayati, N., & Sutawardana, JH (2017). The relationship between nurses' role as educators and self-care of patients with type 2 diabetes mellitus in polyclinic in Jember healthy hospital NurseLine Journal , 61 - 72.

[13]. Funnell, MM, & Anderson, RM (2004). Empowerment and Self Management of Diabetes. Clinical Diabetes , 123-127.

[14]. Ismonah. (2008). Analysis of factors related to self care management of diabetes mellitus patients in the context of nursing care at Panti Wilasa Citarum Hospital Semarang. Thesis .

[15]. Moser, A., Vander, BH, Widdershoven, G., & Spreeuwenberg, C. (2008). Self-Management of Type 2 Diabtes Melitus. Biomed Central Public Health , 91.

[16]. Mulyani, NS (2016). Relationship between Self-Management of Type 2 Diabetes Mellitus Patients with Blood Sugar Levels in Banda Aceh City Hospital. CELL , 56-63.

[17]. Putri, DS, Yudianto, K., & Kurniawan, T. (2013). Self-Management Behavior for Diabetes Mellitus Patients. Faculty of Nursing , Padjadjaran Universits , 30-38.

[18]. Safitri, IN (2013). Obedience of Type II Diabetic Melitus Patients Reviewed From Locus of Control. Applied Psychological Scientific Journal , 273 -290.

[19]. Susanti, ML, & Sulistiyarini, T. (2013). Family Support Increases Dietary Compliance in Diabetes Mellitus Patients in the Inpatient Room of RS. Baptist Kediri. STIKES Journal .

[20]. Riskesdas. (2007). **Basic health research (Basic health research).** Retrieved February 10, 2015 from https://www.k4health.org/sites/default/files/National reporting%20Riskesdas% 202007.pdf [in Indonesia]

[21]. Riskesdas. (2013). **Basic health research (Basic health research)** . Retrieved March 18, 2015 from http://www.litbang.depkes.go.id/sites/download/rkd2013/Riskesdas2013.PDF [in Indonesia]

[22]. Tapan, Erik. (2005). **Degenerative diseases.** Elex Media Komputindo: Jakarta [in Indonesia]
[23]. Tempo. (2013). **Indonesia includes 10 positions in The World of Diabetes.** Available From http://www.tempo.co/read/news/2013/11/14/060529766/Indonesia-Sign in-10- Large-Negara-dengan-Pidid-Diabetes
[24]. **Wijaya and Putri. (2013).** Medical surgical nursing (Medical surgery nursing). Nuha Medika: Yogyakarta [in Indonesia]
[25]. World Health Organization (WHO). (2006). **Definition and diagnosis of diabetes mellitus and intermediate hyperglycemia** . WHO Document Production Service, Geneva: Switzerland
[26]. World Health Organization (WHO). (2009). **Diabetes** . Available from http://www.who.int/mediacentre/factsheets/fs312/en/
[27]. World Health Organization (WHO). (2013). **Prevalence of Diabetic** . Retrieved February 10, 2015, Available from http://www.who.int/diabetes/facts/world_figures/en/
[28]. World Health Organization (WHO). (2015). **Diabetes** . Retrieved January 22, 2015, from http://www.who.int/mediacentre/factsheets/fs312/en/
[29]. World Health Organization. (WHO). (2015). **Physical activity and adults.** Retrieved April 01, 2015 from http:// www.who.int/dietphys icalactivity/ factsheet_adults/en/

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