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Factors Contributing To Dietary Disobedience in Patients with Type 2 Diabetes at Mutiara Timur Public Health Centre, Aceh

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Abstract: Globally, the incidence of type 2 diabetes has continued to rise over the past 20 years. A factor in the failure to manage DM is dietary noncompliance, such as failure to follow suggested eating habits and three principles (type, timing and quantity). The purpose of this study is to identify food nonconformities in patients with type 2 diabetes at the Mutiara Timur public Health Centre. A descriptive research design was used in this study. The population was made up of all type 2 diabetes patients, for a total of 223 respondents. Targeted sampling was applied to a total sample of 69 respondents. The questionnaire was used to collect data. The results of this study show that the factors that cause dietary non-compliance in patients with type 2 diabetes at the Mutiara Timur Public Health Centre. The majority of respondents with type 2 diabetes were older than 45 years (68.5%), were women (62.3%), had a high school education (56.5%), employee (72.5%), low income (72.5%), suffering from DM 1-5 years (85.5%). Lack of knowledge regarding dietary instructions (42.1%) and weak family food support (55.1%). It may be concluded that the age, gender, education, profession, income, duration of diabetic suffering, knowledge, and family support are factors of dietary non-compliance among patients with type 2 DM at Mutiara Timur Health Center. As a result, it is recommended that respondents increase their knowledge of the dietary needs of diabetics and the family should encourage patients to perform regular medical examinations.

Keywords: Non-compliance factor, diet, type 2 diabetes mellitus.

INTRODUCTION

Diabetes Mellitus (DM) is a disease characterized by hyperglycemia and impaired metabolism of carbohydrates, fats, and proteins associated with absolute or relative deficiency of insulin action or secretion. Where DM is a disease caused by high levels of glucose in the blood that exceed normal limits (Bhatt, 2018). According to the Indonesian Endocrinology Association (PERKENI) in 2019, DM can be categorized into 2 types, namely Type I DM and Type 2 DM. Type 2 DM accounts for 90% to 95% of the entire DM population and is a problem that requires health efforts to reduce the incidence rate. continue to increase.

World Health Organization (WHO) in 2019 stated that DM was the direct cause of 3.2 million deaths every year and in 2016 DM caused 1.5 million deaths in the population aged 20-79 years. The International Diabetes Federation (IDF) organization in 2019 stated that the prevalence of DM had increased threefold over the last 20 years. In 2000 adults living with DM were 151 million and in 2009 there was an increase to 285 million and in 2014 there were 422 million people suffering from DM. In 2019 there were 463 million people aged 20-79 years in the world suffering from diabetes or the equivalent prevalence rate of 9.3% of the total population at the same age. The prevalence of DM is predicted to continue to increase to reach 578 million in 2030 and 700 million in 2045.

There are 10 countries with the highest number of DM sufferers, namely:China is in first place with 116.4 million sufferers, India is in second place with 77 million sufferers and the United States is in third place with 31 million sufferers. Indonesia is the only country in Southeast Asia that is included in the list of 10 countries with the highest number of DM sufferers and is ranked seventh with 10.7 million sufferers (IDF, 2019 in PUSDATIN, 2020). The results of the Basic Health

Research (Riskesdas) in 2018 showed that the prevalence of DM in Indonesia at the age of 15 years increased from 1.5% in 2013 to 2% in 2018. However, the prevalence of DM according to the results of blood sugar examinations increased from 6.9% in 2013 to 8.5 % in 2018. The prevalence of DM in women is higher than men with a ratio of 1.78% and 1.21%. Meanwhile, at Riskesdas 2013 the prevalence was 1.7% for women and 1.4% for men.

PrevalenceThe highest DM in Indonesia is Jakarta 3.4%, East Kalimantan 3.1%, DI Yogyakarta 3.1%, and North Sulawesi 3% and the lowest prevalence is East Nusa Tenggara with an incidence rate of 0.9%. While Aceh Province is ranked eighth with the number of DM sufferers of 2.2% (Riskesdas, 2018). Based on Aceh Health Profile (2019) prevalenceDMreached 138,291 patients and who received services according to standards were 95,005 patients or 69%. North Aceh ranks first with an incidence rate of 29,703 patients and Banda Aceh ranks second with an incidence rate of 14,052 sufferers. Meanwhile, Pidie is ranked 5th with the prevalence of DM reaching 9,835 patients who received health services according to the standard 4,808 or 45%.

One of the efforts to reduce the prevalence of DM is to carry out comprehensive management to avoid complications such as:nephropathy (7.7%), cerebrovascular disease (5.4%), neurosis (17.6%), peripheral arterial disease (0.5%), retinopathy (2.7%), coronary artery disease (5.4%), heart failure (5.0%) (IDF, 2019). According to the Indonesian Endocrinology Association (Perkeni, 2019) there are four pillars of DM management in Indonesia, namely education, pharmacological intervention and physical activity and meal planning (diet). Diet is an arrangement of eating patterns according to the calories needed by people with diabetes and combined with their daily activities.

Meal arrangements or diet includes content, quantity and timing of intake (3J-Type, amount and schedule). Meal regulation is a major component for the success of the diet in patients with diabetesDM. However, for the realization of a diet as recommended, the patient must adhere to the diet. The current phenomenon is found in many patients who are not obedient in their dietDMas evidenced by the increasing prevalence ofDMand obesity (Khaerul, 2018). Non-compliance is the behavior of individuals or caregivers that is not in accordance with the health promotion plan established by health care professionals. Non-compliance with health services can cause the end result of clinically ineffective and efficient health care actions so that complications occur in a health problem faced (Purba, Sitorus, & Alfiyanti, 2016).

Non-compliance is a serious health problem and a major challenge to the success of individual health services. Non-adherence in DM patients does not only apply to drug consumption but also to problems changing lifestyles, conducting routine medical tests and the low desire to go for treatment to health services. Patient non-compliance with diet increases the risk of death rate by 12% (Khan et. al, 2016). Non-compliance is a condition where the individual wishes to comply, but there are various factors inhibiting adherence to the advice about health given by medical personnel (Wahyuningsih, 2016). There are several factors that cause dietary non-compliance, including: age, gender, occupation, education, income, length of suffering from DM, knowledge of instructions and family support (Niven, 2013 and Zaqqi, 2019).

Zaqqi (2019) Factors of Diet Disobedience in DM Clients in Saptorenggo Village showed that the majority of respondents had a final age range of 16 respondents (43.24%). On the economic factors of respondents with income below. UMR as many as 18 respondents (37.84%). From the family support factor, it was found that 25 people (67.57%) had low levels and the knowledge factor of dietary instructions with a total of 23 respondents (62.16%) had quite good knowledge.

This is in line with research conducted by Siti Yulia (2015) Factors Affecting Compliance in Running a Diet on Type 2 DM Clients at the Kedungmundu Health Center showed factors related to dietary compliance in patients with Type 2 DM are education (pvalue = 0.046), knowledge (pvalue = 0.028), perception (pvalue = 0.013), motivation (pvalue = 0.035), length of suffering (pvalue = 0.041), family support (pvalue = 0.001), support from health workers (pvalue = 0.021). Ario Sugandi (2018) Factors Affecting Dietary Compliance in Type 2 DM Patients at Rejosari Health Center Pekanbaru City found that the factors related to dietary compliance in type 2 DM patients were knowledge (pvalue = 0.009) , attitude (pvalue=0.004), motivation (pvalue=0.008) and family support (pvalue=0.031).

The data collection at the Mutiara Timur Health Center, from October 2020 to March 2021, showed that the number of type 2 patients with 223 DM, mostly women up to 125 patients and men, up to 98 patients and who have received services to standards, up to 49% (Puskesmas Muara Timur, 2021). According to the preliminary survey, the results of the first 10 interviews revealed that not all respondents were following the MH regime recommended by HCWs. Respondents only limit their intake of sugary foods and beverages, but do not limit their intake of other foods such as white rice, fried foods and fried noodles. Respondents reported that they continued to eat as usual because they felt weak, dizzy, fast-starved and had blurred vision when not eating food. Based on the description above, researchers are interested in research "Factors contributing to dietary disobedience

in patients with type 2 diabetes at Mutiara Timur Public Health Center, Aceh".

METHODS

This study used a descriptive design. The population in this study consisted of all patients with type 2 diabetes mellitus who were treated at the Mutiara Timur Health Centre, totaling 223. The sampling technique used was by design sampling of approximately 69 persons. The device used in this study was a demographic questionnaire and a dietary non-compliance questionnaire (knowledge of diet and family support). Demographics include: age, gender, education, occupation, income, duration of the DM. The knowledge questionnaire includes 20 questions and answers using the Gutmaan scale with true (1) and false (0) alternate answers. The family support questionnaire was adopted from Hensarling Diabetes Family Support (HDSFF). The statement of family support is 25 items including 10 items of emotional support, 2 items of informational support, 7 items of instrumental support, and 6 items of appreciation support. Alternative answers for family support: Positive statements: Always:4, Often: 3, Sometimes: 2, Never:1 and Negative statements: Always: 1, Often: 2, Sometimes: 3 and Never: 4. Characteristics of the value of knowledge: Good, if the value (76-100%), Enough if the value (56-75%), Not Enough, the value (> 56%). Questionnaire measurement results are categorized as good if the score is (11-14), good enough (8-10) and worse if the score is (1-7). The family support results can be rated two, namely good, if (74) and worse if the value (<74). Prior to using the survey, the researcher tested the validity and reliability of 10 individuals at the Kembang Tanjong Health Center. Next, univariate analysis was performed.

RESULTS

According to Table 1, shows that of the 69 respondents studied, the majority of respondents were >45 years old, namely 47 respondents (68.1%),female as many as 43 respondents (62.3%) and respondents with secondary education as many as 39 respondents (56.5%). The majority of respondents who work are 50 respondents (72.5%), low income are 50 respondents (72.5%) and the majority of respondents suffer from DM 1-5 years as many as 59 respondents (85.5%).

Table 1: Distribution of Demographic Data of Patients with Type 2 DM

No	Demographic Data	Frequency (f)	Percentage (%)
Age			
1	<45 Years	22	31.9
2	≥45 Years	47	68.1
Gender			
1	Man	26	27.7
2	Woman	43	62.3
Educational Level			
1	Low	17	24.6
2	Intermediate	39	56.5
3	High	13	18.8
Profession			
1	Working	50	72.5
2	Doesn't work	19	27.5
Income			
1	High	19	27.5
2	Low	50	72.5
Suffering of Diabetic			
1	1-5 Years	59	85.5
2	6-10 Years	10	14.5

Table 2: Distribution of Respondents Frequency Based on Knowledge of DM

No	Knowledge about diet	Frequency (f)	Percentage (%)
1	Good	17	24.6
2	Enough	23	33.3
3	Not enough	29	42.1

Based on Table 2, shows that the majority of respondents are in the category of lack of knowledge about diet, as many as 29 respondents (42.1%), sufficient knowledge of 23 respondents (33.3%), good knowledge category 17 respondents (24.6%).

Based on Table 3, the results show that the majority of respondents have poor family support for diet, namely 38 respondents (55.1%) while for respondents with good family support for diet, 31 respondents (44.9%).

Table 3: Frequency Distribution of Respondents Based on family support for diet

No	Family support	Frequency (f)	Percentage (%)
1	Well	31	44.9
2	Not good	38	55.1

On test *goodness of fit* shows that the model is feasible and in accordance with the results of the Hosmer and Lameshow test showing the results ($X2 = 13.66$, $p = 0.057$, $df = 7$). The results of the Omnimbus Test of Model Coefficient have a value of 0.000 indicating that the p value <0.05, which means that the model experiences a reduction in the Chi-Square value at each step so as to produce the best model. The value of Nagelkerke R Square at each step so as to produce the best model. The value of Nagelkerke R Square shows the result of 0.212 which indicates that each variable that is most related to verbal abuse has a 21.2% chance of influencing verbal abuse and 79.8% is another factor outside of these factors.

DISCUSSION

Characteristics of Respondents

The results of the univariate analysis of the characteristics of the age sub-variable, the researchers found that the majority of respondents who suffered from type 2 DM were in the age range >45 years as many as 47 respondents (68.1%). According to Perkeni (2019) the group of 45 years and over is a group at risk of developing DM. The greater the age, the greater the risk of experiencing type 2 diabetes, this is due to a decrease in the hormone insulin.

According to Purwanto (2017), the older a person is, the lower the mental and psychological development process. At the age of adults or >45 years, a person tends not to easily accept new developments and information that supports his diet. This is caused by a decrease in the function of integration, hearing, vision and decreased thought processes so that it is difficult to remember the information about the diet that is given and can lead to misunderstandings of the recommended dietary instructions which will have an impact on errors or non-compliance in the implementation of diet implementation in daily life.

This is in line with research conducted by Dita (2017) in Semarang City. The results showed that there was a significant relationship between age and adherence to diet management in DM patients with p-value <0.01. Respondents who are included in the late adult category, the level of dietary non-adherence in the high category is 46.4% compared to early adults, and the low level of dietary non-adherence is 34.9%. Another study conducted by Ratu (2018) at the Pasar Minggu Subdistrict Health Center showed that the level of dietary non-compliance in late adulthood (50-65) was in the high category of 88.3%.

According to the researcher's assumption, age is one of the factors causing dietary non-compliance in patients with type 2 diabetes at Mutiara Timur Health Center. In this study, the majority of respondents suffered from type 2 DM aged >45 years.

Age >45 years is a pre-elderly age, where individuals will experience a degenerative process of the body that has an impact on various decreases in body functions such as decreased memory of the information received about their diet program and it is difficult to implement a diet according to the recommendation of health workers with the 3J principle because food is completely limited. , the dose must be right and the time to eat must be followed.

The results of the univariate analysis of the characteristics of the gender sub-variable, the researchers found that the majority of respondents who suffered from type 2 DM were female as many as 43 respondents (62.3%). This is because women have higher LDL or bad cholesterol levels of triglycerides compared to men, different activities and lifestyles can affect a disease (Sutanto, 2016).

Gender is an inherent trait of both men and women that is socially and culturally constructed. Gender shows a person's perception of health management related to a person's decision to be obedient or disobedient (Lestari, 2018). Men tend to have a good perception of the DM diet compared to women because men have a role as breadwinners and heads of families so that they motivate themselves to be healthier by complying with the dietary recommendations given (Haque, 2018).

Siti (2017) suggests that women tend to be disobedient to the diet because of the work status of women as housewives who have habits in the kitchen such as cooking and tasting food. This habit will certainly affect adherence to the diet program as recommended by 3J. Where it can be seen from the non-compliance with the consumption of the number of calories, the eating schedule and the type of food consumed which have an impact on increasing blood sugar.

Based on research by Youvita (2018) at the Denpasar Health Center, it was found that the level of dietary non-compliance in women was 87 people (77.7%) higher than the level of dietary non-compliance in men as many as 25 people (22.3%). This is in line with Siti's research (2017) at the Kemengkudu Health Center Semarang which showed that the level of dietary non-compliance in women was 42 people (87.5%)

higher than the level of dietary non-compliance in men was only 6 people (12.5%).

According to the researcher's assumptions, gender is a factor causing dietary non-compliance in patients with type 2 diabetes at Mutiara Timur Health Center. In this study, the majority of respondents who suffer from DM are dominated by women. Disobedience to diet in women is because women tend not to be able to maintain a good diet according to dietary recommendations because women have physical activities that require a lot of energy in taking care of the house such as washing, mopping, cooking, cleaning so that they require a lot of food intake so that it manifests in diet non-compliance.

The results of the univariate analysis of the characteristics of the education variable, the researchers found that the majority of respondents with secondary education were 39 respondents (56.5%). According to Notoatmodjo (2014) the level of education affects changes in attitudes and behavior of healthy living.The higher the level of education a person has, the more knowledge he has. Conversely, the lower one's education will hinder the development of one's attitude towards the newly introduced values.

According to Rochmah *et al.*, (2019) education affects a person's knowledge regarding his health and will have the awareness to maintain his health with the knowledge he has. Someone with broader knowledge tends to easily understand and comply with dietary behavior because it is easier to absorb information about the dietary recommendations given so that they can implement them in the form of dieting behavior according to these recommendations.

Knowledge is one of the stimuli and cognitive domains that underlie an action that shapes a person's behavior in managing the DM diet. Behavior that is based on knowledge tends to be long-lasting. A person with a good level of knowledge has good preventive behavior as well. This is supported by adaptation theory which states that good knowledge can encourage someone to have good actions in managing their diet. Vice versa, someone with poor knowledge tends to have poor behavior in managing their diet because behavior that is not based on knowledge tends to be temporary or does not last long (Fauzian, 2017).

Based on research conducted by Sylvia (2018) at RSUP DR. Soeradji Tirtonegoro showed that there was a significant relationship between education level and dietary compliance in DM patients with p-value 0.002 <0.05. The majority of respondents with education in the middle category had a diet non-compliance rate of 28.7%.

The results of this study are in line with research conducted by Yuli (2019) at RSUD RA Kartini Jepara. It was found that there was a significant relationship between the level of education and dietary compliance in DM patients with a p-value of 0.038 <0.05. The majority of respondents with secondary education have poor adherence to diet by 27.3%.

According to the researcher's assumption, education is one of the factors causing dietary non-compliance in patients with type 2 diabetes at Mutiara Timur Health Center. People with low education will find it difficult to understand and adhere to dietary behavior compared to people with higher education because it is difficult to absorb information so that knowledge about the management of DM diet is limited which has an impact on the non-optimal application of diet in daily life.

The results of the univariate analysis of the characteristics of the sub-variables of work, the researchers found that the majority of respondents who work with the type of work as farmers, traders, laborers, teachers, civil servants, gardening and mechanics are 50 respondents (72.5%).

According to Witasari (2017) work is a way of earning a living or a need that a person must do to support himself and his family's life. DM sufferers who have higher working hours cause sufferers to pay less attention to regular eating and sleeping patterns.

According to Khaerul (2018), respondents who work will tend to spend time on work activities so that it will reduce their time to make visits to health care centers to get information about their health such as diet in DM. Work can cause sufferers to be disobedient to the diet program because they are busy working so they cannot pay attention to the diet as recommended which causes DM diet management to be not optimal.

Based on research conducted by Rohani (2018) at the Harapan Jaya Health Center, it was found that the majority of respondents who worked did not comply with the diet by 58.1%. Another study conducted by Hema (2020) at the Poto Tano Health Center, West Sumbawa Regency, found that the majority of respondents who did not comply with the diet worked as entrepreneurs (32.8%).

According to the researcher's assumption, work is one of the factors causing dietary non-compliance in patients with type 2 diabetes at Mutiara Timur Health Center. Individuals who work tend to be busier and do not have time to undergo a diet program as recommended because they cannot maintain their diet. Jobs as farmers, gardeners, laborers and mechanics are types of work that require high energy, one of the sources of energy that can be obtained is carbohydrates.

The results of the univariate analysis of the characteristics of the income sub-variable, the

researchers found that the majority of respondents with low incomes were 50 respondents (72.5%). According to Pearlin (2017) income as a factor that supports a person can do good treatment for his health problems. Individuals who suffer from chronic diseases such as DM tend to take advantage of their economic resources to modify the environment so that they can reduce the impact of changes in physical function they experience.

According to Majid (2018), people with higher monthly economic status will be more obedient to the diet compared to people with lower economic status. Non-adherence to the DM diet due to the low economy is due to the lack of individual interest in going to health services and self-care in managing diabetes diets such as not being able to provide and buy food according to the recommended diabetes diet.

Based on research conducted by Zaqqi (2019) in the Pakis area, it was found that the majority of respondents suffered from DM with low income below the minimum wage (Rp. 2,540,000) of 48.6% did not comply with the DM diet. Another study also conducted by Zeilen (2021) in Jambi Regency found that the majority of respondents with low incomes did not comply with the diet as many as 76 respondents.

According to the researcher's assumption, income is one of the factors causing dietary non-compliance in patients with type 2 diabetes at Mutiara Timur Health Center. In this study, the majority of respondents have low income 72.5%. Someone who has a high income will certainly be more obedient because they have costs in managing the DM diet such as fulfilling diet foods as recommended. People with low incomes tend to be disobedient because they do not have adequate resources to support the application of the DM diet as recommended.

The results of the univariate analysis of the characteristics of the old sub-variable, the researchers found that the majority of respondents suffered from DM 1-5 years as many as 59 respondents (85.5%). According to Nurjannah *et al.*, (2018) DM is a chronic disease that cannot be cured. Ferawati *et al.*, (2020) Several factors that can trigger complications in DM patients are long suffering from DM and non-compliance in carrying out a diet program.

In this study, the majority of patients with type 2 DM at Mutiara Timur Health Center were in the range of 1-5 years, amounting to 85.5%. Rodhianto (2016), the longer the time of illness, the longer the patient's acceptance of the disease related to the acquisition of information about diet so that they are more obedient.

According to Sukmayanti (2017) patients who have long suffered from the disease for one to five years tend to adhere to the process both in taking drugs and in diet compliance because of great curiosity and very

high desire to recover. Patients who have suffered from the disease for 6-10 years tend to have poor adherence due to more experience, where these patients have complied with the treatment process but did not get satisfactory results so that patients tend to surrender and do not fulfill the treatment process or diet they are undergoing. According to Niven (2013) explains that the length of time the patient fulfills the advice given during illness will affect the level of patient compliance with the treatment program being undertaken.

Based on research conducted by Rasdianah (2018) at the Yogyakarta Health Center, it was found that the compliance level of DM patients <5 years (55.9%) was higher than DM patients >5 years (39.3%). Another study also conducted by Yulia (2017) at the Kedungmundu Health Center showed that there was a significant relationship between the length of suffering from DM and adherence to the DM diet with a p-value of 0.041<0.05.

According to the researcher's assumption, length of suffering from DM is not one of the factors causing dietary non-compliance in patients with type 2 DM at Mutiara Timur Health Center. In this study, respondents who suffer from DM are in the range of 1-5 years, meaning that they are still classified as new sufferers. Where, individuals still want to collect a lot of information about diet in order to apply it because they are worried that doing the wrong diet management will cause complications.

Dietary Noncompliance Factors based on knowledge of dietary instructions
The results of the univariate analysis of the characteristics of the dietary instruction knowledge sub-variable, the researchers found that the majority of respondents had less knowledge as many as 29 respondents (42.1%). Notoatmodjo (2014) knowledge is the result of knowing and this happens after people sense certain objects and most of the knowledge is obtained from the senses of sight and hearing.

Knowledge of health can help individuals to adapt to their illness, prevent complications and adhere to a therapy program and learn to solve problems when faced with new situations. A person's knowledge about his illness greatly supports patient compliance with everything that is suggested by health workers for the sake of healing his illness (Ismail, 2017).

According to Handayani (2017) this knowledge or cognitive is an important domain in shaping one's behavior. Patients with good knowledge about the implementation of the type 2 DM diet will be more alert and careful in choosing the food to be consumed so that a behavior is formed towards the diet they are living (Handayani, 2017). According to Effendi (2017), if someone has less knowledge, then the attitude

they have towards the DM diet is very lacking, causing non-compliance.

According to Niven (2013) lack of knowledge or understanding of dietary instructions is a factor that affects non-compliance. No one can fulfill the instructions if he misunderstood the instructions given to him. This can be due to the client's lack of knowledge so that they do not understand the information and instructions given by health workers. Based on research conducted by Rahmiyanti (2019) in the Work Area of the Sudiang Raya Health Center Makassar City, it was found that the majority of respondents who had sufficient knowledge about diet had a non-compliance rate of 70%. Another study also conducted by Handayani (2017) at the Baki Husada Clinic in Purwokerto found that there was a significant relationship between DM dietary compliance and level of knowledge with a p-value of 0.008 <0.05.

Researchers assume that knowledge is one of the factors causing dietary non-compliance in DM patients at Mutiara Timur Health Center. Knowledge is needed by someone as the first step to shape behavior and attitudes towards the DM diet. Individuals with good knowledge of diet will be more obedient because it is easy to understand the information about DM diet instructions given so that they become aware of the importance of diet and behave according to understood instructions. DM patients with less knowledge of dietary instructions tend to be disobedient because individuals cannot absorb the information obtained properly and do not understand the dietary instructions given by health workers which will have an impact on the ineffective implementation of the DM diet.

Dietary non-adherence factors based on family support

The results of the univariate analysis of family support for the type 2 diabetes diet, the researchers found that the majority of respondents had poor family support, 38 respondents (55.1%).

According to Friedman (2013), family support is all forms of positive behavior and attitudes given by the family to one of the sick family members, namely family members who experience health problems.

Galih (2021) states that family support is the most important element in helping individuals solve a problem. Family support consists of 4 dimensions, namely emotional support, information support, instrumental support and appreciation support. Where, if the four dimensions of family support are met, it will have a positive impact on diet management in DM patients. The positive impact of family support for people with DM diet is that self-confidence will increase and motivation, there are those who remind about diet, and there are rewards when successfully running a diet. According to Setyowati (2019), family

support is closely related to dietary compliance in DM sufferers. Patients who get family attention will be much easier to make behavioral changes towards being healthier than patients who get less attention from their families.

Based on research conducted by Galih (2020) in the Work Area of the North Cimahi Health Center, it was found that the majority of respondents who had poor family support tended to be disobedient by 60%. Other research was also carried out by Evarani (2018) at the Internal Medicine Polyclinic of RSUD dr. Sayidiman Magetan showed that the majority of respondents had poor family support indicating 20% non-compliance. According to the researcher's assumption, family support is one of the factors causing dietary non-compliance in patients with type 2 diabetes. Patients who have poor family support tend to be disobedient because they are not cared for, do not remind, provide food according to dietary recommendations and do not motivate.

CONCLUSION

This study generally concludes that there are several factors that are causing dietary disobedience in type 2 diabetes mellitus patients at Mutiara Timur Health Center. In particular, this study provides the following conclusions:

a. The frequency distribution of patients with type 2 DM was obtainedThe majority of respondents who suffer from type 2 DM are >45 years old (68.5%), female (62.3%), secondary education (56.5%), working status (72.5%), low income (72.5%) and long suffering from DM 1 -5 years (85.5%).

b. Obtained the highest frequency distribution of respondents in the category of lack of knowledge of dietary instructions (42.1%)

c. It was found that the highest frequency distribution of respondents had poor family support for diet (55.1%)

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