DESCRIPTION OF DIET COMPLIANCE IN ELDERLY PEOPLE WITH DIABETES MELLITUS AT KARANGANYAR 2 HEALTH CENTER

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Abstract

Diabetes is a chronic disease that occurs when the pancreas does not produce enough insulin or when the body cannot effectively use the insulin it produces. Diabetes mellitus can cause two complications, namely acute complications and chronic complications, acute complications such as hypoglycemia and diabetic ketoacidosis, while chronic complications include macroangiopathy, microangiopathy and neuropathy. **Method:** The sampling technique used in this research was *purposive sampling* , with a total of 30 respondents, 1 of whom suffered from hypertension. **Results:** Based on the research results, it was found that the majority of respondents were aged 66-74 years, the largest gender was female, 28 respondents (8.4%) and the highest education among the elderly was at elementary school level, 23 respondents (6.9%), The results showed that the majority of respondents adhered to the DM diet, 17 respondents (5.1%). **Conclusion:** Respondents have complied with the recommended diet
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Key words: [Diabetes Mellitus, Diet, Elderly]

INTRODUCTION

Man elderly, usually abbreviated (Manula), or simply called the elderly group. Elderly *(ageing/elderly*) is a group of older people. During this period, a person experiences a slight physical, mental and social decline to the point of no longer carrying out their daily tasks, so that for most people, old age is an unpleasant period (R.Hasdianah, et al, 2014). Physical decline is the emergence of degenerative diseases due to decreased physical activity, lifestyle and diet. Degenerative diseases have a high mortality rate and can affect a person's quality of life and productivity, one of which is DM (Galuh RP, Syahrul A, 2018). Diabetes in the elderly is a disease that often occurs in the elderly because the elderly cannot produce sufficient amounts of insulin or the body cannot use insulin effectively (Nugroho, 2012).

The global prevalence rate of DM according to WHO (2017) will increase from year to year to reach 8.5% or as many as 415 million people. In 2040 the number of DM sufferers is estimated to be 642 million people. In 2015, Indonesia ranked seventh in the world for the highest prevalence of diabetes sufferers along with the United States, China and India. In 2018, the prevalence of DM sufferers in Indonesia was estimated to reach 1.5% or around 1,017,290 people (Ministry of Health [KEMENKES], 2018). Diabetes is a global problem that continues to increase in number from year to year both in the world and in Indonesia. Based on data *from the International Diabetes Federation* (IDF), the global number of DM in 2019 is estimated at 9.3% (463 million people), rising to 10.2% (578 million) in 2030 and 10.9% (700 million) in in 2045 (IDF, 2019).

The estimated number of DM sufferers in Central Java province in 2019 was 652,822 people, and 83.1% were provided with health services according to standards. The target for achieving health services for DM sufferers is determined based on the prevalence of DM which has been determined by the Ministry of Health's Data and Data Center or BPS (Dinkes, 2019). In 2017 in Demak district there were 5861 cases of DM. The results obtained from the Meranggen Community Health Center were that there were 58 DM sufferers (Mranggen Community Health Center, 2017). Meanwhile, at the Karanganyar 2 Health Center , the results showed that 33 people had DM (Karanganyar 2 Health Center,

2021) .

This research is in line with research Zanti (2017), explained that the majority (53.1%) of Diabetes Mellitus patients did not adhere to the standard Diabetes Mellitus diet based on 3J (amount, type and schedule). DM patients' non-compliance with diet can have a negative impact on their health if the food they consume is not controlled (Fauzia, et.al, 2017). Based on research conducted by Regina Merdekari Rizki Ananda (2021), the results showed that research with the title Overview of Diet Compliance in Type II Diabetes Mellitus Patients: Literature Review showed that dietary compliance greatly influences the condition of diabetes mellitus patients, so it is necessary to deal with dietary compliance in diabetes mellitus patients.

Based on the results of a preliminary study conducted in March 202 2 at the Karanganyar 2 Community Health Center , there were 33 elderly people who were affected by DM. So the researchers conducted a survey at the Karanyar 2 Community Health Center from the results of interviews with 10 elderly people who suffered from DM who did not comply with the diet and some DM sufferers had knowledge. those who don't know about DM, 5 of them don't know what foods DM sufferers should not consume, 2 sufferers don't go on a diet because there are too many rules, and 3 sufferers often forget to go on a diet. Based on the description above, the researcher took the title of Description of Diet Compliance in Elderly People Suffering from Diabetes Mellitus at Karanganyar Community Health Center 2. This research aims to ensure that elderly people can be helped by the DM diet because according to the author, elderly people often ignore their disease.

METHODS

The type of design in this research is descriptive research. Researchers used a descriptive design aimed at finding out Description of dietary compliance in elderly people suffering from diabetes mellitus at Karanganyar 2 Community Health Center, Karanganyar District, Demak Regency. The time of the research (the process of collecting research data and preparing scientific reports) was carried out on 13-27 May 2022. The sampling technique used in this research was *purposive sampling* , with a total sample of 30 respondents and 1 of them suffered from hypertension.

RESULTS AND DISCUSSION

Results

Table 1. Frequency distribution based on elderly age

Age	Frequency	Percentage
Early seniors 55-65 years old	9	2.7%
Young elderly 66-74 years old	13	3.9%
Older people aged 75-90 years	8	2.4%
Total	**30**	**100.0%**

From table 4.1, the results show that the highest characteristics of respondents based on age were in the age range 66-74 years, namely 13 people (3.9 %)

Table 2. Frequency distribution based on gender of the elderly

Gender	Frequency	Percentage
man	2	0.6%
Woman	28	8.4%
Total	**30**	**100.0%**

Based on table 4.2, it can be seen that of the 30 respondents, the highest number were women, 28 respondents with a percentage of 8.4%

Table 3. Frequency distribution based on elderly education

Education	Frequency	Percentage
No school	4	1.2%
elementary school	23	6.9%
Junior High School	3	0.9%
Total	**30**	**100.0%**

Based on table 4.3, it can be seen that of the 30 respondents, the highest number of education for the elderly was at elementary school level, 23 respondents with a percentage of 6.9%.

Table 4. Description of dietary compliance in the elderly

Dietary compliance	Frequency	Percentage
Obedient	17	5.1%
Not obey	12	3.6%
Total	**30**	**100%**

Based on table 4.4, it can be seen that of the 30 respondents, the highest number of compliant elderly people was 17 respondents with a percentage of 5.1%.

Discussion

Based on research results from 30 respondents with an overview Diet Compliance in Elderly People Suffering from Diabetes Mellitus at Karanganyar 2 Community Health Center, it was found that the highest characteristics of respondents based on age were in the 66-74 year age range, namely 13 people (3.9%). The results of this research are in line with research conducted by Dewi (2018). In this study, it was found that someone who is elderly is susceptible to disease and is at risk of contracting disease, therefore there is a need for compliance in preventing disease by going on a diet by regulating the eating patterns of diabetes mellitus patients . This research is in line with research conducted by Ananda (2021) which states that age is >50 years. The age group that suffers from DM the most is 66-74 years old.

In this age group, the elderly experience various musculoskeletal changes, usually a decrease in muscle strength or changes when walking, nerves usually occur in the elderly, hearing gradually decreases, not only hearing, the elderly's vision will also decrease. Cells in the elderly will result in a decrease in appearance and function, such as the elderly will become shorter due to a reduction in shoulder width and widening of the chest circumference, abdomen and pelvic diameter. Cardiovascular will cause a decrease in the ability to pump blood, causing contractions and decreased volume, respiration in the elderly will experience respiratory muscles losing strength and becoming stiff, gastrointestinal or digestive disorders including changes in the intestines, genitourinary, decreased bladder capacity in the elderly, the vagina will experience contractures and shrinking.

In the endocrine system, there is a decrease in the insulin hormone secreted by beta cells in the pancreas. The insulin hormone functions to increase glucose metabolism in tissues and cells in the body. When the body needs energy, insulin will be responsible for breaking down glucose molecules and converting them into energy, so that the body can get energy. Apart from that, the insulin hormone is responsible for converting glucose into glycogen for storage in muscle and liver cells. This will keep blood sugar levels at a stable level.

More respondents were female than male, which shows the results that the highest gender frequency was, 28 female respondents with a percentage of 8.4% and 2 male

respondents with a percentage of 0.6%. The results of this research are in line with research by Cahyaningrum (2020) which states that there are more elderly women than men with a frequency of 75%. The mechanism linking gender and DM is unclear. In general, men need more nutrients (especially energy, protein and fat) than women because men's posture, muscles and body surface area are wider than women.

It is known that of the 30 respondents, the highest number of education levels among the elderly was at the elementary school level, 23 respondents with a percentage of 6.9%. The results of this research are in line with Cahyaningrum's research (2020) which states that the education level of the majority has completed elementary school, namely 36 people with a frequency of 56.2%. Having a high level of education makes it easier to understand and comply with existing health regulations, so respondents with a low level of education need to receive more attention so that the level of diet compliance can be achieved and control the rise in blood sugar properly.

The results of the research describing compliance in the elderly showed that the majority of elderly people adhered to the diet in 17 respondents with a percentage of 5.1 %. The results of this study are in line with research by Bistara (2018) which states that 16 respondents adhered to the diet with a percentage (53.3%) of the recommendations given by Health workers, in this case nutritionists, are focused on regulating the type of food, quantity and eating schedule in order to reduce blood sugar levels . This is in line with research by Tera (2011) which states that the majority of DM sufferers consume food provided by the family in the form of fish, protein, animals, vegetables and fruit and respondents also often pay attention to the schedule, type and amount of food, especially for patients. This shows that the respondents in the study were said to be compliant with the doctor's recommendations, because they had complied with the diet schedule recommended by the doctor.

CONCLUSION

Conclusion
1. Based on the research results, it was found that the majority of respondents were aged 66-74 years (3.9%), the largest gender was female and the highest education among the elderly was at elementary school level.
2. Based on the research results, it was found that the majority of respondents adhered to the DM diet .

Suggestion
1. For Community Health Centers
   Conduct education regarding DM management to increase and maintain DM diet compliance among the elderly at the Karangnayar 2 Community Health Center
2. For Society
   It is hoped that people, especially elderly respondents, will always follow the DM Diet according to recommendations
3. For Further Researchers
   It is hoped that future researchers can increase the number of respondents so that it can be generalized.

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