

Land Mapping Study On The Incident Of Diabetes Mellitus In Kalialang Village

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ARTICLE INFO

ABSTRACT

Keywords:

Target area for diabetes mellitus incidence

Prevalence based on international diabetes data (IDF) Indonesia has diabetes mellitus alert status because it ranks 7th out of 10 countries with the highest number of diabetes patients. The prevalence in patients experiencing diabetes mellitus in Indonesia reaches 6.2%. Diabetes Mellitus not only causes premature deaths throughout the world, but can also cause complications in sufferers. Prevention and control need to be carried out to prevent complications. The aim of this research is to determine the Mapping Study on the Incidence of Diabetes Mellitus in Kalialang Village. This research is a non-experimental quantitative research. The research method used was a descriptive analytical design with a cross sectional design, because it did not carry out intervention or treatment and the results of this research were to determine the number of residents suffering from Diabetes Mellitus in Kalialang Village. In this research, we looked at the Mapping Study on the Incidence of Diabetes Mellitus in Kalialang Village. Sampling used the sequential sampling technique, as many as 40 respondents met the inclusion and exclusion criteria. Research tools use observation sheets and questionnaires. Data analysis was carried out univariately, with the aim of identifying each variable in the research. This analysis presents data in the form of mean, median, standard, deviation, maximum value, minimum value for each respondent in terms of age, gender, education level, occupation, length of time suffering from diabetes mellitus. Data is presented in the form of graphs, tables or pie charts and the data is interpreted simply. It is hoped that giving the questionnaire will help determine the incidence of diabetes mellitus in Kalialang Village.

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1. INTRODUCTION

Aging Diabetes mellitus is a metabolic disorder caused by many factors characterized by high blood sugar levels as a result of impaired insulin function. Diabetes Mellitus has many symptoms, among which sufferers often experience frequent urination at night, frequent thirst, and increased appetite. There are 3 types of diabetes mellitus, namely Type 1 Diabetes Mellitus, Type 2 Diabetes Mellitus, and Gestational Diabetes Mellitus 1.

Type 1 Diabetes Mellitus cannot produce insulin, while Type 2 Diabetes Mellitus is caused by the body not having enough and ineffective insulin work and Gestational Diabetes Mellitus is diabetes mellitus that occurs during pregnancy. Insulin is a natural hormone produced by the pancreas. When we eat, the pancreas releases the insulin hormone which allows the body to convert glucose into energy and distribute it throughout the body.

Based on international diabetes data (IDF), Indonesia has diabetes mellitus alert status because it ranks 7th out of 10 countries with the highest number of diabetes patients. The prevalence of patients experiencing diabetes mellitus in Indonesia reaches 6.2%, which means there are more than 10.8 million people experiencing diabetes per year 2020. And based on data provided seen from the prevalence of diabetes mellitus in the population, according to districts or cities of Central Java Province, Riaskesdas, 2018 it was 67.9% 2. And in the health profile data of Central Java Province in 2019 there were 652,822 people or 83.1% 3

According to the Health Organization (WHO) in 2016, diabetes mellitus is a chronic disease where the pancreas does not produce enough insulin or when the body is not effective in using it. Diabetes Mellitus not only causes premature deaths throughout the world, but can also cause complications in sufferers⁴. Complications that often occur in diabetes mellitus can cause various chronic diseases, including heart and blood vessel disease, nerve damage, kidney damage, vision problems, foot damage, hearing problems, several cardiovascular diseases which can have an impact on diabetes mellitus. These include coronary heart disease, heart attacks, strokes and narrowing of the arteries. To prevent complications in diabetes mellitus, several preventive and control measures can be taken.

There are several ways to prevent and control, one of which is self-management. The description of Self-Management is that sufferers must be able to carry out self-management by carrying out 5 aspects of self-management behavior including, taking medication regularly, maintaining blood sugar levels, doing regular physical activity, and carrying out foot care to prevent ulcers. Based on the phenomena that the patient experiences. Diabetes Mellitus has not yet fully implemented self-management because many people still experience unstable blood glucose levels.

Prevention and control of diabetes mellitus in Indonesia must be carried out because it reflects the patient's conscious behavior and the patient's desire to control diabetes mellitus to prevent complications in diabetes mellitus patients. This aims to ensure that healthy individuals remain healthy and people who already have risk factors can control their risk so that they do not experience diabetes, and people who already suffer from Diabetes Mellitus can control their disease so that complications or premature death do not occur.

There are several ways to control blood sugar levels, including pharmacology or medication and non-pharmacology, namely by changing a bad lifestyle or habits into healthier habits, but this is very difficult to do because there is no time due to work and a lack of economy. buy healthy food. There is a need for other ways to control blood sugar levels, namely by consuming apples, nuts, cinnamon, garlic, broccoli and coffee. Blood sugar levels are sugar found in the body which is formed from carbohydrates from food and stored in the form of glycogen in the liver and skeletal muscles. Uncontrolled blood sugar levels will cause diabetes mellitus (DM). There are several ways to control blood sugar, namely pharmacological and non-pharmacological in the form of complementary therapies.

Based on research conducted by Citra Windani (2019, Self-management in Diabetes Mellitus patients who have carried out self-management at a moderate level (97%) and at a good level (2.9%). On average, people who experience Diabetes Mellitus have not fully carry out self-management because from the results of this research there are still many people who experience Diabetes Mellitus who have not carried out self-management⁴. Based on research conducted by Dwi Siwi Ratriani Putri (2013) the results of the research showed that more than half of respondents (64.9%) carried out five aspects of self-management well⁵. And research conducted by Milda Hidayah (2019) results showed that some respondents had a good level of self-management (59.5%), meaning that there are still many people who experience diabetes mellitus who have not carried out good self-management⁶.

Results of a preliminary study that researchers conducted in Kalialang Village, which is a village supported by Stikes St Elisabeth Semarang. Information was obtained that there were various kinds of health problems encountered in the community there, especially Diabetes Mellitus. Therefore, we need a mapping study to obtain basic data about the description of health problems and curative management carried out especially in that place. Based on existing data, data was obtained that there were 300 residents in RW VII Kalialang Village who suffered from diabetes mellitus. Diabetes mellitus must be prevented so that bad conditions do not occur or further complications do not occur and so that glucose levels remain stable. With several therapies.. Based on these phenomena and data, researchers are interested and want to know about the Study of Mapping of Built Land for the Incidence of Diabetes Mellitus in Kalialang Village.

2. METHOD

This research is a non-experimental quantitative research. The research method used was a descriptive analytical design with a cross sectional design. In this study, we looked at the Mapping

Study of Built Land for the Incidence of Diabetes Mellitus in Kalialang Village. Sampling used the sequential sampling technique, as many as 40 respondents met the inclusion and exclusion criteria. Data analysis was carried out univariately, with the aim of identifying each variable in the research. This analysis presents data in the form of mean, median, standard, deviation, maximum value, minimum value for each respondent in terms of age, gender, education level, occupation, length of time suffering from diabetes mellitus. Data is presented in the form of graphs, tables or pie charts and the data is interpreted simply. It is hoped that giving the questionnaire will find out how many residents suffer from Diabetes Mellitus in Kalialang Village. The tools and materials used in this research are informed consent, screening sheets, questionnaires. Data collection was carried out using primary data. Primary data was obtained using a questionnaire distributed to Kalialang village residents, especially RW VII. Population is the total number consisting of subjects/objects that have certain characteristics and qualities determined by the researcher to be studied and then conclusions drawn. In this study the population was residents whose families suffer from Diabetes Mellitus in Kalialang Village RW VII. The research was conducted in Kalialang Village from January to February 2017.

3. RESULTS AND DISCUSSION

Result

This mapping study was carried out in Kalialang RW VII village in January 2017 and based on screening, researchers found 300 residents. After screening, the researcher took samples that met the inclusion and exclusion criteria. After finding a sample of 40, the researcher provided informed consent and distributed questionnaires. The data taken in the research was the result of filling out a questionnaire from 40 respondents. It shows that 15 people aged 20-40 years (37.5%), 20 people aged 40-60 years (50%), 5 people aged 60-80 years (12.5%). It shows that 22 respondents were female (55%), while 18 respondents were male (45%). It shows that there were 15 respondents who had been sick for 1-2 years (37.5%) while there were 25 people who had been sick for > 2 years (62.5%). It shows that there were 20 respondents with a high school education (50%), 15 people with a junior high school education (37.5%), 5 people with a bachelor's degree (12.5%). It shows that there are 15 respondents who work in the private sector (37.5%), there are 10 people who are self-employed (25%), there are 5 people who are civil servants (12.5%), there are 10 people who don't work.

Discussion

Based on the results, it was found that those aged 20-40 years were the ones who had the most diabetes mellitus, this was because at that age the body's function had begun to decline, especially the function of the pancreas, this could be caused by bad lifestyle factors, consumption of bad food and this in accordance with Cahyono B Suharjo's research. From the data, it is found that more women experience diabetes mellitus because women have more insulin resistance, lack of activity, consume excessive fat, give birth, are obese, women have larger fat cells and these fat cells cannot respond to insulin well, a large body mass index makes the distribution of body fat does not accumulate properly. This is in accordance with Benner and Kieffer's research. From the data based on the length of illness, the most data was found to be sick for more than 2 years because diabetes mellitus has a long and lengthy process to be diagnosed with certainty. Type 2 diabetes mellitus is a metabolic disorder characterized by an increase in blood sugar due to a decrease in insulin secretion by pancreatic beta cells. This is due to factors such as food, smoking, alcohol, lack of activity, hypertension, and abdominal circumference, which are the most common factors that have occurred so far. This is in accordance with Restyana's research. Based on the level of education, the most people who experience diabetes mellitus are high school and middle school because they lack knowledge about diabetes mellitus, this is in line with Dian Lukman's research. Based on the work, diabetes is more common in working people due to lifestyle factors and poor food consumption, this is in line with Noviyanti and Aji's research.

From the results of the questionnaire, data was obtained that 40 residents suffering from diabetes mellitus said they had been suffering from diabetes mellitus for a long time and most of them did not know about several complementary therapies that could prevent and treat diabetes mellitus. There are several reasons why they rarely take medication, the first is that they feel bored, lazy, forget, rarely

check up and rarely go to the health center for check-ups. This is in line with Rahmad's research. Questionnaires distributed to residents and filled in by residents. This questionnaire is a questionnaire whose validity has been tested. Before residents fill out the questionnaire, they first fill out informed consent. After that, fill out a questionnaire according to the characteristics of each person accompanied by the officer. Previously, the officer has been given a common perception, if there are residents who have difficulty.

Regarding filling out the questionnaire and the questions in the questionnaire, you can ask them right away. So the results are expected to be very valid, there are no disturbing factors. After filling out the questionnaire, the data will be collected by researchers. Next, the researcher will summarize the required independent and dependent variable data. To recapitulate data, accuracy and honesty are required. Based on the questionnaire distributed. Of the 300 residents, 40 residents suffer from diabetes mellitus. Residents who were detected as cases of Diabetes Mellitus have not had their blood sugar tested again. So, to ensure that these residents really have diabetes mellitus, researchers will check their blood sugar. What type of diabetes the residents have is also not yet known.

4. CONCLUSION

From research conducted on the Mapping Study on the Development of Diabetes Mellitus Incidence in Kalialang Village, the following results were obtained, there were 15 residents aged 20 years - 40 years, 20 residents aged 40 years - 300 years, 5 residents aged 300 years - 80 years. There are 18 female residents, 12 male residents. There are 15 residents who have suffered from diabetes mellitus for a long time for 1 year - 2 years, 25 residents have been there for more than 2 years. There are 20 residents with high school education, junior high school students. 15 residents, 5 undergraduate residents. The results of this research can provide information at the Community Health Center about the incidence of Diabetes Mellitus in Kalialang Village. The results of this research can be input for patient families to always accompany their families who suffer from diabetes mellitus in any circumstances, always provide social support and help diabetes mellitus sufferers to fulfill self-management needs. The results of this research can be used as input for nursing education regarding the results of The study of mapping the incidence of diabetes mellitus is integrated into lecture material, especially in nursing. It is hoped that the results of the research will increase the public's insight and knowledge as well as awareness about Diabetes Mellitus. The results of this research can then be carried out into research regarding efforts to prevent Diabetes Mellitus in Kalialang Village.

REFERENCES

- [1] Alodokter. (2021). Mengenal Sarkopenia dan Cara Pencegahannya. Ditinjau oleh: dr. Kevin Adrian. Terakhir diperbarui: 16 Oktober 2021
- [2] Cahyono B. Suharjo. Lifestyle And Modern Diseases. Jakarta. Canisius Publishers. 2009
- [3] WHO Media Center 2014 [Internet]. Obesity and Overweight. World Health Statistics 2014 [cited 2018 February 28]. Available from <http://www.who.int/mediacenter/factsheet/fs311/en/#>
- [4] WHO Media Center 2016 [Internet]. Obesity and Overweight. World Health Statistics 2016 [cited 2018 February 28]. Available from <http://www.who.int/mediacentre/factsheets/fs311/en/>
- [5] Research and Development Center for Humanities and Health Management, Ministry of Health of the Republic of Indonesia 2016 [Internet]. Basic Health Research. 2016. [cited 2018 february 28]. Available from : <http://www.Pusat4.litbang.depkes.go.id/all-download.html>
- [6] Noviyanti, s.KM. Quick Ways to Get Rid of Diabetes.Notebook. 2015
- [7] Word Health Statistics 2015 [Internet]. World Health Organization. 2015. [cited 2018 february 28]. Available from : <http://www.who.int/mediacentre/factsheets/fs312/en/>
- [8] Research and Development Center for Humanities and Health Management, Ministry of Health of the Republic of Indonesia 2013 [Internet]. Basic Health Research. 2013. [cited 2018 february 28]. Available from : <http://www.depkes.go.id/resources/download/general/hasil%20risikesdas%202013.pdf>
- [9] Semarang City Health Service 2016 [Internet]. Health Profile 2016. [cited 2018 february 28]. Available from: <http://dinkes.semarangkota.go.id/page/menu/17>

- [10] Reiner C. Polii. et al. The relationship between fasting blood glucose levels and obesity in adolescents in West Bolangitang District, North Bolaang Mongondow Regency. 2016 vol 4 number 6
- [11] Aji Prihaningtyas Rendi. Living Sweetly with Diabetes. Jakarta. PT Buku Seru. 2013.
- [12] Maya Aprianti. Mixing your own medicine and healthy menu for diabetes mellitus sufferers. Yogyakarta. New Library Press. 2014
- [13] Gemilang J. The Secret to Mixing the Most Delicious Coffee from Various Corners of the World. Yogyakarta: Araska; 2013.
- [14] Murdijati G, Dimas R. Kopi. Yogyakarta: Kanisius; 2011.
- [15] Bennett A W, Bonnie K. Bealer. The Miracle Of Caffeine The Unexpected Benefits of Caffeine Based on the Most Cutting-Edge Research. Bandung: Qanita; 2010
- [16] Nur Vita Purwaningsih. Comparison of Blood Glucose Levels Before and After Drinking Coffee. The Journal of Muhammadiyah Medical Laboratory Technologist. 2017; 1(2): 62-66
- [17] Lukman Khakim. Effect of Coffee Administration on Blood Glucose and Blood Lactate During and After Submaximal Physical Activity. Sport Science Journal. 2015; 3(4): 163-165
- [18] R. Rachmad Soegih. Kunkun K Wiramihardja. Obesity Problems and Practical Therapy. Jakarta: Sagung Seto. 2009
- [19] Aru W. Sudoyono, Bambang Setiyohadi, Idrus Alwi, Marcellus Simadibrata K, Siti Setiati. Internal medicine textbook. Jakarta: Publishing Center for the Department of Internal Medicine, Faculty of Medicine, University of Indonesia; 2014
- [20] Nattaya Lakshita. Choose “Apples” or “Pears”? Simple tips to prevent and treat obesity. Jakarta : PT Buku Kita. 2012
- [21] R. Rachmad Soegih. Kunkun K Wiramihardja. Obesity Problems and Practical Therapy. Jakarta: Sagung Seto. 2009
- [22] Mary E. Barasi. At a glance Nutrition Science. Jakarta : Erlangga. 2008
- [23] Diah Krisnatuti. Healthy Diet for Diabetes Mellitus Sufferers. Self-help distributor. 2008
- [24] Prapti Utami. Juice Therapy for Diabetes Mellitus. Jakarta: Agromedia Library. 2008
- [25] Naeli Farhaty, Muchtaridi. Review of Chemistry and Pharmacological Aspects of Chlorogenic Acid Compounds in Coffee Beans: Review. Pharmaka Supplements. 2013. 14(1) : 216-217
- [26] Dr. Novi khila firani. Carbohydrate metabolism biochemical and pathological review. U press. Malang. 2017