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Health Behavior Skill Prevention of Emergency Conditions of Diabetes Mellitus

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ABSTRACT

Diabetes mellitus (DM) disease requires long-term treatment. Clients need skills in carrying out care. This studied aims to analyze descriptively the behavior skills in preventing emergency conditions. The research design was descriptive. The number of samples were 150 people in the city of Surabaya. Sampling with probability sampling to determine the sample by randomly selecting 1 (one) Health Center in each area of North, West, East, South Surabaya, so that 4 (four) Health Centers are determined. The second stage, each selected Health Center, randomly selected 35-40 people. The researched variable of health behavior skill with sub-variables of diet management skill, blood sugar check skill and physical activity management skill. Data collection using Likert scale instrument with validity test result of 0.87 and reliability of 0.79. The result of the research obtained that diet management skill is mostly sufficient, blood sugar check skill is mostly sufficient and physical activity management skill is mostly sufficient. The conclusion of this researched that health behavior skill is in sufficient category. It is necessary to increase understanding about DM care to prevent emergency condition.

Keywords: Health; behavior; skill; emergency; diabetes mellitus

BACKGROUND

Long-term care of diabetes mellitus (DM) requires skills. The knowledge of DM clients will motivate them to take good care. The results of the study showed that 60.2% of clients with diabetes mellitus did not take care of themselves.[1]. Client knowledge is a factor that influences DM treatment non-adherence[2]

The adult mortality rate due to DM in Southeast Asia is 1 million.[3]. The prevalence of DM in Indonesia ranks 7th out of 10 countries at 10.7 million.[4]. In 2020 in East Java Province, the prevalence of DM at the age of 15 years and over was 89,713.[5]. Data from Surabaya Health Office in 2016 recorded 32,381 DM patients increasing in the last 3 years.[6]

Based on the literature study and journal review, it has not been found about the prevention of diabetes mellitus, which is the novelty of this study. The results of presearch explain that the action to prevent

hyperglycaemia is to inject insulin according to the dose.[7]. Another study explained that the characteristic factors of hypoglycaemia were gender, occupation, knowledge, education, and age.[8]

Health behaviour skills include the abilities and skills required to modify behaviours that positively affect health. Health behaviour skills for DM care involve a number of important actions that must be performed regularly. These care actions include diet, physical activity, exercise, taking medication regularly and control to health services.[4]. Healthy behaviour skills influence care adherence, which has an impact on preventing diabetes mellitus emergencies. Regular treatment can control blood glucose levels. If the blood glucose level is stable, the condition of the patient can be avoided.[9].

The purpose of this study is to describe health behaviour skills in diabetes

mellitus clients to prevent emergency conditions.

RESULTS

This research is descriptive research. Certificate of ethical eligibility has been obtained from the Ethics Committee, Poltekkes Kemenkes Surabaya No. EA/2624/KEPK-Poltekkes_Sby/V/2024.

Research data were collected from 150 respondents in 4 (four) Puskesmas working areas, namely Puskesmas Krembangan Selatan, Puskesmas Kedurus, Puskesmas Kalijudan, Puskesmas Asemrowo.

Tabel 1. Demographic Characteristics of DM Clients

Characteristics	Frequency	Percentage
Gender		
Male	35	23.3
Female	115	76.7
Total	150	100.0
Age (years old)		
<=40	8	5.3
41-50	28	18.7
51-60	47	31.3
61-70	52	34.7
71-80	15	10.0
Total	150	100.0
Religion		
Islam	146	97.3
Khatolik	1	.7
Kristen	3	2.0
Total	150	100.0
Jobs		
Not Working	123	82.0
Work	27	18.0
Total	150	100.0
Tribe		
Jawa	142	94.7
China	1	.7
Madura	6	4.0

Sunda	1	.7
Total	150	100.0

This study involved 150 respondents who had a variety of demographic characteristics, including gender, age, religion, occupation, and ethnicity. For gender, the respondents in this study were dominated by women, with 115 people or 76.7% of the total respondents. Meanwhile, men only numbered 35 people or 23.3%. The age range of respondents varied, with the largest distribution being in the 61-70 years age group, which included 52 people or 34.7% of the total respondents. The 51-60 years age group followed with 47 people or 31.3%. Respondents aged 41-50 years were 28 people or 18.7%, while respondents aged 71-80 years totalled 15 people or 10%. Only 8 respondents or 5.3% were aged 40 years or younger. The majority of respondents in this study were Muslim, with 146 people or 97.3%. There were 3 respondents who were Christian or 2%, while only 1 person or 0.7% was Catholic. This shows that the majority of respondents in this study are Muslim. Most respondents did not work, with 123 people or 82% of the total respondents. Respondents who worked only totalled 27 people or 18%. This data shows that the majority of respondents are unemployed. In terms of ethnicity, the majority of respondents were of Javanese origin, with 142 people or 94.7%. Respondents from the Madurese tribe totalled 6 people or 4%, while 1 person each came from the Chinese and Sundanese tribes, which each accounted for 0.7% of the total respondents. This shows the dominance of Javanese ethnicity among the respondents involved in this study.

Table 2. Frequency Distribution of *Health Behaviour Skill* Behavioural Factors to Prevent Diabetes Mellitus Emergency Conditions in 2024

Indicator	Category	Frequency	Percentage (%)
Dietary Management Skills (X6.1)	Less	2	1,3
	Sufficient	135	90,0
Skills in Blood Sugar Check (X6.2)	Good	13	8,7
	Less	5	3,3
	Sufficient	132	88
Physical Activity Management Skills (X6.3)	Good	13	8,7
	Less	5	3,3
	Sufficient	129	86
	Good	16	10,7

Table 2 explains that the indicators of dietary management skills are mostly (90%) categorised as sufficient, skills in checking blood sugar are mostly (88%), and physical activity management skills are mostly (86%) categorised as sufficient.

DISCUSSION

The results of research on dietary management skills were found to be mostly (90%) categorised as sufficient. This condition can be caused by several factors including lack of understanding of the DM diet, lack of motivation to carry out the diet, lack of support, and lack of knowledge.family and lack of facilities to carry out the diet. Some research results that support the factors that cause DM clients to be less in carrying out the DM diet include family support. The results showed that family support affects dietary adherence. Family is an important factor in providing care. Involving family members such as preparing meals is very important in preventing diabetes complications and emergencies.[10]. Descriptive analysis results explained that more than half (58.7%) of respondents who were DM clients had complaints. This condition indicates that the care provided is less than optimal. Complaints that are felt may be due to blood glucose exceeding normal or less than normal. This data is in accordance with the client's condition which can be

concluded that more than half (51.3%) of the category is sufficient. This situation is a supporting factor for the occurrence of DM emergency conditions. The results also explained that 94.7% of the 10 respondents were Javanese. This condition can be attributed to the culture of Javanese people who like sweet-tasting foods, thus triggering an increase in the prevalence of DM. The results of research by Cahya Septiwi (2021)[11]explains that diet management of diabetics in Javanese culture shows how Javanese culture, Javanese beliefs, values, Islam as the religion, characteristics of Javanese people, will affect obtaining information and knowledge about diabetes and its management. The behaviour of managing daily diet is influenced by daily habits. The findings of this study found that people with diabetes in Java have the self-awareness to follow dietary guidelines, enjoy daily dietary activities, and try to keep their blood glucose levels stable.

The results of research on skills in checking blood sugar are mostly (88%) categorised as adequate. This data when associated with the length of illness more than half (54.7%) less than 5 years. This indicates that the majority of respondents were in the early stages of their health condition. Therefore, many of the skills in checking blood sugar levels are adequate. Blood sugar check skills can be improved

through education. Good knowledge will influence self-care behaviour [12]. Most of the respondents, 82 people or 54.7%, had been ill for less than 5 years. This indicates that the majority of respondents are in the early stages of their health condition. The results of the study showed that clients with DM who have been suffering from the disease for a long time have experience in coping with the disease and are able to perform better self-care behaviours (Yoo, Kim, Jang & You, 2011). Duration of DM affects self-care [13]. Length of illness also influences a better understanding of the importance of self-care behaviours so that they can easily add information related to diabetes care. [14]. A person who has been diagnosed with diabetes for many years can accept their disease diagnosis and treatment regimen, and have a better adaptation to their disease by integrating a new lifestyle in their daily life. [14]

The results of research on physical activity management skills are mostly (86%) categorised as sufficient. This activity management includes exercise for DM clients. The results of interviews with DM clients, the perception of exercise is doing routine work such as washing clothes, cooking, cleaning the house is included in exercise. There are some respondents who are already active in sports organised by Posyandu.[15]. However, most of them have not done it regularly. The results of this study support the results of research which explains that family support and facilities affect physical activity.[10]

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