THE CORRELATION BETWEEN THE LEVEL OF KNOWLEDGE ABOUT DIABETES MELLITUS AND AGE FACTORS IN PANGA DISTRICT, ACEH JAYA REGENCY

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Abstract

This study aims to conduct non-communicable disease surveillance with a focus on the relationship between the level of knowledge about diabetes mellitus and age level in Kuta Tuha Village, Panga District, Aceh Jaya Regency. Diabetes mellitus is one of the non-communicable diseases whose prevalence continues to increase in various regions, including in Indonesia. Adequate knowledge of the disease is essential for effective prevention and management. This study involved the entire population of Kuta Tuha Village consisting of 107 households, with the study period lasting for one month, from December 21, 2023 to January 10, 2024. Data were collected through a questionnaire designed to evaluate respondents' level of knowledge regarding diabetes mellitus and identify age as an important variable in understanding. The results of univariate analysis showed that the majority of respondents in this study were male (82.2%). The most common age group was 48-50 years old, which accounted for 50.5% of the total respondents. Despite previous socialization efforts regarding diabetes, there were still 17.8% of the population suffering from diabetes mellitus. It is recommended that health education programs be improved, with a more specific and sustainable approach, especially targeting the 48-50 years age group. This could include regular counseling, distribution of easy-to-understand educational materials, and establishment of support groups for people with diabetes and their families. Overall, this study provides important insights into the relationship between knowledge of diabetes mellitus and age, and emphasizes the importance of ongoing health education to improve public understanding of non-communicable diseases.

Keywords: Non-Communicable Diseases, Knowledge, Age, Diabetes Mellitus

1. INTRODUCTION

Diabetes mellitus (DM) is a chronic disease that occurs when the pancreas produces insufficient insulin or when the body is unable to use insulin effectively. This generally results in elevated blood sugar levels or hyperglycemia in individuals with DM. Poorly controlled hyperglycemia in people with DM can have a serious impact on various body systems, especially the nervous system and blood vessels (World Health Organization, 2017). Diabetes is characterized by metabolic disorders due to suboptimal production and function of the hormone insulin, causing an increase in blood sugar levels in the urine. This condition, if left untreated in the long term, can cause damage to various body systems, including cardiovascular, kidney, and nerve damage (stroke), and can even lead to death (Kosasih, 2018). The Aceh Health Office (Dinkes) recorded 154,889 cases of Diabetes Mellitus (DM) in the area, the most dominating area was in South Aceh with 21,514 cases, followed by Aceh Besar with 17,277 people and Aceh Tamiang with 16,781 people (Rahma, 2023).

According to the International Diabetes Federation (IDF) report, the number of people with type 1 diabetes in Indonesia will reach 41,817 by 2022. This number puts Indonesia at the top of ASEAN. The majority of people with type 1 diabetes in Indonesia are aged between 20-59 years, as many as 26,781 people. When viewed from the data of health services for people with diabetes mellitus in 2022 Aceh Jaya Regency has a number of people with diabetes mellitus of 4000 more almost close to 5000. Based on data from 2023, Aceh Jaya district has a total of 2,539 people with diabetes mellitus (Rahma, 2023).

The primary treatment for diabetes involves lifestyle modification, especially adopting a healthy and balanced diet. Implementation of a food plan is a critical component in successful diabetes management, but often poses a challenge in diabetes care as it requires patient compliance and motivation (Setyorini, 2017). Adherence to food planning and regulation is a significant obstacle for people with diabetes. Many individuals with diabetes feel exhausted and stressed due to the lifelong commitment required to adhere to the recommended diet program (Widodo, 2012).

Although many diabetics are aware of the dietary recommendations, a significant number of them do not adhere to them. Some find diet foods less enjoyable, so they eat to their liking when their symptoms are not severe (Setyorini, 2017). Therefore, patients need knowledge (PERKENI, 2015), as knowledge serves as the basis for action. Every patient who takes an action usually starts with awareness, followed by the initiative to act on his or her knowledge. Knowledge-based behavior tends to be more effective than behavior without knowledge (Notoatmodjo, 2003). A strong knowledge base is essential for managing a diabetic diet, but individual ability in daily life management, control, and minimizing the impact of the disease, known as Self-Management, is necessary for diabetes control (Lin et al., 2008).

Diabetes is strongly influenced by knowledge. In this case, the patient's knowledge about diabetes is very important because this knowledge helps diabetics to assess their attitudes, thoughts, avoid disease, or conditions in their disease (Rosita, 2019). Knowledge refers to facts, truths, or information acquired through experience or learning process. It includes information known or realized by a person, including descriptions, hypotheses, concepts, theories, principles, and procedures that are considered true or useful according to Bayesian Probability. The notion of knowledge also involves the understanding of various phenomena observed and acquired by humans through the use of reason. Knowledge becomes clear when a person uses his analytical power to recognize objects or events that he has never seen or experienced before. For example, when a person tries a new dish, knowledge is manifested in an assessment of the shape, taste, and aroma of the dish. In addition, knowledge can also be defined as a combination of data and information. Data are raw facts, while information is data that has been interpreted from a particular perspective. Turban notes the close relationship between data, information, and knowledge (Arisma et al., 2017).

People with diabetes often experience stress during their diet program, and the way they handle stress can affect their success in adhering to the diet program and controlling blood sugar levels. This is expected to reduce the likelihood of complications, both acute and chronic (Setyorini, 2017). Therefore, with this background, the author is interested in conducting research to explore the relationship between the level of knowledge and age factors in panga sub-district, aceh jaya district.

2. RESEARCH METHODS

This study design focused on non-communicable disease surveillance regarding the relationship between diabetes mellitus knowledge and age level. The aim was to collect data on non-communicable diseases among the population in Panga. The population consisted of all residents of Kuta Tuha Village, Panga Sub-district, Aceh Jaya District, with a total of 107 households. The study was conducted for one month, from December 21, 2023, to January 10, 2024, in Kuta Tuha Village, Panga Subdistrict, Aceh Jaya District. The expected outputs of this surveillance include data on the level of hygiene and health of the Kuta Tuha Village community, including information on PHBS behavior and non-communicable diseases (NCDs), especially the relationship between diabetes mellitus knowledge and age. The survey instruments used were structured interviews and questionnaires, with confidentiality, anonymity and exclusive use for research purposes maintained. The number of respondents was determined statistically, considering the level of significance, margin of error, and population size, to ensure the representativeness of the sample

Respondents were voluntary individuals aged 30 to 65 years living in Kuta Tuha Village. The surveillance process involved planning, data collection, data processing, data analysis, and report preparation. Respondents were randomly selected based on a list of Kuta Tuha Village residents. Data collection methods involved surveys through questionnaires, interviews, and direct observation in the field. Data analysis used descriptive statistical methods to produce an overview of NCD behavior, specifically surveying the relationship between DM knowledge and age in Kuta Tuha Village.

3. RESULTS AND DISCUSSION
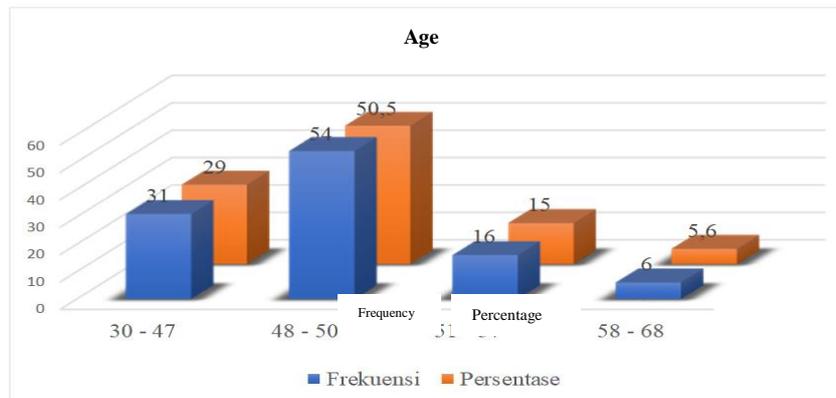
3.1. Non-communicable disease surveillance

After completing surveillance activities on non-communicable diseases in Kuta Tuha Village, Panga Sub-district, Aceh Jaya District, the following is a description of the results and discussion of this study:

3.1.1. Univariate Analysis
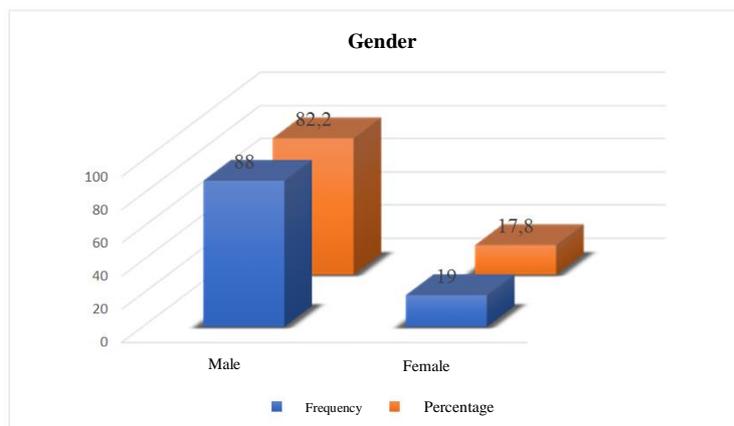
Figure 1. Frequency Distribution Chart Based on Gender in Non-Communicable Disease Surveillance in Kuta Tuha Village

Based on the graph above, it can be seen that the frequency distribution of gender related to clean and healthy living behavior in Kuta Tuha Village, Panga District, Aceh Jaya Regency where male respondents consisted of 88 people with a percentage of 82.2% and female respondents numbered 19 people with a percentage of 17.8%.


Figure 2. Frequency Distribution Chart Based on Age in Non-Communicable Disease Surveillance in Kuta Tuha Village, Panga District, Aceh Jaya Regency

The data in the graph above shows that respondents aged 30-47 years were 31 people (29%), followed by respondents aged 48-50 years totaling 54 people with a percentage of 50.5%, aged 51-57 years were 16 people with a percentage of 15%, respondents aged 58-60 years were 6 people (5.6%).

Based on the univariate analysis above, it can be concluded that the highest category in the application of clean and healthy living behavior is the category of gender, especially men with a frequency of 88 respondents and a percentage of 82.2%, followed by categories based on age, namely age 48-50 years, totaling 54 people with a percentage of 50.5%, then the age category is 30-47 years as many as 31 people (29%), female respondents numbered 19 people with a percentage of 17.8%. Followed by a percentage of 15% with a total of 16 people at the age of 51-57 years, finally followed by respondents with an age range of 58-68 years with a percentage of 6% totaling 6 people.

3.1.2. Diabetes Mellitus in Kuta Tuha Village, Panga District, Aceh Jaya Regency

After carrying out the socialization of the non-communicable behavior program in Kuta Tuha Village, Panga District, Aceh Jaya Regency, where the problem in this study is to see the knowledge of the relationship between diabetes and age. Below is a description of the research results:
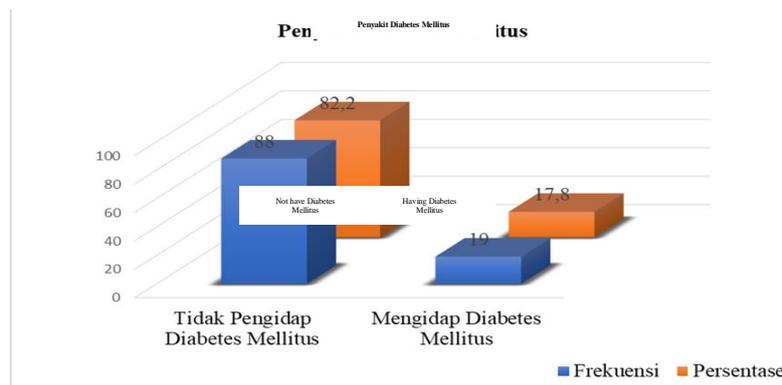
**Figure 3. Graph of Diabetes Mellitus Disease in Kuta Tuha Village,
Panga District, Aceh Jaya Regency**

Based on the graph above, it shows that the community of kuta tuha village, panga sub-district, aceh jaya district still has to be given socialization related to knowledge about diabetes, so that the number suffering from diabetes can be minimized, based on the percentage of kuta tuha village community has patients who have diabetes totaling 19 people with a percentage of 17.8%.

4. CONCLUSION

The conclusions of this study can be described as follows. Univariate analysis showed that the majority of respondents were male (82.2%), with the largest age group in the range of 48-50 years (50.5%). In general, respondents, especially males and those aged 48-50 years, had a high level of implementation of clean and healthy living behaviors, providing the basis of information for more specific health program planning. Despite the socialization of non-communicable diseases in Kuta Tuha Village, additional efforts are needed to improve knowledge about diabetes. A total of 17.8% of Kuta Tuha villagers have diabetes, indicating the need for preventive measures and a better understanding of the relationship between diabetes and age. Therefore, it is recommended to increase socialization and health education, especially to the 48-50 years old group, to reduce the impact of non-communicable diseases in the community of Kuta Tuha Village, Panga Sub-district, Aceh Jaya District.

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