RESEARCH ARTICLE
Article URL: https://ojs.poltekkes-malang.ac.id/index.php/HAJ/index

Overview of CERDIK Behavior in Diabetes Mellitus Clients at Posbindu Pakunden

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ABSTRACT

Diabetes mellitus is a metabolic disorder caused by the pancreas not producing sufficient insulin or the body being unable to use insulin effectively, resulting in increased blood glucose levels, also known as hyperglycemia. The purpose of this study was to determine the description of CERDIK behavior among clients with diabetes mellitus. This study employed a descriptive research design. The sample consisted of patients diagnosed with diabetes mellitus within the last five years, with a total of 30 respondents selected using a purposive sampling technique. The research was conducted through a door-to-door approach in Pakunden Village, Sukorejo District, Blitar City. The results showed that all respondents (100%) had received information about diabetes mellitus. In the attitude category, more than half of the respondents (60%) demonstrated intelligent behavior. In the subjective norm category, more than half (57%) demonstrated intelligent behavior. Meanwhile, in the perceived behavioral control category, more than half of the respondents (57%) had correct perceptions. It can be concluded that the intention to engage in CERDIK behavior among clients with diabetes mellitus varies and still requires increased awareness regarding diabetes mellitus treatment and therapy in order to achieve better outcomes.

Keyword : Behavior; CERDIK; diabetes; clients

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INTRODUCTION

Diabetes mellitus is a metabolic disorder caused by the pancreas not producing enough insulin or the body not being able to use insulin effectively which results in increased blood sugar levels or commonly called hyperglycemia (1–3). Diabetes Mellitus is often called the silent killer because this disease is often not realized by the sufferer and is usually known when complications occur (4). The International Diabetes federation (IDF) organization in 2019 estimates that there are at least 483 million people aged 20-79 years or 9.3% of the total population of the same age in the world who suffer from Diabetes mellitus. Indonesia ranks seventh in the highest number of people with diabetes in 2019 with 10.7 million people (5,7) . The prevalence of diabetes mellitus in Indonesia according to the results of the 2018 Riskesdes showed that there was an increase in the incidence of diabetes at the age of > 15

Submitted: 15 July 2025 Reviewed: 22 January 2026 Accepted: 27 February 2026
Doi: https://doi.org/10.31290/haj.v3i1.5594

years to 2%. Available The four provinces with the highest prevalence in 2018 are DKI Jakarta, East Kalimantan, DI Yogyakarta and North Sulawesi (8,9). The main results of the Riskesdes of East Java Province in 2018 stated that the prevalence of Diabetes Mellitus based on a doctor's diagnosis in the population aged> 15 years in East Java Province increased, from 2.1% to 2.6% (8).

There are two types of risk factors that can cause Diabetes Mellitus, namely risk factors that cannot be changed and risk factors that can be changed (10–12). Risk factors that can be changed include race, ethnicity, gender, family health history with Diabetes Mellitus, history of giving birth to a baby weighing > 4,000 grams, and a history of being born with a low birth weight or < 2,500 grams. Meanwhile, modifiable risk factors include excessive body weight, hypertension, unhealthy or unbalanced diet, prediabetes characterized by impaired glucose tolerance (TGT 140-199 mg/dl) or impaired fasting blood sugar (GDP < 140 mg/dl), and smoking (10,13,14).

The Minister of Health encourages the public to take smart action to support the government's efforts in addressing the increasing cases of Diabetes Mellitus in Indonesia. Through preventive and promotive measures initiated by the government, it is expected to improve the quality of life and overall welfare of the community. Prevention and control of NCD risk factors including Diabetes Mellitus is emphasized on promotive and preventive aspects through CERDIK behavioral actions which include regular health checks, eliminating cigarette smoke, diligent physical activity, and maintaining health, a balanced diet, adequate rest, and managing stress (15,18).

In the working area of Puskesmas Sukorejo it self, there are several people affected by diabetes mellitus who are still unable to apply CERDIK behavior properly, starting from implementing a messy pattern of taking medication and a lack of understanding of how to manage stress properly, therefore I made this research because I wanted to find out how the intention to do or apply a CERDIK behaviour for people with diabetes mellitus, especially in the working area of Puskesmas Sukorejo itself. Therefore, research on the Overview of CERDIK Behavior in Diabetes Mellitus Clients at Posbindu Pakunden is deemed necessary. The purpose of this study was to determine the description of CERDIK behavior in clients with diabetes mellitus in the family context.

METHODS

This research design is quantitative research with a descriptive approach. The population in this study were Posbindu Meka Pasera participants in the Pakunden area totaling 100 people and took a sample of 30 respondents using purposive sampling technique. The research was conducted in the working area of the Sukorejo Health Center, precisely Posbindu Meka Pasera in May 2024. The data collection instrument in this study used a questionnaire totaling 18 statements. The results of filling out a Likert scale questionnaire with a pattern of answering favorable statements with a score of 4 agree, 3 scores less agree, 2 scores doubt, 1 score disagree. The reliability test of the questionnaire is 0.781 which means reliable. Observation data from the questionnaire will be analyzed descriptively by percentage.

RESULT

Table 1. Respondent Characteristics of Research Respondents Overview of CERDIK Behavior in Diabetes Mellitus Clients at Posbindu Pakunden
May 2024

Characteristics	Frequency	Percentage
Age		
40-60 years	8	27
>60 years	22	73
Gender		
Male	25	83
Female	5	17
Last Education		
Elementary school/equivalent	11	37
junior high school/equivalent	14	47
High school/equivalent	5	17
Occupation		
Farmer	10	33
Entrepreneur	18	60
Retired	2	7
Information		
Yes	30	100
Total	**30**	**100**

Based on table 1, it is known that less than half 27% (8 respondents) are male, most 83% (25 respondents) are 40-60 years old, less than half 47% (14 respondents) have a junior high school education, more than half 60% (18 respondents) work as self-employed, and all 100% (30 respondents) received information about Diabetes mellitus disease.

Table 2. Attitude Categories of Respondents of Research on the Overview of CERDIK Behavior in Diabetes Mellitus Clients at Posbindu Pakunden

Characteristics	Frequency (f)	Percentage (%)
Attitude Category		
Positive Attitude	18	60
Negatif Attitude	12	40
Norma		
Full Support	17	57
Lack of Support	13	43
Perception Control		
False Perception	15	50
Correct Perception	15	50
Total	**30**	**100**

Based on table 2, it is known that more than half of 60% (18 respondents) have a positive attitude, the norms of diabetes mellitus clients regarding CERDIK behavior are more than half 57% (17 respondents) have full support, and control the perceptions of diabetes mellitus clients regarding CERDIK behavior half 50% (15 respondents) have the right perception.

DISCUSSION

Attitude Toward CERDIK Behavior Among Diabetes Mellitus Clients at Posbindu Pakunden

The study results showed that more than half of the respondents (60%) had a positive attitude toward CERDIK behavior, while 40% still demonstrated negative attitudes. This finding indicates that most diabetes mellitus clients have a good level of acceptance toward healthy lifestyle behaviors; however, a considerable proportion still does not fully demonstrate supportive attitudes. Attitude is an important component in shaping health behavior because it reflects an individual's evaluation of the benefits or consequences of a particular behavior. A positive attitude toward CERDIK behavior indicates that respondents believe the behavior can provide health benefits, particularly in controlling blood glucose levels and preventing complications of diabetes mellitus.

The majority of respondents were aged over 60 years (73%), a group at high risk for diabetes complications due to declining physiological and metabolic functions (19,20) . This condition may increase individuals' awareness of the importance of maintaining health, thereby encouraging the development of more positive attitudes toward healthy behaviors (21,22) .

In addition, all respondents (100%) had received information about diabetes mellitus, which contributed to the formation of positive attitudes. Adequate health information can improve individuals' knowledge and understanding of the benefits of CERDIK behavior, making them more receptive to implementing these behaviors in daily life (2,23,24). This is consistent with the Riskesdas report, which states that improved health knowledge plays an important role in changing attitudes and behaviors toward controlling non-communicable diseases (8). The respondents' education level, mostly at elementary and junior high school levels, may also influence attitude formation. Individuals with lower education levels tend to have limitations in comprehensively understanding health information, which may affect attitudes toward chronic disease management. This may explain why 40% of respondents still had negative attitudes toward CERDIK behavior.

In addition to education, occupational factors may also influence attitudes, as most respondents were self-employed (60%). Work demands may become barriers to consistently maintaining healthy lifestyles, such as engaging in regular physical activity or managing a healthy diet, thereby influencing perceptions of the benefits of CERDIK behavior. CERDIK behavior has been proven effective in helping control non-communicable diseases, including diabetes mellitus, through comprehensive lifestyle modifications (15,16). Positive attitudes toward CERDIK behavior can increase individuals' motivation to adopt healthy lifestyles and reduce the risk of complications such as cardiovascular disorders and neuropathy (25). Thus, attitude is an important predisposing factor in shaping CERDIK behavior among diabetes mellitus clients. Although most respondents have positive attitudes, continuous health education is still needed to strengthen positive attitudes and transform negative attitudes into more supportive ones. Education tailored to respondent characteristics such as age and education level is expected to improve understanding and awareness in managing diabetes mellitus optimally.

Subjective Norms of CERDIK Behavior Among Diabetes Mellitus Clients

The study results showed that more than half of the respondents (57%) received full support for implementing CERDIK behavior, while 43% still lacked support. This finding indicates that subjective norms play an important role in shaping health behavior among diabetes mellitus clients. Based on respondent characteristics, the majority were aged over 60 years (73%). Older adults are a group with a higher risk of diabetes mellitus and its complications due to decreased metabolic function and insulin sensitivity (1,3). This condition makes social support an important factor in helping older adults maintain good health behaviors.

In addition, most respondents were male (83%) and self-employed (60%). Work activities and lifestyle patterns in this group may influence adherence to healthy behaviors, making support from family and healthcare professionals essential to maintain consistency in practicing CERDIK behavior. This is consistent with Rahma et al. (2), who stated that social support is an important determinant in the implementation of CERDIK behavior as an effort to prevent non-communicable diseases.

The respondents' education level, mostly at elementary and junior high school levels (84%), may also influence understanding of disease and health behavior. Lower education is often associated with limited knowledge and ability to manage chronic diseases (8). Therefore, support from the social environment becomes an important factor in improving adherence to treatment and lifestyle modification.

All respondents (100%) had received information about diabetes mellitus, indicating that access to information was good. However, not all respondents received full support, suggesting that family- and community-based education still needs to be improved. CERDIK behavior including regular health check-ups, avoiding cigarette smoke, engaging in physical activity, maintaining a healthy diet, getting adequate rest, and managing stress has been proven effective in controlling non-communicable diseases, including diabetes mellitus (15,16). With good social support, individuals are more motivated to maintain healthy behaviors consistently.

Thus, subjective norms play an important role in shaping intentions and health behaviors among diabetes mellitus clients. Increased support from family, healthcare providers, and the social environment is needed to strengthen the implementation of CERDIK behavior to prevent diabetes complications.

Perceived Behavioral Control of CERDIK Behavior Among Diabetes Mellitus Clients

The study results showed that respondents' perceived behavioral control was evenly distributed between correct perception (50%) and incorrect perception (50%). This indicates that individuals' ability to understand and manage health behaviors remains varied. Perceived behavioral control reflects an individual's belief in their ability to perform a behavior. Correct perception increases self-confidence in practicing healthy behaviors, while inaccurate perception may become a barrier in managing chronic diseases such as diabetes mellitus.

Most respondents were older adults who may experience physical limitations and cognitive decline that can affect their ability to understand health information and manage their disease independently (1). This may explain why half of the respondents still had inaccurate perceptions regarding CERDIK behavior. In addition, relatively low education levels may influence understanding of diabetes management concepts, including the importance of physical activity, healthy diet, and treatment adherence. Research shows that education level is associated with self-management ability among diabetes mellitus patients (14).

Accurate perception is very important because diabetes mellitus is a chronic disease with risks of systemic complications such as cardiovascular disorders, neuropathy, and nephropathy if not properly managed (25). Therefore, improving understanding through continuous health education is necessary to enhance patients' self-control. Furthermore, consistent implementation of CERDIK behavior can help reduce the risk of complications and improve the quality of life of diabetes mellitus patients (16). Physical activity and stress management also play important roles in controlling blood glucose levels (10).

Thus, perceived behavioral control is an important factor in the successful management of diabetes mellitus. Efforts to improve health education tailored to respondent characteristics such as age and education level are needed to enhance patients' confidence and ability to implement CERDIK behavior optimally

CONCLUSION

The results of this study indicate that CERDIK behavior among diabetes mellitus clients at Posbindu Pakunden is influenced by attitudes, subjective norms, and perceived behavioral control. Most respondents have demonstrated positive attitudes and good social support; however, their ability to understand and manage health behaviors remains varied. Therefore, continuous health education and environmental support are needed to strengthen the implementation of CERDIK behavior in order to support optimal diabetes mellitus management.

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