Correlation Between Illness Perception and Self-Management Among People With Diabetes Mellitus

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A B S T R A C T

Background: Diabetes Mellitus (DM) is a chronic metabolic disease with a rising global prevalence. Successful diabetes management heavily relies on patients' engagement in self-management behaviors, which are significantly influenced by their illness perception. This study aimed to examine the correlation between illness perception and diabetes self-management among elderly individuals with type 2 diabetes.

Methods: A quantitative, cross-sectional study was conducted involving 120 elderly participants with diabetes mellitus selected through purposive sampling from three community health centers. Data were collected using the Brief Illness Perception Questionnaire (Brief IPQ) and the Diabetes Self-Management Questionnaire (DSMQ). Pearson Product Moment analysis was employed to examine the correlation between the two variables.

Results: The mean illness perception score was 48.72 (SD 15,75), while the mean self-management score was 78.75 (SD 11,35). A significant positive correlation was found between illness perception and self-management ($p < 0.001$, $r = 0.568$).

Conclusion: Individuals with a higher perception of their illness demonstrate better self-management behaviors. Health education strategies should focus on improving illness perceptions to enhance diabetes self-management.

BACKGROUND

Diabetes Mellitus (DM) is a chronic metabolic disorder characterized by high blood glucose levels due to impaired insulin secretion, insulin action, or both. It is a major global public health concern, with rising prevalence worldwide and significant impacts on morbidity, mortality, and healthcare costs. According to the International Diabetes Federation, the number of people living with diabetes is expected to continue increasing, particularly in low- and middle-income countries (Findlay et al., 2020)

Effective management of diabetes is essential to prevent or delay its numerous complications, which include cardiovascular disease, kidney failure, neuropathy, retinopathy, and diabetic foot ulcers (Himawan et al., 2016; Korsa et al., 2020). Diabetes management primarily relies on patients' active involvement in self-management behaviors such as adhering to prescribed medications, maintaining a healthy diet, engaging in regular physical activity, monitoring blood glucose levels, and attending regular medical check-ups (Hidayah, 2019).

However, the success of these self-management efforts is heavily influenced by patients' illness perceptions—how they cognitively and emotionally interpret their disease. Illness perception encompasses patients' beliefs about the cause of their diabetes, the duration and timeline of the illness, perceived consequences, controllability, and their emotional response to the condition. These perceptions are shaped by personal experiences, cultural beliefs, social influences, and information provided by healthcare professionals (Ragab et al., 2023).

Studies have shown that patients who view their diabetes as a serious but manageable condition are more likely to adopt effective self-care behaviors. Conversely, patients who hold inaccurate or negative beliefs about their illness such as believing diabetes is uncontrollable or that complications are inevitable may experience feelings of helplessness, which can result in poor adherence to treatment regimens and inadequate self-management (Kugbey et al., 2017).

Understanding the correlation between illness perception and self-management is therefore crucial. It helps healthcare providers tailor educational and psychological interventions to modify maladaptive beliefs, improve patients' engagement in their care, and ultimately enhance clinical outcomes. This is especially important in diabetes, where sustained behavioral changes are necessary for long-term disease control. Despite this, many patients with diabetes continue to struggle with self-management, partly due to unaddressed or misunderstood illness perceptions. Addressing these perceptions offers an opportunity to improve diabetes care by promoting more effective self-management strategies and better quality of life for patients.

METHODS

This study used a quantitative, descriptive-correlational design with a cross-sectional approach. The study population consisted of individuals diagnosed with type 2 diabetes mellitus, registered at Saguling Public Health Centre. A total of 120 respondents were recruited through purposive sampling.

Illness perception was assessed using the Brief Illness Perception Questionnaire (Brief IPQ), which consists of 8 items scored on a Likert scale and one open-ended question. Self-management was measured using the Diabetes Self-Management Questionnaire (DSMQ), which contains 16 items covering glucose management, dietary control, physical activity, and healthcare use. After data collection, processing included editing, coding, cleaning, and analysis. Bivariate analysis was conducted using Pearson's Product Moment correlation test after ensuring data met normality and linearity assumptions.

RESULTS

Table 4.1
Demographic Characteristics of Respondents (n=120)

Karakteristik	Frekuensi	Presentase (%)
Age (Mean ± SD)	58,2 ± 6,4	
Education Level		
Elementary	11	9,1
Junior High School	31	25,9
Senior High School	54	45
Higher Education	24	20
Gender		
Man	56	46,6
Women	64	53,4
Occupation		
Farmer	27	22,5
Private Sector Employee	21	17,5
Civil Servant	14	11,7
Housewife	32	26,7
Entrepreneur	26	21,6
Duration of DM		
< 5 Years	56	46,7
≥ 5 Years	64	53,3

Table 4.2
Self-Management and Illness Perception of Respondents with DM (n=120)

Karakteristik	Mean	SD
Self-Management	78,75	11,35
Ilness Perception	48,72	15,72

Table 4.3

Respondents' Perceptions of Causes of Diabetes Mellitus

Perceived Cause	Frequency (n)	Percentage (%)
Poor Diet	84	70
Heredity	88	73,3
Lack of Exercise	61	50,83
Aging Process	41	34.17
Stress	49	40,7

Table 4.4
Correlation Between Illness Perception and Self-Management (n=120)

Karakteristik	Pearson	*p* value
Illness Perception and Self-Management	0,568	< 0,001

DISCUSSION

The findings indicate that elderly individuals with diabetes typically exhibit moderate levels of illness perception. This observation aligns with previous research, which has consistently demonstrated that patients living with chronic diseases tend to heighten their awareness and concern regarding their health conditions over time (Alyami et al., 2021; Kugbey et al., 2017). The duration of the illness significantly influences how individuals interpret their health status and the seriousness with which they approach self-care practices.

Illness perception encompasses the beliefs and emotional responses that individuals have towards their health conditions, which can profoundly impact their behaviours and choices. For instance, an elderly person who has lived with diabetes for several years may come to recognise the importance of maintaining stable blood glucose levels, not only to avoid immediate discomfort but also to prevent long-term complications. This understanding often evolves from personal experiences or observations of others facing the dire consequences of mismanagement. Consequently, the longevity of the condition plays a pivotal role in shaping these perceptions, leading to a more proactive approach to self-care as patients become increasingly aware of the potential ramifications of neglecting their health.

The correlation between illness perception and diabetes self-management is particularly noteworthy. Studies have found that a positive illness perception is associated with enhanced self-management behaviours in both diabetic and hypertensive populations (Bilondi et al., 2021; Ragab et al., 2023; Shakya et al., 2020). This connection underscores the notion that an individual's beliefs about their illness significantly influence their actions. For example, an elderly diabetic patient who perceives their condition as a serious threat to their health is more likely to engage in regular glucose monitoring and adhere to dietary restrictions compared to someone who views their diabetes as a minor inconvenience. This behavioural distinction illustrates how perceptions can drive health outcomes, particularly in the context of chronic diseases where self-management is crucial.

The moderate level of illness perception observed in the study may also stem from the gradual accumulation of experience in managing diabetes. Individuals who have navigated the complexities of this condition for several years often develop a more nuanced understanding of the consequences associated with non-adherence. For instance, a patient who has experienced neuropathy or retinopathy firsthand may be more motivated to comply with their treatment regimen to avoid further complications. This experiential knowledge serves as a powerful motivator for behavioural change, reinforcing the idea that lived experiences can significantly influence health perceptions and practices (Melkamu et al., 2021; Mohebbi et al., 2021).

In examining the relationship between illness perception and specific self-management tasks, the study revealed that individuals with higher levels of illness perception demonstrated greater engagement in activities such as dietary regulation, glucose monitoring, and medication adherence (Sofiani et al., 2022; Xiong et al., 2023). This finding suggests that illness perception does not uniformly influence all aspects of self-care; rather, it appears to reinforce particular components of disease management that the individual deems most critical. For example, a patient who perceives their diabetes as a significant threat may prioritise strict dietary control and regular glucose checks, while another who views their condition as less serious may neglect these essential tasks. This variation highlights the need for healthcare

providers to tailor their approaches to align with patients' perceptions, ensuring that interventions resonate on a personal level.

Cultural beliefs also play a vital role in shaping illness perception among elderly populations. In certain cultural contexts, diabetes may be regarded as a natural consequence of aging, fostering a sense of resignation rather than an impetus for active management. This fatalistic attitude can diminish the urgency to engage in consistent self-care practices, as individuals may believe that their condition is an inevitable part of growing older. For instance, an elderly individual from a culture that views diabetes as an unavoidable aspect of life may be less likely to seek out information on managing their condition effectively, leading to poorer health outcomes. This underscores the necessity for culturally sensitive health education interventions that acknowledge and address these beliefs.

Healthcare professionals must not only assess clinical parameters but also explore patients' illness beliefs as an integral part of routine care. By understanding the cultural and emotional frameworks that shape patients' perceptions, providers can develop tailored interventions that address the unique needs of each individual. For example, incorporating culturally relevant education materials and support groups can empower patients to take charge of their health in a manner that resonates with their values and beliefs. Such tailored interventions that encompass emotional, cognitive, and social aspects of diabetes management are essential for transforming awareness into sustainable action.

The findings of this study underscore the intricate relationship between illness perception and diabetes self-management among elderly individuals. The moderate levels of illness perception observed highlight the importance of experience in shaping health beliefs and behaviours. Furthermore, the positive correlation between illness perception and specific self-management tasks reinforces the notion that beliefs and emotional responses are critical to achieving favourable health outcomes. Cultural factors further complicate this landscape, necessitating a nuanced approach to health education that respects and addresses patients' beliefs. Ultimately, healthcare professionals must recognise the significance of illness perception in their practice, fostering an environment where patients feel empowered to engage in their health management actively. By bridging the gap between awareness and action, we can enhance the quality of life for elderly individuals living with diabetes, enabling them to navigate their condition with confidence and resilience.

CONCLUSION

This study concludes that there is a significant positive correlation between illness perception and self-management among elderly individuals with diabetes mellitus. Patients who perceive their illness as serious, chronic, and requiring ongoing management tend to demonstrate better self-care behaviors, including diet regulation, medication adherence, and glucose monitoring. Interventions aimed at improving diabetes management in the elderly should include strategies to enhance illness perception through education, counseling, and family involvement. Future programs should also consider cultural beliefs, social support systems, and individual barriers to optimize disease self-management.

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CONFLICTS OF INTEREST

The authors declare that they have no conflict of interest.

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