

Epistemic Knowledge on Health Behaviour Among Diabetic Patients

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Abstract

This study examined the relationship between epistemic knowledge on health and health behaviour among patients with Type 2 diabetes mellitus, addressing a critical gap in understanding how knowledge translates into self-management practices. A quantitative correlational research design was employed, with a sample of 200 diabetic patients aged 30–65 years selected through purposive sampling from hospitals, clinics, and community health centres. Data were collected using the Patient Diabetes Knowledge Questionnaire (PDKQ) and the Diabetes Self-Management Questionnaire (DSMQ), and analyzed using descriptive statistics and Pearson's correlation. The findings indicated a moderate level of diabetes knowledge ($M = 15.72$, $SD = 5.426$) and variability in self-management behaviour ($M = 26.75$, $SD = 8.903$). However, the relationship between knowledge and health behaviour was weak and not statistically significant ($r = -0.085$, $p = 0.230$). These results suggest that epistemic knowledge alone is insufficient to influence health behaviour, highlighting the role of additional factors such as motivation, psychological readiness, social support, and healthcare accessibility. The study emphasizes the need for integrated interventions combining education with behavioural and psychological support to enhance diabetes self-management outcomes.

Keywords Epistemic Knowledge, Diabetes Mellitus, Health Behaviour, Self-Management, Patient Education, Psychological Factors

1. Introduction

Diabetes as a Global Health Challenge, Diabetes mellitus ranks among the most prevalent chronic conditions worldwide, characterized by consistently elevated blood sugar levels that necessitate ongoing management. The World Health Organization recognizes diabetes as a significant public health issue due to its associated complications and detrimental effects on individuals' quality of life. India as the "Diabetes Capital, India holds one of the highest prevalence rates of diabetes globally. Factors such as rapid urbanization, sedentary lifestyles, and changes in dietary habits have contributed to this increase. Additionally, cultural and familial influences play a crucial role in shaping how individuals manage their diabetes.

Epistemic Knowledge and Its Role, Epistemic knowledge encompasses how people comprehend, interpret, and validate health-related information. This concept extends beyond mere factual knowledge; it involves trust in sources and the ability to make sense of guidance provided. For individuals with

diabetes, epistemic knowledge significantly affects their adherence to medical advice compared to reliance on cultural beliefs or traditional remedies.

Health Behaviour Among Diabetic Patients, Health behaviour includes aspects such as medication adherence, dietary management, physical activity engagement, blood glucose monitoring, and stress management. Individuals with robust epistemic knowledge are more inclined to adopt consistent and effective health practices. Conversely, those harboring misconceptions or limited understanding may face challenges in adherence, which can lead to adverse health outcomes. Challenges in Patient Behaviour, Despite having access to medical care, many patients struggle to maintain consistent health practices. Emotional barriers like denial, fear, or stress can undermine the connection between knowledge and behaviour. Misunderstandings regarding medication side effects or reliance on traditional therapies can further hinder adherence.

Influence of Socio-Cultural Context, In India decisions regarding health are often collective, influenced by family traditions and community norms. Patients may prioritize cultural expectations over medical recommendations. This highlights the necessity of examining epistemic knowledge within a cultural context. Psychological Perspective, Patients who perceive health outcomes as manageable through informed actions tend to engage in proactive behaviours. In contrast, those who view health as predetermined or externally controlled may exhibit passive or avoidant behaviours. Understanding an individual's epistemic orientation can elucidate variations in patient behaviours even when they receive identical medical advice. Research Gap, The majority of existing studies concentrate on biomedical treatments and clinical results; however, few investigate how patients conceptualize knowledge itself and its influence on behaviour. There is a notable lack of research within the Indian context where disparities related to education, culture, and healthcare accessibility are pronounced.

2. Review of Literature

Fatema et al. (2017), BMC Public Health. Fatema and colleagues conducted a large cross-sectional study in Bangladesh involving 18,697 diabetic and non-diabetic adults. Their aim was to assess knowledge, attitude, and practice (KAP) related to diabetes. The findings revealed that individuals with type 2 diabetes generally had better knowledge and practices compared to non-diabetic participants, while attitudes toward diabetes were positive in both groups. Importantly, the study highlighted socio-demographic influences urban residents, individuals with higher education, and those with better socioeconomic status demonstrated stronger knowledge and healthier practices. Middle-aged participants also showed more awareness compared to younger or older groups. The authors emphasized that gaps in knowledge and practice were most evident among rural, less educated, and economically disadvantaged populations. This suggests that diabetes education programs must be targeted and context-specific, focusing on vulnerable groups who may lack access to reliable health information. The study is significant because it demonstrates how epistemic knowledge shaped by education, environment, and resources directly influences health behaviour. It also underscores the importance of tailoring interventions to bridge disparities in awareness and practice.

Kakade et al. (2016) – Journal of Clinical and Diagnostic Research. Kakade and colleagues carried out a hospital-based cross-sectional study in India to evaluate knowledge, attitude, and self-care activities among patients with type 2 diabetes. Using a semi-structured questionnaire and the Diabetes Self-Care Management Questionnaire, they assessed lifestyle-related knowledge, attitudes, and practices associated with glycemic control. The results were striking only 30% of participants achieved good glycemic control,

despite being under medical care. Knowledge levels were significantly higher among patients who managed to control their blood sugar, while attitude alone did not show a strong association with outcomes. Instead, dietary control and glucose monitoring practices were the most critical factors linked to better management. This study highlights the gap between knowledge and behaviour. Even when patients had some awareness, many struggled to translate it into consistent self-care practices. The findings emphasize that patient education must go beyond simply providing information it should also focus on behavioural reinforcement, motivation, and practical guidance. Kakade et al. concluded that structured education programs and sustained support are essential for improving diabetes management in India, where lifestyle factors and misconceptions often interfere with adherence.

Shrivastava et al. (2013) – International Journal of Diabetes in Developing Countries. Shrivastava and colleagues examined the role of knowledge, attitude, and practices (KAP) in diabetes management among patients in India. Their study emphasized that inadequate knowledge and poor self-care behaviours are major barriers to effective diabetes control. They found that patients with higher awareness about diet, exercise, and medication adherence were more likely to achieve better glycemic outcomes. The authors argued that health education and counselling are critical components of diabetes care. They noted that many patients lacked proper understanding of long-term complications, which often led to poor compliance with treatment regimens. The study concluded that structured educational interventions, combined with regular follow-up, can significantly improve health behaviour and reduce the burden of diabetes complications in developing countries.

This study aims to explore the relationship between epistemic knowledge and health behaviour among diabetic patients. It seeks to illuminate how knowledge systems, beliefs, and cultural influences impact self-management strategies. Additionally, it intends to offer insights for healthcare professionals aimed at developing improved educational resources and intervention programs.

3. Methods

Objectives of the Study

1. To assess the level of epistemic knowledge related to diabetes among diabetic patients.
2. To assess the health behaviour of diabetic patients.
3. To examine the relationship between epistemic knowledge and health behaviour among diabetic patients.
4. To determine whether epistemic knowledge significantly predicts health behaviour in patients.

Hypotheses

H1 There is a significant relationship between epistemic knowledge on health and health behaviour among diabetic patients.

H02 There is no significant difference in health behaviour among diabetic patients across gender.

H03 There is no significant difference in epistemic knowledge on health among diabetic patients across gender.

Research Design

The study adopts a quantitative, correlational research design. This design is appropriate because the study aims to examine the relationship between two psychological variables epistemic knowledge and health Behaviour without manipulating them. The design allows for objective measurement and statistical analysis of associations between variables.

Sample and Sampling Technique

The study will include 200 diabetic patients who have been diagnosed with Type 2 Diabetes Mellitus. Participants will be selected from hospitals, clinics, and community health centres where they are receiving regular treatment. A purposive sampling technique will be used, selecting participants based on their availability and willingness to take part in the study.

Before data collection, ethical permission will be obtained from the concerned authority. All participants will be clearly informed about the purpose of the study, assured that their responses will be kept confidential, and told that participation is completely voluntary. Written informed consent will be obtained, and participants will be free to withdraw from the study at any time without any consequences.

Inclusion Criteria

1. Patients diagnosed with Type 2 Diabetes Mellitus and currently receiving treatment from hospitals, clinics, or community health centers.
2. Diabetic patients aged 30–65 years who have been living with the condition for at least one year.
3. Participants who have basic knowledge and understanding of English and are able to comprehend and respond to the questionnaires independently.

Exclusion Criteria

1. Patients diagnosed with severe psychiatric disorders or cognitive impairment.
2. Patients with severe diabetic complications requiring hospitalization.
3. Patients diagnosed with gestational diabetes.
4. Individuals currently participating in intensive psychological intervention programs related to diabetes management.

Tools Used

1. Patient Diabetes Knowledge Questionnaire (PDKQ)
2. Diabetes Self-Management Questionnaire (DSMQ)
3. Socio-demographic Information Sheet (self-constructed)

Tool Description

a. Patient Diabetes Knowledge Questionnaire (PDKQ)

The Patient Diabetes Knowledge Questionnaire is a standardized tool designed to assess patients' knowledge and understanding of diabetes, including disease nature, treatment, lifestyle management, and prevention of complications. The scale measures the extent to which patients possess accurate and meaningful knowledge related to diabetes management. The questionnaire has demonstrated satisfactory reliability and validity across different populations and is suitable for assessing epistemic knowledge in diabetic patients.

b. Diabetes Self-Management Questionnaire (DSMQ)

The Diabetes Self-Management Questionnaire is a widely used standardized instrument that assesses health behaviour related to diabetes management. It measures behaviours such as glucose monitoring, dietary control, physical activity, medication adherence, and healthcare use. The DSMQ has strong psychometric properties, including good internal consistency and construct validity, making it an appropriate measure of health behaviour in diabetic patients.

c. Socio-demographic Information Sheet

A self-developed socio-demographic sheet will be used to collect information such as age, gender, educational level, duration of diabetes, treatment type, and other relevant background variables.

Statistical Analysis

Data will be analyzed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics, including mean, standard deviation, frequency, and percentage, will be used to summarize and describe the sample characteristics. Pearson's correlation coefficient will be employed to examine the relationship between epistemic knowledge and health behaviour. Additionally, regression analysis will be conducted to determine whether epistemic knowledge significantly predicts health behaviour. The level of statistical significance will be set at $p = 0.05$.

4. Results

Table 1 Descriptive Statistics

Variable	Mean	Std. Deviation	N
IV – Diabetes Knowledge	15.72	5.426	200
DV – Diabetes Self Management	26.75	8.903	200

Table 1 presents the descriptive statistics of the study variables. The mean score for diabetes knowledge among participants was 15.72 with a standard deviation of 5.426, indicating moderate variability in knowledge levels. The mean score for diabetes self-management was 26.75 with a standard deviation of 8.903, suggesting greater variability in how participants manage their diabetes. The sample size for both variables was 200 participants.

Table 2 Correlation Analysis

Variables	Person Correlation	Sig.(2 tailed)	N
Diabetes Knowledge – Diabetes Self Management	-0.085	0.230	200

Table 2 shows the Pearson correlation between diabetes knowledge and diabetes self-management. The correlation coefficient was $r = -0.085$ with a significance value of $p = 0.230$. This indicates a very weak negative relationship between the two variables and the result is not statistically significant ($p > 0.05$). Therefore, diabetes knowledge does not show a significant association with diabetes self-management in this sample.

5. Discussion

The present study examined the relationship between diabetes knowledge and diabetes self-management among 200 participants. The descriptive statistics indicated that participants had moderate knowledge about diabetes and varied levels of self-management practices. The correlation analysis revealed a weak negative relationship between diabetes knowledge and diabetes self-management ($r = -0.085$). However, the relationship was not statistically significant ($p = 0.230$). This suggests that higher knowledge about diabetes did not necessarily translate into better self-management behaviors among participants in this study. One possible explanation is that knowledge alone may not be sufficient to influence health behaviors. Many other factors such as motivation, access to healthcare services, family support, lifestyle

habits, economic conditions, and psychological factors may play important roles in determining how well a person manages diabetes. Even if individuals understand diabetes management theoretically, they may face challenges in applying that knowledge in daily life. Another possible reason could be differences in personal attitudes and behavioral readiness. Some individuals may have adequate knowledge but may not practice proper diet control, exercise, or medication adherence consistently. Therefore, effective diabetes care should focus not only on improving knowledge but also on behavioral change strategies and continuous support.

6. Summary

The present study aimed to examine the relationship between epistemic knowledge on health and health behaviour among patients with diabetes mellitus. Diabetes is a chronic metabolic disorder that requires continuous self-management, including medication adherence, dietary control, physical activity, and regular monitoring of blood glucose levels. Understanding the role of patients' knowledge about diabetes is important because knowledge is often considered a key factor influencing health behaviour and disease management.

The study adopted a quantitative correlational research design to explore the association between diabetes knowledge and diabetes self-management behaviour. A total of 200 patients diagnosed with Type 2 diabetes mellitus were selected from hospitals, clinics, and community health centres using a purposive sampling technique. The participants were within the age group of 30–65 years and had been living with diabetes for at least one year. Two standardized tools were used to collect data. The Patient Diabetes Knowledge Questionnaire (PDKQ) was used to assess participants' level of knowledge about diabetes, including its causes, symptoms, treatment, and complications. The Diabetes Self-Management Questionnaire (DSMQ) was used to measure health behaviour related to diabetes management, such as glucose monitoring, medication adherence, diet control, physical activity, and healthcare utilization. Descriptive statistics and Pearson correlation analysis were performed using Statistical Package for Social Sciences (SPSS). The results showed that the mean score for diabetes knowledge was 15.72 (SD = 5.426), indicating a moderate level of knowledge among participants. The mean score for diabetes self-management behaviour was 26.75 (SD = 8.903), suggesting variability in how participants managed their diabetes in daily life. Correlation analysis revealed a very weak negative relationship between diabetes knowledge and diabetes self-management ($r = -0.085$, $p = 0.230$). Since the significance value was greater than 0.05, the relationship was not statistically significant. These findings indicate that although participants possessed moderate knowledge about diabetes, this knowledge did not significantly influence their self-management behaviours. This suggests that knowledge alone may not be sufficient to promote effective diabetes management. Other factors such as motivation, lifestyle habits, psychological readiness, social support, economic conditions, and access to healthcare services may play an important role in determining health behaviour among diabetic patients.

7. Conclusion

In conclusion, the study found that there was no significant relationship between diabetes knowledge and diabetes self-management among the participants. Although participants demonstrated a moderate level of knowledge regarding diabetes, this knowledge did not significantly influence their self-management practices. The findings highlight the importance of implementing comprehensive diabetes management programs that combine education with behavioral interventions, counseling, and continuous support.

Future studies should explore other factors such as motivation, psychological support, lifestyle behaviors, and healthcare access that may influence diabetes self-management.

8. Limitation

The study was conducted with a sample of 200 diabetic patients, which may not fully represent the entire diabetic population. Participants were selected only from specific hospitals, clinics, and community health centers, which may limit the generalizability of the findings. The study relied on self-report questionnaires, and participants' responses may have been influenced by personal bias or social desirability. The cross-sectional design of the study limits the ability to determine cause-and-effect relationships between epistemic knowledge and health behaviour. The study focused mainly on epistemic knowledge and health behaviour and did not consider other psychological factors such as motivation, self-efficacy, or emotional distress..

9. Implications

The findings highlight the importance of improving diabetic patients' knowledge and understanding of their health condition. Healthcare professionals can develop effective educational programs to enhance patients' awareness and promote better self-care behaviours. The study emphasizes the role of psychological factors in diabetes management and the need for integrating psychological support in treatment plans. Public health initiatives can use these findings to design awareness campaigns that encourage healthy lifestyle practices among diabetic patients. The study can help healthcare providers improve communication strategies to ensure that patients clearly understand medical advice and health information.

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