Factors Affecting the Medication Behavior of Diabetics Patients: A Cross-Sectional Study

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Abstract

The appropriate medication behavior of diabetic patients has the potential to mitigate the development of diabetes complications. This research is a cross-sectional study. The aim is to investigate the factors of knowledge while also examining the medication use patterns of patients with diabetes. We implemented proportional random sampling to obtain the sample. Sample size 2 1 0 individuals. We implemented a questionnaire to gather data and to use descriptive statistics such as the mean and standard deviation to analyze the data. The results indicated that the majority of the sample possessed a high level of knowledge regarding the use of diabetes medicine and demonstrated appropriate substance use behavior at a high level. They effectively manage their blood sugar levels, obtain their diabetes medication from the hospital rather than a pharmacy, engage in physical activities, consume three meals, avoid spicy foods, lean meat, and adhere to the staff's recommendations regarding the quantity of flour consumed. This did not lead to any complications from diabetes in the sample group.

Keywords: Behavior, Diabetic patients, Medication, Health promotion

1. Introduction

Diabetes is a chronic disease caused by higher than normal blood sugar levels. This can occur for many reasons, such as the pancreas producing little or no insulin at all. Alternatively, the body may produce sufficient insulin but struggle to utilize it to regulate blood sugar levels. Excessively high blood sugar levels cause abnormalities in all organs and tissues of the body, which can lead to complications such as issues with the eyes, kidneys, nerves, brain, heart, or feet (Hengyotmak, 2024). Drug treatment, which comes in two main forms: oral medicine and injection medicine, is part of the patient's treatment plan and is more popular. This is because patients often feel that injections are difficult to administer. When blood sugar levels are uncontrollable, doctors frequently administer injections (Luengmunkong, 2016). Maintaining satisfactory blood sugar levels reduces complications in people with diabetes (Jongtrakul, 2017). The patient's use of the medication at home also indicates the efficacy of the treatment. Patients frequently experience complications associated with medication administration, including neglecting to take medications, failing to complete them, or failing to adhere to the prescribed regimen (Ounprasertsuk et al., 2023). This is because patients frequently receive a variety of medications and use them continuously for an extended period of time to manage their diabetes at home. To effectively treat diabetes, it is important to understand the patient's medication behavior (Benjanirat et al., 2021). For

this reason, researchers study the factors influencing the drug use behavior of diabetic patients. Therefore, we can apply the research results to promote appropriate drug use behavior among diabetic patients.

1.1 Objective

1.1.1 The aim is to investigate the elements that impact diabetic patients' understanding of medication usage.

1.1.2 The aim is to examine the drug consumption patterns of people with diabetes.

2. Body of paper

Methodology: 305 diabetic patients from Bang Khonthi District, Samut Songkhram Province, served as the study's population. The Taro Yamane (Yamane, 1973) formula calculated the sample, resulting in a total of 174 individuals. The sample was selected proportionally. We divide our research instruments into three categories.

Part 1: A general information questionnaire for respondents, which includes five items: gender, age, duration of illness, weight, and height.

Part 2: This is a six-item questionnaire designed to assess diabetic patients' knowledge of medication usage, offering three tiers of options: Refrain from employing one point, occasionally employ two points, and consistently employ three points. A score of six points suggests that the individual possesses a substantial amount of knowledge regarding the administration of medications, at an average level. A score between 7 and 12 points means the level of knowledge about using medicine is moderate. And a score of more than 13 points means that the knowledge level of using medicine is excellent.

Part 3: The questionnaire focuses on the drug use behavior of diabetic patients and consists of 27 questions. The questionnaire offers three levels of options: do not practice, 1 point; occasionally use, 2 points; and routinely use, 3 points. A score of 27 indicates that the drug use behavior is within the fair range, while a score of 28 to 54 indicates that the drug use behavior is excessive. The individual's substance use falls into the moderate range. Drug use behavior is classified as very excellent when the score is 55 to 81.

Expert inspection has subjected the tool to an IOC value of 0.75. We tested it and found a confidence value of 0.81. We implemented a questionnaire to collect data. The data collection process required 15–20 minutes, during which the researcher provided the sample group with a detailed explanation of the procedure and consulted the Research and Development Institute regarding the ethical approval of this investigation. (COA.1-021/2023). Utilize descriptive statistics such as the mean and standard deviation to scrutinize the data.

Results: The researcher presented the results of the data analysis in three parts. 3 parts:

Part 1: Personal information. The sample group of diabetic patients in Bang Khonthi District, Samut Songkhram Province consisted of the majority of females (50.00%), aged 41-59 years (38.30%), with a duration of illness of 3 years (37.80%), a weight of 61-75 kilograms (45.50%), and a height of 161-170 centimeters (32.90%”). (Table 1)

Table 1: Displays the number and percentage of general information on diabetic patients (210 people)

General information	Quantity (Person)	%
Gender		
Male	99	44.60
Female	111	50.00
Age		
less than 30 years	8	3.60
31-40 years	61	27.50
41-59 years	85	38.30
More than 60 years	56	25.20
Duration of illness		
Less than 1 year	9	4.10
1-2 years	60	27.00
3 years	84	37.80
More than 4 years	57	25.70
Weight		
Less than 45 kg.	9	4.10
46-60 kg.	51	23.00
61-75 kg.	101	45.50
More than 76 kg.	49	22.10
Height		
Less than 150 cents.	4	1.80
151-160 cents.	64	28.80
161-170 cents.	73	32.90
More than 171 cents.	69	31.10

Part 2: Delves into the understanding and knowledge of substance use behavior among diabetic patients.

The Bang Khonthi District of Samut Songkhram Province provides an overview of the knowledge and comprehension of drug use behavior among diabetic patients. As illustrated in Table 2, the sample group of diabetic patients possessed an exceptional level of knowledge regarding the use of medicine, with a total of 210 individuals and an average of 100% (Table 2)

Table 2: The total number and percentage of diabetic patients who are aware of medication use. (210 person)

Diabetic patients possess an overall level of medication knowledge.	Quantity (Person)	%
They use medicine without adequate knowledge.	0	0
They possess a moderate level of proficiency in the use of medicine.	0	0
They possess an exceptionally high level of expertise regarding the utilization of medication.	210	100
Total	**210**	**100**

Part 3: The medication behavior of diabetic patients (n = 210 people)

The study examined the number and percentage of diabetic patients who use drugs in Bang Khonthi District, Samut Songkhram Province. The study revealed that 209 diabetic patients, averaging 99.52 percent, exhibited very good drug use behavior, while one person demonstrated moderate drug use behavior, averaging 0.48 percent. (Table 3)

Table 3 : presents the numbers and drug use behaviors among diabetic patients, with a sample size of 2 1 0 individuals.

Diabetic patients exhibit an overall level of substance use behavior.	**Quantity *(*Person*)***	**Percentage**
A low level of drug use.	0	0.00
A moderate level of drug use.	1	0.48
A high level of drug use.	209	99.52
Total	**210**	**100**

Discussion: An evaluation of diabetic patients' knowledge about medicine use yielded remarkable results. Diabetic patients exhibit high-level use behavior. Patients' understanding of the disease influences their behavior in terms of self-care and medication utilization (Banklang et al., 2016). Patient's blood sugar-lowering behavior is inappropriate. resulting in bodily violence. This leads to a loss of control over blood pressure. Especially drinking alcoholic beverages. It may cause even more complications for people with diabetes (Saengsaeng et al., 2018). Furthermore, researchers determined that mitigating complications involves engaging in physical activity for 25–30 minutes per day, consuming three complete meals, and including a variety of vegetables as key components in each meal for at least three days a week. Diabetes can lead to even more complications for individuals with the disease (Katanyutanon, 2016). Creating self-improvement activities in patient care organizations or individuals requires focus. Raising patient awareness and fostering a shared sense of problem-solving, as well as providing suitable educational resources, is critical for encouraging patients to feel connected and motivated to take care of their health (Ounprasertsuk et al., 2023). The subsequent investigation should incorporate qualitative research. The aim is to gain knowledge that can motivate patients to adopt suitable drug usage habits in the future and to gather information from additional samples.

3. Conclusion

Proper self-care behavior of diabetics can help reduce the complications that occur. In addition, the government's budget for patient care has decreased. For this reason, all relevant agencies should promote education. Clear guidelines to ensure that patients have the ability to take care of their own health.

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