
CONCEPT ANALYSIS OF SELF PERCEIVED KNOWLEDGE

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ABSTRACT:

Systematic reviews and meta-analyses have indicated very distinct scores for educational effectiveness in type 2 diabetes mellitus. However, attainment of therapeutic targets after educational programs has been poorly evaluated. Evaluating the effectiveness of structured and individualised educational programs for type 2 diabetes, provided by primary care nurses, requires educational assistance and family support to achieve metabolic control as well as long-term therapeutic targets. Knowledge or cognitive constitutes an important domain in the formation of a person's actions that derive from the five senses. Based on the results of experience and research, it is found that knowledge-based behaviour will act faster than those who are less knowledgeable. Objective: To analyse the concept of self-perceived knowledge as the initial step in developing nursing theory. Results: Self-perception: an act or ability to perceive or understand by the senses or minds; cognition; understanding. The concept of self-perception was selected because the definition is closely similar to self-perceived knowledge. Self-perceived knowledge is different from actual or objective knowledge.

Keywords: self-perceived knowledge, diabetes mellitus type 2, knowledge, structured education

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INTRODUCTION

Diabetes mellitus (DM) is a collection of symptoms that arise in a person caused by an increase in blood glucose levels due

to a progressive decrease in insulin secretion attributable to insulin resistance (Tan et al., 2019). While the pathogenesis of type 2 DM is characterised by peripheral

insulin resistance, impaired hepatic glucose production (HPG) and decreased beta cell function, which will eventually lead to total beta cell damage (Sharma et al., 2022).

There is currently no epidemiological survey of the complications of DM because of cost constraint to find out DM complication rate on a large scale. From the Basic Health Research (Riskasdas, 2018), it was found that the DM incidence was 11.8% without any accompanying complication data. DM chronic complications basically occur in all blood vessels throughout the body (diabetic angiopathy). Diabetic people have a risk for coronary heart disease and cerebral vascular disease 2 times greater, 5 times more likely to suffer from ulcers/gangrene, 7 times more likely to develop terminal renal failure and 25 times more likely to experience blindness due to retinal damage than non-diabetic patients. If a complication has occurred, efforts to heal in a normal direction are very difficult, the damage that has occurred will generally be permanent. Therefore, early prevention efforts for these complications are necessary and expected to be very useful to avoid various unfavourable occurrences.

Secondary prevention efforts begin with early detection of people with DM. Therefore, it is recommended at every opportunity, particularly for those who are at high risk, to have a blood glucose filter checked. The goal of short-term secondary diabetes mellitus management is to eliminate DM complaints and symptoms, while the long-term secondary is to prevent

DM complications, both microangiopathy, macroangiopathy and neuropathy. Broadly speaking, the factors affecting the complication incidents are genetic or hereditary as well as metabolic factors – blood glucose and other abnormal metabolites (Murphy, 2015).

There are many ways for diabetic patients to gain knowledge or education about diabetes, inter alia, by using print or electronic media, banners or posters and, if hospitalised, the patient will be provided with knowledge by medical personnel. Promoting knowledge for diabetic patients is essential for self-management of diabetic patients, especially in controlling blood glucose and preventing the emergence of acute and chronic complications (Borba et al., 2019). To optimise education on diabetes, cooperation between the patient, family/companions and medical personal is necessary that, upon receiving education, one can expect changes in patient's behaviour and daily lifestyle.

By knowledge and education, it is expected that diabetes complications can be prevented and can improve patient's ability to carry out self-management (Abaza & Marschollek, 2017). Diabetes knowledge is an individual's knowledge of the disease, including knowledge of diabetes diet, physical exercise, SMBG (self-monitoring blood glucose) and the use of antihyperglycemic drugs (oral or insulin). Based on the definition above, one way to improve knowledge is to conduct health education. The purpose of providing health education is to help improving the

knowledge of diabetic patients; with sufficient knowledge, there will be an initial change in attitudes, behaviour and lifestyle, which, in turn, can improve compliance and quality of life.

Objective : a) To find out the concept of self-perceived knowledge that describes the phenomenon of research. b) To clarify the meaning or concept of self-perceived knowledge. c) To find out the operational definition of self-perceived knowledge by the attributes obtained from literary sources. d) To find out the empirical referents for the concept of self-perceived knowledge.

RESEARCH METHODS

Definition and description

Analysis of nursing theory, using the framework presented in this study, is a systematic examination of what the authors have written about the theory, not relying on inferences about what it means or by referring to other authors' interpretations of the theory. When the author of the theory is unclear about something or has not presented certain information, it may be necessary to draw conclusions or move on to other reviews of the theory. However, it must be noted explicitly, so that the difference between the theorist's words and others becomes clear. Therefore, theory analysis involves a non-judgmental and detailed examination of theory, including Theory Scope, Theory Context, and Content Theory.

Self-perceived knowledge is a concept to describe the perception of knowledge

possessed by an individual. Knowledge is the main factor to change behavior. This is because the perception of self-knowledge is useful for decision making in carrying out daily activities. This concept is interesting to know because of the high rate of complications of type 2 Diabetes Mellitus.

The type 2 diabetes epidemic has been associated with urbanization and environmental transitions (changes in work patterns and eating patterns) that favor sedentary work and increased caloric consumption (Ley et al., 2014). Diabetes is a major cause of morbidity and mortality because it can cause blindness, kidney failure, myocardial infarction, stroke, and lower extremity amputation. Diabetes was considered a direct cause of 1.6 million deaths in 2015. In addition, 2.2 million people died from cardiovascular disease caused by hyperglycemia, 43% of which occurred in people under the age of 70 years (Foley et al., 2010); (Bourne et al., 2013); (Saran et al., 2015); (World Health Organization, 2016). In addition, the economic costs associated with diabetes in the form of lost jobs and income, drugs, hospitalization, and prenatal care are excessive, both for patients and the health system.

RESULTS AND DISCUSSION

Implementation procedure

The implementation procedure for conducting concept analysis is as follows: 1). Select a concept to be analysed (select a concept), 2). Determine the objective of concept analysis (determine the aims or purpose of analysis), 3). Identify all uses of

concept that can be found (identify all uses of the concept that you can discover), 4). Determine the defining attributes of the concept (Determine the defining attributes), 5. Create a model case according to the attributes of the concept (construct a model case), 6). Create borderline cases and contrasting cases (Construct borderline, contrary cases), 7). Identify the antecedents and consequences (Identify antecedents and consequences), 8). Define the empirical referents (Define empirical referents).

Followings are the description of each step:

A. *Select a concept*

Self-perceived knowledge.

The underlying reason for this is chronic and progressive patients of type 2 DM who do not know the complications of DM and how to perform a self-assessment on the development of complications.

B. *Determine the aims or purpose of analysis*

To clarify the meaning or concept of self-perceived knowledge

C. *Identify all uses of the concept that you can discover*

Table 1. *Identify all uses of the concept*

No.	Source of Reference	Definition	Keywords
1	(Park et al., 1988).	understanding and using the interrelationships between new pieces of information in decision choice to carry out tasks. It also affects individual's judgments on the importance of old and new information.	a. Information b. Decision choice c. Carry out tasks d. Individual's judgments
2	(Stein & Bransford, 1979).	individual's knowledge of information that is important to them in making decision choice.	a. Individual's knowledge b. Information c. Decision choice
3l	(Hunt & Rawson, 2011).	Improved individual's knowledge that depends on the material thus affecting memory after the tasks.	a. Individual's knowledge b. Material c. Memory d. Tasks
4	(Banta, 1987).	An unshaped matter but affected by an individual culture so as to find a meaning of the information obtained.	a. Unshaped matter b. Meaning of information c. Culturally affected
5	(Porte & Elliot, 1990)	Something that comes out of the self to know oneself, indescribable that others do not know, but is not a mask that hides the truth but can be	a. Oneself b. By shared understanding c. Has a past,

		displayed through shared understanding because it has a past, present and future and can develop within the contours of culture and environment.	present d. Develop in the culture and environment
6.	(Douglas & Affoo, 2019).	A self's confidence in the information to be able to carry out a task but the roles and responsibilities are not yet clear to report such tasks.	a. Self's confidence in the information b. Carry out a task c. Unclear roles and responsibilities
7.	(Gee & Peterson, 2016).	A fact of past and present interaction that reflects the efficacy in oneself as a result of behavioural reasoning.	a. Fact of past and present interaction b. Oneself c. Behavioural reasoning
8.	(Oxenford et al., 2017).	A self-assumption of an information that may change for the better, worse or no change.	a. Self-assumption b. May change
9.	(Selm et al., 2019).	A self-gap between identity-protective cognition for using and appreciating information that supports one's own values and opinions to establish efficacy and complete a task or solve a problem.	a. Self-gap between identity-protective cognition b. Information c. Complete a task or solve a problem
10.	(De la Fuente Coria et al., 2020)	A self-participation and autonomy to an information.	a. Self-participation and autonomy b. Information
11.	(Gardiner et al., 2019)	A self-authority to make a decision on the information obtained.	a. Self-authority b. A decision c. Information obtained
12.	(Joos et al., 2016)	An idea of self-guidance to carry out daily practice.	a. Idea of self-guidance b. Carry out daily

		practice
13. (Chang et al., 2018)	Self-idea to change the distribution of information resources for each decision-making and improve one's own quality.	a. Self-idea b. Information resources c. Decision-making d. Improve self-quality
14. (Ningthoujam et al., 2019)	A self-awareness of sufficient information to play a role in decision-making and good treatment outcome.	a. Self-awareness b. An information c. Decision-making d. Good treatment outcome
15. (Whiles et al., 2019)	A self-assessment of the information obtained, the longer one is exposed to the same information, the better understanding and decision-making.	a. Self-assessment b. Information c. Decision-making
16. (Vance Jr et al., 2018)	Individual's confidence in self-perceived knowledge to organise and carry out certain actions.	a. Individual's confidence b. Self-perceived knowledge c. Organise and carry out certain actions
17. (Acharya et al., 2019)	Something that plays an important role in oneself in managing information to carry out daily practice.	a. Important role in oneself b. Information management c. Daily practice
18. (Glenberg et al., 1982)	An illusion where there is a discrepancy between self-assessment and the achieved understanding.	a. Illusion b. Self-assessment c. Achieved understanding
19. (Linville et al., 2012)	Self-knowledge to be able to perform daily tasks effectively.	a. Self-knowledge b. Daily tasks
20. (Hunt & Rawson, 2011)	A process between conceptual and empirical reasoning that contains the domain items relevant to the domain item control.	a. Conceptual and empirical process b. Relevant

D. *Determine the defining attributes*

Followings are the attributes found:

1. Subject or self-assessment
2. Information
3. Decision choice
4. Carry out tasks
5. Culture
6. Facts of past and present

Self-perceived knowledge: self-assessment of old and new information that affects decision-making and carrying out tasks by facts from the past, present and culture.

E. *Construct a model case*

Mrs A, a 60-year old Type 2 DM patient, has been exposed to DM for 15 years. Currently, the patient has been taking medication regularly but still has no understanding of what to do when her legs feel numb and her feet gets tired quickly. The patient said that the action taken to overcome the condition of her foot was by foot exercises that had been taught. In addition, Mrs A also keeps her diabetic diet of stir-fried and steamed vegetables, brown rice and drinking warm water. Mrs A diligently practices fasting on Monday and Thursday. Mrs A dislike to eat and drink sweets because it is a custom in her family not to eat and drink sweets. Mrs A carries out self-management of diabetes because her family has a history of DM and Mrs A does not want to have DM complications such as her family history of having stroke complications due to uncontrolled glucose. At present, Mrs A can carry out her daily activities as a Koran teacher while having DM.

F. *Construct borderline, contrary cases*

Borderline case:

Mrs B, a 70-year old type 2 DM patient, has been suffering from DM for 10 years, currently at digit amputations of 4 and 5 dextra. The patient said that she had taken medicine regularly but did not know why her leg was often injured. The patient said that she regularly took medicine because her family is diligent in reminding her. Mrs B said that even if she takes medicine regularly, her eating pattern remains the same as before; she likes coconut milk, red meat and dislikes vegetables and fruits. At present, Mrs B simply stays at home because her legs hurt as she walk.

Contrary case:

Mr C, a Type 2 DM patient, 55 years old, suffering from DM for 5 years, currently not taking medication regularly, has been amputated on both legs. Mr C does not want to receive information from his family or medical personnel to treat his current condition. Mr C still smokes, is overweight and does not care about his illness because he believes that life and death is God's privilege.

G. *Identify antecedence and consequences*

Antecedence:

1. Self-awareness
2. Perception
3. Motivation

Consequences:

1. Compliance
2. Comfort (Whiles et al., 2019)
3. Quality of life

H. *Define empirical referents*

Self perception: the act or ability to perceive or understand by the senses or mind; cognition; understanding. The concept *Identify all uses of the concept of*

self-perception was chosen because the definition is close to self-perceived knowledge. Self-perceived knowledge is different from actual knowledge or objective knowledge.

Instrument: The Self Perception and Relationship Tool (Gibbons et al., 1986)

The Self-Perception and Relationship Tool (S-PRT) is intended to be a clinically responsive assessment tool and a holistic assessment of the patient's experience of illness and subjective Health-Related Quality of Life (HRQL). This instrument contains Intrapersonal well-being (physical, mental & emotional items), Interpersonal Acceptance, Interpersonal Contribution, Transpersonal Acceptance and Orientation. The conclusion of this instrument is that there is evidence supporting the validity of S-PRT as a generally accepted health measure for self-perception of health-related quality of life.

Advantages and limitations

The advantage in analysing the concept of self-perceived knowledge is knowing the concept clearly so that the author knows the operational definition and arrives at a conclusion on the empirical referents of self-perception. The concept of self-perception is close to the meaning of the concept of self-perceived knowledge.

However, the instruments obtained from self-perception do not contain all attributes on self-perceived knowledge, namely self-assessment of old and new information that affects decision-making and carrying out tasks by facts from the past, present and culture. Self-perceived knowledge of these attributes is not found in the self-perception and relationship tool instrument. Thus, further research is needed to create instruments related to

self-perceived knowledge according to the attributes obtained.

CONCLUSION

The conclusion in this study is that the meaning of the concept of self-perceived knowledge is obtained after being clarified based on the literature. Self-perceived knowledge has the attributes of Subject or self-assessment, Information, Decision choices, Carrying out Tasks, Culture as well as Facts from the past and present. Thus, the operational definition of self-perceived knowledge is self-assessment of old and new information that affects decision-making and carrying out tasks by facts from the past, present and culture. In addition, empirical referents obtained from self-perceived knowledge are self-perception. Instruments on self-perception describe an individual's perception and understanding of health related to quality of life. For further research, to determine empirical referents, it is necessary to compare the obtained instruments whether or not they are close to the attributes of self-perceived knowledge that have been obtained.

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