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FACTORS INFLUENCING THE NURSE'S ROLE AS AN EDUCATOR OF SELF-CARE MANAGEMENT FOR DIABETIC PATIENTS: A CROSS-SECTIONAL STUDY

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Abstract

Background: Nurse Educators play an important role in improving self-care management in patients with diabetes mellitus (DM). Knowledge, motivation, the role of head nurses, and workload are probably related to the nurse's role as an educator for diabetes self-care management. The purpose of this research was to investigate the relationship between knowledge, motivation, the role of head nurses, and workload with the nurse's role as an educator for diabetes self-care management.

Methods: This study used a descriptive correlative approach with a cross-sectional design. The data were collected through questionnaires. The population was all nurses on the surgical ward of dr.R. Goeteng Taroenadibrata Hospital Purbalingga, consisting of 70 participants.

Result: The results showed that 94.3% of participants had good knowledge and 47.1% had good motivation. Of the head of nurses, 66.6% fell into the 'good' category, 95.7% had a high workload and 75.7% fell into the 'good' category as nurse an educator for diabetes self-care management. The results showed a significant correlation between knowledge (p=0,046), motivation (p<0,001), and the role of head (p= 0,011) with the nurse's role as an educator for diabetes self-care management.

Conclusion: Knowledge, motivation, and the role of head nurses have a significant relationship with the nurse's role as an educator for diabetes self-care management

Keywords: *diabetes self-management, head nurse, knowledge, motivation, role, workload*

INTRODUCTION

Diabetes mellitus (DM) is a disease characterized by an increase in blood sugar levels either due to damage to the pancreas gland or caused by a body which no longer reacts to insulin (insulin resistance) (1). Between 2013 and 2018, global incidences of DM rose from 6.9% to 8.5% (2). DM can lead to both chronic and acute complications. Chronic complications include retinopathy, diabetic ulcers, neuropathy, nephropathy, stroke, and acute myocardial infarction(3), while acute complications include hyperglycemia, shock, diabetic ketoacidosis, hypoglycemia, non-ketotic coma, and hyperosmolar (4). A complication often experienced by DM sufferers is diabetic diabetic ulcer(5). This can lead to increased costs, depression, and a low quality of life for DM sufferers (6).

DM complications are the main cause of death in those who do not properly engage in self-care management. Self-care management includes controlling blood sugar, following a healthy diet, engaging in physical exercise, engaging in foot care and adhering to medication regimes (7). However, many DM sufferers do not optimally engage in self-care management. One of the reasons is a lack of knowledge and awareness. A lack of understanding can equate to a lack of self-care behaviors, but this can be overcome by health workers providing healthcare information, both in hospitals and in other healthcare environments (8).

A nurse has several roles to perform when it comes to helping DM sufferers gain an increased understanding of their disease. An important role is that of educator (8). Through education, nurses can share health information, demonstrate procedures such as self-care management activities, help their patients improve their behavior and lifestyle choices, and evaluate progress (9). According to previous study there are three factors that can influence a person's behavior or role. These factors are; predisposing factors such as knowledge and motivation, enabling factors such as infrastructure, and reinforcing factors such as the role of a leader (10)(11).

A preliminary study of ten nurses was carried out in the Lavender and Flamboyan room at RSUD dr. R. Goeteng Taroenadibrata Purbalingga, regarding the factors that influence nurses in their role as educator for self-care management. Four nurses were found to have limited interest (motivation) and nurses told us that the role was limited to conveying information about DM self-care without evaluating.

Head of nurses emphasized the importance of providing DM self-care education. However, the head nurses admitted to rarely monitoring and evaluating this roledue to a high workload. This suggests that some nurses do not have time to carry out the role of educator for diabetes self-management, and only explain things when a patient or family member asks. In addition to interviewing nurses, we also interviewed 10 DM patients in the room. Six out of 10 patients said that the nurse provided DM self-care education but did not provide continued support. Seeing the existing phenomena, we were interested in further researching the factors that influence the role of nurses as educators regarding diabetes self-management at dr. R. Goeteng Taroenadibrata Purbalingga. The factors studied were knowledge, role of head nurses, motivation and workload.

METHODS

Research Design

This research is a descriptive study with a cross-sectional design. This research was conducted at the dr. R. Goeteng Taroenadibrata Purbalingga in July 2019-January 2020. The sample was selected using a total sampling technique with a sample size of 70 nurses in the surgical and internal medicine wards. This study used a questionnaires that were adopted and modified from previous research, namely a questionnaire on knowledge, motivation, the role of the head of nurses, and the role of nurses as DM self-care educators(1). Then for the workload questionnaire using the questionnaire in Saputra's research (2019)(6). This study was approved by ethical research committee, Faculty of Health Sciences, Universitas Jenderal Soedirman, Purwokerto, Indonesia.

The data analysis used was univariate analysis and bivariate analysis. The data that will be included in the univariate analysis are respondent characteristics based on age, gender, last education, and length of work as well as independent and bound variables, namely knowledge, motivation, role of the head nurses, workload, and the role of nurses as educator for diabetes-self management.Bivariate analysis in this study is to determine whether there is a relationship between knowledge, motivation, the role of the head nurse, and workload, with the role of nurses as educators for diabetes self-management. Bivariate analysis which is used in this study was Somers'd test.

RESULT

The respondents characteristics are shown in table 1. Most respondents were females aged between 30 and 50 years. In this study, 57.1% of respondents had diploma education. Sixty four percent of respondents had spent between 1 and 10 years working in hospital. The average nurse had worked for more than one year in hospital.

Table 1. Respondent characteristics

Category	Frequency (f)	Percentage (%)
Age		
<30	16	29.9%
30-50	54	77.1%
> 50	0	0%
Gender		
Male	28	40%
Women	42	60%
last education		
D3	40	57.1%
S1	3	4.3%
Ners	27	38.6%
Length of working		
1-10	43	61.4%
11-25	27	38.6%
> 25	0	0%

Descriptions of knowledge, motivation, the role of the head of nurse, workload and the role of the nurse as an educator for diabetes self-management are shown in table 2. The results showed that almost all repondents had a good knowledge about their role as an educator (94.3%). 47% of respondents had good motivation in carrying out their role as educators about self-care management. The results showed that most of the respondents, namely 66.6%, stated that the role of the head of the room was in a good category. Table 2 also shows that almost all respondents had a high workload.

Table 2. Description of knowledge, motivation, the role of the head of the room, workload and the role of the nurse as a DM self-care educator

Category	Frequency (f)	Percentage (%)
Knowledge		
Less	1	1.4%
Enough	3	4.3%
Well	66	94.3%
Motivation		
Less	0	0%
Enough	37	52.9%
Well	33	47.1%
The role of the head of space		
Less	0	0%
Enough	22	31.4%
Well	48	66.6%
Workload		
Low	3	4.3%
High	67	95.7%
The role of the DM nurse educator self-care		
Less	0	0%
Enough	17	24.3%
Well	53	75.7%

The results showed a significant correlation between knowledge (p=0,046), motivation (p<0,001), and the role of head (p= 0,011) with the nurse's role as an educator for diabetes self-care management.

Table 3.The relationship between knowledge, motivation, the role of head of nurse, and the workload with the role of nurses as and educator for diabetes self-management

		The role of the nurse as a DM self-care educator		Total	r	P
		Enough	Well			
Knowledge	Less	0	1	1	0.075	0.046
	Enough	0	3	3		
	Well	17	49	66		
Motivation	Less	0	0	0	0.545	<0.001
	Enough	16	21	37		
	Well	1	32	33		
The role of the head of nurse	Less	0	0	0	0.362	0.011
	Enough	10	12	22		
	Well	7	41	48		
Workload	Low	1	2	3	0.021	0.737
	High	16	51	67		

DISCUSSION

Ours study showed that almost all respondents has a good knowledge of 94.3% about the role as an educator for diabetes self-management. This is in line with research by Safitri (2017) that revealed 92% of nurses have good knowledge about their role as educators(1). Knowledge of the competence of the role of nurses as educators about DM self-care includes cognitive, affective, and psychomotor aspects. Nurses are said to have good knowledge about their role as DM self-care educators if these three aspects are in the nurse (WHO 2016). Nurses have already obtained knowledge about the competence of the role of nurse educators at the lecture stage, where one of the courses contains material on education and health promotion.

In this study, 47% of respondents had good motivation in carrying out their role as educators about DM self-care. These results are in line with previous research conducted by Netanya et al. (2019) 51,% of nurses have good motivation in carrying out their duties(6). A nurse's motivation can come from within as well as encouragement from outside. Nurses realize that the role of educators is their responsibility so that nurses always take the time to provide health education about DM self-care(3).

In this study, 66.6%, stated that the role of the head of the room was in a good category. The results of this study are in line with research conducted by Raodhah, Nildawati & Rezky (2017)that 86.3% of respondents stated that the role of the head of the room was in a good category (12). The head of the room as a manager and leader has an important role in improving the performance of its members. Most of the nurses assessed the role of the head of the room in the good category because the head of the room always provided support, guidance, and always had a good relationship with the nursing staff in carrying out the role as a DM self-care educator. In addition, the head of the room also gave direction to the nursing staff regarding providing education about DM self-care to patients.

Our study showed that almost all respondents had a high workload. The workload, in this case, includes mental, physical, time, performance, effort, and frustration levels (2019 Saputra)(6). Previous research conducted byKimalaha, Mahfud & Anggraini (2018)found that most nurses (52.3%) had a high workload(12). The high workload is influenced by several things such as the number of patients, types of direct and indirect services, both independent and collaborative, as well as administrative activities such as recording manual medical records and many more. Of course, these activities require time, a level of effort, a high level of frustration, and performance to complete. In addition, nurses who work shifts at night also require high mental and performance where they must continue to do activities when they should be used for sleeping. Based on this, almost all nurses think that their workload is high.

Most of the roles of nurses as educators are about DM self-care in dr.R. Goeteng Taroenadibrtata Purbalingga is in a good category. It is said to be good because they apply these three aspects such as preparing material from trusted sources such as accredited journals and books, providing support to patients, facilitating patients in understanding DM self-care material, always maintaining good relations with patients, and being able to use media according to patient material and character. Meanwhile, nurses are in a sufficient category because they have not provided support to patients. Whether or not nurses carry out their roles is also related to the motivation of nurses, where not all nurses have good motivation in carrying out this role.The relationship of knowledge, motivation, the role of the head of the room and workload with the role of nurses as a DM self-care educator

Our study showed that there was a significant relationship between knowledge and the role of nurses as educators about DM self-care with a value of $p = 0.046$ ($p < 0.05$). These results are supported by the statement by Notoatmodjo (2014) that knowledge is a predisposing factor that can affect a person's role. Previous research conducted by Safitri (2017)also showed that there was a significant relationship between knowledge and the role of nurse educators with a value of $p = 0.016$ ($p < 0.05$)(12). Knowledge of the competence of the role of the DM self-care nurse educator includes cognitive, affective, and psychomotor knowledge. Nurses who have a good knowledge regarding their role as educators can be a basis for being able to carry out that role well too. Increasing knowledge is needed so that nurses' insight can increase so that the role of the educator can be carried out optimally and with quality. Increasing knowledge can be done by continuing to higher education levels.

The results showed a significant relationship between motivation and the role of nurses as DM self-care educators with a value of $p < 0.001$ ($p < 0.05$). These results are in line with the previous study that revealed that there is a relationship between motivation and the level of nurse compliance ($p = 0.000$)(12). Motivation is a strong enough factor in influencing the role of nurses as DM self-care educators with a value of $r = 0.545$, which means that the better the motivation of nurses, the better the role of nurses as DM self-care educators. The motivation contained in a person is closely related to satisfaction. If someone feels satisfied in carrying out an activity or job, it can drive a strong motivation so that they will be enthusiastic in carrying out their role and get good performance.

The results showed that there was a significant relationship between the role of the head of the room and the role of the nurse as an educator of DM self-care ($p = 0.011$). The correlation value of these results is positive at $r = 0.362$, which means that the better the role of the head of nurse, the role of the nurse as an educator about self-care, DM will also be good. This research is in line with researchRaodhah, Nildawati & Rezky (2017)which shows that there is a relationship between the role of the head of the room with the performance of nurses in the inpatient room at Syekh Yusuf District Hospital. Gowa ($p = 0.014$)(12). The success of the nurse's role as a DM self-care educator can be determined from the role of the head of the room through good planning, then coordination between the nurse and the head of the room, a clear division of responsibilities, and direction from the head of the room to increase the effectiveness of the nurse educator's role and create a work environment. which is healthy (9). In addition, support

from the head of the room such as the provision of DM self-care media provides rewards to increase motivation and directs nurses in carrying out the role of DM self-care educators. After this function is carried out, the head of the room also needs to supervise/control so that he can immediately make improvements if there are nurses who do not carry out their educator roles.

Furthermore, the results showed that there was no relationship between workload and the role of nurses as DM self-care educators (p = 0.737). The results of these studies are in line with the previous study that is, there is no relationship between workload based on direct activities and administrative activities with nurse performance (10). The results of this study indicate that the average nurse in the Mardi Waluyo Inpatient Ward, Blitar City has a high workload and produces good performance. Nurse workload is all activities or activities carried out by a nurse while on duty in health services (11).

Some nurses stated that their workload was high because nurses did not only carry out their main/independent duties but often carried out collaborative actions, delegation actions, and even administrative actions such as preparing patients to go home, administering when patients entered, etc. In addition, the nurses also said that working night shifts required a higher level of physical need and effort. This workload is a subjective workload (13). Administrative and collaboration activities are not fully the main task of a nurse, so they do not have direct responsibility for these activities. So they don't really think about doing it and the main task of nurses, namely nursing care, such as providing education, can still be done by nurses. Providing education about DM self-care can be done by nurses at any time or be more flexible so that even though their workload is high, nurses can still run it.

CONCLUSION

This is the first study to reveal that knowledge, motivation, and the role of the head of nurse has a significant relationship with the role of the nurse as an educator for diabetes self-care management. Our study provides important evidence that can be used as a guide to develop program to improve nurses role as an educator for diabetes self-management.

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