

The Role of Nurses on the Psychosocial Quality of Type 1 Diabetes Mellitus Patients in a Hospital in Lombok, Indonesia

Chairun Nasirin

Abstract--- *Diabetes mellitus is a chronic condition characterized by increased concentrations of blood glucose or high blood sugar accompanied by the emergence of a typical main symptom of urine that tastes sweet in large amounts. World Health Organization confirmed that diabetes mellitus is one of the 10 main diseases causing 382 million deaths. The role of nurses is significant in maintaining the quality of life of patients and providing psychosocial support to patients with diabetes mellitus. The purpose of this study was to determine the role of nurses on the psychosocial quality of life of type 1 diabetes mellitus patients at a hospital in East Lombok, Indonesia. The population in this study were all type 1 diabetes mellitus clients totaling 100 people at the hospital, with the sample in this study being 70 respondents using total sampling techniques. By using analysis of data using Spermank ranks test, the results of this study indicate that there is a relationship between the role of nurses on the psychosocial quality of life of type 1 diabetes mellitus patients at the hospital. As evidenced by the results of the Sperman rank test with the value of $p\text{-value} < \alpha$ ($0.00 < 0.05$), this study confirmed that there is a relationship between the role of nurses on the psychosocial quality of life of type 1 diabetes mellitus patients.*

Keywords--- *Nursing Practice, Role of Nurses, Psychosocial Rehabilitation, Quality of Life, Diabetes Mellitus.*

I. INTRODUCTION

Psychosocial quality of life is an individual's perception of their position in life in the cultural context and values in which they live and in relation to life goals, expectations, standards and attention (WHOQoL Group, 1994; Suurmeijer et al., 2001). Problems with the psychosocial quality of life of patients with diabetes mellitus are quite complex problems (Herpertz et al., 2000). The results show that diabetes mellitus has an adverse effect on quality of life (Grey et al., 2000). Diabetes mellitus is a metabolic disease that is included in the blood sugar group that exceeds normal limits or hyperglycemia (more than 120mg / dl or 120mg%). Diabetes Mellitus is classified based on its etiology, namely type 1 diabetes and type 2 diabetes, gestational type, and diabetes mellitus is a metabolic disease characterized by increased glucose levels in the blood caused by hormonal disorders in the form of insulin resistance or disruption in insulin production (American Diabetes Association, 2014). The classification of diabetes mellitus based on its etiology is divided into 2, namely type 1 diabetes mellitus caused by damage to pancreatic cells due to an autoimmune process, whereas type 2 diabetes mellitus is caused by insulin resistance and impaired insulin secretion. Insulin resistance is a decreased ability of insulin to stimulate glucose uptake by peripheral tissues, thus inhibiting its production to the liver. The role of health workers here is a form of behavior expected from someone in certain situations that are given duties or responsibilities in a professional manner, in accordance with a professional code of ethics.

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Nurses are health workers who play a role in caring for or maintaining, and protecting someone who is sick. Skilled nurses are expected to handle cases of diabetes mellitus properly and correctly and provide health education to patients and families related to diabetes mellitus. therefore there needs to be competence from a nurse so that the care provided is more quality. In addition, the role of nurses is as implementing nursing services, managing nursing services, and educational institutions, as well as care providers, advocates, coordinators, collaborators, consultants, and innovators (Siminerio et al., 2007; Fain & Melkus, 1994). Nurse competence becomes an important part in developing a nurse in carrying out her duties so that the objectives of the health service provided will be achieved. The competence that must be possessed by a nurse in an internal medicine room can provide nursing care to patients with diabetes mellitus. Previous studies explain the important role of nurses in healing and quality of life of patients, as well as providing psychosocial encouragement for patients with diabetes mellitus (Siminerio et al., 2007; Loveman et al., 2003; Peimani et al., 2010; Drincic et al., 2017; Moser et al., 2006; Chan et al., 2006; Robertson, 2012).

Based on data from the WHO (World Health Organization), diabetes mellitus is one of the 10 leading causes of 382 million deaths, an estimated 382 million people, 175 million of whom have not been diagnosed. And the number of people with diabetes mellitus in 2035 that number will increase to 592 million people. Furthermore, the data shows NTB province occupies the 5th highest position of 25,439 (1%), with the incidence of diabetes mellitus in NTB increasing every year.

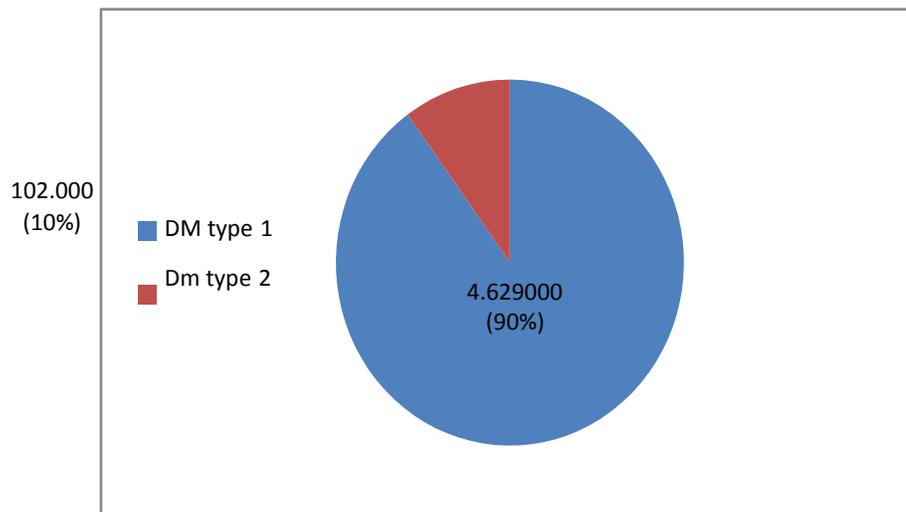


Figure 1: DM patients by type in Indonesia

This study was conducted at Namira Hospital in East Lombok, Indonesia. Data obtained from the hospital for the past 6 months recorded that there were 366 patients with Diabetes Mellitus Type 1 in May to October 2017. This study seeks to analyze the role of nurses on the psychosocial quality of life in patients with type 1 diabetes mellitus at the hospital. Hence, this study is to examine the role of nurses on psychosocial quality of life in type 1 diabetes mellitus patients at the hospital and to find out the psychosocial quality of life in type 1 diabetes mellitus patients at the hospital.

II. LITERATURE REVIEW

2.1. Psychosocial Quality for the Welfare of Diabetes Mellitus Patients

Psychosocial quality of life is an individual's feelings about his health and well-being which includes physical functions, psychological functions, and social functions, and the environment as well as feelings of satisfaction and happiness (WHOQoL Group, 1994; Suurmeijer et al., 2001). Factors affecting the psychosocial quality of life are age, sex, level of education, socioeconomic status, duration of DM, and complications due to DM (Gonzalez-Zacarias et al., 2016; Tessier et al., 2014). Yusra (2011) stated that psychosocial quality of life is an individual's feelings about his health and well-being which includes physical function, psychological function, and social function. Handayani et al. (2013) explains the psychosocial quality of life is a feeling of satisfaction and happiness so that patients can carry out their daily lives properly. Factors affecting the psychosocial quality of life are age, sex, and socioeconomic status. The psychosocial quality of life is a feeling of satisfaction with individuals regarding their health and well-being which includes physical function, psychological function, and social function.

2.2. Nurses to provide health services for patients with diabetes mellitus

A nurse is someone who has graduated from a tertiary institution of nursing, both inside and outside the country that is recognized by the government in accordance with statutory provisions. Nurses provide a form of professional services in the form of meeting the basic needs provided to healthy and sick individuals who experience physical, psychological, and social disorders can achieve optimal health degrees in carrying out the role of nurses. A nurse is someone who has graduated from a tertiary institution of nursing, both inside and outside the country that is recognized by the government in accordance with statutory provisions. Nurses provide a form of professional services in the form of meeting the basic needs provided to healthy and sick individuals who experience physical, psychological, and social disorders can achieve optimal health degrees in carrying out the role of nurses. Based on Law No. 38 of 2014, a nurse is someone who has graduated from a tertiary education in nursing, both inside and outside the country that is recognized by the government. Another case with Nursalam (2015) explains that Nursing is a form of professional service in the form of meeting the basic needs provided to healthy and sick individuals who experience physical, psychological, and social disorders can achieve optimal health degrees in carrying out the role of nurses. From the explanation above, a nurse is someone who has graduated from a tertiary education in nursing, both inside and outside the country, which is recognized by the government in accordance with statutory provisions.

Professionalism can be seen from how nurses carry out their duties in nursing services and the special skills of nurses who will carry out their duties in order to remain in the corridor, while the characteristics of professional nurses in providing nursing services in the future is that they must be able to communicate fully, adequately, and quickly. Based on Sumijatun (2017), professionalism can be seen from how nurses carry out their duties in nursing services and the special skills of nurses who will carry out their duties to remain in their corridors. This is in accordance with Nursalam (2015) explaining the characteristics of professional nurses in providing nursing services in the future is that they must be able to communicate completely, adequately, and quickly. Professionalism can be seen from how nurses carry out their duties in nursing services and the special skills of nurses. The role of the nurse is as a health provider, manager of nursing services, and educational institutions, educators, providing nursing care

and nursing development. The role of nurses in the future must develop along with the development of science and technology and community demands, so nurses are required to be able to take responsibility and anticipate the impact of change. As a professional nurse, her role is CARE (Communication, Activity, Review, Education and career).

III. RESEARCH METHODS

The research method is a way or a means to an end, so the selection of methods in research activities depends on the research objectives. This chapter will present research subjects, populations, samples and sampling techniques, research designs, data processing techniques, data collection techniques, identification of variables, operational definitions, data analysis, ethics, and frameworks (Nasirin, 2009). Research subjects are the intended subjects to be investigated (Hidayat, 2017). In this study the subject of the study were nurses working at Namira Hospital and type 1 diabetes mellitus patients the hospital. The population in this study were 100 nurses working at the hospital and 100 type 1 diabetes mellitus patients at the hospital in East Lombok. In this study, the samples were nurses who worked at the hospital and type 1 diabetes mellitus patients at the hospital. The sampling technique in this study is to use the Nonprobability sampling technique with total sampling, namely the way of taking samples by taking all population members into a sample, this method is done if the population is small (Hidayat, 2017).

In this study data collection methods and research instruments used in independent and dependent variables are both using questionnaire sheets and observation sheets, with a Likert scale from 1 (strongly disagree) to 5 (strongly agree).

The independent variable in this study is the role of nurses, while the dependent variable in this study is Diabetes Mellitus type 1. The role of nurses is defined as health workers who play a role in caring for or maintaining, and protecting someone who is sick. Psychosocial quality of life is an individual's perceptions regarding his health and well-being which includes physical, psychological, social and environmental functions.

In conducting research, researchers previously requested permission letters from the Hospital Director for approval. After getting approval then conduct research by emphasizing ethical issues that include Informed Consent, Anonymity, and Confidentiality

Analysis of the data in this study is the result of a questionnaire that is tabulated and analyzed to prove whether the role of nurses on the psychosocial quality of life of type 1 diabetes mellitus patients using the sperman rank test. Sperman Rank (Rho) is a statistical test tool to measure the level or close relationship between two ordinal scale variables with an error rate $\alpha = 0.05$. Data processing in this study was carried out with the help of a computer through SPSS Version 21.

IV. RESULTS

The incidence of diabetes mellitus in East Lombok is increasing from year to year, because Based on Darmono (2010) the cause of type 1 diabetes mellitus is that the gene in the HLA region of chromosome 6 is only found in type 1 diabetes mellitus (genetic), viral or bacterial infections can spur the onset of symptoms of diabetes mellitus through non-specific stress, and viruses can cause cytolytic infections in beta cells with the result of cell destruction

and stimulate an autoimmune reaction that causes autoimmune lesions on beta cells (viruses and bacteria), some toxic substances that can damage Beta cells directly include alloxan, pyrinuron and streptozocin (toxic substances), and diabetes mellitus is known as a disease related to nutrition, both as an etiological factor or treatment, excessive nutrition is the first known risk factor for diabetes (nutrition).

Associated with an increase in population, poor lifestyle, and less physical activity, and a poor lifestyle. The overall incidence of diabetes mellitus at the Namira Islamic Hospital in East Lombok totaled 616 from May to October, and the factors that favored patients chose to seek treatment at the hospital. In terms of services provided were good in terms of knowledge of nurses, specialist doctors, friendly medical team, complete facilities such as operating room, hemodialysis, physiotherapy, radiology, front office and laboratory.

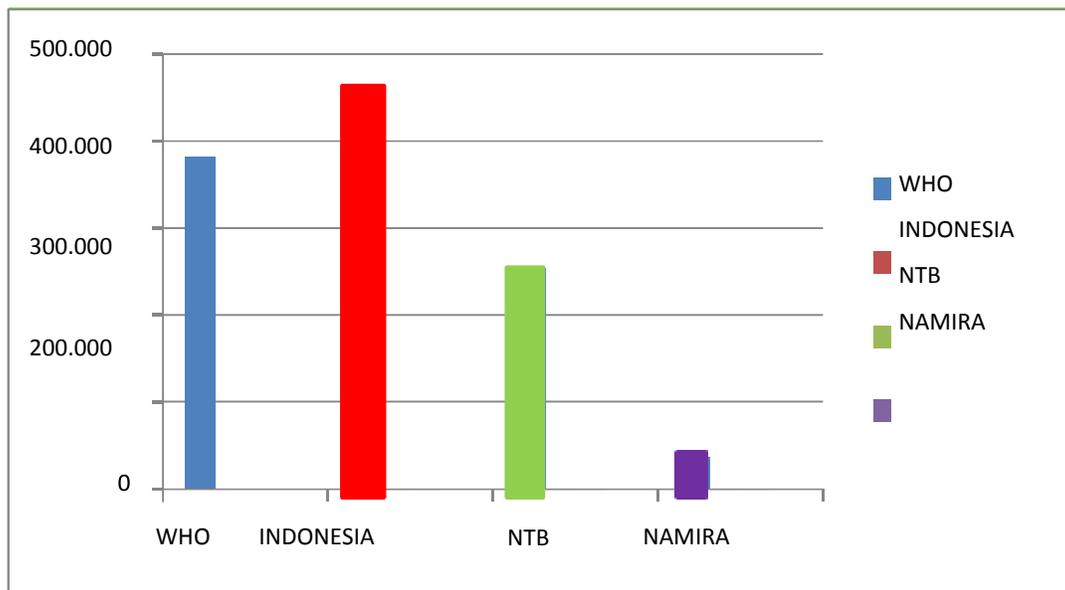


Figure 2: Diabetes Mellitus Incidence Rate

Based on data from the WHO (World Health Organization) diabetes mellitus one of the 10 main diseases causing 382 million deaths. And the number of people with diabetes mellitus in 2035 that number will increase to 592 million people. It is estimated that of the 382 million people, 175 million have not been diagnosed. In Indonesia, the incidence of diabetes mellitus is 564,900 cases. Which where type 1 diabetes mellitus is 4.62900 (10%) while type 2 diabetes mellitus is 102,000 (90%) of all diabetes. NTB province occupies the 5th highest position with 25,439 (1%). The incidence of diabetes mellitus in NTB is increasing every year. While the number of type 1 diabetes mellitus patients from data obtained from the hospital during the past 6 months recorded that type 1 diabetes mellitus patients in May to October 2017 were 366 people. Which is where the number of patients with diabetes mellitus each year increases.

Based on the results of field research, the services provided are quite good, nurses and medical teams who work are very friendly and helpful when researchers conduct research. Namira Hospital organizes health services that can meet the needs and desires of the community through the development of an integrated and comprehensive service system and improve the quality of human resources through the fulfillment of trained and professionally educated

personnel. Table 1 shows the role of nurses as educators on the psychosocial quality of life of type 1 diabetes mellitus patients at the hospital.

Table 1: The Role of Nurses on the Psychosocial Quality of Type 1 Diabetes Mellitus Patients

No	Role of the nurse	Frequency (n)	Percentage (%)
1.	Excellent	35	50.00
2.	Moderate	20	28.57
3.	Marginal	15	35.71
Total		70	100

Table 1 shows that the role of nurses is good as many as 35 respondents (50.00%), the role of nurses is quite as much as 20 respondents (28.57%), and the role of nurses with poor psychosocial quality is as much as 15 respondents (35.71%). This is in accordance with the definition of the nurse's role as an educator according to Mubarak & Chayatin (2012), which explains that this role is carried out by assisting the client in helping the client and helping the client in increasing the level of his health knowledge, symptoms of the disease and even actions given, resulting in changes in the behavior of the client after providing health education. The role of nurses can be performed by health workers (nurses) and members of other professions, both in formal and non-formal forms. Teaching conducted aims to improve and maintain health. The focus of teaching can take the form of: planting healthy behavior, improving nutrition and regulating diet, exercise, stress management or management, education about the disease process and the importance of sustainable treatment, education about drug use, and education about self-care.

The findings also indicate that the psychosocial quality of life of type 1 Diabetes Mellitus patients at the hospital is in accordance with the research findings data, from 78 respondents with good psychosocial quality as many as 48 respondents (55.17%), and respondents with quality psychosocial life was as marginal as 39 respondents (44.82%).

Table 2: Psychosocial quality of life of Type 1 Diabetes Mellitus Patients

No	Psychosocial quality	Frequency (n)	Percentage (%)
1.	Good	52	74.28
2.	Marginal	18	25.71
Total		70	100.00

Table 2 shows that respondents with good psychosocial quality were 52 respondents (74.28%), and respondents with poor psychosocial quality were 18 respondents (25.71%). Prevention of diabetes mellitus by patients and families in type 1 diabetes is as early as possible with very strict control of blood sugar levels, set adequate sleep time, eating patterns with balanced nutrition, exercise, and maintaining nutrition. Nuari (2016) said that the psychosocial quality of life is a result reported by patients that includes physical aspects, functions, social, and emotional states of a person with diabetes mellitus. One of the factors that encourage the need for psychosocial quality of life, especially for diabetes mellitus patients, is that diabetes mellitus is a chronic disease that cannot be treated, but if controlled properly, it can inhibit or prevent complications.

In this study the most psychosocial quality of life that is good psychosocial quality of life is as many as 52 respondents (74.28%), psychosocial quality of life is good due to social, economic, psychological, and

environmental functions in patients with type 1 Diabetes Mellitus can be fulfilled, so it has feeling happy about their health and well-being and being able to live their daily lives properly.

Statistical analysis on the role of nurses on the psychosocial quality of life of type 1 Diabetes Mellitus patients at the hospital, revealed the role of nurses on the psychosocial quality of life of type 1 Diabetes Mellitus patients using the Sperman Rank Test with a p-value level of α 0.05%.

Table 3: Spearman's rho analysis on the relationship of nurse's role and patient's psychosocial quality

		Role of Nurses	Quality of life
Role of Nurses	Correlation	1.000	.539**
	Coefficient Sig. (2-tailed)	.	.000
	N	70	70
Quality of life	Correlation	.539**	1.000
	Coefficient Sig. (2-tailed)	.000	.
	N	70	70

** . Correlation is significant at the 0.01 level (2-tailed).

Based on the results of statistical analysis using the Sperman Rank Test and its completion using the spss windows version 21.0 program, it was found that N or the amount of research data were 87 respondents and p value $<\alpha$ (0.00 <0.05), so it can be concluded that Ha was accepted with the conclusion that there is a nurse's role on the psychosocial quality of life of type 1 diabetes mellitus patients at the hospital. A nurse is someone who has graduated from a tertiary institution of nursing, both inside and outside the country that is recognized by the government in accordance with statutory provisions. Nurses provide a form of professional services in the form of meeting the basic needs provided to healthy and sick individuals who experience physical, psychological, and social disorders can achieve optimal health degrees in carrying out the role of nurses (Sumijatun, 2017). Psychosocial quality of life is a conceptual measure or Operations are often used in chronic disease situations as a way to assess the impact of therapy on patients. Measurement of the psychosocial quality of life encompasses well-being, quality of survival, the ability of a person to independently perform daily activities (Nofitri, 2009).

The results also showed that respondents with good psychosocial quality were 48 respondents (51.17%), and respondents with poor psychosocial quality were 39 respondents (44.82%). This is in accordance with Laoh and Tampongangoy (2015) that the psychosocial quality of life is a perception or subjective view of diabetes mellitus patients towards perceived satisfaction, both to physical abilities (daily activities, rest and sleep), psychological (self-image, body image and appearance), social relationships (social support and sexual activity), and the environment (health environment, opportunities to obtain information and skills, recreational opportunities and free time). Yudianto (2011), that the psychosocial quality of life of an individual's feelings about his health and well-being includes physical functions, psychological functions, and social functions, and the environment as well as feelings of satisfaction and happiness so that patients with diabetes mellitus can carry out their daily lives properly.

V. CONCLUSION

The results of the analysis about the role of nurses on the psychosocial quality of life of type 1 diabetes mellitus patients at the Namira Hospital revealed that the role of nurses on the psychosocial quality of life of type 1 diabetes mellitus patients at the hospital is a nurse good as many as 35 respondents (40.22%), the role of nurses is 27

respondents (31.04%) and the role of nurses with poor psychosocial quality of life is 25 respondents (28.73%). The psychosocial quality of life for type 1 diabetes mellitus patients at the hospital, is the good psychosocial quality of 48 respondents (55.17%), the psychosocial quality of life is poor as many as 39 respondents (44.82%). The Sperman Rank Test found that N or the amount of research data were 100 respondents and the value of p value $< \alpha$ (0,000 < 0.05) so it can be concluded that H_a was accepted with the conclusion that there is a nurse's role in the psychosocial quality of life of patients with diabetes mellitus type 1 at the hospital

This study encourages the general public to take care of their health and their families, as well as the environment, and nutrition in order to avoid type 1 diabetes mellitus. Patients with type 1 diabetes mellitus always visit regularly to the hospital to check their health, seek medical treatment routinely and always take care of their health by maintaining their diet and personal hygiene so that they are not the easiest to contract the disease. The related institutions are expected to continue to conduct counseling and outreach to the entire community, especially people with diabetes mellitus regarding the importance of maintaining health. Theoretically, this study can add insight and knowledge about type 1 diabetes mellitus, how to prevent it and can be a guideline in carrying out nursing care in patients with diabetes mellitus, and can be used as a reference in helping patients to understand related to the disease and obtain information about the disease. The results of this study are used as input for policy decisions for health workers to develop nursing knowledge and to treat and treat patients. The application of the role of nurses to the psychosocial quality of life of diabetes mellitus patients at the hospital to assist in the process of increasing the regularity of diabetes mellitus patients' visits at the hospital.

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