



## Effect Of Peer Education Towards Self-Care On Diabetes Mellitus Patients In RSUD Panembahan Senopati Bantul Yogyakarta

Dewi Wijayanti<sup>1</sup>, Untung Sujianto<sup>2</sup>, Achmad Zulfa Juniarto<sup>3</sup>

<sup>1</sup>Universitas Borneo Tarakan Amal Lama, Tarakan, Kalimantan Utara 77115 <sup>2</sup>Universitas Diponegoro Jl. Prof. H. Soedarto, S.H. Tembalang, Kota Semarang, Jawa Tengah 50275, Indonesia <sup>3</sup>Universitas Diponegoro Jl. Prof. H. Soedarto, S.H. Tembalang, Kota Semarang, Jawa Tengah 50275, Indonesia  
Email: iwed101112@yahoo.co.id

### Abstrak

*Perawatan Diri adalah implementasi dari kegiatan yang didasari oleh kesadaran diri dan dilakukan oleh individu itu sendiri untuk memenuhi kebutuhan dalam mempertahankan kehidupan, kesehatan, dan kesejahteraan sesuai dengan keadaan kesehatan dan penyakitnya. Pemberdayaan kemandirian dilakukan oleh pasien Diabetes Mellitus (DM) disebut DM perawatan diri dengan salah satu tujuan dalam melakukan tindakan independen adalah untuk mengendalikan Diabetes Mellitus sehingga dapat meminimalkan terjadinya komplikasi. Pendidikan adalah sumber informasi yang dapat membantu pasien diabetes mellitus dalam mengambil keputusan perawatan diri yang tepat tindakan keperawatan. Tujuan penelitian ini adalah untuk mengetahui pengaruh pendidikan sebaya terhadap perawatan diri pada pasien dengan Diabetes Mellitus. Jenis penelitian kuantitatif dengan pre-test desain penelitian eksperimen semu dan post-test control group. Jumlah sampel dalam penelitian ini adalah 21 pasien Diabetes Mellitus di Rumah Sakit sesuai dengan kriteria inklusi dan eksklusi dalam penelitian ini. Pengambilan sampel menggunakan teknik purposive sampling, pengumpulan data menggunakan kuesioner The Personal Model Of Self Care Diabetes Questionnaire yang terdiri dari 9 item pertanyaan. Analisis penelitian menggunakan univariat dan distribusi frekuensi. Hasil penelitian menunjukkan bahwa pasien dengan kategori perawatan diri Diabetes Mellitus sebanyak 16.7% dan perawatan diri dengan kategori kurang baik sebanyak 83.3%. Berdasarkan hasil penelitian, dapat disimpulkan bahwa perawatan diri pasien diabetes mellitus dalam melakukan tindakan diri untuk meminimalkan terjadinya komplikasi pada kategori kurang baik.*

**Kata kunci :** Pendidikan Sebaya, Perawatan Diri, Diabetes Mellitus

### Abstract

*Self-care is an implementation of activities based on self-awareness and conducted by the individual itself to meet the needs in maintaining life, health, and well-being in accordance with the state of health and illness. Self empowerment conducted by Diabetes Mellitus (DM) patients called self-care DM with one of the goals in performing independent actions is to control the Diabetes Mellitus so as to minimize the occurrence of complications. Education is a source of information that can help diabetes mellitus patients in taking decisions appropriate self-care nursing actions. The purpose of this study is to determine the influence of peer education against self-care in patients with Diabetes Mellitus. This research was quantitative research with pre-test design of quasi experimental research and post-test control group. The number of samples in this research were 21 patients with Diabetes Mellitus in the Hospital according to inclusion and exclusion criteria in the study. Purposive sampling technique was used and data were collected by using The Personal Models Of Self Care Diabetes Questionnaire that consists of 9 items of questions. The data analyzed by using univariate and frequency distribution. The results showed*

that patients with Diabetes Mellitus self-care category as much as 16.7% and self-care with less good category as much as 83.3 %. Based on the results of the study, it can be concluded that self-care nursing diabetes mellitus patients in performing self-actions to minimize the occurrence of complications in the category less good.

**Keywords:** Peer Education, Self-care, Diabetes Mellitus

*Article info:*

*Article submitted on September 05, 2018*

*Articles revised on October 07, 2018*

*Articles received on November 01, 2018*

*DOI: [http://dx.doi.org/10.21927/jnki.2018.6\(3\).175-180](http://dx.doi.org/10.21927/jnki.2018.6(3).175-180)*

---

## INTRODUCTION

Diabetes Mellitus (DM) is a group of metabolic diseases characterized by hyperglycemia that occurs due to carbohydrate metabolism, fat and protein metabolism, resulting in abnormalities of insulin secretion and insulin work or both (1). Clinically there are two types of diabetes Mellitus, the type I diabetes caused by a metabolic disorder characterized by an increase in blood sugar levels due to damage to pancreatic beta cells for a certain cause that causes insulin production is not there at all so that the patient is in need of additional insulin from the outside, and type II DM are the most common cases (90% -95% of all cases of diabetes) who generally have background abnormalities with insulin resistance (1,2). Diabetes mellitus type II is slow for many years and is progressive, where symptoms experienced patients are often mild as fatigue, irritability, polyuria, and long-term injuries (2).

Diabetes prevalence is increasing from year to year. The World Health Organization (WHO) said in 2006 at least 171 million people had diabetes mellitus and would double by 2030 (3). WHO concluded that in 2010 Indonesia ranks 4th largest in the world after India, China and USA in the number of diabetics in the world. Diabetes mellitus in Indonesia ranks third of the 10 major deadly diseases after stroke ranks first and ischemic heart disease is ranked second.

In Indonesia, according to the Basic Health Research Report (Risksdas 2015) the prevalence of DM patients in 2015 (2.1%) has increased compared to the year 2013 (1.1%), where the highest prevalence of DM is in DI Yogyakarta province, with prevalence value (2.6%), followed by DKI Jakarta (2.5%) and North Sulawesi (2.4%) (4). Surveilans Integrated Disease Report (STP) Puskesmas and Hospital Information System (SIRS) in D.I Yogyakarta province in 2014 there are 17.434 cases of DM where DM disease is ranked fifth out of 10 major diseases in D.I Yogyakarta.

Actions that support the management of diabetes mellitus are self-care measures, because diabetes mellitus is a common chronic disease in adults who require ongoing medical supervision. Forms of self-care in patients with diabetes mellitus include the regulation of nutrition, physical activity, drug use and blood glucose monitoring, the form of self-care is not an easy thing for DM patients, where DM patients have the desire, self-awareness that cannot be separated from information about his or her health and education that has been obtained for the handling of illnesses independently (5).

Health education is one of the basic factors that can condition someone to be able to improve self-ability, increase their knowledge, skill and attitude of self, where the process of understanding patient Dm this happened through health education. Education is a form of activities and nursing service that is an

important part of the role of professional nurses in health promotion and preventive efforts that can be done in hospital or outside the hospital, the provision of appropriate information to give a positive impact for patients in fast and proper management of the illness (5,6).

Researchers conducted interviews with patients with DM as many as 13 patients in the Hospital, with the results of the interview is their ignorance in the handling and prevention of complaints they feel, what self-care measures appropriate to be done by patients, to overcome the perceived complaints. Patients said that during the suffering of DM disease and at the time of care, the information obtained is very less even there are patients who say not yet get information about the handling of illness in suffering. Therefore based on the above phenomenon researchers feel very important to do research on the Effect of Peer Education against Self-care on Diabetes Mellitus Patients.

## MATERIALS AND METHODS

This research was quantitative research with pre-test design of quasi experimental research and post-test control group design. It was to analyze and compare the influence of peer education to increase self-care DM in intervention group and control group (7).

The intervention group was given a questionnaire about self-care DM before and after peer education. The control group received only self-care DM education and health information from health workers without intervention by educators or other health workers. At the end of the study, the researcher conducted a post-test by giving a questionnaire to the control group and the intervention group (8). The number of samples in this study were 21 Diabetes Mellitus patients in the Hospital according to the inclusion and exclusion criteria in the study. Purposive sampling technique was used and the data were collected by using The Personal Models of

Self-care Diabetes Questionnaire consisting of 9 items of questions. The data then analyzed by using univariate and frequency distribution.

## RESULTS AND DISCUSSION

The results of research conducted towards 21 respondents with diabetes mellitus in the hospital on February 2018 that were categorized as good and poor self-care can be described in the table below.

**Table 1: Frequency Distribution of Education on Self – Care In Diabetes Mellitus Patients Before Intervention at RSUD Panembahan Senopati Bantul Yogyakarta Year 2018 (n = 21)**

Group Variable	Self-care	
	Good	Poor
Intervention	2 People (16.7%)	10 People (83.3%)
Control	1 People (11.1%)	8 People (88.9%)
Total	21 People (100%)	

Table 1, showed that in intervention group, respondents who had good self-care were 2 people (16.7%) and respondents who had poor self-care were 10 people (83.3%). The same condition was shown in the control group that as many as 1 person (11.1%) who had good self-care and 8 people (88.9%) had poor self-care. Based on table 1, it can be concluded that before the intervention, the majority of respondents, both in the control group and the intervention group, had poor self-care.

**Table 2. Self - Care in Diabetes Mellitus Patients (Respondents) After Intervention at RSUD Panembahan Senopati Bantul Yogyakarta Year 2018 (n = 21)**

Group Variable	Self Care	
	Good	Poor
Intervention	11 People (91.7%)	1 People (8.3%)
Control	3 People (33.3%)	6 People (66.7%)
Total	21 People (100%)	

Table 2 shows that in intervention group, after receiving treatment, respondents who had good self-care were 11 people (91.7%) and respondents who had poor self-care was only 1

person (8.3%). The same condition was shown in control group, that there were 3 people (33.3%) who had good self-care and 6 people (66.7%) who had poor self-care. Based on table 2, it can be concluded that after intervention, the majority of respondents, both in control group and intervention group, were statistically increased. Furthermore, the intervention group experienced a significant increase, while the control group experienced an insignificant increase in foot gymnastic self-care.

Diabetes mellitus is a common chronic disease in adults who require ongoing medical supervision. Forms of self-care in patients with diabetes mellitus include the regulation of nutrition, physical activity, drug use and blood glucose monitoring, the form of self-care is not an easy thing for DM patients, where DM patients have the desire, self-awareness that cannot be separated from information about his or her health and the education that has been obtained for the handling of illnesses that are self-sufficient. Factors influencing diabetes self-care settings include (9,10) :

### **Age**

Age has a positive relationship to self-care diabetes, the increasing age will increase the maturity of a person so that patients can think rationally about the benefits that will be achieved if they perform diabetes self-care activities adequately in daily life.

### **Gender**

Gender affects the increase in diabetes self-care, where it is explained that female perform self-care better than male. Women are more concerned about health. They optimally do self-care for the disease they suffered

### **Socioeconomic**

Socioeconomic effect on self-care diabetes. A positive relationship can be seen from the

high socioeconomic status of self-care behavior and vice versa. Diabetes mellitus is a chronic disease that requires a fairly expensive cost of care, where care is needed in a long time and continuously. If the patient's economic status is low, it will cause the difficulty in obtaining optimal care. Thus can lead to a high risk of complications for diabetic patients.

### **Long suffering from DM**

Patients with longer duration of DM have higher diabetes self-care scores than patients with shorter DM duration. Patients with DM over 5 years may learn diabetes self-care behavior based on experience gained during DM disease. They have better understanding about the things and the best handling that must be done. Patients with longer duration of DM generally have adequate understanding of their health care. Searching for information about diabetes over a period of time affects self-care.

### **The emotional aspect**

The emotional aspect has a significant relationship to self-care behavior. The usual emotional problems experienced by diabetic patients are stress, sadness, worry about the future, thinking of the long-term complications that will arise, the fear of living with diabetes, feeling uninspired with the diabetes program they have to live and fighting off boredom with routine care.

### **The belief in the effectiveness of diabetes mellitus**

The belief in the effectiveness of diabetes mellitus management is an understanding of diabetes mellitus patients about the importance of diabetes self-care. In the management of DM patients, the understanding will reflect on the patient's beliefs about the extent of action offered to improve self-care in daily life, so that patients can minimizing diabetes complications that are life-threatening at any time.

The self-care theory in nursing proposed by Orem has the aim of increasing patient independency, so that it can function optimally. According to Orem, the treatment is carried out in the belief that everyone learns the ability to make ends meet, maintain health and well-being. Orem believes that all humans have self-care needs and that they have the right to get the necessities themselves, unless they cannot afford (11). In self-care theory, Orem describes self-care agency, self-care deficit and nursing system. Self care agency is the human ability or the power to do self-care. Self-care deficit explains that giving care is given when adults are unable to carry out self-care effectively, Orem identifies five methods that can be used to help self-care (12).

- a. Actions to or do for others
- b. Provide guidance and direction
- c. Provide physical and psychological support
- d. Provide and maintain an environment that supports personal development
- e. Health education

Orem's theory explains that one of method in assisting patient of diabetes mellitus to be able to move independently or self-care is education method. Health education is one of the basic factors that can lead a person to be able to improve their abilities, increase their knowledge, skills and attitude of where the process of understanding by DM patients occurs through health education. By providing information, it is expected that individuals or communities will emerge to behave according to their knowledge. Education is provided to ensure that information about diabetes mellitus is properly and appropriately delivered to the patient, so that the patient can feel better, control diabetes mellitus, prevent complications, and ultimately reduce the cost of treatment (13).

## CONCLUSION AND RECOMMENDATION

Education is one of the most important factors that must be possessed by patients with diabetes mellitus, because it is an indicator of patients in self-care. Good education owned by DM patients positively impacts the patient's openness in receiving information about his or her health. The openness of DM patients in the acceptance of health information will affect the activity of the patient to carry out self-care activities, so that the patient's health status remains stable. Diabetes mellitus treatment will be successful if diabetes management is done based on the patient's ability to initiate and perform the action independently through self-care activities, DM in the conduct of self-care activities are appropriate and continuous to minimize the occurrence of complications, so closely related to the incidence of morbidity and mortality, which significantly affects the quality of life of patients with diabetes mellitus.

## REFERENCE:

- American Diabetes Association. *Diabetes Care*. Diakses dari <http://www.ncbi.nlm.gov/pmc/articles>. Diperoleh tanggal 19 Agustus 2017
- Perkeni. (2011). *Konsensus Pengelolaan dan Pencegahan Diabetes Melitus Tipe 2 di Indonesia*. <http://www.pbbpadi.org>. Diakses tanggal 11 Agustus 2017.
- Perkeni. *Konsensus Pengelolaan dan Pencegahan Diabetes Melitus Tipe 2 di Indonesia*. PB Perkeni. 2002.
- Rekesdas. 2015. *Data prevalensi pasien diabetes mellitus*. DIY.Dinkes DIY.15. [link.dink.diy@.15](http://link.dink.diy@.15)
- Bai, Y. L., Chiou C. P., & Chang, Y. Y. *Self Care Behaviour and Related Factor In Older people With Type 2 Diabetes*. 2009.

- Bantarti W. Pengaruh Pendidikan Kelompok Sebaya Terhadap Pengetahuan dan Sikap tentang HIV/AIDS Pada Siswa Siswi SMU Di Kotamadya Depok: Tesis Fakultas Kesehatan Masyarakat, Universitas Indonesia
- Sugiyono. Metode Penelitian Administrasi. Bandung: alfabeta. 2006.
- Dharma Kusuma Kelana. Metodologi Penelitian Keperawatan (Pedoman Melaksanakan Dan Menerapkan Hasil Penelitian). Jakarta Timur. 2011
- Sousa, V. D., Hartman, S.W., Miller, E.H & Carroll, MA. New Measure Of Diabetes Self Care Agency, Diabetes Self Efikasi, And Diabetes Self Management For Insulin-Treated Individual With Type 2 Diabetes. Journal Of Clinical Nursing, 18, 1305-1312. 2009.
- Kusniawati. Analisis Faktor Yang Berkontribusi Terhadap Self Care Diabetes Pada Klien Diabetes Mellitus Tipe 2 Di Rumah Sakit Umum Tangerang. Tesis, Universitas Indonesia. 2011.
- Orem, Dorothea E. Nursing Concept Of Practice. (6th ed). St. Louis : The CV Mosby Harcourt Sciences Company. 2001.
- Alligood M. Pakar Teori Keperawatan. Jakarta: Elsevier. 2014
- Fitriana RN. Pengaruh Pendidikan teman sebaya terhadap Pengetahuan dan Efikasi Diri Siswa SD Terhadap pencegahan Kekerasan Seksual di Magelang: Tesis, Universitas Diponegoro Semarang. 2017.