

Available online at [www.scientiaresearchlibrary.com](http://www.scientiaresearchlibrary.com)



Scientia Research Library

ISSN 2348-0416

USA CODEN: JASRHB

Journal of Applied Science And Research, 2016, 4 (5):83-90

<http://www.scientiaresearchlibrary.com/archive.php>

## Effectiveness of Diabetes Self Management Education Against Type 2DM patients Independence in Managing Diet Disease In General Hospital Jombang

Hariyono\*, Tjipto Suwandi\*\*, AhYusuf\*\*\*

\*Institute Of Health Science Insan Cendekia Medika Jombang

\*\*Faculty Of Public Health Airlangga University

\*\*\*Faculty Of Nursing Airlangga University

---

### ABSTRACT

*Diabetes mellitus has been the cause of 4.6 million deaths. In addition, health expenditure for diabetes mellitus has reached 465 billion USD. Complications experienced by patients with type 2 diabetes mellitus that causes the sufferer to experienced independence in regulating dietary patterns. Ketidakmandirian patients in managing the diet due to a lack of knowledge and lack of motivation in self-care. This study aims to identify the effectiveness of Diabetes Self-Management Education to independence type 2 diabetic patients in managing the diet. This research is an experimental Pre. Research Design One group pre-post-test design. The sampling technique used was simple random sampling with 30 samples. Statistical analysis using the Wilcoxon Signed Rank Test with a significance value of  $\alpha=0.05$ . Pre-test results showed that almost all respondents (80%) or 24 samples in the category of partial care. While the post-test results showed that the majority (56.7%) or 17 respondents in the category of minimal care. Statistical analysis showed Wilcoxon  $p = 0.000$  The conclusion of this research that the effects of Diabetes Self Management Education on patient autonomy in managing type 2 diabetes diet.*

**Keywords:** Diabetes Self Management Education, Diet, Independence

---

### INTRODUCTION

Diabetes mellitus type 2 in most countries has grown as a result of social and cultural change rapidly, increasing aging population, increasing urbanization, dietary changes, reduced physical activity and other behaviors that show a pattern of behavior and unhealthy lifestyle. An increasing number of cases of type 2 diabetes mellitus in the world has increased the complications experienced by patients with type 2 diabetes mellitus, diabeticretinopathy, diabetic nephropathy, stroke, coronaryartery disease, diabetic foot, and some other complications (Yuanita, 2013). Complications experienced by patients with type 2 diabetes mellitus that causes the sufferer to experience dependence in terms of insulin therapy, regulate diet and take medication dependency. Ketidakmandirian patients in managing the dietdue toa lack of knowledge and lack of motivation in self-care. Thus, patients with type 2 diabetes mellitus in dire need of education to help increase knowledge and understanding about the disease and the patient received treatment so as to increase the independence of patients in the control of glucose with diet management (Aditama, 2013).

According to WHO data, more than 346 million people worldwide suffer from diabetes mellitus. This figure is expected to double in 2030 if patients with diabetes mellitus did not get the right intervention. 80% mortality of diabetes mellitus are at a middle-income country down. (Ramasamy, 2013). The WHO predicts that the increase in the prevalence of diabetes mellitus in Indonesia from 8.4 million in 2000 to around 21.3 million in 2030. The latest data in 2012, Indonesia ranks 7<sup>th</sup> after Mexico, as many as 7.6 million people with Diabetes Mellitus with an age range 20-79 years (PERKENI, 2011).

Diabetes mellitus has been the cause of 4.6 million deaths. In addition, health expenditure for diabetes mellitus has reached 465 billion USD. International Diabetes Federation (IDF) estimates that as many as 183 million people are unaware that they have diabetes mellitus. Obtained samples of 75 people from 32 countries show has not suffered from the disease due to diabetes mellitus using a traditional lifestyle. Conversely, in some countries like Saudi, India and China are still many who suffer from diabetes mellitus (Nahas, 2007). Based on epidemiological studies in Indonesia, the prevalence of Diabetes Mellitus by 1.5 to 2.3% in the population aged over 15 years, even in areas of Urban prevalence of diabetes mellitus of 14.7% and by 7.2% in Rural areas. The prevalence increased 2-3 times compared with developed countries, so that Diabetes Mellitus is a serious public health problem (Hasdianah, 2012). In Jakarta, a survey of patients with diabetes mellitus showed that 1 in 8 people suffer from diabetes mellitus (Dorothy, 2011). According to a preliminary study conducted by researchers at the health department to get the data Jombang in patients with Diabetes Mellitus in 2013 as many as 12.254 inhabitants. This figure is expected to increase and if the patient had complications of Diabetes Mellitus not get appropriate treatment.

Meal planning is a major component of the successful management of type 2 diabetes mellitus in a given meal diet. Patient non compliance in meal planning is one of the obstacles in the treatment of diabetes mellitus (Tera B.hanifah, 2011). Lack of family support on dietary Diabetes mellitus ketidakmandirian also be a factor in regulating dietary patterns. Eating habits in the family, including the selection of a fast food menu also influence patient non-adherence to the diet. Of the bad habits will cause bad impact on the healing therapy of diabetes mellitus. Impact caused, among others, thus causing the patient rehospitalisasi recurrence, complications of a stroke. But the fact of independence of patients in the diet is very difficult to implement. Data reported to WHO in 2003 showed that only 50% of patients with diabetes mellitus type 2 in developed countries are able to independently manage his diet (Tera, 2011)

Selfcare is good and true in patients with diabetes mellitus including control of risk factors, may reduce morbidity recurrent or rehospitalisasi, complications and deaths caused by the disease. So the control of type 2 diabetes mellitus are more effective when given priority on early prevention through the efforts of self-care management is right or can be called by Diabetes Self-Management Education. Management is included in the Diabetes Self-Management Education among others with diet. Compliance with type 2 diabetes mellitus patients for treatment programs, especially patients who are at home is very important, because the control of blood glucose levels that will either prevent the onset of complications. Diabetes Self Management Education diharapkan will increase the independence of people with type 2 diabetes mellitus in managing diet (Sutandi, 2012)

### **Research Question**

Are there any effects of Diabetes Self Management Education to independence in managing patients with diabetes mellitus self-care theory-based diet in the poly in Jombang Hospital?

### **The purpose of research is conducted**

The general objective

Analyzing the effects of Diabetes Self Care Management Education to independence in managing diabetes mellitus patients in hospitals diet Jombang

The specific objectives

- a) Identifying patients with diabetes mellitus independence before administration of Diabetes Self-Management Education
- b) Identifying independence of patients with diabetes mellitus after administration of Diabetes Self-Management Education
- c) Analyzing the independence of patients before and after administration of Diabetes Self-Management Education in patients with diabetes mellitus

### **Benefits of research**

Benefits theoretical

The results of this study can be reached by adding scientific information and insight in nursing science related to the effects of Diabetes Self-Management Education to independence in patients with diabetes mellitus Poly In Jombang Hospital.

### **Practical Benefits**

As a reference for nursing inntervensi in terms of increasing patient autonomy in managing diet

## **MATERIALS AND METHODS**

### **Types Of Research**

In this study, the type of research used experimental research is a study by conducting an experiment (experiment), which aims to determine the independence of patients with type 2 dm in managing diet

### **Study Design**

The research design used in this study was pre-experimental pre-post-test in one group (One-group pre-post test design

### **Location and Time Research**

The experiment was conducted in Poly Disease In Jombang Hospital from June 9 until July 9, 2014

### **Population/Sample/Sampling Techniques Population**

The population in this study were all clients of new cases of diabetes mellitus who visited Poly Medicine Hospital Jombang as many as 46 clients in January to March 2014

### **Samples**

The sample in this study was in part the patients with diabetes mellitus type 2 new cases who visited Poly Medicine Hospital Jombang as many as 30 clients in January to March 2014.

### **Sampling**

Sampling in this study is simple random sampling, the sampling randomly without regard to

existing strata in the population (Sugiono, 2007)

**RESULT AND DISCUSSION**

**RESULTS**

General Data

Characteristics of respondents by sex

**Table 5.1** Frequency Distribution of Respondents by Sex in Poly Medicine Hospital Jombang

No	general	frequency	Percentage (%)
1	male	9	30
2	famale	21	70
	amount	30	100

a. Characteristics of respondents by age

**Table 5.2** Frequency Distribution of Respondents by Age Poly Disease Hospital in Jombang

No	Age(years)	frequency	Percentage (%)
1	45-54	9	30
2	55-64	18	60
3	65-74	3	10
	amount	30	100

b. Characteristics of respondents based on information about self-reliance in managing diet

**Table 5.3** Frequency Distribution Based On Information Independence in managing diet in Jombang Poly Disease Hospital

No	Information	Frequency	Precentage(%)
1	Never	0	0
2	Do not never	30	100
	Amount	30	100,0

**Special Data**

a) Independence of the respondents in managing diabetes diet given before Self Management Education

**Table 5.5** Frequency Distribution About Independence of Type 2 DM patients in managing diet in Poly Disease Hospital Jombang

No	Criteria	Frequency	Percentage (%)
1	Total care	-	-
2	Partial care	24	80
3	Minimal care	6	20
Amount		30	100

b. Independence of the respondents manage diet after Diabetes Self Management Education

**Table 5.6** Frequency Distribution About Independence of Type 2 DM patients in Managing Diet on Poly Jombang Disease Hospital After Diabetes Self Management Education

No	Criteria	Frequency	Percentage (%)
1	Total care	0	0
2	Partial care	13	43,3
3	Minimal care	17	56,7
amount		30	100

c. Effectiveness of Diabetes Self Management Education Against Type 2 DM patients Independence in Managing Diet on Poly Medicine Hospital Jombang

**Table 5.7** Effectiveness of Diabetes Self-Management Education Against Type 2 DM patients Independence in Managing Diet on Poly Medicine Hospital Jombang

No	Kriteria	Before DSME		After DSME	
		Σ	%	Σ	%
1	Total care	0	0	0	0
2	Partial care	24	80	17	43,3
3	Minimal care	6	20	13	56,7
Jumlah		30	10	30	100
Wilcoxon α = 0,05		p = 0,000			

**DISCUSSION**

Independence of Type 2 diabetic patients in managing diet before being given DSME From the research results in Table 5.1 that most of the respondents were female (21 patients) to 70%. Gender

effect on self-reliance in managing diet in patients with diabetes mellitus. According to researchers, women are more submissive in managing women pay more attention to the diet because the body shape and tend to be afraid to do invasive. If a woman has a fear of invasive action, then they will tend to do the diet correctly. The shape of the ideal body weight will increase the confidence in women (Lingga, 2013)

In Table 5.2 the obtained data that the majority of respondents are aged 55-64 years (18 patients) of 60%. According to researchers, the age effect on self-reliance in managing the diet, this is due to getting older, the greater the degree keergan tungannya. Age of a person showing signs of willingness and ability, or how a person reacts to his in ability, (Puspitasari, 2011)

In Table 5.3 indicates that all respondents (30 patients) had not received information about diabetes self-management education and obtained the data in Table 5.4 all respondents did not obtain information from several sources. This relates to the independence of Type 2 diabetic patients in managing their diets. In Table 5.5 shows the majority of respondents experienced a partial dependence/ partial care (24 patients) to 80%. The relationship of the three table it can be proved that the lack of information about diabetes self-management education will influence the behavior of people to motivate themselves to play an active role in the healing process are included in the self-reliance in managing the diet. Lack of information of diabetes self-management education is not an independent cause the patient to manage his diet

Independence of Type 2 diabetic patients in managing the diet after being given Diabetes Self Management Education. Table 5.6 shows the effects of diabetes self-management education to the patient autonomy in managing Type 2 diabetes diet is shown by the results of the Wilcoxon statistical test with a significance value of  $p = 0.000$ . In the table it is known that before the extension, most of the patients in the category of partial independence of care (24 patients) to 80%. After being granted intervention in the form of education about diabetes self-management education in the form of dietary guidelines, the data produced by most of the respondents were in the category of minimal care (17 patients) 56.7%. The change is the result of interventions such as the provision of counseling is performing well according to the unit of educational events (SAP).

5.2.3 Independence of Type 2 diabetic patients in managing the diet before and after administration of Diabetes Self Management Education. The results of the study the effectiveness of Diabetes Self-Management Education. Against the independence of Type 2 diabetic patients in managing the diet, after a given intervention mostly in the category of minimal care (17 patients) and 56.7% before granted intervention results mostly in the category of partial care (24 patients) to 80%. This shows the effects of Diabetes Self Management Education to the independence of Type 2 diabetic patients in managing diet in Poly Disease Hospital Jombang

## CONCLUSION

- a) Independence of the respondents in managing the diet DM before given Diabetes Self Management Education, the majority (80%) in the criteria of partial care
- b) Independence of the respondents in managing diabetes diet given after Diabetes Self Management Education, the majority (56.7%) in the minimal care criteria
- c) There are effects of Diabetes Self-Management Education to the independence of Type 2 diabetic patients in managing diet in Jombang Poly Disease Hospital

## RECOMMENDATION

### For The Respondents

For patients with diabetes mellitus is better to always look for the information to be used as a source of discourse and motivation to improve patient participation in the healing process.

### For Further Research

The results of this study can be used as a reference for further research so that this study could be developed better.

### For Institutions Hospitals

The results of this study are expected to provide the basis of interventions to improve the quality of service as well as the outputs satisfy both the community and hospital

## REFERENCES

- [1] Aditama, Lisa dkk, Efektivitas Edukasi Terapi Insulin terhadap Pengetahuan dan Perbaikan Glikemik Pasien Diabetes Melitus. Tesis, **2013**.
- [2] Alimul, A. A. H, Riset Keperawatan dan Teknik Penulisan Ilmiah. Salemba Medika. Jakarta, **2007**.
- [3] Arsana, Studi Terapi Diabetes Melitus Tipe 2 dengan Pedoman Terapi Menurut Perkeni Jurnal, **2011**.
- [4] Brunner & Suddarth, Keperawatan Medikal Bedah. Buku Kedokteran EGC. Jakarta, **2002**.
- [5] Budiman, N. Perkembangan Kemandirian Pada Remaja.  
[http://www.google.com/fjur.\\_psikologi\\_pend\\_dan\\_bimbingan\\_nandang\\_budimanfperkembangan\\_kemandirian.pdf&ei=vtq2u83yi4f](http://www.google.com/fjur._psikologi_pend_dan_bimbingan_nandang_budimanfperkembangan_kemandirian.pdf&ei=vtq2u83yi4f). Diakses 31 Maret **2014**, 10.00 WIB
- [6] Ernawati, Penatalaksanaan Keperawatan Diabetes Melitus Terpadu. P T. Mitra Wacana Media. Jakarta, **2013**.
- [7] Maulana, Mirza, Mengenal Diabetes Melitus. Katahati. Jogjakarta, **2009**.
- [8] McCulloch, et al, Increasing Diabetes Self Management Education In Community Settings. *Journal of Preventive Medicine.*, **2002**.
- [9] McLaughlin, Sue, National Standards For Diabetes Self-Management Education and Support. *Journal Diabetes Care*, **2012**.
- [10] Notoatmodjo, S, Metodologi Penelitian Kesehatan. Rineka Cipta. Jakarta, **2010**.
- [11] Notoatmodjo, S, Promosi Kesehatan dan Perilaku Kesehatan. Rineka Cipta. Jakarta, **2012**.
- [12] Nursalam, Konsep dan Penerapan Metode Penelitian Ilmu Keperawatan Pedoman Skripsi, Tesis, dan Instrumen Penelitian Keperawatan. Salemba Medika. Jakarta, **2011**.
- [13] Padila, Keperawatan Gerontik. Nuha Medika. Yogyakarta, **2013**.
- [14] Parker, Marlyn, Nursing Theories and Nursing Practice. F.A Davis Company, Philadelphia, **2001**.
- [15] Rusel, M. Dorothy, Bebas dari 6 Penyakit Paling Mematikan. PT. BukuSeru, **2011**.

- [16] Sugiyono, Statistika untuk Penelitian. Alfabeta. Bandung, **2007**.
- [17] Sujarweni, W, Statistika Untuk Penelitian. Graha Ilmu. Yogyakarta, **2012**.
- [18] Sutandi, Aan, Self Management Education (DSME) Sebagai Metode Alternatif dalam Perawatan Mandiri Pasien Diabetes Melitus di dalam Keluarga. Jakarta, **2012**.
- [19] Tera, Banu H, Determinan Ketidaktahuan Diet Penderita Diabetes Melitus Tipe 2. Tesis, **2011**.
- [20] Triwibowo, Trend Disease, Trend Penyakit Saat Ini. PT. Trans Info Media, **2013**.
- [21] Yuanita, Alvinda, Pengaruh Diabetes Self Education Terhadap Resiko Terjadinya Ulkus Diabetik Pada Pasien Rawat Jalan Dengan Diabetes Melitus Tipe 2 di RSUD dr. Soebandi Jember. Skripsi, **2013**.