

# Relationship of Self Awareness and Knowledge of Diabetes with Blood Glucose Level on DM II

Sodikin, Agus Prasetyo  
Program Studi Keperawatan  
STIKES Al-Irsyad Al-Islamiyyah  
Cilacap, Indonesia  
abufauqinabil@yahoo.com

**Abstract—Objectives :** The purpose of this study was to determine the relationship of self awareness and knowledge of diabetes with the value of fasting blood glucose level. **Method:** Descriptive correlational research method with cross sectional design, sampling taking with consecutive sampling method, the research in the Public health Center 1 Cilacap. **Results and Discussion :** There is a significant relationship between self-awareness and fasting blood sugar value, with an OR value of 6.44, meaning that respondents who have an age of their disease have a 6.44 times chance of having controlled fasting blood sugar levels compared to respondents who are unaware. There was no significant relationship between knowledge of diabetes with the value of fasting blood sugar  $p < 0.05$ .

**Keywords:** diabetes mellitus, self awareness, diabetes knowledge

## I. INTRODUCTION

Diabetes Control and Complication Trial (DCCT) research conducted in America has proven that controlling blood glucose levels near normal will be able to prevent complications of diabetes mellitus such as cerebrovascular disease, coronary heart disease, leg, eye, kidney, and nerve blood vessel diseases. Based on the results of this study it can be seen that self-awareness and knowledge of diabetes are important indicators in controlling DM so that DM sufferers can maintain their quality of life [1]. Problems faced by the State of Indonesia include not all people with diabetes mellitus, getting access to adequate health services, as well as the ability of health workers who have not been optimal in handling DM cases, both preventive, promotive, curative and rehabilitative aspects [2].

Self-awareness is one's experience of himself and the ability to understand himself as an independent individual with subjective feelings from each individual originating from the results of social interaction. Self Awareness research has been conducted by previous researchers, including Falupi (2017); Arif (2014); the conclusion is that the patient is a person who must play an active role in efforts to improve his health where the patient collaborates with nurses to determine the appropriate and necessary interventions [3,4,5]. The results showed that the level of knowledge of DM sufferers was still low [6]. The results showed that the results of research by

Rahmawaty and Witasari (2009) in Surakarta, showed that there was no relationship of knowledge about the management of DM with the control of fasting blood glucose levels, the level of knowledge of DM patients was still low[7].

## II. MATERIAL AND METHOD

### A. Procedure

Data collection tool that will be used: questionnaire in the form of respondent characteristic data (age, sex, education, duration of DM, type of DM therapy. Self awareness instrument questionnaire consists of blood sugar control, treatment, awareness of long-term complications, visits to health services and diabetes questionnaire containing knowledge about diabetes and its management and assessment of the results of blood sugar laboratory last 1 month.

### B. Data Analysis

To find out the relationship of self-awareness, knowledge about diabetes to fasting blood sugar. The independent variable data is in the form of a categorical data scale, and the dependent variable uses a categorical scale. Then the researchers took the Chi Square correlation statistical test.

## III. RESULTS

TABLE 1: CHARACTERISTICS OF RESPONDENTS ACCORDING TO AGE, DURATION OF DM, AND FASTING BLOOD GLUCOSE IN RESPONDENTS

Variabel	Mean	Min - maksimal
Age	63,1 years	47 – 77 years
Duration of DM	2,9 years	1-12 years

**TABLE 2: CHARACTERISTICS OF RESPONDENTS BASED ON GENDER, OCCUPATION, EDUCATION, SELF AWARENESS**

variabel	f	%
Sex		
1. Male	18	45,0
2. Female	22	55.0
Self Awareness		
1. Aware	28	70
2. unaware	12	30
Knowledge		
1. good	22	55
2. Lack	18	45
fasting blood sugar		
1. controlled	28	70
2. uncontrolled	12	30

**TABLE 3: CROSS TEST BETWEEN SELF AWERENESS AND FASTING BLOOD GLUCOSE**

Knowledge variable	Fasting blood glucose				total		OR (CI)	Pv
	Controlled		Uncontrolled					
	n	%	n	%	n	%		
Lack	10	55,6	8	44.4	18	100	2.12	0,14
good	18	81,2	4	18.2	22	100	1	5

**IV. DISCUSSION**

Based on calculation of Chi Square the results of the study of the relationship of self-awareness with fasting blood glucose the statistical test results obtained pv of 0.021 ( $\alpha = 0.05$ ). Which means there is a significant relationship between self-awareness and the value of fasting blood glucose. Self awareness of respondents at the Public Health Center was obtained that their blood sugar was controlled, this showed that the better alert to their own DM disease, my role in maintaining the conditions of controlling, consuming food, and other things related to DM management was better. Statistical test results obtained pv value 0.145 ( $\alpha = 0.05$ ). Which means there is no significant relationship between knowledge of diabetes with the value of fasting blood sugar. In these results it was concluded that the fasting blood sugar of the respondents was not related to diabetes knowledge.

**V. CONCLUSION**

The conclusion in this study, we provide information about the correlation between self Awareness and knowledge diabetes with fasting blood glucose. Relationship between self-awareness and fasting blood glucose value, with an OR value

of 6.44, meaning that respondents who have an age of their disease have a 6.44 times chance of having controlled fasting blood glucose levels compared to respondents who are unaware. there is no significant relationship between knowledge of diabetes with the value of fasting blood sugar pv 0.145 ( $\alpha = 0.05$ ).

**ACKNOWLEDGMENT**

This article was created to fulfill the output assignment of research by P2M. Thank you to the Director of STIKES Al-Irsyad, P2M Director, and Director STIKES BTH Tasikmalaya. I hope this article is useful.

**REFERENCES**

- [1] Waspadji S., 2005. *Diabetes Mellitus, Chronic Complications, and Prevention*, Jakarta: Balai Penerbit FK UI, pp. 169-78 Trans.
- [2] Perkeni. (2011). *Consensus on the control and prevention of type 2 diabetes mellitus in Indonesia 2011*.
- [3] Falupi, N.A & Relawati, A. (2017). Diabetes Mellitus Self Awareness of Employees in Universitas Muhammadiyah Yogyakarta. <http://repository.umy.ac.id>
- [4] Sari, Ni Putu W.P (2016). Diabetes Mellitus: Relationship Between Sensory Knowledge, Self Awareness, Self Care Measures And Quality Of Life, *Ners Journal*. Vol. 4, No. 1, Maret 2016
- [5] Rahman UZ, Irshad M, Khan I, Khan AF, Baig A, Gaohar QY. A survey of awareness regarding diabetes and its management among patients with diabetes in Peshawar, *Pakistan. J Post Med Inst* 2014; 28(4): 372-7.
- [6] Arief, Rosdalia, Erna. (2014). Relationship of BMI with fasting glucose levels in Riau Daerah Secretariat staff. *JOM. Vol.1 No.2 tahun 2014*
- [7] Witasari (2009). Relationship between level of knowledge, intake of carbohydrates and fiber with controlling blood glucose levels, *science & Technology research journal. Surakarta*