Self-Management Models on Patients with Type II Diabetes Melitus

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**A B S T R A C T**

Self management (competent and competent learning skills) by someone with Diabetes Mellitus is beneficial to manage the disease. Self management can be in the form of individuals or groups. Patients living with Diabetes Mellitus need guidance in learning how to manage themselves (self management) about management and quality improvement.  

The purpose of this review literature is to provide a literature description describing self-management in patients with type II diabetes mellitus. Designed used in this research was RCT, Cohort Study, and Pilot Study which the selection of the sample done randomly, with the same participant characteristics between the treatment and control groups. Sample was taken from a type 2 diabetes mellitus patients. The article search from Sage Journal, Science Direct, Google Scholer is Based Data used in the article searches, through PICOT framework. The finding of this Literature review have shown significant improvements/reducing in HbA1c levels on patients. It concluded that self management either given in the form of individuals or groups is effective in improving glycemic control.

**Keywords:**  
Diabetes type 2  
Self-management  
Glycemic control

I. **INTRODUCTION**

Diabetes mellitus is a chronic disease that occurs in many developing countries. An important intervention to be noticed in patients with chronic disease is the patient centered education. Education provided to patients (individuals or groups) is an education designed to help patients manage management and prevent complications by maintaining or improving quality of life. It is known that using self-management by someone with diabetes is important to manage the disease. Self management can be given in the form of individuals or groups.

Some studies show that the greater support provided by the social system will improve self-management in Diabetes Mellitus patients, self-management can be performed by trained health workers, informal social systems, the physical environment around (Schiotz, 2011). Forms of social support can be provided by family, friends, fellow patients Diabetes mellitus.

The purpose of this review literature is to provide a literature description describing self-management in patients with diabetes mellitus. This literature review research question is how is the effectiveness of self management management of self care behavior and blood sugar control in patients with type 2 diabetes mellitus?
II. METHOD

Data sources


Article Selection

This literature review is structured with several stages of a search strategy. The first search was conducted in Sage Journal, Science Direct, which was linked by using keyword exploration: "diabetes mellitus type II", ‘self management’. The second stage is to perform a manual search of the first search result.

Some of the criteria used in article selection are:
1. The article used is the original reference, not the second source.
2. The author of the article is a health practitioner
4. Limitations used in article search are: population of diabetes mellitus type II, Randomized control trial age 18-65 years, Year 2000-2013, using English language

Review finding

How is the effectiveness of self management education on Blood Sugar control in patients with type 2 diabetes mellitus?

Several kinds of interventions from each self-management study showed different results on blood glucose control. Based on the gained outcome (glucose control), Self-management interventions focused on diet and exercise showed the most significant decrease in Glucose control among interventions in other articles, 7.4% (± 1.3) to 6.8% (± 0.8) (p = 0.040) after 12-month intervention.

Methodology (Sample, Procedure, Data Collection, Data Analysis, Result, Limitation)

Sample

The sample used in the research of Bastiaens et al (2009), Rygg et al (2012), Jackie et all (2006), is a type 2 diabetes mellitus with an age range of 18-80 years. In the research conducted by Bastiaens et al (2009) about 60 people interested in engaging in the research, 63% -100% of participants attended the discussion session. 44% of respondents did not attend due to illness in the discussion session and expressed excluded from the research. This tends to be high this can be caused because the average age of respondents is 66 years old so prone to illness.

Procedure

Bastiaens et al (2009) provides intervention for 2 hours every two weeks for 3 months. Interventions were divided into 5 sessions, led by different health workers on the topics discussed: (1) educators and psychologists; (2) educator and nutritionist as physical activity counselor; (3) educator as a physical activity counselor; (4) educator and nutritionist; (5) educator and psychologist.

Rygg et al (2012) conducted the study by providing intervention in 2 hospitals, the main difference in hospital 2 discussion sessions and the completion of therapy briefly. Problems are focused on. In the respondent at the hospital 1 focus was discussed about diet led by nutritionist, while in hospital 2 topics discussion about complication, diet, physical activity, improvement of metabolic control. This study would be more relevant if the number of samples in both hospitals is the same and the intervention is equated.
Jackie Sturt (2006) provides 12-month intervention through training to monitor respondents regarding HbA1c, cholesterol, blood pressure, body mass index, self-efficacy and quality of life as additional outcomes.

**Data Collection**

Measurement of HbA1c using TOSOH G7 with liquid chromatography. Similarly, Rygg et al (2012) sampling was done at the hospital by fasting first, to measure the activation of patients using PAM (Patient Activation Measurement), measurement. There is no mention of sampling procedures and measuring instruments that can be used to determine the value of HbA1c. Sampling has been done after Fasting patient, a tool that has high accuracy and has done calibration.

**Data Analysis**

Each study has a different data analysis seen from the research objectives, and the scale of the data used. To assess the data Blood sugar (HbA1c) can be used t test as did Bastiaens et al (2009). Bastiaens uses 2-tailed Wilcoxon signed ranks to calculate the significance of PAID values. Different things were done by Jackie S et al (2006) because there was a difference of duration and treatment between the control group and the disparity intervention group should be taken into account through regression analysis, the regression procedure found the initial HbA1c data and the dichotomous intervention in the control group showed significant results.

**III. RESULT**

The results of Bastiaens et al (2009) showed 44 respondents in 5 groups. HbA1c decreased from 7.4% (± 1.3) to 6.8% (± 0.8) (p = 0.040) after 12-month intervention. Rygg et al (2012) reported a significant increase after 12 months intervention for A1c and PAM values and improved outcomes in the treatment group.

**Limitations**

The self-directed diabetes self-management education (DSME) program demonstrates effective effectiveness in enhancing self-management capabilities with improved glucose control results. Several studies conducted by the review have limitations that can be further improved in subsequent studies. The Bastiaens (2009) study used a pilot study design, the groups obtained were heterogeneous. Some respondents carried out their own HbA1c examinations so that the measurements were performed in different laboratories, but all laboratories used the DCCT standard.

**IV. CONCLUSION**

Self Management is effective in improving Glucose control. Research with RCT design in selecting samples should be done randomly, with the same participant characteristics between the treatment group and the control group. Measurement out come to be done with a standardized tool to avoid the occurrence of bias.

**V. REFERENCES**

