

INTEGRATED EDUCATION ON HEALTHY FAMILY MANAGEMENT ON THE STATUS OF DIABETIC MELLITUS PATIENTS

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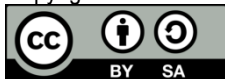
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ABSTRACT

Insufficient pancreatic insulin production or ineffective use by the body is the main cause of diabetes mellitus. Insulin sugar is regulated by hormones. In the initial survey, five diabetes mellitus sufferers (50%) were asked and, five of them did not understand the problem, underwent routine physical examinations, but did not regularly take the prescribed medication because they lacked family support and did not understand how serious the disease was. **Objective:** To determine the health status of diabetes mellitus patients in the Guntur 2 Community Health Center working area and analyze healthy family management with integrated education. **Method:** Purposive sampling was used in a quasi-experimental two-group pre-procedure with a sample size of 20 participants. The health status of the respondents was recorded in the observation sheet after the integrated education on diabetes mellitus was carried out as stated in the Healthy Family Assistance Book. Statistical test using the Paired T-test **Results:** Independent sample test results were obtained with a p-value of 0.003 and paired T-test findings with p-values of 0.001 and 0.05 respectively. **Conclusion:** Diabetes mellitus sufferers in the Guntur II Health Center Working Area have significantly different health statuses.

Keywords: Healthy family management, integrated education, Diabetes mellitus, health status

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INTRODUCTION

Diabetes Mellitus (DM) is a disease of carbohydrate, protein, and fat metabolism disorders that occur due to abnormalities in pancreatic beta cells. This disorder results in an imbalance between insulin secretion and blood sugar levels (Hani & Hapsari, 2020)

Diabetes facts and figures show the growing global burden for individuals, families, and countries. The IDF Diabetes Atlas (2021) reports that 10.5% of the adult population (20-79 years) has diabetes, with almost half unaware that they are living with the condition (Federation, 2021). More than 90% of people with diabetes are driven by socio-economic, demographic, environmental, and genetic factors. The main contributors to the increase in diabetes include: Urbanization, aging,

Declining levels, physical activity, obesity (Federation, 2021; Huang et al., 2009)

An initial survey conducted by researchers revealed that 51 residents in the working area of the Guntur II Health Center in Sukorejo Village had been diagnosed with diabetes mellitus. In addition, the results of interviews with 5 people with diabetes mellitus revealed that 3 out of 5 (50%) of them think that people with diabetes mellitus do not have a deep understanding of the disease. Patients with diabetes mellitus routinely check their health at the Guntur II health center but do not consistently drink (II, 2023)

Empowerment in diabetes mellitus treatment programs or family-centered care (Centered Care) is one form of support that can be accepted by patients. The lack of family information about diabetes and diabetic patients still do not receive

adequate family support, which contributes to the increasing prevalence of diabetes mellitus treatment, leading to physical and psychological problems(Qona'ah et al., 2022). Based on the description above, family optimization is needed as an effort to help and support the improvement of family health. This study to determine the health status of diabetes mellitus patients in the Guntur 2 Community Health Center working area and analyze healthy family management with integrated education.

METHOD

This research was conducted in Sukorejo Village on June 21-July 2, 2023. This type of research is a Quasi-experimental research with a control group pretest-posttest design. The population is 51 people. The sample in this study used purposive sampling, namely 20 people with diabetes mellitus in Sukorejo village. Nutrition Assistance is carried out by the patient or family writing the food menu that is eaten for one week according to the food menu schedule in the Mentoring book and the progress of this study is monitored using the WA group. The health status observation sheet is recorded in the mentoring book after the Integrated Education of Healthy Family Management in Diabetic Patients. The inclusion criteria were respondents with cases of type II diabetes mellitus, GDS >150mg/dL, suffering from DM >5 years. Normality test with Shapiro wilk test with p-value results.

The experimental group before being given education in the form of leaflets and family books Healthy with Integrated Education on Diabetes Mellitus and Nutrition Assistance 0.427, after being given education in the form of leaflets and healthy family books with integrated education on diabetes mellitus and nutritional assistance 0.110, while the results of the control group's p-value before being given education in the form of leaflets and healthy family books with Diabetes Mell Integrated Education This research has been conducted by the Research Ethics Committee of Universitas Karya Husada Semarang and has been declared to have passed the ethics test with a certificate

RESULTS

Table 1 Description of the Health Status of Diabetes Mellitus Patients Before and After Education and Healthy Family Assistance Books with Integrated Education on Diabetes Mellitus and Nutrition Assistance

GDS	n	Mean	Min	Max	SD
Pretest	10	182.70	156	215	21.319
Post-test		122	97	140	16.214

It is known that the average blood sugar level of diabetic mellitus patients before and after being given an intervention in the form of education along with a healthy family assistance book with integrated education and nutritional assistance is 182.70 mg/dL and 122 mg/dL. The minimum blood sugar levels for patients with diabetes mellitus are 156 mg/dL and 97 mg/dL, the maximum is 215 mg/dL and 140 mg/dL, and the Standard Deviation is 21,319 mg/dL and 16,214 mg/dL.

Table 2. Description of the Health Status of Diabetes Mellitus Patients Before and After Education and a Healthy Family Assistance Book with Integrated Education for Diabetes Mellitus

GDS	n	Mean	Min	Max	SD
Pretest	10	177.80	156	213	17.358
Post-test		147.70	130	179	16.813

Based on Table 2 of 10 respondents, it can be seen that the average blood sugar level during diabetes mellitus patients before and after being given an intervention in the form of education along with a healthy family assistance book with integrated diabetes mellitus education is 177.80 and 147.70. The minimum blood sugar levels of diabetic mellitus patients are 156 and 130, the maximum is 213 and 130 and the standard deviation is 17,358 and 16,813.

Tabel 3. Analysis of the health status of patients with diabetes mellitus before and after the intervention in the experimental group

GDS	N	Mean	SD	P-value
Pretest	10	182.70	21.391	0.001
Post-test		122.00	16.214	

Based on table 3, the results of the bivariate

statistical test using the Paired T-test showed that the average blood sugar level before the intervention was given was 182.70 with a standard deviation of 21.319. The average blood sugar level after the intervention was 122.00 with a standard deviation of 16.214. Based on the results of the bivariate statistical test, the p-value result was 0.001.

Tabel 4. Analysis of the health status of patients with diabetes mellitus before and after the intervention in the control group

GDS	N	Mean	Standar Deviasi
Pretest	10	177.80	17.358
Post-test		147.70	16.813

Based on table 4, the results of the bivariate statistical test using the Paired T-test showed that the average blood sugar level before the intervention was given was 177.80 with a standard deviation of 17.358. Average blood sugar levels after the intervention 147.70 with a standard deviation of 16.813. Based on the results of the bivariate statistical test, the p-value result was 0.001.

Tabel 5. Analysis of the Health Status of Patients with Diabetes Mellitus after Intervention in the Experimental Group and Control Group

Group	N	Mean	P-value
Experiment Group	10	122.00	0.003
Control Group	10	147.70	

Based on table 5 with a sample of 20 statistical tests using the Paired T-test, the p-value for the experimental group and the control group after being given the intervention was 0.003.

DISCUSSION

The main causative factor for diabetes mellitus is dietary behavior. An irregular diet can cause sugar levels in the body to be uncontrolled, in addition to

that, the patient's knowledge of the disease and therapy of Diabetes Mellitus plays an important role in controlling blood glucose levels and the patient's compliance in carrying out the therapy.(Hani & Hapsari, 2020; Sofie & Sefrina, 2022; Suyanto & Astuti, 2023; Wiguna, 2023) Efforts that can be made to improve the diet of DM patients to be healthier are by providing nutrition education. The influence of nutrition education has an impact on patient behavior to be healthier, as evidenced by a decrease in blood sugar levels compared to patients compared to before nutrition education (Sofie & Sefrina, 2022; Yuantari, 2022)

The provision of nutrition education has a significant influence on the improvement of nutritional knowledge and changes in dietary behavior in patients with diabetes mellitus. Family or community empowerment is one of the tactical steps to increase knowledge and generate motivation in improving the degree of family health. Activities directed to increase the capacity of families to prevent and deal with nutritional problems of their members are examples of the Pemberd strategy(Ibrahim et al., 2023; Qona'ah et al., 2022; Sofie & Sefrina, 2022)

Education and support for self-management are essential when caring for people with chronic diseases such as diabetes mellitus. To achieve effective self-management, including lifestyle modifications, it is also important to motivate people.(Hani & Hapsari, 2020; Lambrinou et al., 2019)

There are four main pillars of treatment in people with type 2 diabetes mellitus, namely education, nutritional therapy, physical exercise, and pharmacology(Haryati et al., 2023)Providing education about diabetes mellitus and an appropriate diet can change behavior and lifestyle in patients with diabetes mellitus and healthy family education can help families with diabetes mellitus in self-care. Nutritional literacy is a new concept of educational skills in the concept of nutrition, which

includes(Hani & Hapsari, 2020; Lambrinou et al., 2019; Sofie & Sefrina, 2022)

Education to the family can provide psychological support to patients with diabetes mellitus. Adequate family support will be beneficial for the physical well-being of people with diabetes mellitus. (Rifki, 2009)Family contributions will determine how well blood sugar levels are managed, thereby lowering the risk of complications and improving quality of life. (Fitri Yeni, 2019; Hani & Hapsari, 2020; Lambrinou et al., 2019; Sofie & Sefrina, 2022)

CONCLUSION

Providing education is one of the efforts that can be used to improve the knowledge and skills of people with diabetes mellitus. The education provided should not only be given orally but added using modules so that patients and families can learn about diabetes care continuously. Providing diabetes mellitus education through leaflets has a significant influence on reducing blood sugar levels. One of the steps that is quite strategic to increase knowledge and motivation towards improving the condition of family health status is to empower the family or community. Forms of family empowerment activities are carried out through mentoring activities that aim to improve the family's ability to prevent and overcome joints

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