

Examining the Nursing Impact of Diabetes Patients' Health Education and the Endocrinology Department's Diabetes Nursing Practice of Maternity and Children Hospital of King Khaled

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Abstract- The purpose of this research was to examine the diabetes education effects and nursing strategies used by the endocrinology department on the outcomes of care provided to patients with diabetes. A total of 90 newly diagnosed diabetes patients hospitalized to our hospital's Endocrinology Department between October 2018 – 2019 were included in the research. All of the patients' medical records were retrospectively reviewed. 45 patients served as the control group and got standard medical care, while the same number of patients were given the experimental diabetic health education care model. Randomly dividing patients into two groups. We monitored routine care patients' blood sugar, meals, and medicines. The experimental group received diabetes education. The nursing influence, blood sugar level, degree of illness awareness, incidence of problems, and compliance were evaluated for the two patient groups. Patients in the experimental group in this research got diabetic health instruction. When comparing the overall data from the two patient groups, there was no statistically significant difference in gender, age, or length of illness ($P > 0.05$). When the nursing effects of the two patient groups were compared, it became clear that the experimental group's nursing effects were higher and that its overall rate of effectiveness was greater. A statistical study showed that the two groups were different ($P 0.05$). In the experimental group, 90.1% of treatment compliance assessments were effective, compared to 75.5% in the control group. Conclusion: Even though these patients were cared for utilizing standard nursing practices, they performed significantly better than the control group. As a result, implementing diabetic health education is extremely beneficial. The remission of the illness has good outcomes.

Index Terms- Diabetes mellitus, Health education, Nursing

I. INTRODUCTION

In the entire clinic, diabetes is a metabolic disease. It is an endocrine system disorder. In addition to doing a lot of damage, it also severely damages the patient's organs and systems, and in some cases, it may even be the cause. Patients' quality of life continuously declines as a direct result of diseases like chloasma of the fundus and peripheral auditory damage, as well as diabetic feet and diabetic kidneys. (Guo, 2015) There is currently no effective treatment for diabetes in clinical medicine; instead, focus is being placed on the patient's comprehensive life intervention, which has been shown to significantly improve prognosis and prevent diabetes complications. Since treating diabetes requires a lengthy process, it is crucial to provide effective health education while undergoing treatment. Diabetes has a very high clinical incidence and is the most prevalent chronic disease. Long-term high blood sugar levels may cause the patient to develop blood vessel and organ disorders, cause a variety of difficulties, and in severe instances, endanger their life. Patients with diabetes must take long-term blood sugar-controlling drugs, but bad feelings will also impact how the condition is treated, which will decrease the patient's adherence to the regimen. Poor disease knowledge will also result in less treatment compliance from the patient. (Weaver, 2018) (Balaji et al., 2019) The purpose of this study was to examine how diabetes education and nursing techniques used on diabetic patients in the endocrinology department of the Maternity and Children Hospital of King Khaled affected the nursing care of those patients.

II. METHODOLOGY

90 diabetic patients were the study participants, and all of the patients' medical records were retrospectively evaluated. These patients were hospitalized at our hospital's Endocrinology department between October 2018 and October 2019. The patients were divided randomly into 2 groups: 45 patients were in the control group, receiving standard treatment, and 45 patients were in the experimental

group, receiving diabetes health education and nursing care. General characteristics between the two groups, such as gender and age, were compared. No statistical difference existed.

Patients in the routine group received routine care, meaning that we monitored their blood sugar levels, nutrition, and medication regimens. Patients in the treatment group were also given health education about diabetes, however the following were the most common approaches used. A team for nursing research and diabetes education is first established. The hospital has a research team focused on diabetes care, which includes the head of the endocrinology department, diabetes specialists who serve as attending physicians, the hospital's chief nurse, the department's head nurse, and several other key nurses, a psychologist, and a dietician. When a new patient comes in for treatment, the nurses should greet them with a cheerful and engage in conversation with them and their loved ones to learn all they can about the patient's history with diabetes, lifestyle, diet, and any other health issues. Only then should the nursing staff enter the patient's condition into an electronic database. They must to file and keep getting well during their subsequent medical care. The attending physician in the undergraduate room must also educate the patients on blood sugar management so that they are aware of its significance and can afterwards effectively stop the progression of their own illness and consequences. Third, while the patient is in the hospital, the nursing staff should deliver diabetes booklets or brochures and explain the pathophysiology, types, related consequences, and effective blood sugar management measures. In order for patients to completely understand the right approaches to personal care, nutrition, exercise, and medicine following sickness the head of department should routinely arrange for patients to offer lectures on the stage of "diabetes." Additionally, in order to properly regulate blood sugar and increase patients' ability for self-management, the director should urge patients receiving future therapy to eat healthily, exercise sensibly, and utilize scientific drugs. The nursing staff should also provide the patients' families with the proper information and publicity so that they may support the patients as much as possible in their efforts to control the condition and watch over them while they practice excellent self-management. Finally, nursing staff should gently explain to patients what to do once they are released from the hospital, while also creating appropriate care plans and telling patients to visit the hospital frequently for review, depending on the situations of various patients. Following hospital discharge, nursing staff should call patients on a frequent basis to check in on how they are doing so they can alter their care plan in time for their recovery and receive better care. In order to make it convenient for patients to consult with them after discharge, the department should also set up a consultation. The two patient groups' nursing impact, blood sugar level, level of disease knowledge, occurrence of problems, and compliance were assessed. T and the chi-square test were utilized. A value of P 0.05 was regarded as significant, & SPSS 22 was utilized in order to carry out statistical analysis on the data from the text.

III. RESULTS

Comparison of the Two Patient Groups' General Information

The gender, age, and duration of illness of the two patient groups were not significantly different ($P > 0.05$). Table 1 compares two groups' general statistics.

Table 1

| | Control | Test group | T value | p-value |
|--------|---------|------------|---------|---------|
| Gender | 21 | 23 | 1.56 | 0.08 |
| Age | 48 | 46 | 1.29 | 0.28 |
| Year | 5.6 | 5.8 | 0.65 | 0.58 |

Comparison of Nursing Impacts on the Two Patient Groups

The experimental group's nursing effects were better and its overall effective rate was greater. A statistical test showed two groups were different ($P 0.05$). Table 2 compares nursing effects on two patient groups.

Table 2

| Groups | Markedly effective | Effective | Invalid | Total effective rate |
|----------------|--------------------|-----------|---------|----------------------|
| Control group | 16 | 17 | 12 | 73.2% |
| Test group | 22 | 18 | 5 | 88.7% |
| X ² | | | | 8.95 |
| p-value | | | | 0.02 |

Disease Awareness and Blood Glucose Levels Differ Between the Two Groups

Blood glucose levels were statistically lower in the experimental group both before and after eating. Sickness awareness in the experimental group was much greater than in the control group ($P 0.05$).

Table 3

| Groups | FBG | 2H blood glucose after meal | Awareness disease level |
|---------------|------|-----------------------------|-------------------------|
| Control group | 9.56 | 10.2 | 85.3 |
| Test group | 6.5 | 8.1 | 95.5 |

| | | | |
|---------|--------|------|--------|
| t-value | 5.4 | 5.6 | 12.5 |
| P-value | ≤ 0.01 | 0.01 | ≤ 0.01 |

Complications Comparison

One case of hypoglycemia and two cases of heart failure were among the 6.7% of after-effects experienced by the test group. There were 2 cases of hypoglycemia (11%) in the control group. Two had heart failure and three had angina. Two groups differed statistically (P 0.05).

Compliance Evaluation of the Two Patient Groups

The experimental group's treatment compliance rate was 90.1%, far higher than the control group's 75.5% (P 0.05). Table 4 compares patient groups' compliance.

Table 4

| Groups | High compliance | Moderate compliance | Poor compliance | Efficacy |
|---------------|-----------------|---------------------|-----------------|----------|
| Control group | 26 | 8 | 11 | 75.5% |
| Test group | 30 | 11 | 4 | 90.1% |
| T-value | | | | 6.5 |
| p-value | | | | 0.01 |

IV. DISCUSSION

People who have diabetes typically have high blood sugar levels, which can be brought on by a variety of reasons including obesity, autoimmune diseases, the environment, heredity, and even other lifestyle choices. Numerous factors may contribute to the development of diabetes. All of the research participants had type 2 diabetes, which may be controlled with medication. According to the research mentioned, using simply pharmaceuticals to treat diabetes makes it difficult to get a bigger curative impact, but health education may improve the effectiveness of diabetes therapy. Health education for diabetes patients should be given by medical professionals, since it may greatly improve patients' adherence to treatment (Cramer, 2004, García-Pérez et al., 2013).

Health education may be given by nursing staff in a number of different methods. Depending on the patient's requirements, nursing staff may do a complete assessment of the patient's condition and create a customized education programme. Demonstrations, classes, and talks may all help to raise awareness about diabetes. In the context of health education, subjects like "blood glucose testing processes," "the necessity of controlling blood glucose," and "the normal blood glucose range" are discussed, among other related matters. Health education also covers the causes, symptoms, and classifications of diabetes; the means, ends, and definitions of dietary management; the necessary amount of exercise and the best times to exercise; the effects of negative emotions on health and how to control them; and the dangers, indications, dosages, and administration schedules of medications. When patients actively collaborate with the nursing staff and objectively monitor both their own behavior and nutrition, the effectiveness of the treatment is incrementally improved. We found that giving endocrine patients with diabetes health education can have a positive impact on their treatment outcomes by influencing their nutrition, behaviour, and mental health (Coppola et al., 2016, Frich, 2003).

Diabetes causes endocrine abnormalities. Untreated, it can cause metabolic abnormalities, vascular illness, and death. Relevant research indicate that lifestyle, employment, and dietary habits are mostly responsible for endocrine problems in diabetes individuals. Patients get inadequate therapy and have poor prognoses because they have a poor understanding of their own diseases and lack self-control in everyday life. Therefore, it is crucial to provide health education top priority in clinical practice in order to increase the treatment impact for diabetic patients. Through effective and scientific health education, we should assist patients in changing their harmful eating and lifestyle patterns. Additionally, we must educate patients on the importance of taking their medications as prescribed. Doing so will increase patient compliance and treatment success. As a consequence, it's essential to provide individuals with diabetes adequate health information about endocrine therapy (Zheng et al., 2019).

The delivery of health education by nursing practitioners may take many different forms. After conducting a detailed assessment of the patient's condition, the nursing team may devise a specialized educational plan for the patient. It's possible that patient education via lectures, workshops, and seminars can help them understand diabetes better. Health education includes knowledge on the mechanism, signs, prognosis, or forms of diabetes, as well as food management approaches, aims, and meanings, exercise quantity, and exercise duration. The processes for checking blood glucose, the need of maintaining blood glucose management, and the normal range of blood glucose are all discussed in this article. The negative effects, indications, doses, and timing of hypoglycemic medications; The use, storage, injection processes, and dosages of insulin; The relationship between negative emotions and illnesses and how to manage them; The usage, storage, and dosages of insulin; Patients have the opportunity to collaborate actively with nursing staff to scientifically manage their own behavior and diet via the use of health education, which has the effect of gradually enhancing the therapeutic impact. This research has shown that giving endocrine patients with diabetic health education may progressively improve medication adherence and nutritional, behavioral, and psychological well-being, all of which have a positive influence on treatment success. (Cameron, 1996) In this study, gender, age, and length of illness were not statistically different between the 2wpatient populations ($P > 0.05$). This was determined by comparing the general characteristics of the two patient groups. The experimental group's nursing effects were better,

and its overall effective rate was greater, according to a comparison of the nursing effects of the two patient groups. (Alinier et al., 2006) Two groups differed statistically ($P < 0.05$) The experimental group's fasting and two-hour post-meal blood glucose levels were lower than the control groups. The experimental group's sickness cognition was significantly higher than the control group's ($P < 0.05$). (Miller et al., 2002) When the incidence of the two patient groups was compared, it was found that the experimental group had a complication rate of 6.7%, which included 1 instance of hypoglycemia and 2 cases of heart failure. This was observed when the two patient groups were compared. Complications occurred at a rate of 11% among those in the control group. These complications included 2 instances of hypoglycemia. There was a total of three cases of angina pectoris and two instances of people experiencing heart failure. An examination of the available statistical information revealed the existence of a considerable disparity between the two groups ($P < 0.05$). In the group that was subjected to the experiment, the effective rate of treatment compliance was found to be 90.1%, which was a considerable increase from the 75.5% that was reported in the control group ($P < 0.05$).

V. CONCLUSIONS

The last component of this investigation was the provision of diabetes health education to the patients who participated in the experimental group. This group of patients' conditions improved considerably after the implementation of conventional nursing practices, which allowed for a comparison with the basic group of patients' circumstances. Therefore, it can be said that the implementation of diabetic health education is fairly effective. In addition to this, it offers potential benefits for the treatment and rehabilitation of the ailment.

VI. REFERENCES

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