# Diabetes Mellitus Nursing Management: Literature Review

Jamal Drea

Lakeview College of Nursing

Dr. Ariel Wright

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Research is performed to establish better approaches to patient-centered care to improve outcomes. A literature review examines previous relevant data for limiting flaws and progress toward more advanced practice. The nursing profession entails caring for patients but also takes a role in their surveillance and monitoring to maintain maximal health. Type 2 diabetes mellitus is a chronic condition associated with several health risks if unmanaged by the individual. It is a prevalent illness estimated to impact about 9% of the United States and is expected to rise significantly in the future (Xu et al., 2018). Because of this, nurses provide interventions and assist affected patients with compliance with a routine to prevent complications. Continual analysis of the evidence on this topic allows for further insight into perspectives on patient care.

## A Randomized, Controlled Trial Exploring Collaborative Nursing Intervention on Self Care Ability and Blood Glucose of Patients with Type 2 Diabetes Mellitus

Diabetes mellitus is a disease that requires lifelong management to avoid health complications that can result from poor adherence to controlling blood glucose levels. A study explored the results of a nursing model aimed at implementing collaborative nursing to increase patients' self-care ability with type 2 diabetes mellitus. This article was published to show the effects of a nursing approach that had previously been shown to be effective for other health problems like cardiovascular disease and schizophrenia (Wang et al., 2022).

### Key Points

The key points that were the focus of this study were the factors included in patient education for improving self-care. The article explains how a randomized, controlled trial method was used

between two groups of admitted patients with type 2 diabetes. A total of 72 patients over two years were separated using a fixed-point sampling method into a control group of 35 and a research group of 37. The control group was educated on the benefits of nutrition with less sugar and fat. They were also told about how adequate protein, fiber, and vitamins with exercise controlled blood glucose levels. The research group was given manuals, informed about common diabetic drugs, taught about what to monitor for, received weekly follow-ups over the phone, and were referred to a specialist for diet and counseling for mental health while including family members. Data was collected through HbA1c level, fasting plasma glucose, Morisky adherence scale, HAMD depression rating scale, and SAS anxiety scale for a mental health assessment (Wang et al., 2022). A p-value was used to determine differences between the two groups before and after the intervention. There was no significant difference, with p being >0.05 prior, but the results were notable afterward, with HbA1c and FPG lower in the research group. The research group had a significantly higher adherence score and lower scores for depression and anxiety compared to the control group, which was supported by $p < 0.05$ in those categories. A satisfaction survey was done, and the control group was lower than the research group, with 51% compared to 97%. The author concluded that collaborative nursing was more effective in helping patients with T2DM (Wang et al., 2022).

**Assumptions**

The primary assumption of the authors is that more resources are needed to assist in self-care ability for widespread disease. They claim that there is evidence that this approach to collaborative nursing was effective in controlling other illnesses. They also acknowledge the mental health aspect and its effect on a patient's health (Wang et al., 2022).

**Deficit/Conclusion**

The author's line of reasoning is sensible because they believe that providing more opportunities for patients will help with their ability to control their condition and how it affects their health. The data supports the reasoning of the authors. This article implies that incorporating family members in education and giving more in-depth teachings are beneficial for patients to get a better understanding (Wang et al., 2022). Frequent assessments and collaborating with other healthcare specialists are ways in which nurses can achieve better health outcomes for their patients that have chronic health issues.

## Study on the Nursing Effect of Diabetes Health Education Nursing Methods Applied to Diabetes Patients in the Endocrinology Department

Another study analyzes the effects of nursing on the education of diabetes patients by juxtaposing the results of a monitored control group and an experimental group that receives follow-up appointments with more education. The main focus of the study was to improve the understanding of diabetic patients because of the nature of the disease as an endocrine disorder that affects multiple body systems (Wang et al., 2022). As a result, this education would promote treatment compliance and prevent complications that could endanger the life of patients.

**Key Points**

The critical point that the author is trying to address is blood sugar control, complications, compliance, and level of knowledge. A randomized, controlled experiment was performed on 90 patients admitted to a hospital's endocrinology department. The participants were split into even

groups of 45, with one control group being monitored for their lifestyle, diet, medications, and blood glucose. The other 45 patients had the same treatment and telephone follow-up appointments (Wang et al., 2022). They were also taught about the disease process, medications, proper diet, and exercise with family members. The blood glucose level of the participants was gathered, and the average fasting BG level was 6.53 mmol/L for the test group, while it was 9.56 mmol/L in the experimental group. The p-value was <0.01 for this criterion. Both groups were tested for awareness level, and the experimental achieved an average score of 12% higher than the control group with a significant p-value. As for complications, the p-value was <0.05, as the incidence rate was higher in the control group (Wang et al., 2022).

**Assumptions**

The author assumes that patients with diabetes should have better, specific information about testing and controlling blood sugar levels. They also assume that nursing staff could help by teaching patients about lifestyle changes that could alleviate negative attitudes toward compliance. The study's goal was to observe improvements in the condition of the participants after they were educated on management (Wang et al., 2022).

**Deficit/Conclusion**

The article implies that the quality of education for diabetes management correlates with better outcomes. The author's reason is that nurses could help diabetic patients by using teachings that support improved management of blood glucose levels. The experimental group

had superior results to the test group with routine care (Wang et al., 2022). Nursing allows for the facilitation of information to the patients so they can manage their diabetes and avoid complications such as damage to organs.

## Effect of a Nurse-Led Diabetes Self-Management Education Program on Glycosylated Hemoglobin among Adults with Type 2 Diabetes

Further research was done on a group of patients with type 2 diabetes mellitus to see the effect nurse-led programs had on HbA1c. Participants in the study were re-evaluated after 12 and 24 weeks to record the effects of interventions. Other changes, such as blood pressure, weight, and lipid profiles, were noted (Azami et al., 2018).

### Key Points

The study was performed using a randomized, controlled trial with two groups consisting of 72 patients. The experimental group participated in a self-management program that provided them with a book and informational videos. The other group was taught about self-monitoring with a pamphlet. During the 12-week mark, HbA1c for the experimental group was about 48% lower and then 62% lower after 24 weeks compared to the control group. No patients in the control group had a level lower than 7%, but the group that went through the nurse-led program had 21% of participants below to signify adequate control of their diabetes. A p-value $<0.001$ supported these findings (Azami et al., 2018).

### Assumptions

The assumption by the authors in this study was that nonpharmacological self-management is increasingly essential for patients with diabetes. They also claim that nurses are the best healthcare professionals for educating patients on developing self-care abilities with preventive methods. Because of this, the reasoning is that nurses could assist in promoting behaviors that reduce HbA1c for patients to show control of blood glucose levels (Azami et al., 2018).

**Deficit/Conclusion**

The study concludes that the nurse-led program successfully supports patients' self-care. The data supports the conclusion. This article implies that more contact time and resources are helpful for diabetic patients to understand better how to control their condition, which is logical (Azami et al., 2018).

## Conclusion

Several studies have been performed to observe the effects of additional education for patients with diabetes mellitus to help control their blood glucose and reduce the risk of complications. The evidence-based practice utilizes data from research to develop optimal treatment methods for better patient outcomes. The data collected shows that when resources are made available, patients tend to comply more with treatment. As a result, both physical and mental health benefit from interventions. Literature reviews are important for nursing and healthcare because they incorporate recently obtained information to advance practice to give the

best care possible to patients (Houser, 2023). This concept is especially true for a common disease like diabetes mellitus, which needs to be managed to preserve the health of individuals.

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