

**Diabetes Mellitus: Literature Review**

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## **Diabetes Mellitus**

Diabetes mellitus is a condition in which the body cannot properly utilize glucose for energy due to a lack of insulin or insulin resistance. An imbalance of glucose may cause damage throughout the body, including but not limited to the heart, kidneys, eyes, and nerves. It is essential to assess the patient's level of interest in maintaining their diabetes, available resources for family members of diabetic patients, and self-management strategies for those with insulin dependence. Doing so will give the nurse a baseline for proper education. Nurses should be up to date on current research to efficiently educate their patients.

Literature reviews offer an unlimited source of information on the known and unknown of a subject (Houser, 2018). New research is consistently available, providing the latest research available (Houser, 2018). Nurses can utilize these reviews for patient education and personal knowledge of any subject.

### **Do patients value nutritional therapy? A quantitative study in type 2 diabetes patients**

With type 2 diabetes mellitus, diets low in carbs and sugars are essential to help maintain sugar levels within acceptable ranges. This study showed that participants relied on pharmacotherapy regimens instead of making dietary changes (Ezequiel et al., 2017). Sixty-two patients participated in a non-random quantitative study to identify perceived barriers to nutritional compliance (Ezequiel et al., 2017). Emphasis on nutritional therapy is equally as crucial as pharmacotherapy compliance.

### **Key Points**

This quantitative study utilized 62 patients over 85 diagnosed with diabetes for over 12 weeks and have seen a registered dietician within the last year (Ezequiel et al., 2017). The p-value in this study is  $<0.001$ . When referring to compliance, adherence to 80% of the recommended treatment is desirable (Ezequiel et al., 2017). Studies show diabetic patients' adherence falls between 23%-77% (Ezequiel et al., 2017). Patients excluded from this study include those taking insulin, a history of degenerative central nervous system disorders, and those following lactose or gluten-free diets (Ezequiel et al., 2017). Surveys consisting of a 24-hour diet recall, a series of questions, and a series of questions utilizing the Likert scale collected dated for this study (Ezequiel et al., 2017). Body mass index, HbA1c, lipid profiles, and age at the time of diagnosis are also categories observed. Of the participants, BMI placed 22 patients in the overweight category, 33 as obese, and only seven within the normal weight range (Ezequiel et al., 2017). Participants stated food as essential, pleasurable, and the center of social gatherings (Ezequiel et al., 2017). While nutrition is essential, pharmacological treatments are considered the preferred source of sugar management amongst participants (Ezequiel et al., 2017). This study suggests that patients would benefit from better nutrition and weight reduction. While changing eating habits is difficult, potential exists as many participants acknowledge the importance of good nutrition (Ezequiel et al., 2017).

### **Assumptions**

Nutritional therapy amongst diabetic patients has a lower compliance rate than pharmacological treatments (Ezequiel et al., 2017). Little interest in making dietary changes and increasing physical activity leads to higher rates of noncompliance. Changing eating habits and perceptions of the importance of food is a complex task, even though most patients report expressing importance in proper nutrition (Ezequiel et al., 2017). Nutritional counseling may be

recommended and proven successful in promoting positive changes (Ezequiel et al., 2017).

### **Deficit/Conclusion**

Proper nutrition is essential in managing diabetes mellitus. Properly educating patients on the importance of maintaining a healthy weight and making healthy eating decisions can help to decrease complications related to diabetes mellitus. Patients are aware of the need to make these changes, so empowering them is essential. This article implies that many patients with diabetes lack value in their nutritional tendencies and that encouragement, education, and emphasis on making healthy choices are essential (Ezequiel et al., 2017). If nurses fail to accept this line of reasoning, these patients will continue to live unhealthy lifestyles with no encouragement to make changes. Nutritional counseling is successful in helping patients to change long-term unhealthy behaviors and can be a valuable resource for patients in need of change (Ezequiel et al., 2017).

### **Mutual involvement in families with type 2 diabetes through web-based health care solutions: Quantitative survey study of family preferences, challenges, and potentials**

Diabetes is a chronic disease that affects not only the patient but also their families. Being educated on the disease and having access to information about diabetes assists the family in being supportive of the patient. This study questioned six domains, including family life related to diabetes, access to the internet, desire to gain information from the internet, preference of delivery format, preference in the source of information, and peer-to-peer communication (Vitger et al., 2017). Fifty participants from twenty-two families participated in this quantitative study. Essentially, the internet was a substantial source of information for both family members and the patients themselves (Vitger et al., 2017).

## **Key Points**

This quantitative study utilized fifty patients from twenty-two families, including twenty-eight relatives and twenty-two patients (Vitger et al., 2017). Out of the fifty participants, the study had a response rate of 69% (Vitger et al., 2017). Recruitment of patients for this study included recommendations from health care providers such as nurses, dieticians, health consultants, and health care facility coordinators (Vitger et al., 2017). A quantitative self-reported questionnaire was the backbone of this study. Participants answered questions based on six domains, including family life related to diabetes, access to the internet, desire to gain information from the internet, preference of delivery format, preference in the source of information, and peer-to-peer communication (Vitger et al., 2017). The p-value in this study is 0.006. The study found that 89% of relatives and 95% of patients indicated the internet was their preferred source for information regarding diabetes (Vitger et al., 2017). 32% of relatives and 46% of patients attempted to seek further information on diabetes (Vitger et al., 2017). Participants were interested in peer-to-peer communication, but only a few people (Vitger et al., 2017). This study suggests that despite the information being available on the internet, families suggested more information be available via text and video from healthcare practitioners (Vitger et al., 2017). This study utilized charts and tables to represent data.

## **Assumptions**

The quality of information related to diabetes compared to other disease processes such as cancer and cardiovascular disease is lacking (Vitger et al., 2017). Patients with lower health literacy also requested that information be short and concise (Vitger et al., 2017). If websites offered information pertinent to the request of the participants, more participants would utilize

the internet to seek information about diabetes (Vitger et al., 2017). Encouragement by the HCP is also essential to direct families toward information that may be appealing (Vitger et al., 2017).

### **Deficit/Conclusion**

Having easily accessible, accurate, and practical information is essential for both families and patients to gain additional education on diabetes. The HCP must know these sites to make proper recommendations. Failure to do results in education not being emphasized and participants feeling lost when searching for factual information. Families desire to learn as much as possible about the disease process but feel as though the information available is lacking and needs updating (Vitger et al., 2017). Information needs to be brought up to date and written in a manner that can be quickly processed. Diabetes affects millions of people worldwide, and important information must be readily available.

### **Difficulties found by persons living with diabetes mellitus: A quantitative analysis**

Diabetes affects nearly 150 million people worldwide (Maximino et al., 2017). This study investigates the relationship of age, social status, education, and treatment associated amongst participants (Maximino et al., 2017). One hundred participants answered questions on a data collection form divided into sociodemographic characteristics and data related to diabetes (Maximino et al., 2017). Emphasis focuses on the difficulties of those living with diabetes and self-management (Maximino et al., 2017).

### **Key Points**

This quantitative study utilized one hundred participants previously diagnosed with diabetes (Maximino et al., 2017). 64% of participants stated they were not compliant with diet

recommendations (Maximino et al., 2017). 14% indicated they participated in an exercise routine. 27% indicated that diabetes interfered with their daily lives (Maximino et al., 2017). 38% stated experiencing depression-like symptoms associated with their diabetes (Maximino et al., 2017). Participants also stated that one of their biggest concerns is "diabetic foot." Due to neuropathy, impaired circulation, and delayed wound healing, injuries to the foot can cause severe complications, potentially leading to amputation (Maximino et al., 2017). This study suggests that diet, exercise, and self-care are essential for diabetic patients to manage their disease (Maximino et al., 2017). This study used tables to represent data. There was no p-value listed within this study.

### **Assumptions**

Self-management of diabetes is essential. Patients who are unwilling to change their lifestyle, including nutrition and exercise, are more likely to experience complications related to diabetes (Maximino et al., 2017). The role of the health care provider is essential as it encourages self-management. Other complications such as depression can also interfere with the patient's ability to provide proper self-care (Maximino et al., 2017).

### **Deficit/Conclusion**

Making changes to the patient's lifestyle is essential in the self-management of diabetes (Maximino et al., 2017). With only 14% of patients participating in an exercise routine, the nurse needs to act as an educator and promote how exercise can help prevent complications and improve patients' quality of life (Maximino et al., 2017). More sedentary lifestyles lead to increasing numbers of patients diagnosed with diabetes affecting more than 150 million patients

worldwide. This number may double by 2025 (Maximino et al., 2017). Now is the time to start making changes to prevent rapid increases in diabetes diagnoses.

### **Conclusion**

In conclusion, diabetes affects more than 150 million patients worldwide. Patients need to be interested in maintaining their disease, have access for themselves and family members to gain additional education, and be able to self-manage and control their diabetes. By following a proper diet and exercise program, patients can decrease the incidence of complications related to diabetes (Maximino et al., 2017). It is essential to advocate, provide, and counsel the patient regarding the disease process as a nurse. Nurses spend more time with patients than any other health professional and are first in line in assisting in management. By encouraging the patient to live a healthier lifestyle and providing resources on seeking additional information, the patient is more likely to be compliant (Vitger et al., 2017). Staying up to date on evidence-based practice is essential for the nurse. It will aid them in providing the most current studies about the desired subject while also gaining valuable knowledge of the topic. Healthcare needs to continue to promote the prevention of obesity as it directly correlates with diabetes type 2. With fewer patients being diagnosed with diabetes, health care costs will decrease for patients, quality of life will improve, and hospitals will have more beds readily available as fewer diabetic patients will be occupying beds.

## References

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