

Relationship Between Health-Related Quality of Life (HRQoL) Factors in Patients With Diabetes Mellitus

Kendra Callista Satyafebrianti¹, Aktaruddin Arief Santoso¹

¹Faculty of Medicine Universitas Pembangunan Nasional Veteran Jawa Timur

Corresponding Author

Kendra Callista Satyafebrianti

Faculty of Medicine Universitas Pembangunan Nasional Veteran Jawa Timur

Rungkut Madya Street Number 191, Rungkut Kidul, Rungkut District, Surabaya, East Java, 60293

Tel/Fax: +6282113270523

E-mail: kendracalista@gmail.com

Abstract:

Background: Diabetes mellitus (DM) is a chronic disease that can significantly affect the quality of life of patients. Poor quality of life is often associated with poor disease control, complications, and psychosocial burden. A better understanding of the factors that affect the quality of life of DM patients is essential for designing effective interventions.

Objective: This study aims to analyze the relationship between health-based quality of life factors and the condition of diabetes mellitus patients.

Method: This study used a literature review method. Researchers collect data through database sources, such as PubMed, Google Scholar, and ScienceDirect. The articles used are in English. The keywords used in the article search are: "heart related quality of life" and "diabetes mellitus". The article search is limited to publications in the last 5 years (2019 to 2024).

Results: The results showed that factors such as glycemic control, severity of complications, social support, and depression were significantly associated with the quality of life of patients. Patients with better glycemic control and higher social support reported better quality of life.

Conclusion: Overall, the quality of life of diabetes mellitus patients is greatly influenced by various factors, including glycemic control, complications, social support, and psychosocial factors. To improve the quality of life of diabetes patients, it is important to provide a holistic approach that includes good medical management, emotional support, and social interventions that can improve their well-being.

Keywords: Diabetes Mellitus, Patient, Health-Related Quality of Life

Introduction

Diabetes mellitus (DM) is a chronic disease whose prevalence is increasing worldwide. This disease not only affects physical health but also affects the quality of life of patients. Quality of life (QoL) refers to an individual's perception of their life conditions, including physical, psychological, social, and environmental aspects. Diabetic patients often face major challenges in maintaining glycemic balance, managing complications, and coping with the emotional burden caused by this disease. Decreased quality of life in DM patients is often associated with poor glycemic control, the emergence of complications, and psychological disorders, such as depression or higher anxiety.¹

One of the main factors affecting the quality of life of diabetic patients is good glycemic control. Research shows that patients with poor glycemic control tend to experience a significant decline in quality of life, especially in physical and psychological aspects.² In addition, complications related to DM, such as neuropathy, retinopathy, or heart disease, also contribute greatly to decreased quality of life. Psychosocial aspects such as family support and the existence of a social community also play an important role in improving the quality of life of DM patients.³

Factors such as education level, employment status, and access to health facilities also affect how diabetic patients experience their life conditions. Therefore, it is important to understand the relationship between these factors in order to improve the quality of life of DM patients. This study aims to explore how health factors related to diabetes affect the quality of life of patients.

Method

This study used a literature review method. Researcher collects data through database sources, such as PubMed, Google Scholar, and Science Direct. The articles used are in English. The keywords used in the article search are: "heart related quality of life" AND "diabetes mellitus". The article search is limited to publications in the last 5 years (2019 to 2024). Data sources in the form of articles are in the original article, full text, and open access categories.

Discussion

Diabetes mellitus (DM) is a chronic disease that affects many aspects of a patient's life, both physically and psychologically. Inadequate management can lead to a significant decline in the patient's quality of life (QoL). Factors such as glycemic control, complications, social

status, and psychological conditions play a very important role in determining the level of quality of life of diabetic patients.

Glycemic Control and Quality of Life

One of the factors that most affects the quality of life of diabetic patients is glycemic control. Studies have shown that patients with poor glycemic control experience a significant decrease in quality of life, especially in physical and psychological aspects. Poor glycemic control is associated with an increased risk of long-term complications such as neuropathy, retinopathy, and heart disease, which can worsen overall health conditions.^{2,3} Patients who are able to maintain blood glucose levels within the recommended range tend to report a better quality of life, with fewer physical and psychological symptoms.⁴

Diabetes Complications

Complications due to diabetes, such as diabetic neuropathy, kidney failure, and cardiovascular disease, are directly related to decreased quality of life. These complications not only limit mobility and physical function, but can also cause ongoing psychological stress. A study by Zhang et al. (2022) revealed that patients suffering from diabetes complications had lower quality of life scores, especially in terms of physical ability and mental health.⁵ Patients with type 2 diabetes who suffered from diabetic neuropathy reported significant pain, which reduced their overall quality of life.⁶

Psychosocial Aspects

In addition to physical factors, psychosocial aspects also have a major influence on the quality of life of diabetes patients. Good social support, whether from family, friends, or social support groups, can help patients cope with stress related to their disease. Research by Liu et al. (2021) shows that strong social support can reduce levels of anxiety and depression in diabetes patients, which in turn can improve their quality of life.⁷ Conversely, social isolation and low emotional support are often associated with increased feelings of anxiety and depression, which worsen diabetes control and quality of life.⁸

Demographic and Socioeconomic Factors

Demographic factors, such as age, gender, and socioeconomic status, also influence how patients with diabetes perceive their quality of life. Younger patients with type 1 diabetes tend to have better quality of life compared to older patients, especially in terms of social and

emotional aspects.⁹ Socioeconomic status factors, such as income, education, and access to health care, also influence patients' disease control and quality of life. Patients from lower economic backgrounds may have difficulty accessing optimal medical care, which has a negative impact on their quality of life.¹⁰

Conclusion

Overall, the quality of life of diabetes mellitus patients is greatly influenced by various factors, including glycemic control, complications, social support, and psychosocial factors. To improve the quality of life of diabetes patients, it is important to provide a holistic approach that includes good medical management, emotional support, and social interventions that can improve their well-being.

References

1. Smith MJ, Jones R. Impact of diabetes mellitus on quality of life: A longitudinal study. *Diabetes Care*. 2021;44(3):457-63. doi:10.2337/dc20-1012.
2. Brown SA, O'Connor PJ, Garcia R, et al. Glycemic control and quality of life in diabetes patients: A systematic review. *Diabetes Metab Res Rev*. 2023;39(2):e3472. doi:10.1002/dmrr.3472.
3. Choi JH, Kim MK, Yoo JH, et al. Social support and quality of life in patients with diabetes mellitus: The mediating effect of self-management. *J Diabetol*. 2022;13(4):120-8. doi:10.1016/j.jdiii.2022.04.003.
4. Wang J, Xie H, Li X, et al. The relationship between glycemic control and health-related quality of life in patients with type 2 diabetes: A meta-analysis. *J Diabetes Investig*. 2020;11(5):1094-102. doi:10.1111/jdi.13252.
5. Zhang X, Xu G, Yang W, et al. The impact of diabetes-related complications on quality of life: A cohort study in Chinese patients. *J Diabetol*. 2022;13(1):54-62. doi:10.1016/j.jdiii.2022.01.007.
6. Lee Y, Choi H, Lee S, et al. Diabetic neuropathy and its impact on quality of life in patients with type 2 diabetes. *Diabetes Res Clin Pract*. 2022;181:109039. doi:10.1016/j.diabres.2022.109039.
7. Liu M, Wang S, Zhao L, et al. The role of social support in improving quality of life among patients with diabetes mellitus: A cross-sectional study. *BMC Endocr Disord*. 2021;21(1):91. doi:10.1186/s12902-021-00788-0.

8. Kuo S, Wu C, Chang L, et al. Social isolation, loneliness, and depression in patients with diabetes: A cross-sectional study. *J Clin Nurs.* 2022;31(7-8):1124-32. doi:10.1111/jocn.16031.
9. Nwankwo TO, Williams DM, Jackson S, et al. Age-related differences in quality of life in adults with diabetes mellitus: A nationwide study. *Diabetes Care.* 2020;43(10):2465-72. doi:10.2337/dc20-1023.
10. Patel P, Gopalan M, Guptill L, et al. Socioeconomic disparities in diabetes care and quality of life in underserved populations. *Diabetes Educ.* 2021;47(3):247-56. doi:10.1177/0145721721991393.