Advanced Medical Research

Global Science Publishing

Number 2 (2024), pp. 01–05

Review

The Importance of Empowering Self-Management Skills in Diabetes Mellitus

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Received: March 28, 2024; Revised: April 14, 2024; Accepted: April 28, 2024; Published: 15 June, 2024

Abstract: Background: This narrative review article aims to provide an understanding of diabetes mellitus, including its causes, health risks, and ways to prevent and prevent them, empowering self-management skills in managing this health problem. Materials and Methods: In the search for scientific literature for this review, data from the US National Library of Medicine (PubMed), MEDLINE, PsycINFO, and SportDiscus were used, and the terms '' self-management skills'', diabetes mellitus''.'' metabolic health''. "regular physical activity'' was used. The relevant literature has also taken its source from the research of relevant articles from reference lists derived from data searches. Results: Diabetes mellitus is a complex condition that involves some different processes, including insulin secretion, insulin action, and glucose metabolism. It would be beneficial to continue researching the various aspects of diabetes management and to gain a deeper understanding of the underlying mechanisms of this disease. Conclusion: Diabetes mellitus is a condition that requires a multifaceted approach to management. It involves dysfunction in insulin secretion, insulin action, and glucose metabolism. Empowering individuals with the skills to manage this metabolic health problem can contribute to significant health benefits in the prevention and treatment of this disease.

Keywords: self-management skills; diabetes mellitus; metabolic health; obesity; regular physical activity

1. Introduction

It is estimated that diabetes mellitus affects millions of people worldwide. While it is a metabolic disease characterized by high blood sugar levels in individuals due to disorders in insulin secretion, insulin action, or both, it is also known to cause a wide range of health problems, including cardiovascular disease, neuropathy, retinopathy, and nephropathy [1]. Therefore, it would be advisable for individuals to become aware of the current treatment understanding of diabetes mellitus-related health problems and to learn how to manage this health problem correctly.

When the pathophysiology of diabetes mellitus is examined, a chronic condition characterized by high blood sugar levels due to defects in insulin secretion, insulin action, or both, it becomes evident that genetic and environmental factors interact in a complex manner to impair glucose metabolism [2]. Once this interaction has been revealed in detail, it would be beneficial to focus on the effects of impaired metabolic balances on the physiological aspects of diabetes mellitus, as well as the rearrangement of medical treatment and individual management to preserve this metabolic balance [3].

In addition to medical treatment methods for the prevention and treatment of diabetes mellitus, another factor that is of critical importance is self-management skills. It is believed that individuals with diabetes mellitus can achieve success in controlling their blood sugar levels by developing effective self-management skills, which can help reduce the risk of some complications associated with the disease and improve quality of life [4]. It has also been suggested in scientific research that empowering self-management skills in diabetes mellitus may have a significant impact on the prevention and treatment of the disease [5].

In a systematic review conducted by Li et al. (2018), it was found that self-management training had a significant impact on improving glycemic control, self-efficacy, and quality of life in patients with diabetes mellitus [6]. It also had a positive effect in preventing a wide range of metabolic complications commonly experienced by diabetes mellitus patients.

Similarly, Khodaveisi et al. (2019) found that self-management interventions may potentially lead to improvements in glycemic control, self-care behaviors, and quality of life in patients with diabetes mellitus [7]. Furthermore, Glasgow et al. (2014) observed that a self-management program combining group sessions and personalized coaching yielded promising outcomes in people with Diabetes Mellitus [8]. The program was associated with improvements in glycemic control, self-efficacy, and quality of life in the study participants, in addition to an observed decrease in HbA1c levels in type 2 diabetes patients. The findings also indicated that patients reported notable enhancements in self-efficacy and quality of life [9,10].

It is becoming increasingly clear that the spread of diabetes in developed and developing countries is occurring at an alarming rate, and that the condition itself is a chronic one. This makes it all the more important to recognize the positive impact that interventions based on self-management information can have on the prevention and treatment of diabetes. It is particularly beneficial for individuals with diabetes to develop regular exercise habits, as this can contribute to the control of diabetes and the improvement of healthy living conditions. It is becoming increasingly clear that there is a need to expand diabetes-related health knowledge and improve healthcare skills [4,11,12].

It is also widely acknowledged that lifestyle change plays a pivotal role in the prevention and treatment of Type 2 diabetes, which is among the many health problems that can be caused by obesity. There is a growing body of evidence suggesting that increasing activity levels along with adopting a healthy diet and understanding the role of exercise in a positive weight loss program can lead to more effective weight loss outcomes. It is therefore recommended that physical activity be incorporated into a calorie-restricted nutrition program to achieve more significant weight loss results. It is therefore suggested that regular exercise is an important factor in the treatment of Type 2 diabetes, which poses a serious risk to a healthy life [13].

Upon closer examination of these and other studies, it becomes evident that enhancing individuals' abilities to manage their health is an effective strategy for both preventing and managing diabetes. Because of the results of these studies, it seems reasonable to suggest that self-management education should be an important component of management plans for diabetes mellitus patients.

2. Discussions

The World Health Organization suggests that self-care (self-management) interventions have the potential to enhance health and well-being, with benefits for both health systems and individuals [14]. Diabetes, a prevalent chronic illness, underscores the importance of effective self-management for improved outcomes [15,16]. This discussion explores the pivotal role of self-management skills among diabetes patients, drawing from Goleman's framework and contemporary research. These skills encompass self-emotional regulation, motivation, responsibility, commitment, adaptability, and trust, rooted in Goleman's principles [17,18].

Emotional regulation assumes paramount importance in diabetes care, given its profound impact on health outcomes. Aikens (2012) revealed a correlation between depressive symptoms and suboptimal self-management in diabetes [19]. Research by Kollin et al. (2024) underscores the indispensable nature of effective emotional regulation in coping with stressors and fostering improved self-care practices [20].

Self-encouragement and self-motivation are pivotal in diabetes management, drawing from Goleman's principles [17] (1995). Motivation facilitates overcoming challenges, crucial for effective

diabetes care [17]. Applied self-determination theory and social support theory to understand self-management behaviors in diabetes [15,16]. Competence and motivation play vital roles in diabetes self-management [15]. Lyngbye & Møller (2023) highlight the importance of theories like self-efficacy, empowerment, and motivation in guiding individuals with diabetes [16]. They recommend an emancipating motivational approach for improved self-regulation and health outcomes.

Gómez-Velasco et al. (2019) stress that patient engagement is pivotal in diabetes care, with healthcare providers tasked to stimulate and support patients' self-management skills [21]. Hickmann et al. (2022) highlight patients as active partners in healthcare, essential for cost reduction, efficient resource utilization, and improved patient-provider satisfaction [22]. Similarly, Dennison et al. (2023) suggest patient involvement, communication, and patient-centered care models as critical for enhancing health outcomes and equity [23]. Fostering responsibility empowers diabetes patients [15,16,22], while encouraging active participation and emphasizing consequences to promote proactive self-management.

Hayes et al. (2006) delineated effective methods for fostering psychological flexibility, emphasizing six key processes: diffusion, acceptance, present moment attention, self-awareness, values, and committed action [24]. Individuals often struggle with inconsistent behaviors such as adhering to diet, glucose testing, exercise, and emotional regulation. Self-commitment facilitates learning, assisting diabetes patients in establishing sustainable habits [25]. Goleman (1995) underscores the criticality of self-commitment in diabetes care, transforming intentions into actions through dedication and self-discipline [17,26]. Wang et al. (2022) found that diabetes patients frequently face self-management challenges, leading to heightened psychological issues [27]. Acceptance and commitment therapy can enhance psychological well-being and self-management engagement. Strong evidence supports the association between self-commitment and treatment adherence, highlighting its importance in diabetes care [24,28].

In the dynamic healthcare landscape, adaptability is crucial for effective diabetic management. Patients equipped with adaptive coping strategies navigate setbacks and adjust self-management routines. Various tools like physical exercise, mindfulness, and family support improve diabetes management [29,30]. Cultivating coping mechanisms, resilience skills, and mindfulness exercises enhance self-efficacy and address distress in diabetes [31,32]. Home-based physical activity protocols, including resistance, walking, and aerobic exercises, are recommended for holistic diabetic care [33].

3.Conclusions

It might be helpful to think of the physiological aspects of diabetes mellitus as referring to the bodily processes and functions that are affected by this condition. It is worth noting that metabolic disorders may arise as a consequence of this disease. These disorders can be attributed to the way the body produces and regulates insulin, as well as the way glucose is processed and used by body cells. It is of the utmost importance for individuals with diabetes mellitus to ensure that all metabolic processes are managed correctly to protect their health and prevent complications related to the disease.

Funding: The authors certify that there is no funding from any financial organization regarding the material discussed in the manuscript or contributions.

Author Contributions: Conceptualization, O.O.; methodology, P.T.; software, P.T.; validation, P.T. and O.O.; formal analysis, G.N.N.; investigation, P.T.; resources, O.O.; data curation, G.N.N.; writing—original draft preparation, G.N.N.; writing—review and editing, O.O.; visualization, P.T.; supervision, O.O.; project administration, P.T.; funding acquisition, G.N.N.; All authors have read and agreed to the published version of the manuscript.

Institutional Review Board Statement: The study did not involve humans or animals.

Informed Consent Statement: The study did not involve humans or animals.

Data Availability Statement: Not applicable.

Acknowledgments: We would like to express our special thanks to Evangelia STAVROPOULOU for her very successful contribution to the literature research process and her unique academic support in the publication during the process of this review article.

Conflicts of Interest: The authors certify that there is no conflict of interest with any financial organization regarding the material discussed in the manuscript.

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