

Managing the Dual Burden: Addressing Mental Health in Diabetes Care

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Abstract

Diabetes and mental illness are highly relevant issues due to their intricate relationship with the treatment and management of both conditions. Diabetes is a medical condition characterized by high blood sugar levels, and there is evidence of reciprocal interactions between the disorder and mental health. Depression, anxiety, and diabetes distress can significantly impact individuals with diabetes, thereby decreasing their chances of practicing good self-care and maintaining favorable glycemic levels. Mental health disorders, on the other hand, can directly worsen diabetes through stress hormones and other coping strategies. Barriers to treating dual diagnoses of diabetes and mental health include diagnostic overshadowing and treatment within different healthcare systems. To overcome these challenges, there is a necessity for integrated care models, psychoeducation, self-management programs, psychological interventions, and pharmacological treatments. Integrated care approaches enable a comprehensive approach to patients' needs, while, in turn, patient education empowers patients with self-management knowledge. There are recommended psychological interventions like cognitive behavioral therapy and mindfulness-based stress reduction that have proven to enhance mental and physical health. We should closely monitor pharmacological interventions to ensure their safety and effectiveness. This article delves into the correlation between diabetes and mental health by focusing on the negative association, whereby

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diabetes increases one's risk of having mental health problems. We conducted an exhaustive search across the top-ranked electronic databases for this review. Taken together, effective and integrated medical management of people with diabetes and mental health disorders is essential for enhancing treatment and enhancing the quality and duration of life of such patients.

Keywords: *Diabetes, Mental Health, Depression, Anxiety, Integrated Care, Psychoeducation*

1. Introduction

Diabetes and mental health disorders are concurrent disease processes in which one disease has the potential to exacerbate the other. Diabetes and mental health are societal issues that have received much attention in recent years, with massive impacts on people and health systems (1). Understanding the interaction between diabetes and mental health is crucial for developing effective interventions that aim to reduce their impact on health (2). This is also important for clinicians and healthcare providers to improve care, manage difficulties, and enact interventions (3). Alleviating this intersection contributes to the general public policy and research agendas, especially in terms of health resource distribution, policy, and prevention (4). This review article will focus on the association between diabetes and mental health, as well as the special considerations of patients with both diseases. This article probes deeply into the convoluted relationship between diabetes and mental health, examining how diabetic complications can trigger mental health issues, and conversely, how mental health disorders can impact diabetes care and its outcomes. This study investigates into the pathological and psychological aspects of this association and helps to understand the nature and process of this co-occurrence. It also emphasizes the importance of early detection and support, which include both medical and psychological aspects of the condition. Moreover, the review article presents evidence-based practices and practice guidelines that healthcare personnel can implement to provide care for patients with dual diagnoses of diabetes and mental. To achieve this nexus, the study seeks to improve overall health and quality of life among the targeted population experiencing the dual burden of chronic diseases.

2. Methodology

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In this review, the authors performed a broad search to identify publications highlighting the link between diabetes and mental health. The authors conducted a comprehensive search across various electronic databases, including PubMed, Scopus, and Web of Science. Specific search terms related to diabetes for this study included “diabetes mellitus,” “type 1 diabetes,” and “type 2 diabetes,” while general terms for mental health included “depression,” “anxiety,” and “psychological distress.” We included articles that addressed the bi-directional relationship between diabetes and mental health, the challenges in managing co-morbid patients, or the evaluation of specific interventions for these disorders. We deemed ineligible the following studies: those that solely reviewed mental health and its related disorders without considering their relationship to diabetes, and those that examined diabetes and its comorbidities without reference to or connection to mental health. We excluded only papers published in languages other than English and articles published before 2014 in our study. Lastly, we narratively analyzed the collected data to provide insights into the bidirectional relationship between diabetes type and mental health complications, the obstacles to diabetes self-management and mental health disorder co-morbidity management, and the treatment interventions that target this relationship.

3. Overview of Diabetes Mellitus

Diabetes mellitus is a common metabolic disease that has high blood sugar as one of its characteristics (5,6). It is a chronic ailment in which there is insufficient insulin production or the body tissues cannot utilize it efficiently, resulting in elevated glucose levels in the blood (7,8). Diabetes is a condition that is characterized by high blood sugar levels, and it can be of different types, with the most dominant ones being type 1 diabetes, type 2 diabetes and gestational diabetes (9,10). Type 1 diabetes is an autoimmune disease where the body’s immune system destroys the insulin-producing cells in the pancreas, leading to a complete or near-complete absence of insulin (11). In contrast, type 2 diabetes results from insulin resistance, whereby the body’s cells do not respond effectively to insulin (12). Gestational diabetes occurs in women during pregnancy and it increases the risk to type 2 diabetes later in life (13,14). Diabetes is characterized by symptoms such as a frequent urge to drink water, frequent urination, especially at night, sudden weight loss,

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and an excessive feeling of fatigue (15,16). Some of the complications that are associated with diabetes include nerve damage, heart complications, kidney-related problems, and vision complications (17,18). Various medical reports also recognize the undesirable effects of diabetes on mental health (1). Dieting, exercise, and the use of drugs, particularly to control blood sugar levels, can treat diabetes (19). Diabetes mellitus requires tight, long-term control of glycemia in patients to avoid complications and improve quality of life (20).

4. The Bidirectional Relationship Between Diabetes and Mental Health

There is a reciprocal interaction between diabetes and mental health; each condition tends to cause or worsen the other (21). For this reason, understanding this relationship is critical in the treatment and management of both disorders. Researchers have identified depression as a significant risk factor for diabetes, particularly type 2 diabetes. The management of diabetes can be challenging and overwhelming, which may cause several psychological problems (22). Self-care tasks such as maintaining regular glucose and blood tests, following the prescribed diet, and managing medicines might lead to tension, anxiety, and even depression (23). Studies have shown that people with diabetes have twice the probability of getting depressed as compared to the rest of the population (24). Anxiety and diabetes distress, characterized by elevated and heavy emotions and significant concerns about diabetes and its management, are two other common conditions among diabetics (25). Depression and anxiety are mental health disorders that cause poor self-care behaviors among people (26). These include failure to maintain a healthy diet, failure to exercise, failure to take medications as scheduled, and failure to test glucose levels regularly, all of which lead to poor glycemic control (27). Cortisol and adrenaline from chronic stress and anxiety impair insulin release and glucose metabolism, resulting in high blood glucose levels (28). Many patients with mental illnesses develop behavioral abnormalities like smoking, excessive alcohol consumption, and other unhealthy behaviors that are detrimental to proper diabetic management (29). Stress and other psychological disorders, such as depression, tend to disrupt the normal sleeping pattern, which disturbs insulin tolerance and blood glucose levels, making diabetes management difficult (28). This reciprocal relationship could be mediated by genetic factors, stress

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inherent to chronic disease self-management, and behavioral risk factors for depression and diabetes. Population-based prospective studies have shown that depression is associated with a 24–60% increased risk of developing diabetes type 2 (30). Conversely, the prevalence of clinical depression increases by 24-53% in individuals with diabetes (31). It is important to enhance the identification, evaluation, and comprehensive management of depression in diabetes patients and the assessment of diabetes in patients with depression in order to enhance the medical outcomes and the quality of life.

5. Challenges in Managing Co-occurring Diabetes and Mental Health Issues

One of the most challenging issues is diagnostic overshadowing, where specialists may disregard or easily overlook the symptoms of mental illness due to their primary focus on diabetes (32). This can lead to the underutilization of mental health care, thereby exacerbating both mental and physical health conditions (33). Integrated care is lacking due to the segregation of physical and mental health treatment facilities. This means that a patient with diabetes may seek treatment from an endocrinologist while receiving psychological support from a psychiatrist without much interaction between the doctors (34). This can result in conflicting care procedures and a lower quality of health care for the patients involved. Due to the social stigma associated with mental health disorders, some people may not receive the required assistance. Data shows that people with diabetes are often embarrassed about reporting mental health issues, thus contributing to delays in diagnosis and treatment (35). Self-stigma can then exacerbate these problems, leading to low self-worth and loneliness (36).

6. Interventions to Address the Intersection of Diabetes and Mental Health

- i. Integrated Care Models: Research has linked diabetes type 2 to mental health disorders, underscoring the importance of integrated care models of physical and mental health services in managing these disorders. Integrated care, where several health practitioners, such as primary care physicians, endocrinologists, and psychiatrists, are involved, may be beneficial in enhancing results (34). Such models make patient care more effective and comprehensive because they address all aspects of it.

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- ii. **Psychoeducation and Self-Management Programs:** Education and awareness measures that focus on the connection between diabetes and mental health can raise patients' awareness. These programs may contain the implementation of self-management plans aimed at helping patients address stress, comply with dosage regimens, and make necessary lifestyle changes (37). Researchers have found that diabetes self-management education (DSME) programs that incorporate mental health services not only improve physical health but also enhance mental health status (38).
- iii. **Psychological Interventions:** Cognitive-behavioral therapy (CBT) involves helping the patient change negative thoughts and behaviors that are relevant to diabetes management and improve symptoms of depression and anxiety (39). Mindfulness-based stress reduction (MBSR) programs have also helped in reducing stress, diabetes-related distress, and enhancing the quality of life (40).
- iv. **Pharmacological Treatments:** Sometimes it would be necessary to prescribe antidepressants and other mood-enhancing agents to patients with diabetes and depression. It might be reasonable to give selective serotonin reuptake inhibitors (SSRIs) or other antidepressants, but one has to discuss it with the patient regarding the interference with the diabetic medications (41). A crucial level of supervision and communication between members of the interdisciplinary healthcare team is essential to determining the effectiveness and safety of pharmacological interventions.

7. Conclusion

Diabetes and mental health issues are closely related and pose certain difficulties, but they are not impossible to address. Psychoeducation, self-management programs, psychological interventions, integrated care models, and pharmacological treatments are among the key elements of effective care. Thus, by focusing on these areas, we can strive for a future in which people with diabetes and mental disorders can get the care they need, which is integrated, personalized, and effective. Managing both diabetes and mental health issues at the same time can be effective in improving the quality of life of people with these diseases.

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