

Diabetes mellitus and depression amid the COVID-19 pandemic: Possible solutions for resource limited settings

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Abstract

Background and aims: The impact of the COVID-19 pandemic on mental health and well-being is a matter of significant concern. Besides the depression associated with diabetes mellitus (DM) diagnosis and management, the COVID-19 pandemic has also imposed significant distress among people with DM.

Methods: This is a narrative review of the interplay between DM management and depression amid the COVID-19 pandemic. Electronic databases, namely; PubMed, CINAHL, EMBASE and Google Scholar were searched for literature. Search terms were "diabetes", "depression", and "corona virus", "COVID-19", "diabetes self-care", "diabetes self-care in low income countries and diabetes management in Zimbabwe".

Results: This paper discusses the interaction between DM and depression, amid the COVID-19 pandemic. We further explain the implications on DM management, screening and elaborate on possible solutions to effective prevention and management of depression.

Conclusions: We have made recommendations for prevention and management of depression such as collaborative practice, early and routine screening, meticulous self-care and use of non-pharmacological strategies.

Keywords: Diabetes; Depression; Screening; COVID-19-pandemic; Diabetes-management

well the patient Annie Macherera Chunga functions at work and home.³ People with diabetes mellitus (DM) are more at risk of developing or worsening mental health issues than the general population.⁴ Non-adherence to treatment can worsen when people are distressed or have depression as seen both during and after disasters.⁵ The COVID-19 pandemic has negatively impacted on mental health and wellbeing of populations. People with DM have not been spared. Co-morbid depression with DM is linked with a 1.5-fold increase in risk of mortality and increases the cost of health care service by 50%-75%⁶, increase in incidence of premature death related to cardiovascular disease and increase in risk of heart attack.⁷ Depression, if left untreated, can have a significant negative effect on a person's financial, physical and mental well-being and puts a huge burden on society.⁸

Besides the depression imposed by the COVID-19 pandemic, people with DM also get distressed by such daily hassles as SMBG, insulin dosing, meal planning, and staying active. Moreover, a great deal of stress management is required of them as one of the aspects of self-care. This can leave one feeling run down, emotionally drained and completely overwhelmed.^{9, 10} This is called diabetes burnout.^{9, 10} Early recognition of patients with depression is very crucial as it helps to decrease morbidity and mortality from complications of depression.³ Patients with depression require early screening and those found at risk require intervention. According to the latest World Health Organization (WHO) data published in 2017, death due to suicide in Zimbabwe reached 1 641 or 1,30% of all total deaths recorded in the country.¹¹ Depression is one of the major risk factors for this suicide. The presence of a chronic medical illness, such as DM and depression, increases the risk of suicide thus it is crucial that persons with DM are also screened for suicidal ideation in the presence of a mood disorder.¹²⁻¹⁴

Depression in developing countries, Zimbabwe included, has received little international attention despite evidence suggesting comparable worldwide epidemiological patterns of mental illness. A majority of the world's population lives in resource-poor countries where relatively less mental health research is conducted. In resource-poor countries such as Zimbabwe, the deficiency of mental health professionals makes having depression care a big obstacle for most people.¹⁵ To date, there is no evidence regarding management of diabetes-related anxiety amid the COVID-19 pandemic. Studies have reported mixed evidence on interventions for diabetes-related distress, with majority interventions involving physical contact which is not feasible during this time.¹⁶ The purpose of this narrative review, therefore, is to suggest feasible recommendations for the prevention and management of depression among people with DM amid the COVID-19 pandemic.

Introduction

The impact of the COVID-19 pandemic on mental health and well-being is a matter of significant concern.¹ The impact will be more severe in resource limited settings such as Zimbabwe. The prevalence of depression in diabetic patients has been well established, with co-morbid depression causing further worsening of quality of life in diabetic patients.² Depression is a psychological disorder that induces feelings of hopelessness and induces lack of interest in things a patient enjoyed. It can get in the way of how

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Methodology

This is a narrative review of the interplay between diabetes management and depression amid the COVID-19 pandemic. Electronic databases, namely; Pubmed, CINAHL, EMBASE and Google Scholar were systematically searched for literature. Search terms used were “diabetes”, “depression”, “corona virus”, “COVID-19”, “diabetes self-care”, “diabetes self-care in low income countries” and “diabetes management in Zimbabwe”.

Results

Literature review focused on diabetes management and depression amid the COVID-9 pandemic. Discussed components were the interplay between diabetes mellitus management and depression amid the COVID-19 pandemic, screening for depression and possible solutions to management of depression amid the pandemic.

Discussion

Diabetes management, depression amid the COVID-19

The relationship between DM and mental health problems is well documented. This can be exacerbated during stressful times such as the ongoing COVID-19 pandemic.¹⁷ The known DM related psychological distress (negative emotions and burden of self-management), can be aggravated.¹⁸ This tends to impact negatively on quality of life and self-management and can result in non-adherence. Lockdown restrictions imposed by many governments, Zimbabwe included, have also affected access to medications, food and physical activity habits. This obviously compromises the mental health of people with DM. The COVID-19 pandemic has brought new psychological distress to people with DM in the form of heightened dependence on self-management (including self-care, medication, COVID-19 behaviour modification and hygiene practices) and intrapersonal and interpersonal distress from social distancing and self-isolation.¹⁹ Unfortunately, this distress is associated with higher glycated hemoglobin (A1C levels), higher diastolic blood pressure (BP) and increased low-density lipoprotein cholesterol (LDL-C) levels, all associated with increasing insulin resistance.¹⁹ Zimbabwe has been in various stages of lockdown since the beginning of the pandemic in March 2020. Number of active cases, together with deaths, have risen sharply to 5261 and 132, respectively, as at 16 August 2020. This is another significant source of psychological distress and depression for people with DM.

Screening for depression amid the COVID-19 pandemic

Early detection of depression, intervention, and appropriate treatment, can promote recovery, prevent relapse, as well as decrease the emotional and economic burden.¹⁰ In our opinion, the various tools that are used for screening can be modified in view of the current movement restrictions to prevent spread of COVID-19. They can either be conducted by phone or be put online for those with reliable internet connection. Two particularly simple and cheap tools that can be used in resource limited settings are the Patient Health Questionnaire (PHQ-2 and the PHQ-9)²⁰ and the Shona Symptom Questionnaire (SSQ).¹⁵ These can be administered remotely to timely screen any people with DM developing or with worsening depression. The Patient

Health Questionnaire (PHQ) is simple and easy to complete for patients. It is scored out of 27, with scores 0-4, 5-9, 10-14, 15-19 and 20-27 representing no or minimal to severe depression in ascending order.²⁰ The SSQ is a more newly developed tool intended for countries that speak Shona and these are inclusive of Zimbabwe, Botswana, and Mozambique.¹⁵ The SSQ can also be used to assess progress with problem-solving therapy (PST). All the questions can be answered with ‘yes’ or ‘no’ with each ‘yes’ being equal to 1 point. The SSQ has 14 items and any total equal or more than 9 points signals high risk for depression, therefore, requires intervention.

Possible solutions to prevention and management of depression amid the COVID-19 pandemic

We suggest a number of solutions that can be feasible in a resource limited setting amid this pandemic. Telehealth will promote social distancing as well as cut the cost of travel. Though more advanced ways of communication such as Zoom™, Skype™, Doodle™ and Blue Jean™ are way beyond the reach of majority affected populations, simple short message services can be used as a way of communication between patients and health care providers. Collaborative practice is very essential in view of the multi-faceted nature of DM. Unfortunately; the health care system in Zimbabwe has been affected by strikes by health care workers. There should be a multidisciplinary (nurses, physicians, nutritionists, counsellors and psychiatrists) approach to care with all cadres being trained in screening for depression. Screening should be routine using cheap tools as mentioned above.

Health education must be scaled up to promote optimum health amid this pandemic. Patient education on prevention, signs and symptoms and management of depression should be incorporated into routine care. Health education programs should be revised to include depression amid the COVID-19 pandemic. Social media platforms and mass messaging will be very useful.

Social support will go a long way in caring for people with DM. Family and friends and significant others should be educated in recognizing signs of depression at home and accessing professional help. Optimum social interactions by way of phones and various social media platforms should be encouraged to prevent solitude and boredom. They should be encouraged to ensure constant and timeous supply of medications and food as well as promote physical activity. As much as social support can be important, it is also vital to subsidize prices of medications (including anti-depressant for those taking them) and other consumables, such as glucose testing strips.

For people with mild to moderate depression not requiring pharmacotherapy, non-pharmacological interventions, that can be remotely conducted, can be helpful. Non-pharmacological interventions include formal psychological therapies such as cognitive behaviour therapy (CBT) and interpersonal psychotherapy (IPT). Less formal supportive therapies such as counselling within primary care, mindfulness-based therapy, behavioural activation, bibliotherapy and self-help strategies can also be modified to be delivered remotely. Lifestyle changes to improve diet, exercise, relaxation and sleeping habits should also be part of a broader management plan. These changes can also help prevent relapse after recovery.²¹⁻²³

Conclusion

COVID-19 related psychological issues in people with DM require addressing both psychosocial and mental health factors that impact on individuals and their families. Though the pandemic has generally resulted in disrupted health care systems, especially in resource limited settings, there are feasible ways to address depression in people with DM.

Conflict of Interest

The authors declare no conflict of interest.

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