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Psychological adaptive difficulties and their management during COVID-19 pandemic in people with diabetes mellitus

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ABSTRACT

Background and aims: People with diabetes have multiple psychosocial issues related to diabetes and its complications and this may be exacerbated during the COVID-19 pandemic.

Methods: We reviewed the psychological adaptive difficulties in people with diabetes especially during natural disasters including the prevailing COVID-19 pandemic.

Results: There are significant concerns regarding worsening of glycemic control, unavailability of appropriate medicines, inaccessibility to health care or acquiring SARS-CoV-2 infection and subsequent poorer outcomes during the COVID-19 pandemic. Although there are some guidance documents for managing diabetes and associated complications during COVID-19 pandemic but very few address the psychological issues in people with diabetes. We discuss the psychological adaptive difficulties and an approach to address the psychosocial concerns in people with diabetes during the COVID-19 pandemic.

Conclusions: People with diabetes have significant diabetes distress and psychological adaptive difficulties that is aggravated by the COVID-19 pandemic. An integrated multidisciplinary approach is needed to manage the prevailing psychological issues amongst people with diabetes during the COVID-19 pandemic.

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1. Introduction

The coronavirus disease (COVID-19) has become a global pandemic impacting millions of lives which is likely to stay for quite some time. One of the co-morbidities that can affect the outcomes of COVID-19 is diabetes mellitus (DM), with India having more than 62 million individuals with diabetes [1]. People with DM are already a vulnerable group, as they have a higher rates for hospitalisation and mortality [2,3], and this risk increases when they contract COVID-19 [4]. Recently, guidance documents for managing diabetes and associated complications during COVID-19 pandemic have become available but none address the psychological issues in people with diabetes [5–7]. In this review we discuss the psychological adaptive difficulties and an approach to address the psychosocial concerns in people with diabetes during COVID-19 pandemic.

1.1. Psychosocial issues in people with diabetes

COVID-19 lockdown has put forth undue psychological distress with anxiety and depression amongst general population as a whole and particularly those afflicted with chronic diseases like people living with diabetes [8–10]. An online survey found that almost one-fourth of the studied general Indian public had moderate to extreme depression [9]. People with diabetes have multiple psychosocial issues, which coupled with the psychological stressors of a pandemic, social distancing, lockdown, and quarantine creates an unsettling situation [10–13]. The prevalence of various mental disorders in people with DM is between 20% and 55%, depending on clinical and socio-demographic variables [14–16]. Therefore, the interplay of COVID-19, DM, and mental health issues create a complex situation for people with DM leading to difficulties in psychologically adapting to the present situation.

'Diabetes distress' (DD) refers to negative emotions such as feeling hopeless, angry, or frustrated that arise from living with DM [17]. Though it is not a psychiatric condition in itself, it can result in

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Table 1
An approach to address psychosocial issues amongst individuals with diabetes.

Psychological issues	Approach to manage
Concern of contracting COVID-19 and death	<ul style="list-style-type: none"> • Discussing individual risk based on clinical variables • The patient may have severe anxiety due to thoughts of inevitable death on contracting COVID-19 (Due to cognitive distortion like 'jumping to conclusion' or 'selective abstraction'). Such concerns need to be identified and addressed by proactive approach and principles of cognitive therapy • Emphasising the importance and success rate of preventive protective measures like physical distancing and sanitation practices • Practicing mindfulness
Stress due to restrictions resultant difficulties in daily living	<ul style="list-style-type: none"> • Educate about the impact of stress on glucose control and immunity • Encourage to adopt a problem solving approach
Disrupted routine (inability to engage in physical activity, exercise, Yoga, etc.)	<ul style="list-style-type: none"> • Collaborate with the patient to devise an alternative plan according to the changed scenario to ensure physical activities while maintaining preventive norms • Engaging family members for alternatives and assistance
Loneliness and social distancing	<ul style="list-style-type: none"> • Identifying and addressing pre-existing interpersonal issues, if any • Promoting alternative ways of communication and interaction • Engagement of family • Emphasising physical distancing in social situations instead of emotional distancing
Pre-existing psychiatric co-morbidity	<ul style="list-style-type: none"> • Need to monitor frequently • Ensure on regular compliance • Regular engagement with psychiatric services
New-onset psychiatric co-morbidity	<ul style="list-style-type: none"> • All patients should be screened for the presence of anxiety and depressive symptoms in routine for early detection as stress is an important predictor of worsening glycemic control • Wherever feasible detailed psychiatric assessment can be scheduled in a patient with poor glycemic control in an integrated treatment approach

reduced self-care and engagement with healthcare professionals, lack of compliance with treatment and suboptimal glycemic control. Another concept labelled 'psychological insulin resistance' incorporates the fears and concerns toward insulin therapy, commonly seen in both the youth and middle-age people with DM [18]. Psychological illnesses such as depression, anxiety, post-traumatic stress disorder as well as issues such as stigmatization, medical mistrust, aggression, and frustration increases in pandemics as has been observed in SARS of 2003, Ebola of 2014 and in particular amongst those with chronic diseases such as DM, AIDS, and tuberculosis [19]. Chronic stress and psychiatric disorders such as depression and anxiety can cause sustained activation of the HPA axis, leading to hypercortisolaemia which may cause central obesity and metabolic syndrome which in turn can increase the risk for type 2 diabetes as much as threefold [20]. Thus, the complex underpinnings of COVID-19, DM and psychiatric morbidity warrant attention.

1.2. COVID-19, diabetes and psychological adaptive difficulties

COVID-19 pandemic and subsequent lockdown has disrupted the lifestyle patterns include eating habits and self-care ability for the disease [21]. It is noticed that there is increased tendency for snacking, decrease exercise duration and less often self-monitoring of blood glucose (SMBG) in people with type 2 diabetes [22]. Also, 87% of participants in an online survey of type 2 diabetes participants from north India were "psychologically affected" and more than one-fourth had decrease in sleep [22]. Hence, an emphasis on seven effective self-care behaviours including 'healthy coping', healthy eating, being active, blood glucose monitoring, taking medication, problem-solving, and reducing risks are recommended [21,23,24]. Essential components of healthy coping include building up motivations, setting behavioural goals, and overcoming obstacles. Emotional expression, help seeking, applying problem solving skills and adaptive coping, staying optimistic and proactive, continuing physical activity with self-efficacy are the various attributes of healthy coping. Self-monitoring of blood glucose has also been affected by the pandemic. DD associated with higher glycated haemoglobin levels affects diabetes outcomes and can

increase psychological distress, including depression and interpersonal difficulties [22]. Further, COVID-19 has the potential to negatively impact eating behaviours, increasing disordered eating habits such as binge eating which puts an individual at increased risk of poor glycemic control [25].

An online-based survey reported that only one-fourth of the participants (28%) were regularly monitoring their blood glucose during the COVID - 19 lockdown and two-fifth of participants (40%) were anxious about COVID-19 infection [26]. More than half of the participants with diabetes are worried about the greater risk of developing COVID-19 and about one-third are concerned about difficulties in managing their diabetes if they contract COVID-19 [22,27]. Being female, feeling isolated and lonely and having type 1 DM, DD, and complications related to diabetes were the predictors for a greater worry and loneliness compared to the general population [26]. Another study reported moderate to severe stress in more than half of the respondents with type 1 diabetes during the COVID-19 pandemic and main concerns were related to glycemic control and availability of appropriate care [27].

The lockdown following COVID-19 has affected insulin injection supplies but also lack of support from diabetes care teams, reduced access to health care, and reduced social support, thus making people more vulnerable to stress and anxiety. Lockdown has also resulted in variations in healthy life style behaviours, the type and duration of exercise, disordered eating behaviours, and excessive mental stress. Fear of contracting the infection often makes people less likely to approach health care for non-emergency issues, especially those pertaining to mental health [14]. This bears the risk of mental health problems, obstructing the healthy coping measures of people with diabetes. Other risk factors that can increase psychological stress include lack of social support, loneliness, limited access to mental health care and concerns about the worsening of pre-existing diabetic microvascular and macrovascular complications.

1.3. Managing psychological issues

Possible interventions to help people with DM during COVID-19 pertaining to mental well-being could include telepsychiatry,

appropriate screening and referral for mental health issues; home-based dietary changes and physical exercises, health education regarding self-monitoring measures for blood glucose and diet control, and general preventive measures against COVID-19 infection.

The WHO advises that people in isolation during the COVID-19 pandemic should try and follow strategies to stay connected with family and friends and maintain social networks, follow a healthy daily routine, paying attention to one's needs and feelings, engage in healthy activities (such as yoga and meditation), and to avoid rumours that may precipitate anxiety and stress [28]. A brief management approach to address psychosocial issues among patients with diabetes is elaborated in Table 1.

2. Conclusion

People with diabetes have a significant psychiatric comorbidity as well as psychological factors adversely affecting the management of diabetes that is exacerbated during the COVID-19 pandemic. It is therefore important to innovate healthcare delivery such as setting up of multidisciplinary clinics addressing diabetes management to include management of psychological issues patients may be facing and to establish integrated clinics for providing comprehensive care. Such integrated clinics should be able to provide physical and mental health care to patients with diabetes during the COVID-19 pandemic. Further studies on how COVID-19 and diabetes can affect mental health, are the needed to elucidate the underlying factors mediating their interaction, which may provide essential clues for tailored intervention to this vulnerable population.

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Declaration of competing interest

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