



Diabetes and depression: A review with special focus on India

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ABSTRACT

Diabetes, a psychologically challenging condition for the patients and their care givers, has been found to be a significant risk factor for depression. Depression may be a critical barrier to effective diabetes management. The accompanying fatigue remarkably lowers the motivation for self-care, often leading to lowered physical and emotion well-being, poor markers of diabetes control, poor adherence to medication, and increased mortality among individuals with diabetes. A very small proportion of the diabetes patients with depression get diagnosed, and furthermore, only a handful of the ones diagnosed get treated for depression. Despite the fact that 80 percent of the people with type 2 diabetes reside in low and middle income countries, most of the evidence on diabetes and depression comes from high income countries. This review offers a summary of existing evidence and the potential gaps that need to be addressed.

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INTRODUCTION

Diabetes mellitus (DM) is one of the leading causes for morbidity and mortality worldwide. The World Health Organization projects DM as the 7th leading cause of death in 2030. It is a major public health concern in Asia, where more than 1.0 million people with diabetes die annually.¹ India labelled as the 'diabetic capital' of the world has an estimated 62 million individuals currently diagnosed with the disease² and is predicted to afflict up to 69.9 million individuals by 2025.^{2,3} Diabetes management takes place amid individual, family, social, economic, and political contexts.^{4,5} The diagnosis of diabetes is a traumatic event demanding high emotional and physical adaptations,⁶⁻⁸ with acceptance, adjustment and adherence to the strict treatment regimen.⁹ Diabetes, a psychologically challenging condition for patients and their care givers¹⁰ has been found to be a significant risk factor for depression.^{11,12} Roy et al suggest that at least one third of the people with diabetes suffer from one or the other forms of depressive disorders. Depression may

be a critical barrier to effective diabetes management.³ The accompanying fatigue remarkably lowers the motivation for self-care,^{8,13,14} often leading to lowered physical and emotion well-being, poor markers of diabetes control, poor adherence to medication and increased mortality among individuals with diabetes.^{1,3,6,11,13,15-20} Diabetes and depression may synergise creating higher risks for suicide among this population.¹⁷ Anxiety and eating disorders have been much observed in individuals with diabetes than in the general population.^{13,21,22}

PREVALECE OF DEPRESSION AMAONG DIABETES PATIENTS

Despite the fact that 80 percent of people with type 2 diabetes reside in low and middle income countries, most of the evidence on diabetes and depression comes from high income countries.²³

Global Scenario

A systematic review²⁴ estimated 14 percent of individuals with diabetes suffering from generalized



anxiety disorder. The proportion experiencing a subclinical anxiety or milder anxiety symptoms was even bigger. Another study²⁵ reported 28 percent of the diabetic patients having either moderate or severe levels of depression or anxiety or both. Whittemore²⁶ reported a depressed mood in approximately 44 percent of the women patients. Lin et al¹³ found that major depression was co-existent among 12 percent of diabetes patients at primary care settings. A study in Nepal¹ reported a 40.3 percent prevalence of depression among diabetes patients. The Diabetes Attitudes, Wishes and Needs second study (DAWN₂), holding evidence from 17 countries across four continents, reported 13.8 percent as prevalence of depression and 44.6 percent as the prevalence of diabetes-related distress among individuals with diabetes.

Indian Scenario

Depression among type 2 diabetes patients is a scarcely researched topic in India.¹⁴ A study from southern India¹⁷ found a prevalence of 45.2 percent among individuals with diabetes, 30.9 percent of them having moderate depression while remaining 14.3 percent having severe depression. A fact that seeks attention is that of those 45.2 percent people with co-morbid depression, majority (75 percent) were uninformed of their status. Furthermore, out of those who were aware, only 11.5 percent had consulted a physician for treatment. Ali et al¹¹ reported a 27.05 percent prevalence of co-morbid depression in type 2 diabetes patients while it was 11.11 percent among the non-diabetic healthy patient relatives. Raval et al³ reported a 41 percent prevalence of depression among type 2 diabetes patients in a tertiary care centre. Another tertiary hospital based study from southern India²⁷ reported a prevalence of depression as 49 percent among the diabetes patients. The prevalence of depression in individuals with diabetes was almost twice (35.38 percent) that in control subjects (20 percent) in a study by Siddiqui et al.²⁸

FACTORS ASSOCIATED WITH DEPRESSION

Age has shown an inconsistent relationship with depression in individuals with diabetes.^{1,3,8} Niraula et al¹ reported that participants from urban area were more depressed which was inconsistent with the

findings of Thour et al²² who found depression to be significantly more prevalent in rural subjects (57 percent) than the urban ones (31 percent). On the other hand, Raval et al³ reported no significant association between depression and rural-urban residence among the diabetes patients. Although few studies^{13,27,29} reported significantly higher prevalence rates of depression among females than in males with type 2 diabetes, others^{3,11,22} reported no role of gender in predicting depression among the diabetes patients.^{3,11,22} Raval et al³ found that a greater waist circumference; diabetic complications such as neuropathy, nephropathy and diabetic foot and also the huge burden of medicines were significantly associated with depression. An interesting finding was that the requirement for insulin was associated with the highest rate of depression, irrespective of the type of diabetes.²¹ Niraula et al¹ reported that a failure to adhere to diabetes management plan was strongly associated with depression.

EXPERIENCE OF DIABETES PATIENTS

Qualitative research reveals that diabetes negatively influences the social life of the patients in addition to their physical health. Patients felt a sense of interference between their medication and routine activities. They described it as being trapped in a different life. Following self-care instructions for medication and diet was often observed but this was quite poor when it came to glucose monitoring and foot examination. Women patients felt guilty and frustrated for not being able to care for their health as well as their family. Some women felt offended when other people advised them what to eat and what not.³⁰ A meta-analysis of qualitative research³¹ reported of feelings of unhappiness and distress among the type 2 diabetes patients at the unpleasant transformation of their lives. Functional limitations worsened the existing situation. Few patients reported of having avoided social events because of their chronic illness. Patients were often apprehensive about the prognosis of their disease and uncertainty about their future. Some of patients believed, those who cared for them were unable to provide the kind of emotional support that they expected.^{6,32} Patients also indicated a need for psychological counselling. Those experiencing psychological distress were more likely to indicate a



need to share their emotional turmoil with someone.^{22,25} Despite the potential role of psychosocial support in self-care, psychosocial and pharmacologic interventions have not been used in an integrated manner to address the psychological co-morbidities among the individuals with diabetes.^{7,33,34}

GAPS IN THE EXISTING MENTAL HEALTH SERVICES

A qualitative study³⁵ reported that most of the nurses after having gone through an already exhaustive list of physical health priorities, ignored the questions on mental health screening. Still, if some of them attempted these questions, the way they were administered discouraged patients from opening up. Few of the nurses reported concerns about an absence of services for the identified patients with depression. These findings suggest a lack of information and co-ordination among the physicians and nurses concerning the management of depressed patients. Most of the nurses reported that mental health screening was an addition to their existing role and that they required a better understanding of it. A longitudinal qualitative analysis by Knowles et al¹⁹ revealed differences between the type of care patients expected and the care they received at the healthcare setting. This inconsistency in the provision of appropriate care was possibly due to the perceived confines between mental and physical healthcare. A systematic review³⁶ reported depression screening as disturbing and pointless to the physicians at primary care settings who were limited by short consultation periods. They felt that the administration of the screening instrument limited the focus of the consultation and also compromised the time that was supposed to be invested on wider context of the illness.

THE INDIAN CONTEXT

The National Mental Health Programme (NMHP) was launched by the government of India in 1982, with an objective to provide early diagnosis and subsequent treatment and rehabilitation to the patients with mental health problems within the community. During the eighth plan, National Institute of Mental Health and Neurosciences (NIMHANS) developed a district mental health care model that laid the

foundation for District Mental Health Programme (DMHP) in India. DMHP, a component of NMHP is a community based initiative with the foremost task of sensitising the community regarding mental health and illness.³⁷ Evaluations of the DMHP program in India suggest that this is still ineffective in practice.³⁸ Physical and mental health co-morbidities pose significant challenges to the healthcare systems which have conventionally focussed on disease specific protocols.¹⁹ Patients with diabetes and depression, in general, are poorly managed in primary care settings.^{11,17} A very small proportion of the diabetes patients with depression get diagnosed, and furthermore, only a handful of the ones diagnosed get treated for depression.^{3,11,15,19} Despite the proven benefits of screening, it is rarely conducted in the primary care which takes away the opportunity to intervene the patients with co-morbid depression.³¹ Shidhaye et al³⁸ mentioned a 'one size fits all' approach to service delivery; a complacent attitude; ignorance of the ground realities; poor administration, and impractical expectations from the underpaid, undermotivated as well as overburdened primary care personnel, as the reasons why India is still facing challenges in addressing the mental health needs of its people.

WAY FORWARD

Almost 95 percent of diabetes management lies in the hands of the individual³⁹ and since depression negatively influences diabetes self-care activities^{18,40,41} and outcomes,^{42,43} identifying depressive symptoms in these patients becomes even more important. This calls for strengthening of the existing mental health services, in particular the primary care. Since, most of the times, diabetes patients depend on their care givers for their management, an understanding of the day to day challenges faced by them would help in addressing their specific needs.^{44,45} Care givers can serve as potential resource for managing the co-morbid depression among the diabetes patients in the current scarcity of qualified mental health professionals in the country, therefore, actively involving them in the collaborative model of care would be an added advantage.



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