

A REVIEW ON QUALITY OF LIFE IN PATIENTS WITH DIABETIC DEPRESSION

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ABSTRACT

Diabetes mellitus (DM) is a frequently experienced metabolic disease with chronic features and involves numerous complications around its course, which causes severe restriction and disability in an individual's common life. It has been reported that the incidence of depression is higher in diabetic patients and that diabetes is one of the risk factors in the development of depression. A prospective observational study was conducted in a tertiary care hospital, Chennai for a period of 6 months on 115 T2DM patients. All consenting patients with confirmed diagnosis of T2DM were interviewed and screened for depression by administering Questionnaires. Of the 115 T2DM patients, a total of 59 (51.30%) were found to suffer from depression, of which 22 (19.3%) had a mild level of depression, 21 (18.26 %) had a moderate level of depression, 12 (10.43%) had severe depression and 4 (3.47%) had a very severe level of depression and observed to have a low quality of life in depressed diabetic patients. This study found a high proportion of depression among patients with T2DM and also found that presence of depression along with diabetes will result in low quality of life. Therefore the care of individuals with diabetes mellitus (DM) should include the concealing and possible treatment of depression in order to attain and sustain treatment goals

KEYWORDS: Depressive disorder, determinants, Diabetes Mellitus Type 2, health care facilities, risk factors, Quality of life.

INTRODUCTION

Quality of Life has been recognized as a province of major importance in patients with chronic diseases, including DM. Since Quality of Life has been also associated with several adverse health outcomes and increased mortality, Apart from the significance it necessitate in its own right, it is also regarded as a major outcome that should be taken into account when evaluating the goals and effectiveness of any therapeutic plan concerning DM management. Depression has been associated with a serious impairment in Quality of Life in patients with DM. However, no safe conclusion concerning causality can be easily drawn, since the majority of the studies conducted have been cross sectional. Still, the relationship seems to be bidirectional.

A systematic literature review including 20 studies (18 cross-sectional and 2 longitudinal) was conducted by Schram et al^[1] and concluded that Quality of Life (both physical and mental) was significantly impaired in diabetic patients with co-morbid depression, demonstrating a mild to moderate impairment of Quality of Life in studies that used generic or domain specific

Quality of Life questionnaires and a moderate to severe impairment of Quality of Life in studies that used disease-specific questionnaires. Despite the fact that potential confounders such as demographics or disease- and co-morbidity-related factors were assessed in only half of the studies, controlling for confounders did not significantly affect the association between depression and Quality of Life impairment.

Depressive Symptoms with Generic Quality of Life – The Association

Most studies on generic quality of life in individuals with diabetes showed a moderate, negative association of depressive symptoms.^[2,3,4] Using different questionnaires majority of studies measured quality of both physical and mental health. Five studies presented the absolute PCS scores^[5,6,7,8], and four the MCS scores^[5,6,7,8] of the Short Form for diabetic individuals with and without depressive symptoms. These data are presented in Fig. (1) shows that compared to individuals with diabetes alone diabetic individuals with depressive symptoms do consistently worse on both physical and mental health. These differences in both physical and

mental health were mild to moderate. The results suggest a similar strength of the associations between depressive

symptoms and both physical and mental health (Fig. 1).

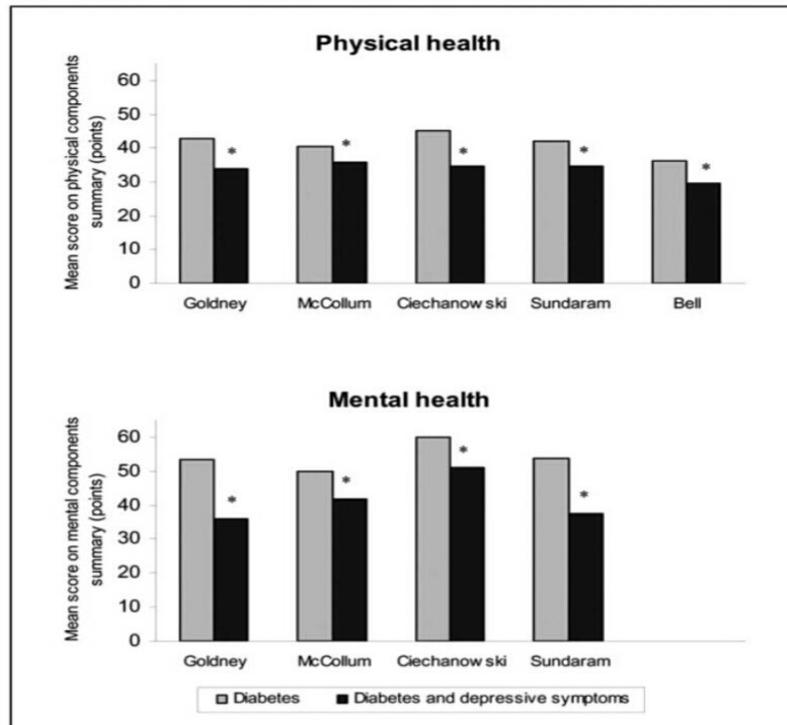


Fig. (1). Difference in physical and mental health between diabetic individuals with and without depressive symptoms in studies using physical and mental components summary scores of the Short Form. * Significant difference between diabetic individuals with and without depressive symptoms.

A more extensive versions of the Short Form Health Survey (SF-20 to SF-36) allowed a comparison based on the subscales of the Short Form; physical function, role function, overall health, social function, pain and mental health was used by four studies^[3,6,9,10]

The Association of Depressive Symptoms with Diabetes Specific Quality of Life

The association of depressive symptoms with diabetes specific quality of life was investigated in four studies. These studies show a moderate to severely worse diabetes specific quality of life in the presence of depressive symptoms.^[3,9,11,12] Individuals with both diabetes and depressive symptoms were less satisfied with their treatment, experienced a greater impact of the treatment, worried more about the impact of diabetes in the future and about the social and vocational impact of diabetes.

In addition to these studies, the association of depressive symptoms with the number of hypoglycaemic events and other symptoms of diabetes was investigated by Kohen *et al.*^[9], but did not find any difference between diabetic individuals with and without depressive symptoms.

The Association of Depressive Symptoms with Domain Specific Quality of Life

Several studies have shown that in diabetic individuals with depressive symptoms as compared to individuals with diabetes alone, both ADL and IADL are more

impaired. In diabetic individuals with depressive symptoms as compared to individuals with diabetes alone, problems with ADL activities were reported more often. The difference in the prevalence of ADL problems between diabetic individuals with and without depressive symptoms was mild to moderate, ranging from 4.21 to 16.93%.^[13,14,15] The difference in prevalence of IADL problems between diabetic individuals with and without depressive symptoms was moderate, ranging from 13.33 to 27.62%.^[16] Functional limitations as measured by Eggede *et al.*^[81] appeared to be closely related to IADL. Individuals with both depression and diabetes reported 20% more functional limitations than individuals with diabetes alone. McCollum^[14] also reported on cognitive problems and self-reported health and showed that the individuals with both depression and diabetes more frequently had cognitive problems (difference 20%) and their self-reported health was 13% lower as compared to individuals with diabetes alone.

Treatment of Depression in Patients with Diabetes

Psychological and pharmacological interventions have a moderate and clinically significant effect on depression outcomes in diabetes patients. Glycemic control improved moderately in pharmacological trials, while the evidence is inconclusive for psychological interventions.^[17,18,19] In depressed patients with diabetes type 2, selective serotonin reuptake inhibitors (SSRIs) are the only class of antidepressants with confirmed favorable effects on glycemic control. Noradrenergic

substances (and possibly also dual acting antidepressants), in contrast, may deteriorate glucose tolerance. The effects of other antidepressants, like bupropion, mirtazapine or newer agents, require further investigation before reliable conclusions can be made.^[20] In diabetic neuropathy, perhaps due to the fact that catecholamine and serotonin may both be implicated in pain pathways, dual-action antidepressants, like duloxetine and tricyclic antidepressants (TCAs) appear more effective at lower doses than do specific serotonergic agents.^[21] Dopamine and norepinephrine influences appear to be hyperglycemic. Serotonergic influences, in the presence of mono amine oxidase inhibitors (MAOIs), which decrease serotonin metabolism, are in contrast hypoglycemic. SSRIs may be hypoglycemic (causing as much as a 30% decrease in fasting plasma glucose) and anorectic (causing an approximately 2-lb decrease), while possibly improving alertness.^[22] Available research data suggests that effective psychological and/or pharmacological treatment of depression may not only improve depressive symptoms, but may also have a positive impact on glycemic control and behavioral risk factors, though not uniformly and simplistically. Differential treatment effects might exist depending on the time-course and etiology of depressive disorders.^[17]

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