

PSYCHOSOCIAL CORRELATION BETWEEN DIABETES MELLITUS AND DEPRESSION: A PRIMARY CARE STUDY FROM A LOW INCOME COUNTRY

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Abstract

Background and aims. Systematic reviews and meta-analyses show an association between diabetes and depression. It is a major public health issue, as depression is generally associated with poor outcome of chronic illnesses, including diabetes and contributes to the high economic burden of health care costs. The purpose of this study is to explore the correlation between depression and diabetes in order to develop adequate interventions. The primary aim was to examine the prevalence of depression, social stress, health related quality of life, and social support among patients with diabetes attending primary care.

Material and methods. This was a cross-sectional study conducted in participating primary care clinics in Karachi. All patients with diabetes attending these primary care clinics were invited to participate in the study. Patients with prior diagnosis of major depression, psychotic disorder, or substance abuse disorder, were excluded. Full confidentiality of the data collected was ensured to all the study participants and all interviews were completed only after obtaining informed consent. We used several questionnaires (socio-demographic, clinical, Patient Health Questionnaire - PHQ-9, self-report questionnaire EQ-5D, Life Events Checklist) and scales (7 items Generalized Anxiety Disorder - GAD-7, 3 items - Oslo-3 scale).

Results and conclusion. Our results show that the rates of depression in adult patients with diabetes in Pakistan are high. The patients with diabetes who have depression reported higher social stress, poorer health related quality of life compared to the non depressed diabetic patients.

Keywords: diabetes, depression, correlates.

CORELAȚII PSIHOsocIALE ALE DIABETULUI ȘI DEPRESIEI: UN STUDIU DE ASISTENȚĂ PRIMARĂ DINTR-O ȚARĂ CU VENITURI SCĂZUTE

Rezumat

Introducere și obiective. Studii sistematice și metaanalitice au arătat o asociere între diabet și depresie. Aceasta reprezintă o problemă majoră de sănătate publică: depresia este în general asociată cu o evoluție nefavorabilă a bolilor cronice, incluzând diabetul și contribuie la creșterea costurilor asistenței medicale și împovărarea economică. Scopul acestui studiu a fost explorarea corelațiilor între diabet și depresie, în vederea dezvoltării măsurilor necesare. Scopul primar a fost examinarea prevalenței depresiei, stresului social, calității vieții legate de sănătate și suportului social, la pacienții cu diabet care solicită asistență primară.

Material și metode. A fost un studiu cross-section, desfășurat în clinicile de asistență primară din Karachi. Toți pacienții cu diabet care s-au prezentat la aceste clinici au fost invitați să participe la studiu. Au fost excluși pacienții cu diagnostice anterioare de depresie majoră, tulburări psihotice sau datorate abuzului de substanțe. A fost asigurată confidențialitatea datelor colectate de la toți pacienții, interviurile fiind completate după obținerea consimțământului informat. Am utilizat mai multe

chestionare (socio-demografic, clinic, PHQ-9, EQ-5D, Life Events Checklist) și scale de evaluare (GAD-7, Oslo-3).

Rezultate și concluzii. *Rezultatele noastre au evidențiat o rată înaltă a depresiei la pacienții adulți cu diabet din Pakistan. Pacienții cu diabet și depresie au raportat un stres social mai înalt, o calitate a vieții legată de sănătate mai slabă, comparativ cu pacienții diabetici nondepresivi.*

Cuvinte cheie: diabet, depresie, corelații.

BACKGROUND

Systematic reviews and meta-analyses show association between diabetes and depression [1,2,3,4]. The Studies indicate 11-30% of the diabetic population suffers from depression [2]. It is a major public health issue as depression is generally associated with poor outcome of chronic illnesses including diabetes and contributes to the high economic burden of health care costs [5,6,7]. It is suggested that vulnerability for depression is higher in those with diabetes than without diabetes [2,8]. Evidence from developing countries also show a significant association of diabetes with depression [9,10].

In South Asia such as Bangladesh and Pakistan, the rate of depression in diabetic patients is higher in females [9,11,12]. There are reports which indicate that people with low educational level and low income have a higher prevalence for both diabetes and depression when compared to people with higher educational level, and middle or high income groups [6,9,11,13,14,15,16,17]. Other risk factors include physical inactivity, past history of depression, history of diabetes, smoking, high cholesterol and high blood pressure [10,18,19,20,21,22].

Depression in diabetes is associated with higher symptom burden [23,24] increased functional impairment [23,24,25], poor adherence to diet, exercise, poor compliance with medications [25,26,27,28,29] and poor self-care. Severity of diabetes and depression is associated with impairment on many other dimensions of health related quality of life, including social functioning, cognitive functioning, role functioning, physical functioning, emotional well-being, perception of health and pain in general [25,30,31]. There is also some recent evidence that managing depressive symptoms among diabetic patients improves their adherence, glycemic control and self-care [28,32,33].

The World Health Organization report suggests that there will be more than 300 million people with diabetes by 2025 and most of these will be in the developing world [34]. Pakistan is predicted to be the fourth most populous country for people with diabetes [34]. Nonetheless, few studies in the developing world have addressed the prevalence and consequences of co-existent depression on chronic diseases of interest such as diabetes

mellitus. The purpose of this study is to explore correlates of depression co-morbid with diabetes in order to inform the development of appropriate interventions. The primary aim of the present study was to examine prevalence of depression, social stress, health related quality of life, and social support among patients with diabetes attending primary care.

Hypothesis

1. The depressed diabetic patients will report poorer health related quality of life as compared to non-depressed diabetic patients in a primary care setting.
2. The depressed diabetic patients will report higher social stress and less perceived social support as compared to non-depressed diabetic patients.

METHOD

This was a cross-sectional study conducted in participating primary care clinics in Karachi, the largest city and economic hub of Pakistan, having population of over 20 million. All patients with diabetes attending these primary care clinics were invited to participate in the study. Patients with prior diagnosis of major depression, psychotic disorder, or substance abuse disorder, were excluded. The study proposal was reviewed and approved by the Research Ethics Committee of the Pakistan Institute of Learning & Living. Permission was also obtained from all the participating clinics. Full confidentiality of the data collected was ensured to all the study participants and all interviews were completed only after obtaining informed consent. Data was collected by trained clinical researchers.

Assessments

Demographics

A structured questionnaire was used to collect information on socio-demographic and clinical characteristics.

PHQ-9

The Patient Health Questionnaire (PHQ-9) is a widely used tool to measure depression [35,36,37] This can be used by the primary care clinicians both for diagnosing depression, as well as for monitoring treatment. This scale has been used in Pakistan with good psychometric properties. The face validity was also established for the south Asian population living in the UK [38].

GAD-7

The 7 item Generalized Anxiety Disorder (GAD 7) scale is primarily designed for screening and measure

severity for generalized anxiety disorder [39]. The GAD-7 has been used in different cultural settings and is reported to have good psychometric properties [40].

OSLO 3

We used the 3 item Oslo-3 scale to measure perceived social support. This scale has been used with Pakistanis living in Norway [41]. This has also been used in studies in Pakistan [42,43]. The three items identify the number of people who offer support when needed, degree of concern expressed and the support received. Each item is scored from 0-4 and higher the score greater the social support.

EQ 5D

The EQ-5D is a self-report questionnaire. It measures the health-related quality of life which indicates patients' perceptions of their own functioning and well-being. We have used this instrument in our study with Pakistani's living in the UK [44].

Life Event Checklist

The Life Events Checklist is a 14-item, self-report measure designed to screen for potentially traumatic events in a participants life over the previous twelve months. This checklist has previously been used in our earlier studies in Pakistan [45].

Random Blood Sugar (RBS)

All participants underwent RBS blood test as an indication of glycolic control.

RESULTS

Our results show that the rates of depression in adult patients with diabetes in Pakistan are high. The patients with diabetes who have depression reported higher social stress, poorer health related quality of life compared to the non depressed diabetic patients. In the presentation the results of our study will be compared to the reports from the developed and the developing world. We will also present our work on depression in diabetes in south Asians living in the UK compared to the south Asians living in south Asia. Psychological interventions such as cognitive behavior therapy have been shown to be effective in improving depression in diabetic patients [32] we will also briefly talk about how this work has informed the development of culturally adapted psychosocial interventions for patients with diabetes who have co-morbid depression.

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