

Predictors of depression among patients with type-2 diabetes: Examining the impact of anxiety and social support on patients' psychological wellbeing

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Abstract

Regardless of the many advances in medicine, there has been an alarming increase in the number of diabetics in the Caribbean. Furthermore, prevalence of diabetes in the region is projected to increase by 148% by the year 2030. The objective of this research was to examine the predictors of depressive symptomology among patients with type-2 diabetics in a Trinidadian sample. Data was collected from 200 patients with type-2 diabetes at hospitals and diabetes clinics in Trinidad using a self-administered questionnaire. The questionnaire measured their anxiety, depression symptomology, perceptions of social support and demographic information such as age and gender. The mean age of participants was $M=55$ and $SD=15.9$. Standard multiple regression was used to analyze the data. Multiple regression indicated that the four variables in combination significantly predicted patients depressive symptomology $R^2=0.16$, $F(4,189)=9.21$, $p<0.001$, with 95% confidence limits for R^2 from 0.07 to 0.25. The size and direction of the relationships suggests that depressive symptomology is greatly influenced by increased anxiety $\beta=0.34$, $t=5.05$, $p<0.001$, decreased social support $\beta=-0.14$, $t=-2.15$, $p<0.05$ and that women experience higher depressive symptoms than men $\beta=0.15$, $t=2.19$, $p<0.05$. Understanding depression and some of the determinants of depression among persons with diabetes is important for diabetes care since depression can hamper diabetes self-care. Interventions to reduce anxiety and to increase social support of diabetic patients may prove beneficial in reduction of depressive symptoms and consequently improve diabetes care. Depression management is necessary among persons with diabetes and special focus should be place on women.

Driven by ageing, obesity and sedentary lifestyles, type 2 diabetes mellitus (T2DM) currently affects just under 400 million individuals worldwide and is expected to rise exponentially, affecting 592 million by 2035¹. Globally, depression and diabetes represent the 4th and 8th cause of disability adjusted life years respectively². Depression and distress in T2DM are associated with greater morbidity, mortality and healthcare costs³.

Like many other chronic conditions, T2DM is associated with depression. Depression has been reported to affect up to 40% of patients with diabetes^{4,5,6}. Indeed, individuals with diabetes have a 2–4 fold greater risk of depression when compared to individuals without diabetes⁷. Depression is associated with higher glycated haemoglobin (HbA1c)⁸, higher rates of complications^{9,10} and mortality¹¹. This association may be mediated by sub-optimal self-care¹², medication adherence¹³, health-related quality of life¹⁴ and common pathophysiological mechanisms via stress and inflammation⁷. Furthermore, even modest levels of depression are associated with less diabetes self-care¹⁵. Timely diagnosis and treatment of depression may improve quality of life and increase social and workforce participation for patients as well as family, friends and carers^{16,17}.

The negative impact of depression on diabetes may be explained by diabetes distress^{18,19}. Diabetes distress refers to the emotional distress related to living with and managing diabetes, not attributable to other causes of overall emotional distress or mental health problems^{19,20}. Many adults with diabetes and depressive symptoms experience high levels of emotional distress stemming from their concerns and worries about diabetes²¹.

Population-based surveys demonstrate that that both depression and diabetes distress are prevalent among adults with type 2 diabetes^{22,23}. Despite this, there is limited data exploring factors associated with depression and diabetes distress in Australian people with type 2 diabetes. We hypothesised that significant levels of depression and diabetes distress in adults with T2DM attending diabetes clinics, are related to demographic, self-care, clinical and healthcare factors. Thus, this large-scale, national, cross-sectional clinic-based study examined the prevalence and factors associated with depression and diabetes distress in adults with T2DM attending diabetes centres across Australia.

Data were analysed from the Australian National Diabetes Audit (ANDA) including patients from 50 diabetes centres across Australia. The state and territory location of participating centres is presented in Supplementary Table 1.

Extended Abstract

Validated screening instruments were administered during the consultation by clinicians on the day of the survey.

De-identified data were collected by participating diabetes centres during a single 4-week survey period (May/June 2016). Patients were under the care of endocrinologists, general specialists, general practitioners and diabetes nurse educators. Health professionals from participating centres interviewed patients, reviewed medical records and pathology results before recording the information in a standardised data collection form.

All missing data, invalid entries and discrepancies were clarified with the relevant diabetes centres. The conduct of ANDA and use of de-identified data for research purposes was approved by the Monash Health Human Research

Ethics Committee and all research was performed in accordance with relevant guidelines/regulations.

Biography

Jannel Gentius is a Lecturer at the University of the West Indies, St. Augustine Campus and has received her PhD in Psychology. Her research interests include attitudes towards health-related stigmatized conditions, health behavior, attitude change, attitudes towards marginalized groups and mental health. She has a keen interest in research and in developing a strong research culture in the Caribbean. She believes that evidence-based research is critical in understanding and addressing the social, psychological, and economic and governance challenges faced by the Caribbean.