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Disordered eating behaviors in Mexican patients with and without type 2 diabetes mellitus

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Abstract The aim of this work was to compare the distribution of disordered eating behaviors (DEB) in Mexican adult patients, with and without type 2 diabetes. A cross-sectional descriptive and comparative field research was carried out in a sample of 169 subjects (54% females; 46% males) with a mean age of 47.9 years. The sample was matched in two groups: patients with type 2 diabetes and patients without diabetes. DEB were assessed with a valid Mexican scale named EFRATA (Escala de Factores de Riesgo Asociados a Trastornos Alimentarios). Results confirmed significant differences in food and weight concern ($t = 4.15$, df 152.09, $p = 0.000$), normal eating behavior ($t = 4.03$, df 151.45, $p = 0.000$) and emotional eating ($t = 1.93$, df 160.76, $p < 0.05$), EFRATA's factors in which diabetic subjects obtained higher values in comparison with no diabetic patients. Subjects without diabetes achieved higher value only in binge eating behavior with statistically significant difference ($t = 2.11$, df 128.8, $p < 0.05$) in contrast with diabetic patients. Since these findings have been open the possibility to propose specific strategies that encourage healthy eating behaviors, both in adult patients with and without diabetes.

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Conductas alimentarias de riesgo en pacientes mexicanos con y sin diabetes mellitus tipo 2

Resumen   El objetivo de este estudio consistió en comparar la distribución de conductas alimentarias de riesgo en pacientes mexicanos adultos con y sin diabetes tipo 2. Se efectuó un estudio de campo de tipo descriptivo y comparativo en una muestra de 169 sujetos (54% mujeres; 46% hombres) con una media de edad de 47,9 años. Los sujetos fueron divididos en 2 grupos: pacientes con diabetes y pacientes sin diabetes. Para medir las conductas alimentarias de riesgo se empleó la Escala de Factores de Riesgo Asociados a Trastornos Alimentarios (EFRATA). Los resultados confirmaron diferencias significativas en preocupación por el peso y la comida (t = 4,15, df 152,09, p = 0,000), conducta alimentaria normal (t = 4,03, df 151,45, p = 0,000) y en comer por compensación psicológica (t = 1,93, df 160,76, p < 0,05), factores de la EFRATA en los que los pacientes diabéticos registraron valores más altos. En contraste con los pacientes diabéticos, los sujetos sin diabetes alcanzaron el valor más alto con diferencia estadísticamente significativa en el factor comer compulsivo (t = 2,11, df 128,8, p < 0,05). A partir de estos hallazgos se abre la posibilidad de proponer estrategias puntuales que favorezcan conductas alimentarias saludables, tanto para pacientes adultos diabéticos como sin diabetes.

Introduction

Diabetes is one of the most devastating diseases of the century, with an economic burden both on families and on society. The incidence and prevalence of this disease have increased progressively in the entire world, and particularly in America (World Health Organization, 2004). The International Diabetes Federation (2011) estimates that there are 366 million people with diabetes and another 280 million are at identifiably high risk of developing diabetes, such that there will be more than 552 million with diabetes and an additional 398 million people at high risk by 2030. Moreover three out of four people with diabetes now live in low and middle-income countries. Further the World Diabetes Foundation estimates that 1.1 million people died of diabetes in 2005. Nearly 80% of deaths related to diabetes occur in countries with low and middle income; approximately half of deaths by diabetes occur in people under 70 years old and 55% of them are women (American Diabetes Association, 2009).

In Mexico, diabetes represents a public health problem (Hernández-Ávila, Gutiérrez, & Reynoso-Noverón, 2013) that affects all social classes (Evaristo-Neto, Foss-Freitas, & Foss, 2010; Genz et al., 2014; International Diabetes Federation, 2013). The National Health and Nutrition Survey (ENSANUT 2006; Olaiz-Fernández et al., 2006) reported a prevalence of diabetes of 14% in the 20−79 age group, which represents 8 million Mexicans with diabetes in the country. In Hidalgo State, the prevalence of diabetes in adults older than 20 years was 7.1%, being higher in women (7.9%) than in men (5.9%). Recently, ENSANUT 2012 (Gutiérrez et al., 2012) has reported that adults' proportion with a prior diagnosis of diabetes was 9.2%, showing an important increase compared to ENSANUT 2006 (7%; Olaiz-Fernández et al., 2006).

On the other hand, some researchers had proposed that disordered eating behaviors (DEB) could instigate, at least theoretically, the onset of type 2 diabetes mellitus (Cleator et al., 2013; Mannucci et al., 1997). Furthermore, there have been suggestions that binge eating behaviors may contribute to earlier onset of this disease, possibly via its impact on weight (Khalida, 2008; Mannucci et al., 2002). It is important to underline that DEB are abnormal eating behaviors that include binge eating with loss of control and extreme weight control behaviors (i.e., self-induced vomiting, dietary restraint and use of diet, pills, laxatives, or diuretics) associated with an increased subsequent apparition of an eating disorders (ED) as anorexia nervosa, bulimia nervosa or binge eating disorder (Asociación Americana de Psiquiatría, 2002).

Few studies have addressed DEB in patients with type 2 diabetes; besides they have been performed on only a small number of patients (Kenardy, Mensch, Bowen, & Pearson, 1994) or in an obese subpopulation (Mannucci et al., 2002). Binge eating has been reported to be frequent among type 2 diabetic patients (Mannucci et al., 1997) or to have a significant positive relationship with this pathology (Papelbaum et al., 2005).

Goebel-Fabbri (2008) has proposed that DEB are often well hidden and denied by diabetic patients; also they decrease their frequency of glucose monitoring, ''forget'' to bring blood glucose records to medical appointments, and also find ways to influence blood glucose meters so that they record in-range blood sugars. Additionally, Goebel-Fabbri has identified that the current goals of diabetes management increase the risk to present DEB, precursors of ED.

Even if it is unclear whether DEB are predominant among patients with type 2 diabetes, these have a deleterious effect on glycemic control, increasing the risk for hypoglycemia, hyperglycemia and diabetic ketoacidosis (Affenito et al., 1997), as well as chronic microvascular and macrovascular complications, one of the most important causes of mortality in diabetic patients (Lee, 2013). Thus, early detection of DEB appears to be crucial in the evaluation and treatment of diabetes (Pérez, Barriguete, & Rivera, 2005).