Available online at www.sciencedirect.com
SCIENCE DIRECT
ELSEVIER
Diabetes Research and Clinical Practice 70 (2005) 166–173
DIABETES RESEARCH AND CLINICAL PRACTICE
www.elsevier.com/locate/diabres

Serious diabetes-specific emotional problems and depression in a Croatian–Dutch–English Survey from the European Depression in Diabetes [EDID] Research Consortium ☆

François Pouwer [a,*], T. Chas Skinner [b], Mirjana Pibernik-Okanovic [c], Aartjan T.F. Beekman [a], Sue Cradock [d], Silvija Szabo [c], Zeljko Metelko [c], Frank J. Snoek [a]

[a] *Vrije Universiteit Medical Center, Diabetes Research Group, EMGO, Van der Boechorststraat 7, 1081 BT Amsterdam, The Netherlands*
[b] *Leicester Royal Infirmary, Leicester, UK*
[c] *Vuk Vrhovac University Clinic, Zagreb, Croatia*
[d] *Queen Alexandra Hospital, Portsmouth, UK*

Received 3 August 2004; received in revised form 20 January 2005; accepted 14 March 2005
Available online 23 May 2005

Abstract

It has been hypothesized that coverage of diabetes-specific issues (e.g. coping with complications, incapacity, pain) during psychotherapy may optimize the likelihood of treatment success for depression in patients with diabetes. However, it is still unclear how often depression is confounded by diabetes-specific emotional problems. We aim to determine the levels of diabetes-specific emotional problems in diabetic individuals with high versus low levels of depression in a sample of 539 outpatients with diabetes (202 Dutch, 185 Croatian and 152 English). Subjects completed the Center for Epidemiological Studies Depression and the Problem Areas in Diabetes scales. Percentages of patients with high depression scores were: 39 and 34% (Croatian men and women), 19 and 21% (Dutch men and women), 19 and 39% (English men and women). Moreover, 79% (Croatian), 47% (Dutch) and 41% (English) of the patients with a severe depression score reported to have four or more serious diabetes-specific emotional problems. For patients with low depression scores, these percentages were: 29% (Croatian), 11% (Dutch) and 1% (English).

Serious diabetes-specific emotional problems are particularly prevalent in depressed diabetes patients. Randomized controlled trials are warranted to test whether coverage of diabetes-specific issues during psychotherapy can further improve the treatment of depression in diabetes.

Keywords: Diabetes; Depression; Emotional distress; Glycaemic control; Diabetes mellitus; Anxiety

☆ Website of the EDID Research Consortium: http://www.edid.bham.ac.uk.

* Corresponding author. Tel.: +31 20 4449679; fax: +31 20 4448181.
E-mail address: f.pouwer@vumc.nl (F. Pouwer).

0168-8227/$ – see front matter © 2005 Elsevier Ireland Ltd. All rights reserved.
doi:10.1016/j.diabres.2005.03.031

1. Introduction

Depression may be regarded as a serious and common complication of diabetes, since a recent meta-analysis concluded that depression is two to three times more prevalent in people with diabetes than in the general population, affecting 10–15% of the diabetes patients [1]. Moreover, depression in diabetes is associated with poorer glycaemic control, and as a consequence depressed diabetes patients are at a higher risk for long-term complications of the disease [2,3]. Depression was also found to be associated with decreased quality of life and an increased health care consumption and expenditures in patients with diabetes [4,5].

Treatment with antidepressant medication such as nortriptyline (tricyclic antidepressant) or fluoxetine (SSRI) was found to be effective in terms of alleviating depression, yet both oral agents were clearly not efficacious in about 40–50% of the depressed individuals with diabetes [6]. This is comparable to an effectiveness of 52–56% found in other antidepressant drug trials in non-diabetic subjects [7]. Treatment with cognitive behavioral therapy (CBT) was also found to be an effective, non-pharmacological treatment for major depression in type 2 diabetes, with 85% of the patients achieving remission of depression, compared with 27% in the control group [8]. Two essential elements of CBT in that particular study were the teaching of problem-solving procedures to resolve stressful circumstances and cognitive techniques to identify distorted or maladaptive thought patterns, but it has not been described how often these stressful circumstances or maladaptive thought patterns were related to diabetes or its complications [8]. Additional analyses in the CBT sample showed that the presence of diabetes complications and lower compliance with blood glucose monitoring were the most important predictors of diminished response to treatment for depression [9]. Lustman et al. therefore hypothesized that coverage of these diabetes-specific issues (e.g. complications, pain/incapacity) during psychotherapy may optimize the likelihood of treatment success in patients with diabetes [9].

However, it is still unclear how often depression is confounded by diabetes-specific emotional problems. To our best knowledge, this has not been the subject of investigation. Therefore, this study set out to: (1) determine the prevalence of high depression symptomatology in three European samples with diabetes (Croatian, Dutch and English) and (2) determine the levels of diabetes-specific emotional problems in diabetic patients with versus without a high level of depressive symptomatology.

2. Materials and methods

2.1. Subjects and general procedure

To minimize chance findings due to cultural characteristics of one sample, this study was conducted in three samples in three different European countries (The Netherlands, UK and Croatia). Permission from the local Research Ethics Committees was obtained in all three countries. Patients' consent to extract data from their medical records was also sought.

2.1.1. Dutch subjects

As part of a large survey [10,11], 3000 randomly selected patients of the 40,000 members of the Dutch Diabetes Association were mailed a booklet of questionnaires. For the present study, a random subsample of 250 patients from the total group of 1472 participants was invited for a second assessment, approximately 2 months after the first assessment. This was done to determine the test–retest reliability of the Problem Areas in Diabetes scale (PAID) [12] and to investigate the associations between diabetes-specific emotional problems and symptoms of depression (present study).

2.1.2. Croatian subjects

The Croatian sample consisted of 185 diabetic patients: 155 were subsequently recruited among those who attended their regular ophtalmological and neurological check-ups in the Vuk Vrhovac University Clinic, and 30 other patients attended a 5-day educational course at the same clinic.

2.1.3. English subjects

Over a 6-week period, all 158 individuals attending Porthsmouth Diabetes Centre for routine annual retinal photography were asked to participate in the study.