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Domain-specific associations between disability and depression, anxiety, and somatization in primary care patients

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ABSTRACT

This study explores the associations between different disability domains and the most prevalent symptoms of mental disorders in primary care patients (i.e. depression, anxiety, and somatization). A total of 1241 participants from 28 primary care centres completed self-report measures of depression, anxiety, and somatization. This same sample also completed the Sheehan Disability Scale (SDS) to assess functional impairment in work, social life, and family life domains. Associations between the symptoms and each disability domain were examined using hierarchical regression analyses. Depression emerged as the strongest predictor of all three disability domains. Somatization was associated only with the work domain, and anxiety was associated only with the family life domain. Clinical symptoms explained a greater proportion of the variance than sociodemographic variables. In primary care patients, depression, anxiety and somatizations were associated with distinct domains of disability. Early provision of effective treatments in the primary care setting may be crucial to reduce the societal burden of common mental disorders.

1. Introduction

Depression, anxiety and somatoform disorders are the most prevalent disorders in primary care settings (Roca et al., 2009; Toft et al., 2005). Results from epidemiologic studies in primary care and community health service settings have shown that common mental disorders involve substantial functional impairment (Alonso et al., 2004; den Boeft et al., 2016; Roy-Byrne, 1996). Anxiety and mood disorders have been associated with levels of disability that are similar to or higher than those observed in common chronic conditions (Buist-Bouwman et al., 2006).Somatoform disorders have also been associated with high levels of disability (Harris et al., 2009; Mack et al., 2015), although evidence on this is sparse.

Mental health problems are now the biggest single cause for a disability benefit claim in most countries (OECD, 2010). Not surprisingly, the societal costs of common mental disorders are substantial (Ruíz-Rodríguez et al., 2017; Whiteford et al., 2013). In Spain, the costs of depressive, anxiety and somatoform disorders have been estimated at 22.8 € billion (equivalent to almost 2% of the country's gross domestic product), more than half of which is due to indirect costs such as permanent or temporary absence from work or early retirement (Pares-Badell et al., 2014).

Large-scale population surveys such as the World Mental Health Surveys (WMHS) and the US National Comorbidity Replication Survey (NCS-R) have reported that mental disorders are associated with disability (Alonso et al., 2011; Druss et al., 2009; Gadermann et al., 2012; Merikangas et al., 2007). Likewise, primary care studies have corroborated these findings in patients with common mental disorders (Fernandez et al., 2010; Grandes et al., 2011; Hanel et al., 2009; Leon et al., 1997; Olfson et al., 1997). However, most of these large-scale general population or primary care studies examining the relationship between disability and mental disorders are based on syndromes or

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disorders rather than individual symptoms. It is important to note that subthreshold mental disorders are also associated with considerable disability and are common in people who also met the full criteria for other axis I disorders (Olfson et al., 1996). Therefore, in studies using diagnostic categories, it is not clear which symptoms are specifically associated with functional impairment even when these studies include only individuals who fulfil the criteria for just one mental disorder. Understanding these specific relationships is crucial to detect, and ultimately to prevent, mental health-related disability. Research in this setting is particularly important given that approximately one third of primary care visits are explicitly motivated by psychological problems (Wittchen et al., 2003) and up to 90% of people diagnosed with common mental disorders are treated by a general practitioner (GP) (National Institute for Health and Care Excellence, 2011).

In this context, we conducted this study in a large sample of primary care patients to examine the associations between specific domains of disability (i.e. work, social and family life) and depression, anxiety, and somatization, which are the most prevalent symptoms in this population.

2. Method

2.1. Participants

We analysed data from 1241 participants in the ongoing Psychology in Primary care (PsicAP) study conducted at 28 primary care centres in eight regions in Spain. The PsicAP study was designed to test the efficacy of psychological treatments for emotional disorders—which in this study include depressive, anxiety, and somatoform disorders—through a randomized controlled trial (Cano-Vindel et al., 2016; González-Blanch et al., 2018c). We included all consecutive, eligible 18–65-year-old patients who, in the opinion of the primary care GP, presented with some type of emotional distress (i.e., anxiety, depression, or somatization) between January 2014 and May 2017. The GPs were advised to exclude patients they believed should be referred to specialized care (i.e., those with severe mental disorders such as psychosis, eating or personality disorders, substance abuse, or dependence disorders). Patients with insufficient Spanish language skills or an intellectual disability were also excluded because they are more likely to have difficulty understanding self-report measures. The study procedure was as follows. First, the treating GP decided whether the patient was suffering from an emotional disorder based on the usual procedures (mainly clinical interview). Next, the participating GPs invited patients to participate in a clinical trial at the centre, and provided them with an information sheet containing details about the study, together with an informed consent form for them to sign if they wished to participate. All participants who agreed to participate and who signed the informed consent form were then scheduled to meet with a clinical psychologist within the next three weeks. Participants then completed all self-report measures using computerized versions of these instruments. In this study, only pretreatment data were used before patients were randomized to the PsicAP trail. The ethics committees at each centre, the National Ethics Committee, and the Spanish Agency of Medicines and Medical Devices (AEMPS) all approved the study protocol (code: ISRCTN58437086).

2.2. Measures

Disability was assessed with the Spanish version of the Sheehan Disability Scale (SDS) (Bobes et al., 1999; Sheehan et al., 1996). The SDS is a brief, 5-item self-administered questionnaire that assesses the degree of disability in three areas of life (work/study, social life, and family life functioning) during the last month. For the purpose of this study, we used the three main items of the scale and excluded the two optional items (perceived stress and perceived social support), which are not directly related to disability. Responses for each item range from 0 to 10 (0 = not at all, 1–3 = mildly, 4–6 = moderately, 7–9 = markedly, and 10 = extremely) with a total possible score ranging from 0 to 30.

Depression was assessed with the nine-item Patient Health Questionnaire (PHQ) depression module (PHQ-9) (Diez-Quevedo et al., 2001; Kroenke et al., 2001). The PHQ-9 is a specific screening test for depression. Each item corresponds to the nine DSM-IV criteria for the diagnosis of major depressive disorder (MDD), which considers symptoms experienced during the two weeks prior to the test administration. Each item is scored on a Likert scale from 0 to 3 (0 = not at all; 1 = several days; 2 = more than half of the days; 3 = almost every day), thus the total scores can range from 0 to 27 points, the unidimensionality of the scale in this sample has been validated elsewhere (González-Blanch et al., 2018b).

Anxiety was assessed with the seven-item PHQ Generalized Anxiety Disorder Scale (GAD-7), (Garcia-Campayo et al., 2010; Spitzer et al., 2006). The GAD-7 consists of 7 items that assess the presence of anxiety symptoms in the last two weeks through a four-point (scored from 0 to 3) Likert scale according to the frequency of symptoms in that time period (0 = not at all: 1 = several days; 2 = more than half of the days; 3 = almost every day), with a maximum score of 21 points.

Somatic symptom severity was assessed with the 15-item PHQ somatic symptom severity scale (PHQ-15) (Kroenke et al., 2002; Ros Montalban et al., 2010). The PHQ-15 is a screening test for the somatization disorder and includes 14 of the 15 most prevalent DSM-IV somatization disorder somatic symptoms. In the Spanish version, patients are asked to rate the severity of 13 somatic symptoms over the last four weeks, scored from 0 to 2 as follows: 0 (not bothered), 1 (bothered a little), or 2 (bothered a lot). Two additional somatic symptoms from the PHQ-9 (fatigue and sleep complaints) are coded in terms of frequency as 0 (“not at all”), 1 (“several days”), or 2 (“more than half the days” or “nearly every day”). The total PHQ-15 score ranges from 0 to 30 (van Ravesteijn et al., 2009).

2.3. Data analyses

We used the Pearson or Spearman correlation coefficients, as appropriate, to examine the relationships between variables. Assumptions of normal distribution were explored with the Kolmogorov–Smirnov test and visual inspections of the histograms. A series of hierarchical multiple linear regression analyses were conducted to determine the association of clinical symptoms (i.e., anxiety, depression and somatizations) with each disability domain. In these models, sociodemographic data (age, sex, education, marital status, employment status, and income) were entered in Step 1 and clinical symptoms were entered jointly in Step 2. Dummy variables were created for the predictors with a nominal or ordinal level of measurement. To address the skewed data distributions, we carried out a bootstrapping analysis in our regression models by calculating bias-corrected and accelerated (BCa) confidence intervals (CI) with 1000 replications. Bootstrapping is a nonparametric procedure that provides reliable measures of statistical significance, even when data do not follow a standard parametric distribution (Efron, 1987). The values of the samples are used to estimate the 95% CIs for the parameter. An effect is considered significant when the BCa CI does not include a zero. Tolerance and variance inflation factor (VIF) were used to check for multicollinearity. Tolerance values less than 0.10 and VIF values greater than 10 typically indicate multicollinearity issues (Menard, 2001). All statistical analyses were two-tailed, and, because multiple comparisons were performed, the alpha level was set at 0.01.

3. Results

The mean age of the 1241 primary care patients recruited was 43.2 years (standard deviation [SD], 12.1) and most were female (n = 956; 77%). In terms of education, 48% had a secondary studies. Just over