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Research paper

Screening for anxiety, depression, and anxious depression in primary care: A field study for ICD-11 PHC

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ABSTRACT

Background: In this field study of WHO's revised classification of mental disorders for primary care settings, the ICD-11 PHC, we tested the usefulness of two five-item screening scales for anxiety and depression to be administered in primary care settings.

Methods: The study was conducted in primary care settings in four large middle-income countries. Primary care physicians (PCPs) referred individuals who they suspected might be psychologically distressed to the study. Screening scales as well as a structured diagnostic interview, the revised Clinical Interview Schedule (CIS-R), adapted for proposed decision rules in ICD-11 PHC, were administered to 1488 participants.

Results: A score of 3 or more on one or both screening scale predicted 89.6% of above-threshold mood or anxiety disorder diagnoses on the CIS-R. Anxious depression was the most common CIS-R diagnosis among referred patients. However, there was an exact diagnostic match between the screening scales and the CIS-R in only 62.9% of those with high scores.

Limitations: This study was confined to those in whom the PCP suspected psychological distress, so does not provide information about the prevalence of mental disorders in primary care settings.

Conclusions: The two five-item screening scales for anxiety and depression provide a practical way for PCPs to evaluate the likelihood of mood and anxiety disorders without paper and pencil measures that are not feasible in many settings. These scales may provide substantially improved case detection as compared to current primary care practice and a realistic alternative to complex diagnostic algorithms used by specialist mental health professionals.

1. Introduction

The World Health Organization (WHO) is preparing a revised version of the classification of mental disorders for primary health care (ICD-10 PHC; WHO, 1996) as part of the 11th revision of the International Classification of Diseases. Proposals for a new primary care classification have been developed by a working group comprising equal numbers of primary care physicians (PCPs) with a special interest in mental disorders and mental health professionals engaged in teaching mental health skills to PCPs. A separate classification of mental disorders for primary care is needed because the parent classification provides a poor fit to common mental disorders as presented in primary care settings (Gask et al., 2008),

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which are often in an earlier and less severe form than those seen by mental health professionals (Goldberg, 2011). Existing specialist mental disorders classifications (American Psychiatric Association, 2013; WHO, 1992) tend to ignore anxiety symptoms unless they have lasted for several months, while depressive episodes can be diagnosed after a period of two weeks. Yet many depressed people are also currently anxious (Goldberg et al., 2012), and consistent differences between depression with and without anxious symptoms have been found in studies that have examined the specific contribution of anxiety to clinical status (Fava et al., 2008; Goldberg and Fawcett, 2012; Goldberg et al., 2014). It is important for PCPs to take account of the patient's clinical state at the time when treatment is sought, and to be aware of differences in ease of treatment, clinical outcome, and suicidal risk.

As proposed, the revised primary care classification for ICD-11 Mental and Behavioral Disorders (ICD-11 PHC) considers *anxious depression* to be an important form of depressive episode in general medical practice (Goldberg, 2014; Silverstone and von Studnitz, 2003), diagnosed when the patient satisfies requirements for both current anxiety and depression, using the same 2-week duration requirement for both. Goldberg and Fawcett (2012) argued that when depression is accompanied by current anxiety, the risk of suicide is greater and the course of illness is less responsive to treatment. Such patients often also present with somatic complaints. In the proposed ICD-11 PHC, *depressive episode* also requires a duration of 2 weeks, and should be diagnosed when there are no or few symptoms of anxiety; conversely, *current anxiety* should be diagnosed when anxiety symptoms have persisted for more than 2 weeks but there are few or no symptoms of depression.

Goldberg et al. (2012) used data from a previous WHO study of mental disorders in general medical and primary care settings in 14 countries (Üstün and Sartorius, 1995) to show that the correlation between anxious and depressive symptoms was +0.88 and that anxious depression is much more common in primary care settings than "comorbid generalized anxiety and depression," where the individual meets the diagnostic requirements of both a depressive episode and generalized anxiety disorder using a duration requirement of 6 months for anxiety symptoms. Kessler and his colleagues have confirmed that briefer durations of anxiety are predictive of subsequent psychopathology and have just as much associated disability at 6-month follow-up as longer durations (Kessler et al., 2005; Ruscio et al., 2007). In addition, *subclinical mixed depression and anxiety*, in which significant symptoms of both anxiety and depression are present but neither set of symptoms satisfies diagnostic requirements for depression or an anxiety disorder, has been shown to be a major cause of psychiatric morbidity in primary care settings. In the UK, it has been shown to account for 20.3% of all time off work, as compared to depression, which only accounts for 8.2% (Das-Munshi et al., 2008).

Definitions based of the above descriptions were submitted to a range of experts on mental disorders in primary care settings around the world, and focus groups were conducted in eight countries (Lam et al., 2013) in order to obtain the views of working PCPs and nurses on the proposed changes to the ICD-10 PHC classification. The proposal for a new category of anxious depression was universally welcomed by the primary care professionals participating in the focus groups. Depressive and anxiety disorders have been repeatedly established as very common in primary care settings in studies conducted in a range of countries around the world (see, for example, King et al., 2008; Kroenke et al., 2007; Pothen et al., 2003; Spiers et al., 2016; Üstün and Sartorius, 1995). In spite of the prevalence and importance of these conditions in primary care and their substantial contribution to disability (Whiteford et al., 2013), rates of identification and treatment remain very low, with less than half of depressive episodes correctly identified even in high-resource primary care settings (Mitchell et al., 2009). PCPs are under ever-increasing time pressure; there are competing demands for the clinician's attention during encounters that typically last only a few minutes, and there is insufficient time to address each demand (Klinkman, 1997). Even mental health specialists have difficulty remembering the complex diagnostic algorithms for mood disorder in current diagnostic systems (Zimmerman et al., 2006). Therefore, PCPs are in great need of feasible and accurate screening procedures for depression and anxiety. However, existing paper and pencil screening tests are not available or appropriate in many global settings for reasons of language or literacy. These difficulties are likely to be even more pronounced in low- and middle-income countries, where more than 80% of the world's population lives. This study tested very brief assessments of depression and anxiety consisting of only a minimal number of additional questions designed to be asked directly by the PCP, thus minimizing the additional time required in the patient encounter and obviating the need for paper and pencil tests and instrument scoring. In addition, these screening questions were tied directly to the proposed diagnostic guidelines for depression and anxiety in the ICD-11 PHC.

Brief candidate screening scales for depression and anxiety had been derived from an earlier WHO study of psychological disorders in primary care carried out in 14 countries (Üstün and Sartorius, 1995). In this study, a stratified random sample of 5438 primary care patients had been assessed using DSM-III-R criteria for common mental disorders, but with the duration requirement for a diagnosis of anxiety disorder reduced to one month. From these symptom data, five-item screening scales for depression and anxiety were derived using item response theory (Goldberg et al., 2012). The sensitivity of the five-item depression scale for major depression was found to be 90% and specificity 88.5%, while for generalized anxiety disorder sensitivity of the five-item anxiety scale was found to be 79.8% and specificity 72.5% (Goldberg et al., 2012).

The aim of the present study was to evaluate the ability of these two brief screening scales to identify cases of depression and anxiety in primary care settings in four large middle-income countries (Brazil, China, Mexico, and Pakistan) in order to consider their potential usefulness to global PCPs in arriving at a preliminary assessment. To minimize necessary PCP time for administration, each scale was structured so as to consist of two screening questions and an additional set of three questions to be asked if either of the screening items was positive. A related aim was to determine the best threshold scores on these scales for detecting ICD-11 cases of depression and anxiety. The results of the screening scales were compared with a structured psychiatric interview designed for use in the general population, the revised Clinical Interview Schedule (CIS-R: Lewis et al., 1992), adapted according to the proposals for ICD-11 PHC to use a duration requirement of only 2 weeks for current anxiety, to yield a diagnosis of anxious depression when patients met the requirements of both current depressive episode and current anxiety, and to yield a diagnosis of subclinical mixed depression and anxiety to patients who had significant symptoms of both depression and anxiety but did not meet the full diagnostic requirements of either disorder separately.

2. Methods

The present field study was carried out in primary care settings in Brazil (São Paulo and Rio de Janeiro), the People's Republic of China (Hong Kong), Mexico (Zapopan), and Pakistan (Rawalpindi). These are large lower and upper middle-income countries in diverse regions of the world, representing a substantial portion of the global population and encompassing multiple languages and wide cultural variations. Centers were selected based on local investigator interest and ability to identify institutional resources in order to complete the study.

The point of the present study was not to examine the prevalence of depressive and anxiety disorders in primary care settings, which has been the focus of other studies. Rather, the study used a cross-sectional descriptive design in a population of patients who were suspected by their PCPs of possibly being psychologically distressed. This procedure was used in order to create an enriched sample in whom a psychological disorder was more likely in order to be able to examine the