Available online at www.sciencedirect.com
ScienceDirect
Psychiatry Research 150 (2007) 163 – 171
PSYCHIATRY RESEARCH
www.elsevier.com/locate/psychres

Discriminant validity of the MASQ in a clinical sample

Mark J. Boschen [a,*], Tian P.S. Oei [b]

[a] School of Psychology, Griffith University, Parklands Drive, Southport, Queensland, Australia
[b] School of Psychology, The University of Queensland, Brisbane Q 4072, Australia

Received 17 November 2005; received in revised form 13 February 2006; accepted 1 March 2006

Abstract

A major weakness of the Mood and Anxiety Symptom Questionnaire (MASQ) is that its discriminant validity has not been demonstrated in a clinical population of anxiety and mood disorder patients. This paper, using 470 anxiety and mood disorder patients, assessed the discriminant validity of the MASQ. The MASQ subscales showed statistically significant discriminant validity, but their maximum ability to discriminate is low at 70%. Overall it was concluded that the MASQ had very weak clinical utility in differentiating anxiety and mood disorder patients, and gave rise to doubts as to the tripartite structure of the MASQ. When using the MASQ, future researchers should be mindful of its limitations when applied in a clinical population.

Keywords: MASQ; Tripartite model; Anxiety; Depression

1. Introduction

The relationship between anxiety and depression remains controversial despite several laudable attempts to differentiate the two (Akiskal, 1990; Mineka et al., 1998; Levine et al., 2001). Comorbidity of the two is high (e.g. Kessler et al., 1996a; Kessler et al., 1996b; Schoevers et al., 2003; Gorwood, 2004; Hunt et al., 2004), and attempts to differentiate anxiety from depression psychometrically have proven notoriously difficult (e.g. Clark and Watson, 1991; Moras et al., 1992).

One proposal for enhancing differentiation draws more strongly on psychometric studies, in addition to theoretical concepts. The tripartite model of Clark and Watson (1991) and the revised Intergrated Hierarchical Model (Mineka et al., 1998) propose that the overlap between anxiety and depression, and the high correlation of anxiety and depression measures, can be best accounted for by considering anxiety and depression in a three-factor model rather than a simpler bifactorial anxiety–depression structure. Clark and Watson (1991) proposed that anxiety and depression share a core set of common general psychological distress symptoms that account for the overlap between the two. The authors label this constellation of symptoms 'negative affectivity' (NA), and suggest that where psychometric instruments have had difficulty separating anxiety from depression, it has been due to high levels of these nonspecific symptoms being assessed. In addition, they suggest that anxiety and depression each have their own set of unique symptoms that are not shared with the other.

* Corresponding author. Tel.: +61 7 5552 8283; fax: +61 7 5552 8291.
E-mail address: m.boschen@griffith.edu.au (M.J. Boschen).

0165-1781/$ - see front matter © 2006 Elsevier Ireland Ltd. All rights reserved.
doi:10.1016/j.psychres.2006.03.008

For depression, it is thought that symptoms relating to inability to pleasurably engage with the environment (e.g. social withdrawal, anhedonia) are specific. Symptoms of physiological arousal were proposed to be specific to anxiety disorders, although the breadth of this anxiety specific factor has been debated, with some authors arguing that it is better conceptualised as a 'somatic distress' factor (e.g. Watson et al., 1995a).

1.1. The Mood and Anxiety Symptom Questionnaire

Watson et al. (1995a,b) developed a new questionnaire designed to assess the constructs of the tripartite model of anxiety and depression. The Mood and Anxiety Symptom Questionnaire (MASQ) was derived across these two studies, with the construct validity being demonstrated predominantly using exploratory factor analyses.

The MASQ is a 90-item questionnaire designed to assess the validity of the tripartite model of anxiety and depression, requiring that subjects respond, on a Likert-type scale from 1 ("Not at All") to 5 ("Extremely"), as to the presence and severity of a series of symptoms of anxiety and depression. Items were derived by the authors from the symptoms listed in the diagnostic criteria of several anxiety and mood disorders. As originally constructed, the MASQ consists of five subscales. Two of these are thought to be comprised of symptoms which are specific to either anxiety or depression. The MASQ Anxious Arousal (MASQ-AA) and MASQ Anhedonic Depression (MASQ-AD) subscales are proposed as being specific to anxiety and depression respectively. Three non-specific ('general distress') subscales can also be calculated. The MASQ General Distress Anxiety (MASQ-GDA), General Distress Mixed (MASQ-GDM), and General Distress Depression (MASQ-GDD) are comprised of symptoms thought to show less specificity to either anxiety or depression, commonly occurring in either condition.

Despite many items of the 90-item MASQ pool showing either weak or complex loadings on a three-factor structure, the Watson et al. (1995a,b) retained all items for the final version of the questionnaire. This inclusion of the 90-items from the original MASQ, despite the weak and complex loading patterns, appears to have left a scale with poor structural stability. Several authors have examined the MASQ factor structure using confirmatory and exploratory factor analytic methods, and have consistently found that around one third of items do not load stably on a tripartite structure (Bedford, 1997; Keogh and Reidy, 2000; Boschen and Oei, in press). Burns and Eidelson (1998) questioned whether the MASQ was a three-factor instrument at all, instead arguing for a more traditional anxiety-vs.-depression bipartite factor structure.

Perhaps more disturbing than the weakness in factor structure is the ongoing failure to fully validate the MASQ in an anxious or depressed sample. There remain no soundly constructed studies documenting the ability of the MASQ to differentiate between anxiety and depressive disorders, or even the stability of its factor structure in these populations for which it was designed (Boschen and Oei, in press). Where one study used the MASQ in an anxious/depressed sample, the work was critically flawed due to its exclusion of those symptoms which were most representative of the nonspecific general distress factor (Burns and Eidelson, 1998).

While the tripartite model of anxiety and depression was developed with the aim of better distinguishing between the two, no direct test of the ability of the MASQ subscales to differentiate anxiety from depression has been conducted. Such an investigation would add further support to the MASQ as a measure of tripartite constructs.

1.2. Hypotheses for the current study

Three sets of hypotheses regarding the discriminant validity of the MASQ were formulated a priori for testing. Unless otherwise stated, all involved use of the complete instrument as proposed by Watson et al. (1995a), including items from the General Distress (Mixed) factor. Firstly, it was proposed that the subscales of the MASQ would show significant differences between those with and without a diagnosis, depending on their predicted specificity to anxiety or depression. For example, the depression-specific MASQ-Anhedonic Depression (MASQ-AD) subscale should show significant differences between those with and without a depressive disorder, but should not be different based on the presence/absence of an anxiety disorder. For the non-specific subscales, it was predicted that an effect would be seen for either depression or anxiety disorder diagnosis.

Secondly, it was proposed that the subscales of the MASQ would be capable of predicting a diagnosis of depressive disorder, and a diagnosis of anxiety disorder. More specifically, it was posited that only MASQ-AD and the three MASQ General Distress subscales would contribute to predicting the presence/absence of depressive disorder diagnosis. Conversely, it was predicted that only the MASQ-Anxious Arousal (MASQ-AA) and the General Distress subscales would contribute to predicting an anxiety disorder diagnosis.