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The role of self-blame and worthlessness in the psychopathology of major depressive disorder

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ABSTRACT

Background: Cognitive models predict that vulnerability to major depressive disorder (MDD) is due to a bias to blame oneself for failure in a global way resulting in excessive self-blaming emotions, decreased self-worth, hopelessness and depressed mood. Clinical studies comparing the consistency and coherence of these symptoms in order to probe the predictions of the model are lacking.
Methods: 132 patients with remitted MDD and no relevant lifetime co-morbid axis-*I* disorders were assessed using a phenomenological psychopathology-based interview (AMDP) including novel items to assess moral emotions ($n=94$ patients) and the structured clinical interview-I for DSM-IV-TR. Cluster analysis was employed to identify symptom coherence for the most severe episode.
Results: Feelings of inadequacy, depressed mood, and hopelessness emerged as the most closely co-occurring and consistent symptoms ($\geq 90\%$ of patients). Self-blaming emotions occurred in most patients ($>80\%$) with self-disgust/contempt being more frequent than guilt, followed by shame. Anger or disgust towards others was experienced by only 26% of patients. 85% of patients reported feelings of inadequacy and self-blaming emotions as the most bothering symptoms compared with 10% being more distressed by negative emotions towards others.
Limitations: Symptom assessment was retrospective, but this is unlikely to have biased patients towards particular emotions relative to others.
Conclusions: As predicted, feelings of inadequacy and hopelessness were part of the core depressive syndrome, closely co-occurring with depressed mood. Self-blaming emotions were highly frequent and bothering but not restricted to guilt. This calls for a refined assessment of self-blaming emotions to improve the diagnosis and stratification of MDD.

1. Introduction

The influential revised learned helplessness model (Abramson et al., 1978) predicts that vulnerability to major depressive disorder (MDD) is due to a bias to blame oneself for failure in an overgeneralised way resulting in decreased self-worth, hopelessness and depression. Overgeneralised self-blame is associated with excessive self-blaming moral emotions((Green et al., 2013b), e.g. guilt, shame, disgust/contempt towards oneself). This is in contrast to the most widely employed model of depression that claims an overall increase in negative and reduction in positive emotions (Watson et al., 1988).

Recent evidence using experimental probes of moral emotions in remitted MDD has pointed to a relative proneness to feeling disgust/contempt towards oneself with a reduction in disgust/contempt towards others (Green et al., 2013b; Zahn et al., 2015) in support of the revised learned helplessness model. The clinical literature, however, has provided contradictory evidence regarding the role of worthlessness and self-blaming emotions in MDD, which the model predicts to be of core pathophysiological importance.

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In support of the model, the combined guilt and worthlessness item in DSM (APA, 2000) was found to be most distinctive of current MDD compared with a generalized anxiety disorder group (Breslau and Davis, 1985). Further support has been provided by the largest transcultural study on MDD, where the feeling of inadequacy (including self-worthlessness) was reported as a consistent symptom of depression (Sartorius et al., 1980). Subsequent studies, however, have reported a wide variation in the consistency of guilt/worthlessness which was most often reported as a single item following DSM. The frequency of guilt/worthlessness in current MDD was found to be between 20% in Australia (Carragher et al., 2011) and Japan (Saito et al., 2010), 50% in Benin (Bertschy et al., 1992), and 70–80% in the USA (Buchwald and Rudickdavis, 1993) and France (Corruble et al., 2009). DSM worthlessness was separately reported in another US study as being present in 61% of current MDD patients (McGlinchey et al., 2006).

The clinical assessment of self-blaming emotions has classically been restricted to guilt, which was found only in a subgroup of patients (McGlinchey et al., 2006; Sartorius et al., 1980). Although, early studies claimed transcultural variation in the frequency of guilt (Gada, 1982; Stompe et al., 2001), more recent evidence suggests that guilt is experienced in a large subgroup of patients across different cultures (Bhugra and Mastrogianni, 2004). This is contradicted by a large study reporting markedly lower frequencies of guilt in Korean compared to US patients with MDD (Jeon et al., 2014). On a cautionary note, this study used item comparisons of the Hamilton Depression scale without using semi-structured interviews to elicit the information and without reporting how items were translated and culturally adapted.

The discrepancy in reported frequencies of guilt and worthlessness is likely due to methodological as well as sampling differences. The semi-structured interviews for DSM were designed to provide reliable diagnoses rather than to assess single symptoms or the coherence of symptoms (First et al., 2002). As a consequence, the criterion threshold for different items on the DSM varies between symptoms rendering a direct comparison and analyses of symptom coherence invalid. Furthermore, the role of self-blaming emotions such as self-disgust/contempt, found to be elevated in MDD using specific instruments of assessment (Green et al., 2013b; Zahn et al., 2015), remains elusive. This is because clinical assessments have solely reported guilt or non-specific reports of self-blame.

As Jaspers, the founder of phenomenological psychopathology, noted on the analyses of symptom-complexes (Jaspers, 1963/1959, p. 582ff): There are different aspects of the relation of symptoms within a symptom-complex: (1) frequency of symptom co-occurrence, and (2) coherence of symptoms by being related to a common aspect or function. The latter aspect has been emphasized by Schneider when discussing symptoms: “Their connectedness must be due to a normal complex of psychic function, which complex has been affected by the illness”. At the time of this theory, a lack of knowledge about neurobiologically valid models of many higher cognitive functions hampered the success of this approach. Aided by advances in social cognitive neuroscience, we can now aim at isolating symptom-complexes which are likely to be associated with a restricted set of cognitive-anatomical syndromes (Zahn, 2009). The neural architecture underpinning the tendency to overgeneralize self-blaming emotions in MDD has recently been elucidated (Green et al., 2013a, 2012). This supports the neurobiological validity of self-blaming emotional biases in MDD and has prompted the current study into the phenomenology of associated clinical symptoms.

Here, we investigated the following hypotheses derived from the revised learned helplessness model: (1) The feeling of inadequacy/worthlessness is a consistent symptom of MDD and co-occurs with other core symptoms when assessed using an instrument designed to assess individual symptoms (AMDP, (Ahrens and Stieglitz, 1998; Busch et al., 1980)) rather than those used in DSM validation studies. (2) The type of self-blaming emotion experienced during depressive episodes differs between patients and is not restricted to guilt. (3) Negative emotions towards others are infrequent and do not co-occur with core depression symptoms.

2. Methods

2.1. Participants

This study was approved by the South Manchester NHS Research Ethics Committee. All participants gave written informed consent and were compensated for time and travel costs. 132 (37 male) patients with major depressive disorder (MDD), fully remitted for >6 months, were enrolled ($n=121$ medication-free at time of study) and had no current, as well as no relevant past comorbid axis-*I* disorders (see also Supplementary Methods).

Residual symptoms were assessed using the Montgomery-Åsberg-Depression-Scale ((Montgomery and Åsberg, 1979), MADRS) and psychosocial functioning was assessed using the Global-Assessment-of-Functioning (GAF, (First et al., 2002)) Scale (Axis V, DSM-IV). Remitted MDD patients had GAF scores indicating minimal or absent symptoms and high psychosocial functioning (mean$=84.4\pm6.6$) and MADRS scores that were well below the cut-off for depression of 10 (mean$=1.2\pm1.6$). Their average age was 32.8 ± 12.3 (range 18–65), years of education mean was 16.6 ± 2.4 (range 11–22) and their age at onset ranged from 8 to 52 (mean$=21.5\pm8.6$, for further clinical details and cultural background see Supplementary Tables S2 & S3).

2.2. Psychopathological assessment

We assessed 132 patients using a phenomenological psychopathology-based instrument (AMDP) translated from German (Faehndrich and Stieglitz, 1997, 2007; Guy and Ban, 1982), adding new items to assess moral emotions ($n=94$ patients). In accordance with the SCID-I (First et al., 2002), we asked patients about the worst two weeks of their last and most severe episode. Importantly all symptoms were measured on the same 4 point scale (0=absent, 1=mild/minimal, 2=moderate, 3=severe) without pre-defining different diagnostically relevant thresholds for different symptoms as is done on the SCID-I. English translations of symptom labels correspond to published symptom label translations (Faehndrich and Stieglitz, 1997). Instructions for ratings were based on definitions in the German version. In addition to the existing standard items of feelings of inadequacy and guilt, we developed additional items to assess moral emotions more systematically (the Moral Emotion Addendum to the AMDP, see Supplementary Methods). This was based on our previous work on experimental probes of moral emotions (Green et al., 2013b; Zahn et al., 2015) and their distinct neural correlates (Green et al., 2012; Moll et al., 2007; Pulcu et al., 2014; Zahn et al., 2009). Inter-rater reliability for the AMDP and moral emotion items were very high (Supplementary Table S4).

2.3. Data analysis

All analyses were carried out using SPSS21 (www.spss.com) at $p=.05$, 2-sided. Symptom ratings were transformed into two categories: absent to mild (0 and 1) vs. moderate to severe (2 and 3). Hierarchical cluster analysis (binary Euclidean distance, Ward method) was employed to identify symptom coherence.