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Mood instability in people with obsessive compulsive disorder and obsessive-compulsive personality traits

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ABSTRACT

Background: This study examines the association of mood instability (MI) with obsessive-compulsive disorder (OCD) and obsessive-compulsive personality (OCP) traits.
Methods: Data was from 2000 and 2007 British Adult Psychiatric Morbidity Surveys. MI was assessed with a self-reported question about sudden mood changes and with the mood reactivity criterion of the borderline personality disorder assessment done by an interviewer, both from the Structured Clinical Interview (SCID-II). OCD diagnosis was established using the Clinical Interview Schedule-Revised. OCP traits were self-reported responses to 8 questions from SCID-II.
Results: Individuals assessed with MI by both methods separately are more likely to have an OCD diagnosis (OR: 7.28, 95% CI: 3.94–13.45) and (OR: 9.88, 95% CI: 3.90–25.03). The association remained significant when we controlled for depression and excluded OCD cases with comorbid psychiatric disorders. Individuals with MI are more likely to report OCP traits (OR: 9.88, 95% CI: 3.90–25.03). Except for moral scrupulosity, MI is associated with all other OCP traits ($p < .01$). The proportion of individuals with MI increased linearly with number of OCP traits.
Conclusions: MI is common in people with OCD and OCP traits. Further understanding of MI in people with OCD and OCP traits could lead to improved treatment.

1. Introduction

Mood instability (MI) refers to rapid and intense variability in mood that occurs over relatively short periods of time (often within hours) (Eid & Diener, 1999; Ebner-Priemer et al., 2007). It is a trans-diagnostic psychopathological dimension that also appears in bipolar disorder and borderline personality disorder. We have previously found a high rate of MI in common mental disorders/neurotic conditions and specifically in 67% of participants with obsessive-compulsive disorder (OCD) (Marwaha, Parsons, Flanagan, & Broome, 2012). How far MI in these conditions has the same neurobiological underpinnings is currently unknown (Broome, He, Iftikhar, Eyden, & Marwaha, 2015).

OCD is a relatively common condition with an estimated lifetime prevalence of 2–3% using DSM-III and DSM-IV criteria in the USA, but up to 28.2% of the population reported symptoms in the National Comorbidity Study – Replication (Kessler et al., 2005; Ruscio, Stein, Chiu, & Kessler, 2010; Torres et al., 2006a). European studies have produced somewhat lower rates around 1% (Fineberg et al., 2013c). It is apparent however, that OCD is one of a group of related disorders and that the lifetime prevalence of the whole group would be higher (Phillips et al., 2010). In DSM-5 OCD has been located in a chapter with related disorders such as body dysmorphic disorder and hoarding disorder (American Psychiatric Association [APA], 2013). Obsessions are recurrent thoughts, images or impulses that are experienced as intrusive and unwanted. Compulsions are repetitive behaviours that individuals feel driven to perform (DSM-5; American Psychiatric Association [APA], 2013). One study found that on average there was a 17.2 year gap between onset of symptoms and initiation of effective treatment and even though 50–70% reported substantial benefit from treatment, 60–90% reported ongoing interference with some aspect of life such as work or social relationships (Fineberg, Reghunandanan, Brown, & Pampaloni, 2013; Hollander et al., 1998; Knopp, Knowles, Bee, Lovell, & Bower, 2013; Ruscio et al., 2010).

There are many similarities between OCD and obsessive-compulsive personality disorder (OCPD) including heritability, manifestations, clinical course and response to specific serotonin

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reuptake inhibitor antidepressants (Fineberg, Sharma, Sivakumaran, Sahakian, & Chamberlain, 2007). Preoccupation with details, perfectionism and rigidity are most characteristic of OCPD, and obsessions do not usually occur, but there appears to be an unusual ability to consider delaying potential rewards (Fineberg et al., 2007; Pinto, Steinglass, Greene, Weber, & Simpson, 2014). OCD and OCPD often overlap in the same individual. OCPD also occurs in conditions such as restricting anorexia nervosa, but OCPD is not necessarily the most common personality disorder in OCD (Fineberg et al., 2007). It is difficult to be definitive about the relationship between OCPD and OCD because the definition of OCPD has changed with different editions of DSM (Starcevic & Brakoulias, 2014). The definition of OCPD used in this study included the eight symptoms used in the DSM-IV and these have changed very little in DSM-5 (American Psychiatric Association [APA], 1994, 2013).

There are several reasons for exploring the relationship of MI with OCD and OCPD. First, whether the association is independent is unclear given that MI is common in disorders such as anxiety and depression with which OCD is frequently comorbid (Fineberg et al., 2013a; Marwaha et al., 2012). Second, MI is a closely related concept to impulsivity (Henry et al., 2001; Peters, Balbuena, Baetz, Marwaha, & Bowen, in press) and impulsivity is associated with OCD as well as with obsessive-compulsive symptoms in non-clinical samples (Summerfeldt, Hood, Antony, Richter, & Swinson, 2004; Zermatten & Van der Linden, 2008). Third, in ICD-10, OCD is listed as a neurotic condition (World Health Organization, 1992) and it has been shown that MI is the essential component of neuroticism (Bowen, Balbuena, Leuschen, & Baetz, 2012). Fourth, we were interested in the association of MI with OCD and OCP traits because cognitive rigidity is characteristic of OCP traits, OCPD and OCD (American Psychiatric Association [APA], 2013; Fineberg et al., 2015). The association of OCD and OCP traits with MI is important for understanding common factors that could lead to novel treatments (Angst, Angst, Gerber-Werder, & Gamma, 2005; Jakubovski et al., 2013).

Our objective is to examine the association of MI with OCD and OCP traits. The first hypothesis is that MI is associated with the diagnosis of OCD independent of comorbid conditions. The second hypothesis is that MI is associated with OCP traits.

2. Methods

2.1. Sample

We used data from two British Adult Psychiatric Morbidity Surveys (APMS), carried out in 2000 and 2007 (Office for National Statistics, 2003; National Centre for Social Research, 2009). These surveys were intended to gather data on the prevalence and associations of psychiatric disorders among adults living in England. The targeted age range was 16–74 in 2000 ($N=8580$, response rate 70%) and 16 and higher in 2007 ($N=7403$, response rate 57%). Both surveys had similar designs and goals and full details of survey procedures are given in the technical reports describing the data (Bebbington et al., 2009; Singleton, Lee, & Meltzer, 2000). Briefly, a multi-stage probability sampling procedure was used in both surveys. The sampling frame consisted of postal codes, then household units, and finally one individual per household was selected using the Kish grid method. The 2007 APMS dataset was used to test our first hypothesis on the association of MI with OCD. Because the 2007 survey did not have a module assessing OCP traits, we used the 2000 dataset to examine the second hypothesis on the association of MI with OCP traits.

2.2. Procedures

The reliability of the CIS-R for different diagnoses lies between .74 and .91 (Lewis, Pelosi, Araya, & Dunn, 1992). Filter questions were used to establish the presence of each symptom in the past month, leading to more detailed questioning about the past week. The respondent's CIS-R answers were used in a diagnostic algorithm to obtain ICD-10 diagnoses. OCD was diagnosed if 4 obsessions and/or compulsions of at least 2 weeks duration were present along with distress and social impairment. Greater distress (endorsing at least 6 symptoms) was required if impairment was not present (Torres et al., 2006a).

In Phase I, lay interviewers trained by the National Centre for Social Research administered a self-completed version of the Structured Clinical Interview for DSM personality disorder traits (SCID-II) designed to allow the diagnosis of Borderline Personality Disorder (BPD) (First, Gibbon, Spitzer, Williams, & Benjamin, 1997). In Phase II in a subsample of Phase I participants, clinically trained interviewers who could apply clinical judgement conducted more detailed assessments for Borderline Personality Disorder. These Phase II interviewers were trained and supervised by a qualified psychiatrist in contrast to Phase I interviewers (social researchers) who more closely followed a script. The probability of being selected for a Phase II assessment depended on a process of score sampling fractions that was applied to responses to SCID-II BPD screening questions at Phase I (First et al., 1997). Those who endorsed three items or less in the screen were excluded from Phase II sampling and those who endorsed at least 8 items were all sampled. A diagnosis of Borderline Personality Disorder in the Phase II assessment was indicated by five of eight criteria: abandonment, unstable self- image, unstable relationships, impulsivity anger, suicide or self-harming behaviour, affective instability, feelings of emptiness, dissociative symptoms. The probability of selection for Phase II given a SCID BPD screen score of 4, 5, 6, and 7 was .25, .4, .52 and .63 respectively. Of the 746 people approached to be interviewed for Phase II, data was available for 606.

For the 2000 study, there were 8886 respondents for Phase I, and the assessment of OCP traits was included in the self-completed SCID-II. Complete data for MI and OCP traits was available in 7827 respondents.

2.3. Measures

To test the first hypothesis that MI is associated with OCD diagnosis independent of dysphoric mood, we had two measures of MI. The first measure was the self-report phase I version of the Structured Clinical Interview for DSM-IV Personality Disorders (SCID-II) question: “Do you often have a lot of sudden mood changes?” (First et al., 1997). The relevant time interval was the last several years and response options were “yes” or “no” (Torres et al., 2006a). This captures the key concepts about MI and is similar to the question about MI in the Eysenck Personality Inventory Neuroticism Scale (Bowen, Baetz, Leuschen, & Kalynchuk, 2011; Eysenck and Eysenck, 1969). The second measure was criterion six of the borderline personality disorder assessment that was made by a clinically trained interviewer using the SCID-II: “affective instability due to a marked reactivity of mood” coded as an ordinal variable 1=none, 2=sub-threshold, and 3=threshold (First et al., 1997). The questions were similar but the first was self-reported and the second clinician rated. We collapsed the categories to create a dichotomous (absent, present) variable for each question.

To test the second hypothesis that MI is associated with OCP traits, we used phase I data from the 2000 dataset. OCP traits were assessed using 8 questions from the self-completed SCID–II questionnaire (First et al., 1997). These were: “preoccupation with rules”, “perfectionism”, “excessive devotion to work”, “moral scrupulosity”, “hoarding”, “reluctance to delegate”, “miserliness”, and “stubbornness”. The MI measure for the 2000 dataset was the question from the self-completed SCID-II “affective instability due to a marked reactivity of mood (e.g. intense episodic dysphoria, irritability or anxiety), usually lasting a few hours and only rarely more than a few days”.

2.4. Statistical analysis

In order to render the results representative of the household population in the chosen age range, primary sampling units were stratified by region and socio-economic characteristics. Thus, in each case, data was weighted to take account of survey design and non-response. All statistical analyses were implemented in Stata 13 (the analysis plan is summarised in Table 1).

To test the first hypothesis, our dependant variable was the diagnosis of OCD. The odds of receiving an OCD diagnosis with and without MI were calculated using survey-weighted logistic regression, controlling for sex, age, marital status, and employment status (Model 1). We then controlled for depressed mood by using the CIS-R depression variable. This depression variable represents the sum of four items, all referring to the past week: “lack of interest in things”, “number of days felt depressed”, “felt depressed for more than 3 h”, and “ever became happier when something nice happened or when in company”. We added this depression score as a covariate in Model 2. Finally, we were interested in whether the association of MI and OCD was direct, and not an artefact of comorbidity with other psychiatric disorders. For this reason, we then restricted our cases to those with “pure-OCD” ($n=34$) without a comorbid psychiatric disorder (depression, generalised anxiety disorder, panic disorder, social phobia and other phobia) in a final model (Model 3).

To test the second hypothesis on the association of MI and OCP traits, we cross-tabulated each of the eight items for OCP traits with the presence of MI. We then calculated a total score for OCP traits and performed the Cochran–Armitage test for trend. This test examines whether the rate of MI increases according to increasing number of OCD trait scores.