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Longitudinal relationships between personality disorder dimensions and depression in a community sample

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ABSTRACT

Background: Little is known about the long-term relationships between specific personality disorder dimensions and onset of major depressive disorder (MDD) in the community.
Methods: A stratified random sample of adult residents of eastern Baltimore was interviewed by psychiatrists in 1981 to assess DSM-III personality disorders. A total of 252 of these individuals were re-examined between 1994 and 1999 and were included in the present analysis. Relationships between scores on personality disorder scales and the onset of MDD in the 13–18 year follow-up period were evaluated using logistic regression models.
Results: Forty-nine individuals had an episode of major depression during the follow-up period; 34 of them had their first episode during this period. Only histrionic personality disorder score was significantly related to the occurrence of MDD in the follow-up period. No significant associations were found between first-incidence MDD and any of the personality disorder scores.
Limitations: The study was conducted prior to DSM-5 criteria.
Conclusion: The findings suggest that the risk of MDD in adults in the community increases with histrionic personality disorder score. Future prospective population-based studies with larger sample sizes are needed in order to verify the present finding.

1. Introduction

Major depressive disorder (MDD) is highly prevalent in the general population and poses a major public health concern worldwide. The lifetime prevalence of MDD in the United States is approximately 15% (Hasin, Goodwin, Stinson, & Grant, 2005; Kessler et al., 2005), and its occurrence is associated with significant functional impairment, decrease in quality of life, and suicidal behavior (Kessler, 2012). Although there are effective treatments available, it has been estimated that existing treatments can only reduce the disease burden related to MDD by around 35% (Andrews & Wilkinson, 2002; Andrews, Issakidis, Sanderson, Corry, & Lapsley, 2004). To further reduce this burden and the economic costs associated with it, research should therefore also focus on the possibilities for preventing the onset of new MDD cases. The identification of variables that can predict MDD is the first important step to implement preventive strategies against MDD.

Risk factors for depressive disorders have been examined in a number of community studies. In these studies, female gender (Anthony & Petronis, 1991; Blazer, Kessler, McGonagle, & Swartz, 1994), family history of depression (Chen, Eaton, Gallo, Nestadt, & Crum, 2000; Kendler, Gardner, & Prescott, 2006), stressful life events (De Graaf, Bijl, Ravelli, Smit, & Vollebergh, 2002), and certain personality traits like neuroticism (Mattisson et al., 2009; Noteboom, Beekman, Vogelz, angs, & Penninx, 2016) have been identified as important premorbid risk factors for MDD. The hypothesis that personality pathology may play a causal role in the development of depressive disorders has gained substantial attention in psychiatry (Hirschfeld et al., 1989). The frequent co-occurrence between personality disorders and MDD in psychiatric practice (Oldham et al., 1995; Skodol et al., 1999) has important implications for elucidating the etiology and improving the clinical management of MDD (Bagby, Quilty, Ryder, & Ryder, 2008; Hirschfeld, 1999). Hence, the interrelation between MDD and personality disorders has been the focus of much empirical research.

While estimates of the comorbidity between personality disorders

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and MDD vary widely among different studies, most report high prevalence rates of personality disorders in depressed patients, ranging from about 41% (Shea & Hirschfeld, 1996) to 81% (Alnaes & Torgersen, 1988). As of yet, there is no general consensus on which specific personality disorders occur most frequently among those with MDD. Based on results from the Collaborative Longitudinal Personality Disorder Study, Skodol et al. (1999) found avoidant (51.3%), obsessive-compulsive (38.6%), and borderline personality disorder (37.4%) to have the highest prevalence among individuals with MDD. Results from the National Epidemiologic Survey on Alcohol and Related Conditions suggest obsessive-compulsive (24.3%) and paranoid personality disorder (20.6%) to be most common in this population (Grant et al., 2005). When co-occurring, personality disorders influence the course of MDD. It has been shown that co-morbid personality disorders elevate the risk for MDD persistence (Skodol et al., 2011), and predict higher rates of, as well as shorter intervals to, recurrence of a depressive episode (Cyranowski et al., 2004; Grilo et al., 2010). However, another study did not find personality disorders to predict MDD recurrence (Skodol et al., 2011). Personality disorders, in addition, also seem to interact with treatment in depression. A large meta-analysis found robust evidence that the presence of a personality disorder decreases responsiveness to depression treatment considerably, irrespective of treatment modality (Newton-Howes et al., 2014).

Although an association between personality disorders and MDD has been firmly demonstrated in the literature, the majority of studies have been cross-sectional and have not been able to clarify the direction of this relationship. Longitudinal studies that measure personality disorders before the onset of depression in the general population will provide the most useful information to elucidate the relation between personality pathology and depression. The prospective studies that have been conducted to date have indicated that Cluster A–C personality disorders might all increase the risk of developing depressive disorders (Johnson et al., 1999; Johnson, Cohen, Kasen, & Brook, 2005; Kwon et al., 2000).

Since a growing body of research supports the inference that personality pathology is dimensional in nature (Morey, Benson, Busch, & Skodol, 2015), and a dimensional approach is integrated in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) (American Psychiatric Association, 2013), it is also important to study the risk for developing MDD in the large group of individuals who exhibits specific traits of personality disorders across a spectrum of severity. The dimensional construct implies that, even without meeting the full criteria for a personality disorder diagnosis, one may still be susceptible to adverse emotional consequences. Elevated levels of personality disorder traits that are more common in the general population could therefore be relevant risk factors for the development of MDD,

and are thus important to identify. However, longitudinal studies investigating the relationship between personality disorder dimensions and depression are rare. The few exceptions have only studied the association between overall or cluster personality disorder scores and depression (Daley et al., 1999; Johnson & Bornstein, 1991; Johnson et al., 1996), and/or have investigated the relationship in a sample of adolescents and young adults (Daley et al., 1999; Johnson & Bornstein, 1991; Johnson et al., 1999). In addition, none of these studies have made a distinction between the different types of mood- or depressive disorders. To overcome these limitations, it is crucial to study the associations between specific personality disorder dimensions and the development of MDD in adult subjects across a wide age range.

To our knowledge, this report describes the first study to investigate personality disorder dimensions as predictors for the onset of MDD in adults. We assessed the onset of MDD in a community sample of individuals who were examined by psychiatrists in 1981 and reexamined twelve to eighteen years later. The aim was to determine whether specific DSM-III personality disorder dimensional scores predicted the onset of MDD in these individuals.

2. Material and methods

2.1. Sample

Individuals in the current analyses had participated in the Baltimore Epidemiologic Catchment Area Study, during which a probability sample of 3481 adult household residents of eastern Baltimore were interviewed by lay interviewers in 1981 (Eaton & Kessler, 1985; Eaton et al., 1984). A total of 810 of these individuals, over-selected for those who screened positive for indicators of mental morbidity, were examined by psychiatrists during the Clinical Reappraisal in 1981 (Romanoski et al., 1992). Two hundred ninety-four of these individuals were reexamined by different psychiatrists in 1994 and 1999, as part of the Baltimore Epidemiologic Study Follow-up Study (Eaton et al., 1998). The study was approved by the Institutional Review Board of the Johns Hopkins Medical Institutions. All participants provided written, voluntary informed consent prior to inclusion.

A total of 42 of these individuals were excluded from the present analyses. Seventeen had a major depressive episode at, or within the past month, of the 1981 examination, which may have influenced their personality disorder scores. Eleven subjects had a history of MDD before 1981, without a recurrent episode during the follow-up period, as determined by the Follow-up Study examinations; these subjects were not included in order to safeguard homogeneity in the group of subjects without MDD. Nine subjects had a manic episode ever in their life, whereby the presence of a major depressive episode as part of a bipolar disorder, rather than of MDD, could not be ruled out. Finally, five subjects had missing data on major depressive episodes during the follow-up period. Therefore, 252 individuals were included in the current analysis.

2.2. Diagnostic assessment

Psychiatrists used the Standardized Psychiatric Examination (SPE) for examination of participants in 1981. The psychiatrists made Axis I diagnoses according to DSM-III criteria (Romanoski et al., 1988). They demonstrated high interrater reliability in ascertaining individual psychopathological symptoms (kappa range; 0.55–1.0) and in making DSM-III diagnoses (kappa range; 0.79–1.0) among a sample of study subjects (n = 43) drawn from both a psychiatric inpatient population and a large community sample of non-patients from the Epidemiological Catchment Area (ECA) study.

Since there were no diagnostic instruments for DSM-III personality disorders at the time, the psychiatrists used inventory and direct questioning methods to evaluate DSM-III personality disorder criteria, as described previously (Nestadt, Romanoski, Samuels, Folstein, & McHugh, 1992). In the inventory method, each criterion was rated on a 3-point scale, either 0 (“trait not present”), 1 (“trait present but did not cause the subject substantial distress/dysfunction”), or 2 (“trait definitely present and has caused the subject distress and/or social/occupational disruption”) for each constituent feature of the specific personality disorder. Additionally, in the direct questioning method, used for compulsive and histrionic personality disorders,

psychiatrists asked a series of questions about particular traits to gain more detailed information about these character features. Compulsive and histrionic personality criteria were each rated on a 4-point scale, from 0 (absent), 1 (“trait present, but does not cause distress”), 2 (“trait present, and causes distress in response to major participating events”), or 3 (“present and likely to result in distress under minor participating events. The psychiatrists based their scores on historical information as provided by the subjects, in combination with the subject’s spontaneous behavior during the interview. The ratings for each of the criteria were summed in order to arrive at a dimensional score for each personality disorder (Hong et al., 2005). The psychiatrists held regular conferences and reviewed videotapes to maintain diagnostic consensus, and inter-rater agreement was high for PD