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Description and prediction of time-to-attainment of excellent recovery for borderline patients followed prospectively for 20 years

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ABSTRACT

One purpose of this study was to determine the cumulative rates of excellent recovery for borderline patients and axis II comparison subjects followed prospectively for 20 years. Another purpose was to find the best set of baseline predictors of excellent recovery for borderline patients. A total of 290 inpatients meeting rigorous criteria for borderline personality disorder and 72 axis II comparison subjects completed semistructured interviews and self-report measures during their index admission. Subjects were reassessed prospectively over 10 contiguous two-year waves of follow-up. Thirty-nine percent of borderline patients and 73% of personality-disordered comparison subjects met our operationalized definition of excellent recovery (concurrent remission of borderline or another primary personality disorder, good social and full-time vocational functioning, and absence of an axis I disorder associated decreased social and/or vocational functioning). Five variables formed our multivariate predictive model of excellent recovery for borderline patients: higher IQ, good childhood work history, good adult vocational record, lower trait neuroticism, and higher trait agreeableness. The results of this study suggest that complete recovery is difficult for borderline patients to achieve even over long periods of time. They also suggest that competence displayed in both childhood and adulthood is the best predictor of this important outcome.

1. Introduction

Four large-scale follow-back studies of the long-term course of borderline personality disorder were conducted in the 1980s (McGlashan, 1986; Paris et al., 1987; Plakun et al., 1985; Stone, 1990). They each found that borderline patients, who were diagnosed by retrospective chart review, were, on average, functioning reasonably well a mean of 14–16 years after their index admission. More specifically, subjects in these studies were rated as having either a mean Health Sickness Rating Scale score (Luborsky, 1962) or a mean Global Assessment Score (Endicott et al., 1976) of 63–67 (i.e., a score in the good range).

NIMH funded two prospective studies of the long-term course of borderline personality disorder in the 1990s that addressed some of the methodological limitations inherent in the follow-back design of these older studies. The McLean Study of Adult Development, which began in 1992, followed these earlier studies from the 1980s by using a Global Assessment of Functioning (GAF) score of 61 or higher to denote a good recovery. However, such a good recovery was operationalized to require a concurrent remission of borderline personality disorder and good social functioning as well as good full-time vocational functioning. It was found that 50% of borderline patients achieved this outcome after 10 years of prospective follow-up (Zanarini et al., 2010) and 60% achieved this outcome after 16 years of prospective follow-up (Zanarini et al., 2012). It was also found that 84% of axis II comparison subjects achieved this outcome after 10 years of prospective follow-up and 85% achieved this outcome after 16 years of prospective follow-up (Zanarini et al., 2010, 2012).

The Collaborative Longitudinal Personality Disorders Study began four years after the McLean Study of Adult Development (Gunderson et al., 2011). A GAF score of 71 or higher was chosen to represent a good global outcome. However, this score was not operationalized but rather relied on the scale's brief narrative definition. After 10 years of prospective follow-up, it was found that 21% of borderline patients met this outcome. It was also found that 48% of subjects in a comparison group with an avoidant and/or obsessive-compulsive personality

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disorder were rated as having a GAF score in this range.

In terms of predictors, each of the follow-back studies (Paris et al., 1987, 1988; Stone, 1990; McGlashan, 1985; Plakun, 1991) tried to determine the best predictors of general outcome a mean of 14–16 years after index admission. Five factors were found to be associated with a good long-term outcome: high IQ (Stone, 1990; McGlashan, 1985), being unusually talented or physically attractive (if female) (Stone, 1990), the absence of parental divorce and narcissistic entitlement (Plakun, 1991), and the presence of physically self-destructive acts during the index admission (McGlashan, 1985). Nine factors were found to be associated with a poor long-term outcome: affective instability (McGlashan, 1985), chronic dysphoria (Paris et al., 1987), younger age at first treatment (Paris et al., 1987), length of prior hospitalization (McGlashan, 1985), antisocial behavior (Stone, 1990), substance abuse (Stone, 1990), parental brutality (Stone, 1990), a family history of psychiatric illness (Paris et al., 1987), and a problematic relationship with one's mother (but not one's father) (Paris et al., 1988).

At 16-year follow-up, the McLean Study of Adult Development studied the best predictors of a good recovery (Zanarini et al., 2014). Variables related to lack of chronicity, temperament, and adult competence were the best multivariate predictors of this outcome.

The current study examined rates of good and excellent recovery achieved by both borderline patients and axis II comparison subjects over 20 years of prospective follow-up—two different definitions of recovery that may have different clinical implications. It also examined the relationship between a wide array of clinically relevant predictor variables assessed at baseline and time-to-excellent recovery in borderline patients, which was assessed at 10 contiguous two-year time periods. In addition, the sample of borderline patients being studied is large, carefully diagnosed, and socioeconomically diverse.

2. Method

As noted above, the current study is part of the McLean Study of Adult Development, a multifaceted longitudinal study of the course of borderline personality disorder. The methodology of this study, which was reviewed and approved by the McLean Hospital Institutional Review Board, has been described in detail elsewhere (Zanarini and Frankenburg, 2001). Briefly, all subjects were initially inpatients at McLean Hospital in Belmont, Massachusetts. Each patient was screened to determine that he or she was between the ages of 18–35; had a known or estimated IQ of 71 or higher; and had no history or current symptomatology of schizophrenia, schizoaffective disorder, bipolar I disorder, or an organic condition (e.g., lupus, MS) that could cause serious psychiatric symptoms.

After the study procedures were explained, written informed consent was obtained. Each patient then met with a masters-level interviewer blind to the patient's clinical diagnoses for a thorough psychosocial and treatment history as well as diagnostic assessment. Four semistructured interviews were administered. These interviews were: 1) the Background Information Schedule (Zanarini, 1992), 2) the Structured Clinical Interview for DSM-III-R Axis I Disorders (Spitzer et al., 1992), 3) the Revised Diagnostic Interview for Borderlines (Zanarini et al., 1989a), and 4) the Diagnostic Interview for DSM-III-R Personality Disorders (Zanarini et al., 1987). The inter-rater and test-retest reliability of the Background Information Schedule (Zanarini et al., 2004a, 2005) and of the three diagnostic measures (Zanarini et al., 2001, 2002) have all been found to be good-excellent.

Childhood history of pathological and protective experiences was assessed during each subject's index admission using a semistructured interview by a second rater blind to all previously collected information–the Revised Childhood Experiences Questionnaire (Zanarini et al., 1989b). The inter-rater reliability of this interview has also been found to be good-excellent (Zanarini et al., 1989b). In addition, self-report measures with well-established psychometric properties assessing temperament and intelligence were administered: the NEO Five Factor Inventory (Costa and McCrae, 1992) and the Shipley Institute of Living Scale, which assesses IQ using sections focused on vocabulary and abstract reasoning skills (Zachary, 1994).

At each of 10 follow-up waves, separated by 24 months, psychosocial functioning and treatment utilization as well as axis I and II psychopathology were reassessed via interview methods similar to the baseline procedures by staff members blind to previously collected information. After informed consent was obtained, our diagnostic battery was readministered as well as the Revised Borderline Follow-up Interview—the follow-up analog to the Background Information Schedule administered at baseline (Zanarini et al., 1994). Good-excellent follow-up (within a generation of raters) and longitudinal (between generations of raters) inter-rater reliability was maintained throughout the course of the study for variables pertaining to psychosocial functioning and treatment use (Zanarini et al., 2004a, 2005). Good-excellent follow-up and longitudinal inter-rater reliability was also maintained for both axis I and II disorders (Zanarini et al., 2001, 2002).

2.1. Definition of good recovery from borderline personality disorder or another axis II disorder

As noted above, we selected a GAF score of 61 or higher as our measure of good recovery because it was used in the four follow-back studies conducted in the 1980s. We also selected it because it offers a reasonable description of a good overall outcome (i.e., “some mild symptoms or some difficulty in social, occupational, or school functioning, but generally functioning pretty well, has some meaningful interpersonal relationships”). We operationalized this score to enhance its reliability and meaning. More specifically, to be given this score or higher, a subject had to be in remission from his or her primary axis II diagnosis for a period of least two years, have at least one emotionally sustaining relationship with a close friend or life partner/spouse, and be able to work or go to school consistently, competently, and on a full-time basis (which included being a houseperson).

2.2. Definition of excellent recovery from borderline personality disorder or another axis II disorder

We selected a GAF score of 71 or higher as our measure of excellent recovery because it was used as the primary overall outcome in the Collaborative Longitudinal Personality Disorders Study. We also selected it because it offers a reasonable description of an excellent overall outcome (i.e., “If symptoms are present, they are transient and expectable reactions to psychosocial stressors; no more than slight impairment in social, occupational, or school functioning”). We operationalized this score to enhance its reliability and meaning. More specifically, to be given this score or higher, a subject had to meet the three concurrent criteria for a good recovery described above. In addition, absence of a co-occurring disorder that was serious enough that it was associated with a decrement social or vocational functioning was required.

2.3. Statistical analyses

The Kaplan-Meier product-limit estimator (of the survival function) was used to assess time-to-good recovery and time-to-excellent recovery from borderline personality disorder (or another primary personality disorder for axis II comparison subjects). We defined time-to-attainment of these outcomes as the follow-up period at which these outcomes were first achieved. Thus, possible values for these outcomes were 2, 4, 6, 8, 10, 12, 14, 16, 18, and 20 years, with time = 2 years for persons first achieving one of these types of recovery from borderline personality disorder (or another primary personality disorder for comparison subjects) during the first follow-up period, time = 4 years for persons first achieving one of these types of recovery from borderline