ABSTRACT
A number of studies in the literature have explored employment outcomes in patients with borderline personality disorder. However, after imposing our exclusion criteria, we located only 11 viable studies, published between the years 1983 and 2010. Individual studies examined employment outcomes in 8 to 249 individuals, but eight studies consisted of 33 participants or less. At baseline, participants were recruited from various locales, including hospital settings (7 studies), outpatient settings (2 studies), day treatment (1 study), and a college campus (1 study). The follow-up periods in these studies ranged from 1 to 27 years. Three studies compared participants with borderline personality disorder to a cohort of individuals with other types of psychopathology whereas only two studies used a normative comparison group. Given a host of potential limitations, findings cautiously suggest that nearly half of individuals with borderline personality disorder remain unemployed at follow-up, and of these, only a portion are self-supporting; 20 to 45 percent subsist on disability. However, several studies found modest employment gains among some individuals with borderline personality disorder, and one study developed a work/school acclimatization program, which meaningfully improved employment outcomes. This general area warrants further research to clarify the explicit employment outcomes of patients with borderline personality disorder.

KEY WORDS
Borderline personality, borderline personality disorder, disability, employment, work

INTRODUCTION
A number of investigators report that the symptoms of borderline personality disorder (BPD) tend to remit or lessen over time. For example, Stone1 reviewed several major follow-up studies of BPD (mostly undertaken in the 1980s) and concluded that patients with this disorder exhibited a fair-to-guarded prognosis. Paris2 reported that personality disorders, in general, cause significant psychosocial dysfunction over the course of adulthood, but in contrast to this theme, BPD tended to abate with age. Karaklic and Bungener3 reviewed four retrospective studies exploring 15-year outcomes in BPD, and concluded that global functioning in such patients improved substantially over time (i.e., outcome in functioning settled within a range of mild impairment according to mean scores on the Global Assessment of Functioning scale). Zanarini et al4...
reported that nearly 75 percent of patients with BPD experienced symptom remission during a six-year follow-up period. In addition, Zanarini et al. found that nearly 75 percent of patients with BPD experienced symptom remission during a six-year follow-up period. However, despite the general conclusion that BPD symptoms appear to remit over time, how do individuals with BPD fare with employment in relationship to their non-BPD peers? In this edition of The Interface, we examine the various studies that have explored specific work variables over the course of BPD—an issue of relevance for both mental health and primary care clinicians.

PARAMETERS OF THE LITERATURE REVIEW

In our review, we used the search terms “borderline personality, long-term” and “outcome” to screen the literature in both the PubMed and PsycINFO databases. We then examined references from obtained articles to procure additional articles. We excluded a number of studies for various reasons. We excluded studies of children and adolescents because of the risk of an unreliable diagnosis of BPD, follow-up periods of less than one year (too short of a duration for the investigation of employment outcomes), investigations prior to 1980 (i.e., BPD diagnosis before the publication of standardized diagnostic criteria in the Diagnostic and Statistical Manual of Mental Disorders), and those studies with fewer than five participants. We also excluded follow-up studies that were specifically related to pharmaceutical outcomes (e.g., clozapine, topiramate). Additionally, we excluded studies of specific populations of patients with BPD, such as samples with only comorbid schizophrenia, substance use disorders, or eating disorders. Finally, we excluded outcome data that reported only correlations among variables (no absolute measurements) or did not specifically address employment status (e.g., a number of studies provided outcome data through scores on the Global Assessment of Functioning; while this measure assesses social, occupational, and school functioning, as well as general symptom status, ratings of employment assessment are obscured within a summary score of all areas). For author groups reporting longitudinal outcomes of the same cohort (e.g., Zanarini and Stevenson groups), we used the most recent follow-up data.

FINDINGS OF EMPLOYMENT OUTCOME IN BPD

After exclusions, we located 11 viable studies on employment outcomes in patients with BPD. These are shown in Table 1 in the order of their year of publication. Note that the earliest published study was in 1983 whereas the most recent published study was in 2010. Samples sizes vary from 8 to 249 individuals, but 8 of 11 studies consisted of samples of 33 or less participants (i.e., generally small sample sizes). In terms of baseline participant entry, seven studies recruited patients who were hospitalized, two recruited patients from outpatient settings, and one recruited patients from day treatment; one study utilized a nonclinical sample (i.e., college students). Follow-up periods vary from 1 to 27 years. In three studies, patients with BPD were compared to patients with other types of psychopathology, which does not allow for comparison with norms. Only two studies compared participants with BPD to a normative sample. Finally, no two studies had identical outcome variables for employment.

Despite this variability in methodologies, we can glean several general insights from these studies regarding overall occupational functioning in BPD. From the two studies that assessed employment status as a dichotomous variable (i.e., employed or unemployed), we can cautiously conclude that approximately 45 percent of patients with BPD remain unemployed at follow-up. In addition, among those who are employed, only a portion appear to be genuinely self-supporting. Likewise, 20 to 45 percent of patients with BPD are on disability at the time of follow-up. As a caveat, these meager data also suggest that patients with BPD, while seemingly less employed than the general population, can potentially make some employment gains. This may be especially applicable to individuals who participate in programs for occupational preparation as a part of treatment.

As we noted previously, specialized programming may improve employment functioning in patients with BPD. A published example is the strategy by Comtois et al. These investigators found that despite clinical improvements in their patients, many remained in outpatient treatment without obtaining employment or attending school. In response to this observation, a new one-year follow-up treatment program was initiated—DBT-ACES (DBT-Accepting the Challenges of Exiting the System). Described as exposure-based with contingency management procedures, patients were informed that if they did not meet the
<table>
<thead>
<tr>
<th>First Author/Year of Publication/Country</th>
<th>Sample Size/Description</th>
<th>Follow-Up Period (Years)</th>
<th>Comparison Group</th>
<th>Work Variable</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pope/1983 United States</td>
<td>33 BPD patients initially hospitalized</td>
<td>4–7</td>
<td>Patients with schizophrenia, schizoaffective, and bipolar disorder</td>
<td>Best occupational or academic functioning</td>
<td>BPD patients higher functioning than schizophrenic patients, but lower functioning than schizoaffective and bipolar patients</td>
</tr>
<tr>
<td>McGlashan/1986 United States</td>
<td>81 BPD patients initially hospitalized</td>
<td>15</td>
<td>Patients with schizophrenia and unipolar affective disorder</td>
<td>Work time (4=all the time), level (1=most complex), and quality past year (4=very competent); further education</td>
<td>Means: BPD, schizophrenic, unipolars for work time: 2.7, 1.2, 2.5; work level: 2.9, 4.2, 3.3; work quality: 3.1, 2.0, 2.8; further education: 51%, 30%, 50%</td>
</tr>
<tr>
<td>Modestin/1989 Switzerland</td>
<td>18 BPD patients initially hospitalized</td>
<td>4.6</td>
<td>Patients with other personality disorders</td>
<td>Work &lt;20 hours per week and disability status</td>
<td>No differences between groups; 50% of BPD patients working &lt;20 hours/week and 22% on disability</td>
</tr>
<tr>
<td>Mehlum/1991 Norway</td>
<td>26 BPD patients initially in day treatment</td>
<td>2–5</td>
<td>None</td>
<td>Employment and self-supporting status</td>
<td>56% employed and 38.5% self-supporting</td>
</tr>
<tr>
<td>Najavits/1995 United States</td>
<td>8 BPD patients initially hospitalized</td>
<td>3</td>
<td>None</td>
<td>Social Adjustment Scale</td>
<td>While there was no baseline data, work functioning did not significantly change from Year 1 (2.89) to Year 3 (2.33), but samples were not identical.</td>
</tr>
<tr>
<td>Trull/1997 United States</td>
<td>35 college students with BPD features</td>
<td>2</td>
<td>30 college students without BPD features</td>
<td>Cumulative grade-point average; semesters on probation; % ineligible to enroll</td>
<td>BPD vs. non-BPD Grade-point: 2.34 vs. 2.91 Semesters on probation: 1.17 vs. 0.63 % ineligible to enroll: 20% vs. 0%</td>
</tr>
<tr>
<td>Paris/2001 Canada</td>
<td>64 patients, average age 50, initially hospitalized</td>
<td>27</td>
<td>Community norms</td>
<td>Social Adjustment Scale</td>
<td>BPD patients’ mean work score, 1.5; community norm work score, 2.1; 20% of BPD patients on long-term welfare</td>
</tr>
<tr>
<td>Stevenson/2005 Australia</td>
<td>30 BPD patients initially seen as outpatients</td>
<td>5</td>
<td>None</td>
<td>Time off work</td>
<td>From baseline, patients experienced significant reduction in time off from work at follow-up</td>
</tr>
<tr>
<td>Yoshida/2006 Japan</td>
<td>19 BPD patients initially hospitalized</td>
<td>17+</td>
<td>None</td>
<td>Employment status</td>
<td>54.2% employed</td>
</tr>
<tr>
<td>Zanarini/2009 United States</td>
<td>249 BPD patients initially hospitalized</td>
<td>10</td>
<td>None</td>
<td>Social Security Disability</td>
<td>40.7% on Social Security disability at baseline and 44.2% at follow-up</td>
</tr>
<tr>
<td>Comtois/2010 United States</td>
<td>30 BPD patients initially seen as outpatients</td>
<td>1</td>
<td>None</td>
<td>Employed or in school; employed at least 20 hours per week</td>
<td>Employed/school before treatment: 10% Employed/school after treatment: 50% 20 hours/week employed before: 3% 20 hours/week employed after: 37%</td>
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program’s employment/school expectations (e.g., 10 hours of employment per week at 4 months and 20 hours of employment per week at 8 months in the DBT-ACES program), they would be “given a vacation from therapy.” As noted from the results presented in Table 1, this program dramatically improved employment/school outcomes.

The preceding conclusions are cautiously offered, as these data have a number of potential limitations. First, the majority of sample sizes are generally small, which challenges the ability to generalize findings to other patients with BPD. On a side note, we do not know if the patients who adhered to follow-up treatment were generally healthier with less typical employment outcomes than those patients who did not adhere. Second, when a comparison group was present, the majority of studies utilized other psychiatrically ill patients. This type of comparison does not allow for determining how patients with BPD fare compared to norms. Third, the majority of these samples consist of patients who were initially hospitalized in a psychiatric facility, suggesting a higher level of personality-disordered illness at the outset. Are these patients genuinely representative of the larger population of individuals with BPD? Fourth, a number of studies explored only one or two employment variables. Clearly, the assessment of employment status is likely to entail a number of potential variables (e.g., percent of adult life employed, either full or part-time; number of different jobs held during the lifetime; number of firings; complexity of the job; advancement profile while at a single company; relationships with other employees). Finally, only the study by Trull et al. examined a nontreatment-seeking sample. It is possible that treatment-seeking individuals may exhibit different characteristics than nontreatment-seeking individuals.

CONCLUSION

While there are a number of general outcome studies in the area of BPD, few adequately address employment outcomes in these challenging patients. Through a literature search of the PubMed and PsycINFO databases, we were able to locate 11 viable studies after implementing practical exclusion criteria. As expected, these studies vary in sample sizes, initial recruitment sites, comparison groups (when applicable), and work-outcome variables. As a result, generalizations about patient outcomes are difficult to ascertain. In very general terms, current data suggest that approximately half of patients with BPD are unemployed at follow-up, and of those who are employed, only a portion are self-sufficient. Likewise, a substantial percentage of patients subsist on disability. On a positive note, however, some studies indicate modest improvements in occupational outcome over time, and one study found dramatic improvements with the implementation of specific programming that addressed re-entry into the work force or school. These latter types of programs warrant further investigation, as remission from symptoms, if authentic, should correlate with positive employment outcomes.

REFERENCES

11. Trull TJ, Useda JD, Conforti K, Doan B-T. Borderline personality disorder features in nonclinical


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