ATTRIBUTIONAL “TUNNEL VISION” IN PATIENTS WITH BORDERLINE PERSONALITY DISORDER

Lisa Schilling, MS, Steffen Moritz, PhD, Brooke Schneider, PhD, Julia Bierbrodt, MS, and Matthias Nagel, MD

We aimed to examine the profile of interpersonal attributions in BPD. We hypothesized that patients show more mono-causal and internal attributions than healthy controls. A revised version of the Internal, Personal, Situational and Attributions Questionnaire was assessed in 30 BPD patients and 30 healthy controls. BPD patients and controls differed significantly in their attributional pattern. Patients displayed more mono-causal inferences, that is, they had difficulties considering alternative explanatory factors. For negative events, patients made more internal attributions compared to healthy controls. We concluded that mono-causal “trapped” thinking might contribute to (interpersonal) problems in BPD patients by fostering impulsive consequential behaviors, for example, harming one’s self or others. A self-blaming tendency likely promotes depressive symptoms and low self-esteem.

Attributional style has been defined as the way in which one explains the cause of (social) events in terms of oneself, others, or circumstances (Kaney & Bentall, 1989). Depending on what is identified as the main cause of a positive or negative situation (e.g., always blaming others or always blaming oneself), consequences for one’s own affective states and behavioral responses arise. Attributional patterns have been thoroughly examined for both depression and schizophrenia (e.g., Candido & Romney, 1990; Kinderman & Bentall, 1997; Moritz, Woodward, Burlon, Braus, & Andresen, 2007) and have been linked with symptoms. Specifically, patients with depression show a self-blaming tendency, that is, they make particularly internal, global, and stable attributions for negative events (e.g., Fresco, Alloy, & Reilly-Harrington, 2006). In contrast, two recent studies found that patients with acute paranoid schizophrenia displayed a tendency to externalize blame in response to both
positive and negative events (Lincoln, Mehl, Exner, Lindenmeyer, & Rief, 2010; Randjbar, Vekenstedt, Vitzthum, Hottenrott, & Moritz, 2010). This patient group predominantly identified only a single causal factor for an event. Restricted information processing and the jumping to conclusion bias were considered as explanations for mono-causal reasoning (Lincoln et al., 2010; Randjbar et al., 2010).

In borderline personality disorder (BPD), a number of cognitive biases have been found to interfere with social interaction (Baer, Peters, Eisenlohr-Moul, Geiger, & Sauer, 2012; Lazarus, Cheavens, Festa, & Rosenthal, 2014). Several studies have reported that patients with BPD make negativistic and schema-related evaluations of others (for a summary, see Sieswerda, Barnow, Verheul, & Arntz, 2013). Moreover, patients with BPD show dichotomous thinking in that they tend to judge other people in an extreme (positive and negative) manner (Arntz & ten Haaf, 2012; Arntz & Veen, 2001; Napolitano & McKay, 2007; Veen & Arntz, 2000). Interestingly, BPD patients do not provide just “simple” or “automatic” explanations for the behavior of others, but their explanations tend to be as complex as those of healthy controls (Arntz & ten Haaf, 2012). Westen (1991) described that inaccuracy in explaining situations is a characteristic attributional pattern in BPD and is an outcome of social learning history. For example, if a patient perceived his or her parents’ behavior as capricious and hard to predict, the development of the ability to arrive at differentiated and valid attributions would be hampered (Westen, Ludolph, Block, Wixom, & Wiss, 1990). Moreover, “egocentrism”—that is, an “embeddedness in one’s own point of view”—was identified as another important feature. Patients with BPD seem to regard themselves as the predominant cause of events (Westen, 1991). In addition, relatively harmless events are catastrophized because only a univalent (narrow) representation can be activated (e.g., “He is going to leave me, because I am worthless”). Interestingly, in a study by Moritz and colleagues (2011), patients made more mono-causal inferences compared to healthy controls, supporting the assumption of a “tunnel vision.” Unlike people with depression, patients with BPD might make such global attributions relating to themselves and others also for positive events. In accordance, Moritz and colleagues (2011) showed that BPD patients tended to allocate a larger proportion (in percent) of the cause of both positive and negative events to themselves compared to healthy controls. The excessive internalization of success and failure may account for the egocentrism mentioned above (Moritz et al., 2011; Westen, 1991).

On the basis of the limited empirical studies on causal reasoning in BPD, the aims of this study were: (1) to compare the pattern of causal reasoning in a group of BPD patients and healthy persons; given the recent findings, we hypothesized that patients would show a more egocentric attributional pattern than controls, that is, they would endorse a greater proportion of the attribution of positive and negative events to themselves; (2) to replicate the finding of mono-causal attributions; (3) to explore the relationship of symptomatology with attributions; and (4) to analyze whether comorbid depressive symptoms influence attributional processes in BPD.
METHODS

PARTICIPANTS

The sample was comprised of 30 patients with BPD and 30 healthy controls. Patients were recruited through the Department of Psychiatry and Psychotherapy, University Medical Center Hamburg-Eppendorf, Germany. Healthy subjects were drawn from an existing subject pool or word of mouth. Written informed consent was obtained from all participants. BPD diagnoses were verified using the Structured Clinical Interview for DSM-IV (SCID) part II for personality disorders (First, Gibbon, Spitzer, Williams, & Benjamin, 1997). The global severity of BPD symptomatology was assessed with the short version of the Borderline Symptom List (BSL-23; Bohus et al., 2009). This instrument has proven to be valid in discriminating borderline patients from other psychiatric groups (mean $d = 1.13$). Internal consistency (Cronbach’s alpha .93–.97) and test-retest reliability ($r = .82$, $p < .0001$) are high (Bohus et al., 2009). The German version of the Beck Depression Inventory (BDI; Beck & Steer, 1993) was administered to assess the severity of depressive symptoms (in the last seven days). The instrument shows good internal consistency, test-retest reliability, and construct validity (Beck, Steer, & Garbin, 1988). Premorbid intelligence was measured using the multiple-choice vocabulary test (MWT-B; Lehrl, 1995). The MWT-B correlates fairly well with global IQ, median of $r = .72$ (Lehrl, Triebig, & Fischer, 1995).

Exclusion criteria in the BPD group were cognitive impairment, intelligence quotient < 70, current or lifetime schizophrenia, alcohol or drug dependence (last 6 months), bipolar disorder, schizoaffective disorder, and major depression with psychotic symptoms as assessed by the Mini International Neuropsychiatric Interview (MINI; Sheehan et al., 1998). The absence of mental disorders in healthy participants was verified with the MINI. Patients were only included if there was no change in psychopharmacological medication for at least two weeks.

INTERNAL, PERSONAL AND SITUATIONAL ATTRIBUTIONS QUESTIONNAIRE – REVISED

Based on the Attributional Style Questionnaire (ASQ; Peterson et al., 1982), Kinderman and Bentall (1996) developed the Internal, Personal and Situational Attributions Questionnaire (IPSAQ), a causal reasoning assessment instrument that focuses on the importance of interpersonal relations. The ASQ covers only two causal loci (internal versus external). In the IPSAQ, the subject should endorse if the explanation is predominantly associated with oneself (internal), others (external-personal), or circumstances (external-situational). Kinderman and Bentall (1996) reported Cronbach’s alphas for the subscales of the original 32-item version of the IPSAQ between .61 and .76. For the present study, a revised shortened (16-item) German version of the IPSAQ was used. The instrument was translated into German and then back-translated by a native speaker. This version was already used with patients with schizophrenia and BPD (Moritz et al., 2010, 2011). Evidence for discriminant validity of the
revised IPSAQ-R was assessed in the work of Moritz and colleagues (2010). Patients are presented with eight positive (e.g., “A friend thinks you are interesting”) and eight negative (e.g., “A friend ignored you”) verbal events. First, subjects are asked to write down the core reason that led to this event (e.g., “He does not like me”). Subjects were additionally asked to specify the relative contribution of personal and situational factors in percent (e.g., myself: 30%, others: 58%, circumstances: 12%). Ratings are assumed as mono-causal if one of the three item options received at least 80%.

Statistical analyses. Statistical analyses were conducted using SPSS Version 21.0. An alpha level of .05 (two-tailed) was used for all statistical tests. Between-group comparisons were performed by means of the $t$-test and $\chi^2$-test. Analyses of covariance were performed to control for possible confounding variables. Correlational analyses were conducted to determine the relationship of different attributional patterns with BPD symptom severity.

RESULTS

PARTICIPANTS

Group samples did not differ in age, education, or intelligence (see Table 1); however, we included more female patients than female healthy controls, $\chi^2(59) = 4.59, p = .032$. The MINI revealed that nineteen BPD patients currently had depression. Twenty-three of the 30 patients were treated with psychotropic medication.

ATTRIBUTIONAL STYLE

We conducted a three-way mixed ANOVA with the factors “Event-Type” (positive, negative) and “Attribution” (myself, other persons, circumstances) as within-subject factors and “Group” (healthy, BPD patients) as the between-subject factor.

The main effect “Attribution” reached significance, $F(2, 58) = 84.86, p < .001, \eta^2_{\text{partial}} = .59$, indicating that attributions on internal, external-personal, and situational factors were different. The three-way interaction “Event-Type” × “Attribution” × “Group,” $F(2, 58) = 8.36, p < .001, \eta^2_{\text{partial}} = .13$, was significant, indicating that groups differed in their attributional patterns (see Figure 1). Compared to healthy controls, patients with BPD attributed the cause of negative events to themselves significantly more, $t(58) = 2.82, p = .007$, and attributed the cause of negative events to situational factors significantly less, $t(58) = 2.17, p = .034$. At a trend level, patients with BPD showed increased attributions to circumstances for positive events, $t(58) = 1.85, p = .070$. Healthy controls displayed a trend toward increased internal attributions for positive events compared to patients, $t(58) = 1.95, p = .056$.

Mono-causal attribution of positive events to others was negatively correlated with the severity of borderline symptomatology (BSL-23), $r = -.51, p = .009$, and with depressive symptoms, $r = -.49, p = .012$. For negative events, mono-causal inferences to others correlated with severity of
borderline symptomatology, $r = .48$, $p = .008$. No other correlation reached significance.

When controlling for the possible effect of depression, the interaction “Event-Type” × “Attribution” × “Group” was no longer significant, $F(2, 58) = 1.23$, $p = .298$, indicating that depressive symptomatology influenced attributional pattern for positive and negative situations. The interaction between “Depressive Symptomatology” × “Attribution” showed a trend, $F(2, 58) = 2.51$, $p = .088$. Re-analyses of the data controlling for the possible confounder “Gender” yielded the following findings. The interaction “Event Type” ×

| TABLE 1. Sociodemographic and Psychopathological Characteristics of the Samples |
|----------------------------------|------------------|------------------|
| BPD                             | Controls         | Statistics       |
| Age (years)                     | 31.43 (7.95)     | $t(58) = .623$, $p = .536$, n.s. |
| Gender (male/female)            | 7/23             |                  |
| Years of education              | 12.01 (1.50)     | $\chi^2(59) = 4.59$, $p = .032$ |
| BDI                             | 29.1 (9.29)      | $t(38) = -10.698$, $p < .001$ |
| BSL-23                          | 2.05 (.77)       |                  |

Note. BDI = Beck Depression Inventory, BPD = Borderline Personality Disorder, BSL-23 = Borderline Symptom List 23.
“Attribution” × “Gender,” $F(2, 58) = 1.85, p = .175$, was not significant. However, the interaction “Event type” × “Attribution” × “Group” still reached significance, $F(2, 58) = 10.06, p < .001$, indicating that groups differed in their attributorial patterns for positive and negative events and that gender did not significantly influence this result.

**MONO-CAUSAL REASONING**

Overall, patients made significantly more mono-causal attributions for positive ($t(58) = 2.48, p = .016$) and for negative events, $t(58) = 2.55, p = .013$. In particular, patients displayed more mono-causal inferences for negative events relating to themselves, $t(58) = 2.79, p = .007$ and more mono-causal attributions for positive events relating to others, $t(58) = 2.80, p = .007$.

**DISCUSSION**

In BPD, interpersonal conflicts and turbulent relationships have been linked with difficulties finding balanced explanations for the reasons underlying other people’s behavior and dichotomous thinking (Arntz & ten Haaf, 2012). Therefore, we aimed to explore attributional style in BPD patients in comparison to healthy controls. Our hypothesis of a more egocentric attributional style (increased sense of self-causation) as reported by Westen (1991) and Moritz and colleagues (2011) could not be replicated. However, in accordance with Moritz and colleagues (2011), patients made significantly more mono-causal attributions for both positive and negative events, which might support the assumption of dichotomous thinking with mixed (positive and negative) valences in BPD (Arntz & ten Haaf, 2012). Consequently, tunnel vision (i.e., failure to consider alternative interpretations) may foster impulsive acts (interpersonal conflicts due to feeling offended) as patients might hastily commit to a single explanatory cause preventing retrieval of alternative explanations. Enhanced mono-causal attributions have also been found in schizophrenia patients (Randjbar et al., 2010). However, in contrast to patients who are acutely deluded, BPD patients displayed no enhanced externalizing tendency. Like patients who are depressed, patients with BPD showed a self-blaming tendency for negative events but hardly considered situational factors. That is, they viewed themselves as responsible for negative events. Internalization of failure might promote the experience of anger toward oneself and the feeling of loneliness (or a perceived lack of support), eventually increasing depression symptoms or self-injurious behavior or low self-esteem. We found no evidence for a negativistic attitude or a tendency to blame others among those with BPD.

There are limitations to our study. First, the reliability and validity of the IPSAQ-R should be examined for future studies. Some of the items of the IPSAQ might not have been clearly positive or negative for BPD patients (e.g., receiving a compliment might also be experienced as aversive). Moreover, attributorial processes for borderline-relevant or personally meaningful events (e.g., confrontation with interpersonal threats or rejection) versus neutral events might differ (Arntz, Weertman, & Salet, 2011). Thus, we plan
to develop a causal reasoning instrument that comprises more BPD-relevant items and asks patients to provide the personal meaning of events.

Regarding specificity of results, future studies should include a patient control group, for example, BPD patients with and without current depression. It should also be tested with other measurements, such as a handheld PC, whether attributions are stable or vary depending on emotional state. Further, in addition to evidence-based standard treatment, such as dialectical behavioral therapy (Linehan, 1993), patients with BPD might benefit from complementary add-on (meta-)cognitive training which focuses on some of the newly uncovered BPD-specific dysfunctional thinking styles and thus extends existing treatment programs with useful (cognitive) elements.

To summarize, the main results of this study were that BPD patients showed mono-causal reasoning and a self-blaming tendency.

REFERENCES


