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Treatment of borderline personality disorder and co-occurring anxiety disorders

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Abstract

Anxiety disorders are highly prevalent among individuals with borderline personality disorder, with comorbidity rates of up to 90%. Anxiety disorders have been found to reduce the likelihood of achieving remission from borderline personality disorder over time and to increase the risk of suicide and self-injury in this population. Evidence-based treatments for borderline personality disorder have not sufficiently focused on targeting anxiety disorders, and their effects on these disorders are either limited or unknown. Conversely, evidence-based treatments for anxiety disorders typically exclude suicidal, self-injuring, and seriously comorbid patients, thereby limiting their generalizability to individuals with borderline personality disorder. To address these limitations, recent research has begun to emerge focused on developing and evaluating treatments for individuals with co-occurring borderline personality disorder and anxiety disorders, specifically posttraumatic stress disorder (PTSD), with promising initial results. However, there is a need for additional research in this area, particularly studies evaluating the treatment of anxiety disorders among high-risk and complex borderline personality disorder patients.

Introduction

Borderline personality disorder is a severe and complex psychological disorder characterized by long-term patterns of intense emotions, impulsive and self-destructive behaviors, and chaotic relationships. Borderline personality disorder is also associated with high rates of comorbidity. Individuals with borderline personality disorder meet criteria for an average of 3.0 to 3.4 current Axis I disorders (e.g. mood, anxiety, eating, psychotic, and substance use disorders) and 4.2 to 4.8 lifetime Axis I disorders [1,2]. Although emphasis is often placed on the comorbidity between borderline personality disorder and mood disorders, anxiety disorders are equally and highly prevalent, with approximately 75-90% of individuals with borderline personality disorder meeting criteria for at least one lifetime anxiety disorder [3-5]. Despite the negative prognostic significance of anxiety disorders on borderline personality disorder [6], there is a paucity of research examining effective treatments for these frequently co-occurring disorders, particularly among severe borderline personality disorder patients. The present review will describe the existing research in this area and make suggestions for future directions.

The prevalence, course, and impact of anxiety disorders in borderline personality disorder

Although the high rate of comorbidity between borderline personality disorder and PTSD has received the most theoretical and empirical attention, each of the anxiety disorders has been found to be prevalent among individuals with borderline personality disorder. Among borderline personality disorder inpatients, 88% meet criteria for a lifetime anxiety disorder, including PTSD (56%), panic disorder (48%), social anxiety disorder (46%), specific phobia (32%), obsessive compulsive disorder (16%), generalized anxiety disorder (14%), and agoraphobia (12%) [4]. Similarly, high rates of current and lifetime anxiety disorders have been found among borderline personality disorder outpatients [1], treatment-seeking individuals with borderline personality disorder [7], and

community samples of borderline personality disorder individuals [5]. Anxiety disorders are more prevalent among borderline personality disorder patients than other clinical populations [1,4], and among women than men with borderline personality disorder [5,8]. Anxiety disorders also have a complex and variable course in borderline personality disorder, with high rates of remission (77-100%), recurrence (30-65%), and new onsets (15-45%) over 10 years of prospective follow-up [9,10]. Perhaps most critically, anxiety disorders are associated with a heightened risk of suicidal and non-suicidal self-injury among individuals with borderline personality disorder [11-18] and have been found to decrease the likelihood of achieving remission from borderline personality disorder over time [6].

The efficacy of borderline personality disorder treatments for co-occurring anxiety disorders

To date, there have been 14 randomized controlled trials (RCTs) that have examined the effects of borderline personality disorder treatments on anxiety, with all but one of these focused on general anxiety severity as opposed to specific anxiety disorder diagnoses (Table 1). The one study that has evaluated the effects of borderline personality disorder treatment on anxiety disorder diagnoses found that, among suicidal borderline personality disorder women in Dialectical Behavior Therapy, rates of remission from anxiety disorders ranged from 35-47% [2]. These remission rates did not differ from those found in the Community Treatment by Experts control condition (24-54%), and were lower than those found for mood, substance, and eating disorders in Dialectical Behavior Therapy (64-88%) [2]. The remaining 13 studies have examined general anxiety severity and have found mixed results. At post-treatment and/or follow-up, nine studies found significant decreases in anxiety [19-28], one study did not find a significant decrease [29], and three studies did not report pre-post changes [30-33]. Additionally, six studies found significant treatment differences in anxiety outcomes [19-22,26,27,33], whereas seven studies found no differences between treatments [23-25,28-32]. Although these studies generally indicate that treatment for borderline personality disorder is associated with a significant reduction in anxiety severity, it is unknown if or how these improvements are related to anxiety disorder diagnostic status. Of note, several borderline personality disorder treatments that have been examined in RCTs have not yet been evaluated in terms of their impact on anxiety outcomes, including Schema-Focused Therapy, Systems Training for Emotional Predictability and Problem Solving, Dynamic Deconstructive Psychotherapy, and General Psychiatric Management (see [34] for a review of these treatments).

The efficacy of anxiety disorder treatments for individuals with borderline personality disorder

Although numerous evidence-based treatments for anxiety disorders are available, borderline personality disorder patients, particularly those with a severe level of disorder, are likely to be excluded from these treatments due to suicidality, self-injurious behavior, and other co-occurring problems that are deemed primary or in need of immediate treatment [35,36]. As a result, few studies have evaluated the efficacy of anxiety disorder treatments among individuals with borderline personality disorder, and the available research is limited to PTSD treatment studies. Results from three RCTs of cognitive-behavioral treatments for PTSD indicate that patients with borderline personality disorder or borderline personality characteristics exhibited a comparable rate of improvement as patients without borderline personality disorder or borderline personality characteristics [37-39]. However, borderline personality disorder patients (11%) were less likely than those without borderline personality disorder (51%) to achieve good end-state functioning [37]. Importantly, each of these studies excluded patients with acute suicidality as well as one or more other problems common in severe borderline personality disorder (e.g. substance use disorder, recent self-injury). Although some research has evaluated the impact of personality disorders on treatment outcome for non-PTSD anxiety disorders [40,41], no studies have specifically evaluated the effect of borderline personality disorder. Thus, research on the use of anxiety disorder treatments among individuals with borderline personality disorder is limited by the small number of studies available, the exclusion of severe borderline personality disorder patients, and the lack of studies on anxiety disorders other than PTSD.

Recent advances in psychosocial treatments for borderline personality disorder and co-occurring anxiety disorders

Given the paucity of empirical data on the treatment of co-occurring borderline personality disorder and anxiety disorders, recent research has begun to emerge focused on developing and evaluating treatments for this population. To date, this research has focused exclusively on individuals with comorbid borderline personality disorder and PTSD. Harned and colleagues have developed a one-year outpatient treatment for suicidal and self-injuring individuals with borderline personality disorder and PTSD that integrates Dialectical Behavior Therapy with a modified version of Prolonged Exposure therapy for PTSD [42,43]. To date, this treatment has been evaluated in an open trial (n = 13) with results indicating that it is feasible and safe to administer, and is associated with large and significant improvements in

Table 1. Anxiety-related outcomes in randomized controlled trials of treatments for borderline personality disorder

Study	Sample	N	Setting	Study length	Treatments	Anxiety measure	Anxiety-related outcomes
Bateman et al. (1999; 2001) [19,20]	Mixed gender with BPD	38	Partial hospital and outpatient	Tx: 1.5 years Fu: 1.5 years	Mentalization based treatment; Treatment as usual	Spielberger State-Trait Anxiety Inventory	During treatment, state and trait anxiety significantly decreased in mentalization based treatment but not in treatment as usual. During follow-up, state anxiety was significantly lower in mentalization based treatment than in treatment as usual.
Bellino et al. (2006) [23]	Mixed gender with BPD and major depression	32	Outpatient	Tx: 6 months	Interpersonal psychotherapy + fluoxetine; Clinical management + fluoxetine	Hamilton Anxiety Rating Scale	Both treatments had a significant reduction in anxiety. There was no significant difference between treatments.
Bellino et al. (2007) [22]	Mixed gender with BPD and major depression	26	Outpatient	Tx: 6 months	Cognitive therapy; Interpersonal psychotherapy	Hamilton Anxiety Rating Scale	Both treatments had a significant reduction in anxiety. Cognitive therapy had a significantly greater reduction in anxiety than interpersonal psychotherapy.
Bellino et al. (2010) [21]	Mixed gender with BPD	44	Outpatient	Tx: 8 months	Interpersonal psychotherapy adapted to BPD + fluoxetine; Clinical management + fluoxetine	Hamilton Anxiety Rating Scale	Both treatments had a significant reduction in anxiety. Interpersonal psychotherapy + fluoxetine had a significantly greater reduction in anxiety than fluoxetine only.
Clarkin et al. (2007) [24]	Mixed gender with BPD	90	Outpatient	Tx: 1 year	Transference focused psychotherapy; Dialectical behavior therapy; Supportive therapy	Brief Symptom Inventory	All three treatments had a significant reduction in anxiety. There was no significant difference between treatments.
Cottraux et al. (2009) [33]	Mixed gender with BPD	65	Outpatient	Tx: 1 year Fu: 1 year	Cognitive therapy; Rogerian supportive therapy	Beck Anxiety Inventory	There was no significant difference between treatments for change in anxiety from baseline. However, at the 1-year follow-up, anxiety was significantly lower in cognitive therapy than Rogerian therapy.
Davidson et al. (2006; 2010) [30,31]	Mixed gender with BPD	106	Outpatient	Tx: 1 year Fu: 1 year and 6 years	Cognitive behavioral therapy plus treatment as usual; Treatment as usual	Spielberger State-Trait Anxiety Inventory	At post-treatment, there was no significant difference on state or trait anxiety between treatments. At the 1-year follow-up, cognitive behavioral therapy plus treatment as usual had significantly lower state anxiety than treatment as usual. At the 6 year follow-up, there was no significant difference between treatments.
Doering et al. (2010) [25]	Women with BPD	104	Outpatient	Tx: 1 year	Transference-focused therapy; Community treatment by experts	Spielberger State-Trait Anxiety Inventory	Both treatments had a significant reduction in anxiety. There was no significant difference between treatments.
Gratz et al. (2006) [26]	Self-harming women with BPD	22	Outpatient	Tx: 3.5 months	Emotion regulation group + treatment as usual; Treatment as usual	Depression Anxiety Stress Scales	There was a significant reduction in anxiety in emotion regulation group + treatment as usual, but not treatment as usual.
Harned et al. (2008) [2]	Women with BPD and recent and repeated intentional self-injury	101	Outpatient	Tx: 1 year Fu: 1 year	Dialectical behavior therapy; Community treatment by experts	Longitudinal Interval Follow-Up Evaluation	No significant difference between treatments for rates of remission from anxiety disorders.
Koons et al. (2001) [29]	Women veterans with BPD	20	Outpatient	Tx: 6 months	Dialectical behavior therapy; Treatment as usual	Hamilton Anxiety Rating Scale	Neither treatment had a significant change in anxiety.
Linehan et al. (1993) [32]	Women with BPD	39	Outpatient	Tx: 1 year Fu: 1 year	Dialectical behavior therapy; Treatment as usual	Social Adjustment Scale – Self-Report	There was no difference between treatments in anxious rumination at 6 and 12 month follow-up.
Soler et al. (2009) [27]	Mixed gender with BPD	60	Outpatient	Tx: 3 months	Dialectical behavior therapy-skills training only; Standard group therapy	Hamilton Anxiety Rating Scale	There was a reduction in anxiety in dialectical behavior therapy-skills training only but not standard group therapy.
Turner et al. (2000) [28]	Mixed gender with BPD	24	Outpatient	Tx: 1 year	DBT-oriented therapy; Client-centered therapy	Beck Anxiety Inventory	Both treatments had a significant reduction in anxiety. There was no significant difference between treatments.

BPD, Borderline personality disorder

PTSD (pre-post d = 1.4 – 1.7; remission rate = 60-72%), intentional self-injury, and a number of secondary outcomes [44]. Pabst and colleagues [45] conducted a feasibility trial of Narrative Exposure Therapy for women with borderline personality disorder and PTSD (n = 10). Treatment primarily occurred in an inpatient unit, lasted an average of 14 sessions, and excluded patients who were unwilling to consent to a no-suicide contract, had attempted suicide in the past eight weeks, or had other severe comorbidities. The treatment was associated with significant reductions in PTSD (g = 0.92) and several secondary outcomes. Finally, although not intended specifically for borderline personality disorder patients, Bohus and colleagues have developed a 12-week residential treatment for women with childhood sexual abuse-related PTSD plus a current diagnosis of major depression, eating disorder, substance use disorder, and/or at least four borderline personality disorder criteria. Individuals with a suicide attempt in the past four months are excluded. This treatment combines modified Dialectical Behavior Therapy and trauma-focused cognitive-behavioral approaches [46] and has been evaluated in an open trial (n = 29) [47] and an RCT (n = 74) [48], in which borderline personality disorder patients constituted 24-42% of the samples. Both studies have shown large and significant reductions in PTSD (d = 1.2 – 1.5; remission rate = 35-36%) and a number of secondary outcomes [47,48] with one study finding that results were comparable between patients with and without borderline personality disorder [48]. Although these treatments have shown promising results, more research is needed to replicate these findings using randomized controlled designs with larger samples of borderline personality disorder patients.

Future directions

Given the high rate of co-occurring anxiety disorders among borderline personality disorder patients, as well as the negative impact of these disorders on achieving remission from borderline personality disorder, it is imperative that additional research continues to evaluate how to effectively treat anxiety disorders among individuals with borderline personality disorder. To date, the available research has focused exclusively on evaluating treatments for PTSD among borderline personality disorder patients, and no research has yet evaluated treatments for other types of anxiety disorders in borderline personality disorder. In addition, with the exception of Dialectical Behavior Therapy, the impact of existing borderline personality disorder treatments on specific anxiety disorders has not been examined.

As efforts to develop and evaluate treatments for co-occurring borderline personality disorder and anxiety disorders continue, attention should be paid to tailoring these treatments to borderline personality disorder patients with various levels of disorder. For example, it may be the case that existing, brief (9-12 week) anxiety disorder treatments can be implemented safely and effectively among borderline personality disorder patients with a mild level of disorder (e.g. those without suicidal and self-injurious behaviors or severe comorbidities) [37,38]. Borderline personality disorder patients with a moderate level of disorder (e.g. low risk non-suicidal self-injury without serious suicidality, significant but non-disabling deficits in interpersonal and emotion regulation skills) may benefit from longer (12-16 week) and/or more intensive (e.g. residential) sequential treatments that implement strategies from borderline personality disorder treatments (e.g. skills training) prior to targeting anxiety disorders [47-49]. Finally, longer-term treatment (e.g. one year) that provides integrated treatment for borderline personality disorder and anxiety disorders may be necessary for borderline personality disorder patients with a severe level of disorder (e.g. recent serious suicidal and/or self-injurious behaviors, severe comorbidities, disabling psychosocial impairment) [44].

Within this general research agenda, several important questions remain to be addressed. First, it will be important to develop empirically-derived criteria for determining when to target anxiety disorders among individuals with borderline personality disorder, particularly in the context of multiple other severe problems. For example, it is not yet clear whether anxiety disorders can be safely and effectively treated among borderline personality disorder patients who are actively engaging in non-suicidal self-injury. It is also possible that these readiness criteria may differ depending on the treatment setting (e.g. inpatient/residential versus outpatient), type of anxiety disorder (e.g. PTSD versus other diagnoses), and/or the relationship of anxiety disorder symptoms to suicidal and self-injurious behaviors. Finally, some research has begun to identify common factors underlying borderline personality disorder and anxiety disorders, including a tendency to experience negative emotions combined with efforts to try to alter or avoid these emotions [50-53]. The extant research suggests that borderline personality disorder treatments that address these common factors may be sufficient to facilitate improvements in general anxiety severity. However, additional research is needed to determine whether more targeted anxiety disorder treatment is necessary to achieve full remission from these disorders during treatment for borderline personality disorder.

Abbreviations

PTSD, posttraumatic stress disorder; RCT, randomized controlled trial.

Disclosures

Melanie Harned is a Dialectical Behavior Therapy trainer and consultant.

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