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Treatment Preference among Suicidal and Self-Injuring Women with Borderline Personality Disorder and PTSD

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Objectives: This study examined treatment preferences among suicidal and self-injuring women with borderline personality disorder (BPD) and PTSD. **Method:** Women ($N = 42$, $M_{\text{age}} = 34$) with BPD, PTSD and recent intentional self-injury were evaluated upon entry into a psychotherapy outcome study. **Results:** The majority preferred a combined dialectical behavior therapy (DBT) and prolonged exposure (PE) treatment (73.8%), followed by DBT alone (26.2%), and PE alone (0%). Women who preferred the combined treatment were more likely to report a desire to obtain relief from PTSD and to receive specific DBT and PE treatment components as reasons underlying this preference. Few women (21.4%) reported concerns about PE, but those who did were more likely to prefer DBT alone. More severe PTSD re-experiencing symptoms, a childhood index trauma, and less reduction in positive affect after a trauma interview predicted a preference for the combined treatment. **Conclusions:** These results may help to inform treatment for these complex patients. © 2013 Wiley Periodicals, Inc. *J. Clin. Psychol.* 69:749–761, 2013.

Keywords: PTSD; borderline personality disorder; dialectical behavior therapy; prolonged exposure; treatment preference; suicidal behavior

Borderline personality disorder (BPD) and posttraumatic stress disorder (PTSD) are commonly co-occurring disorders with comorbidity rates up to 58% (Harned, Rizvi, & Linehan, 2010; Zanarini, Frankenberg, Hennen, Reich, & Silk, 2004; Yen et al., 2002). Individuals with BPD and PTSD are more impaired in a variety of areas than those with either disorder alone (Bolton, Mueser, & Rosenberg, 2006; Harned et al., 2010; Pagura et al., 2010), and PTSD often maintains or exacerbates BPD criterion behaviors such as suicidal and nonsuicidal self-injury (NSSI), other impulsive, self-destructive behaviors (e.g., substance use), emotion dysregulation, and dissociation (for a review see Harned, in press). Accordingly, PTSD has been found to decrease the likelihood of remitting from BPD over 10 years of naturalistic follow-up (Zanarini, Frankenburg, Hennen, Reich, & Silk, 2006). Despite the severity and chronicity of impairment in this population, little research has evaluated effective approaches for treating PTSD among BPD patients, particularly those with a severe level of disorder (e.g., suicidal and self-injuring patients).

One approach is to provide treatment focused primarily on PTSD. Although several empirically supported treatments for PTSD exist that have been found effective with less severe BPD patients (Feeny, Zoellner, & Foa, 2002; Clarke, Rizvi, & Resick, 2008), these treatments remain

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largely inaccessible to patients with severe BPD. Exposure-based treatments such as prolonged exposure (PE; Foa, Hembree, & Rothbaum, 2007) have the most empirical support for PTSD (Institute of Medicine, 2007; Powers, Halpern, Ferenschak, Gillihan, & Foa, 2010), but severe BPD patients are likely to be excluded due to safety concerns (e.g., acute suicidality, recent serious self-injury) or other severe comorbidities (e.g., substance dependence, dissociative disorders; Foa et al., 2007). Clinicians in routine practice often use even broader exclusionary criteria for PE that would rule out most if not all BPD patients, including suicidality, dissociation, depression, a history of multiple childhood traumas, and any comorbid diagnosis (Becker, Zayfert, & Anderson, 2004; van Minnen, Hendriks, & Olf, 2010). Similarly, the consensus among PTSD experts is that a treatment approach based primarily on memory processing (such as PE) is inappropriate for cases of “complex PTSD” (i.e., PTSD with associated features that are common in severe BPD such as emotion dysregulation, behavioral dysregulation, and dissociative symptoms; Cloitre et al., 2011). Given the common practice of excluding severe BPD patients from PTSD treatment, little is known about the efficacy of these treatments for this population.

A second approach is to provide treatment focused primarily on BPD. Dialectical behavior therapy (DBT; Linehan, 1993) is the most empirically supported treatment available for BPD and has been found effective in reducing suicide attempts, nonsuicidal self-injury (NSSI), general psychological distress, crisis service use, and treatment dropout (Kliem, Kroger, & Kosfelder, 2010; Leichsenring, Leibing, Kruse, New, & Leweke, 2011). DBT focuses primarily on helping BPD patients achieve behavioral control by increasing behavioral skills, and does not typically directly target PTSD. When PTSD is not directly targeted, the rate of PTSD remission during DBT is relatively low (35%; Harned et al., 2008). Nonetheless, treatments such as DBT that focus on teaching coping skills (e.g., emotion regulation, interpersonal effectiveness) are viewed by PTSD experts as safer and more appropriate than treatments focused on memory processing for patients with “complex PTSD” (Cloitre et al., 2011). Thus, DBT may be a reasonable and effective alternative to PTSD-focused treatment for severe BPD patients with PTSD.

A third approach is to provide an integrated treatment that targets BPD and PTSD simultaneously. In this case, integrating DBT and PE would represent the best evidence synthesis of the available treatments for BPD and PTSD, respectively. In addition, DBT has been shown to be effective in reducing behaviors commonly used as exclusion criteria for PE among severe BPD patients with PTSD, including imminent suicide risk, suicide attempts, NSSI, severe dissociation, and substance dependence (Harned, Jackson, Comtois, & Linehan, 2010). Thus, an integrated treatment approach that utilizes DBT to increase behavioral skills and achieve stabilization prior to and during PE may be optimal for severe BPD patients with PTSD, and a recent open trial of an integrated DBT and PE treatment showed promising results (Harned, Korslund, Foa, & Linehan, 2012). This type of phase-based treatment (coping skills followed by memory processing) is also endorsed by a majority of PTSD experts as a frontline treatment for “complex PTSD” (Cloitre et al., 2011).

Although clinicians and PTSD experts generally believe that PE alone is inappropriate for severe BPD patients and that a skills-focused treatment such as DBT, possibly combined with PE, is preferable, it is unknown whether severe BPD patients share these beliefs. Current best practice standards emphasize the importance of considering patient preferences in the treatment decision-making process (American Psychological Association, 2006), and research indicates that providing patients with their preferred treatment improves outcomes and reduces dropout (Swift & Callahan, 2009). Studies of treatment preferences for PTSD have found that exposure therapy, including PE, is a preferred treatment in undergraduate, trauma-exposed, and treatment-seeking PTSD samples (Angelo, Miller, Zoellner, & Feeny, 2008; Becker, Darius, & Schaumberg, 2007; Cochran, Pruitt, Fukuda, Zoellner, & Feeny, 2008; Feeny, Zoellner, Mavissakalian, & Roy-Byrne, 2009; Tarrrier, Liversidge, & Gregg, 2006; Zoellner, Feeny, & Bittinger, 2009; Zoellner, Feeny, Cochran, & Pruitt, 2003), and preliminary evidence suggests that providing PTSD patients with their preferred treatment enhances outcomes (Feeny et al., 2009). These findings suggest that the underutilization of exposure treatments for PTSD, including PE, appears to be primarily due to therapist factors (e.g., lack of training, concerns about PE) rather than client factors (e.g., unwillingness to participate in PE). Several of these studies have also begun to examine predictors of treatment preference, finding that demographic

factors (higher education, nonminority status) predict a preference for PE over sertraline, whereas psychopathology factors (more severe PTSD, depression, and anxiety) predict a preference for sertraline over PE (Angelo et al., 2009; Feeny et al., 2009; Zoellner et al., 2009).

To date, no research has examined treatment preferences among BPD patients with PTSD specifically, and understanding the treatment preferences of these patients may help to inform and enhance treatment for this difficult-to-treat population. The present study examines this issue in a treatment-seeking sample of suicidal and self-injuring women with BPD and PTSD. Our three primary aims were to (a) determine whether suicidal and self-injuring BPD women with PTSD prefer DBT, PE, or a combined DBT and PE treatment, (b) evaluate the reasons underlying treatment preference, and (c) examine potential predictors of treatment preference that have been evaluated in prior studies (i.e., demographics, PTSD severity, psychological distress/comorbidity) as well as ones new to this study and client population (i.e., intentional self-injury history, emotional experiencing).

Methods

Participants

Participants were 42 women with BPD and PTSD who were accepted into one of two psychotherapy outcome studies. Inclusion criteria were as follows: BPD, PTSD, 18–60 years of age, female, and recent (past 2–3 months) suicidal behavior or NSSI.¹ Participants were excluded if they met criteria for a psychotic disorder, mental retardation, bipolar disorder, or were mandated to treatment.

The sample ranged in age from 19 to 57 years (mean [M] = 34.0, standard deviation [SD] = 12.1). Participants were White (76.2%), biracial (19.0%), and Asian American (4.8%). In addition, 9.5% of participants were of Hispanic ethnicity. Nearly all participants had graduated from high school (95.2%) and 33.3% had graduated from college. The majority were single, divorced, or separated (78.6%) and earned less than \$20,000 in the past year (81.5%). Index traumas included childhood sexual abuse (52.4%), adult rape (14.3%), childhood physical abuse (9.5%), physical assault by an intimate partner (9.5%), and other (14.3%).

Procedures

Written informed consent was obtained from all participants and all studies were approved by an institutional review board. Participants were recruited via advertisements and outreach to area treatment providers. The studies were advertised as a “Dialectical Behavior Therapy Program for Suicidal and Self-Injuring Women with Borderline Personality Disorder and PTSD.” After an initial phone screen, participants completed an in-person assessment to evaluate study inclusion/exclusion criteria and gather more detailed diagnostic and pre-treatment information. A total of 174 individuals completed the initial phone screen, 80 of whom were rejected. Reasons for rejection at the phone screen included no recent suicidal behavior or NSSI ($n = 56$), does not meet cutoff for PTSD ($n = 8$), does not meet cutoff for BPD ($n = 8$), older than 60 years of age ($n = 3$), not interested ($n = 3$), mandated to treatment ($n = 1$), and lives out of area ($n = 1$).

Of the 94 individuals that passed the initial phone screen, 78 completed the in-person screening assessment; 34 of whom were rejected for the following reasons: did not meet criteria for BPD ($n = 11$), did not meet criteria for PTSD ($n = 8$), bipolar disorder ($n = 6$), not interested ($n = 2$), lives out of area ($n = 2$), no recent suicide attempt or NSSI ($n = 1$), never called back ($n = 1$), not willing to discontinue current treatment ($n = 1$), psychotic disorder ($n = 1$), and unable to make weekday appointments ($n = 1$). The remaining 44 individuals were accepted into the studies and the current analyses examine data collected from the 42 participants who completed the baseline assessment. Individuals who were excluded at any point during the screening process did not

¹One participant was accepted into the study who was determined to be at imminent risk of suicide (i.e., current severe suicidal ideation with a suicide plan and intent to commit suicide in the next 4 weeks), but who had not engaged in recent suicidal or nonsuicidal self-injury.

significantly differ from those who were accepted in terms of age, racial background, education, or income ($ps > .09$).

Measures

Demographics. A demographic questionnaire assessed participants' self-reported age, racial/ethnic background, education, and income.

Diagnostic interviews. The International Personality Disorder Examination (Loranger, 1995) was used to diagnose BPD using Diagnostic and Statistical Manual of Mental Disorders, 4th Edition, Text Revision (DSM-IV) criteria. The PTSD Symptom Scale – Interview (PSS-I; Foa, Riggs, Dancu, & Rothbaum, 1993) was used to assess the presence and severity of PTSD in relation to a specific index trauma. The PSS-I comprises 17 items corresponding to the DSM-IV PTSD diagnostic criteria and items are rated on 0–3 scales for combined frequency and intensity in the past 2 weeks. The PSS-I has been found to have excellent inter-rater reliability for the PTSD diagnosis ($\kappa = .91$) and overall severity ratings ($r = .97$; Foa et al., 1993).

Treatment preference. Treatment preference was assessed using an adapted version of Zoellner and colleagues' (2003) treatment choice measure. Participants were provided with written descriptions of DBT and PE. Each description reviewed the empirical support for the treatment, treatment targets, primary treatment components, and the length of the treatment. Participants responded to a forced choice item asking, "If you had a choice between receiving Dialectical Behavior Therapy (DBT), Prolonged Exposure (PE), or a combined DBT and PE treatment for your psychological problems, which would you choose?" Participants were then asked to list and rank the top five factors that influenced their treatment choice using an open response format.

Demographics. Five demographic variables were examined: age, marital status (0 = non-married, 1 = married), education (0 = high school graduate or less, 1 = college graduate or beyond), ethnicity (0 = non-White, 1 = White), and annual income (0 = up to \$9,999, 1 = \$10,000+).

PTSD. The PSS-I (Foa et al., 1993) was used to calculate the number of criteria met in each PTSD symptom cluster (re-experiencing, avoidance, and hyperarousal). Participants' index traumas were categorized as either 0 = adult trauma (aged 17+ years) or 1 = childhood trauma (< aged 17 years).

Intentional self-injury history. The Suicide Attempt Self-Injury Interview (Linehan et al., 2006) is a psychometrically sound interview that was used to determine (a) the number of past year suicide attempts, (b) the number of past year NSSI acts, and (c) the average medical risk of all past year intentional self-injury acts. The Suicidal Behaviors Questionnaire (Linehan, unpublished) assessed the frequency of self-reported suicidal ideation in the past year.

Psychological distress and comorbidity. Interviewer-rated depression and general anxiety were assessed via the Hamilton Rating Scale for Depression (Hamilton, 1960) and the Hamilton Rating Scale for Anxiety (Hamilton, 1959). The Structured Clinical Interview for DSM-IV, Axis I (SCID-I; First, Spitzer, Gibbon, & Williams, 1995) was used to determine the total number of Axis I diagnoses (including mood, anxiety, eating, substance use, somatization, and psychotic disorders) and to determine a Global Assessment of Functioning (GAF) score. The International Personality Disorder Examination (Loranger, 1995) was used to determine the total number of current Axis II diagnoses. Two self-report measures—Dissociative Experiences Scale-Taxon (Waller & Ross, 1997) and Anxiety Sensitivity Index (Reiss, Peterson, Gursky, & McNally, 1986)—were also used.

Emotional experiencing. An adapted version of the Positive and Negative Affect Schedule (Watson, Clark, & Tellegen, 1988) was used to measure current emotional states before and after the PSS-I interview in which participants described their trauma history and current PTSD symptoms. Change scores (pre-post PSS-I) were calculated to determine the degree to which discussing trauma and PTSD led to changes in positive and negative affect states. Other self-report measures of emotional experiencing are as follows: the Experience of Shame Scale (Andrews, Qian, & Valentine, 2002); the Trauma Related Guilt Inventory (Kubany et al., 1996); the State-Trait Anger Expression Inventory (Spielberger, Krasner, & Solomon, 1988); and the Difficulties in Emotion Regulation Scale (Gratz & Roemer, 2004).

Data Analysis

Qualitative data analysis. Participants' open-ended responses about the reasons underlying their treatment preference were analyzed using the constant comparative method of qualitative data analysis (Maykut & Morehouse, 1994). During an initial discovery phase, three coders individually reviewed the responses and made a list of common themes, concepts and ideas. The three individual lists were compared and refined to create a common list of inductively derived preliminary categories. Next, two coders who were not experts in either DBT or PE individually coded the data into the preliminary categories, discussed the results, reached a consensus, and then finalized the categories. An expert coder then categorized the data into the final categories, and inter-rater agreement was calculated using Randolph's free-marginal kappa (Randolph, 2005). Any conflicting categorizations were discussed until a consensus was reached. These final (sub)categories were then grouped into higher order categories reflecting a similar theme.

Quantitative data analysis. Following qualitative coding of all reasons for treatment preference, 2×2 chi-squares and Fisher's exact tests were conducted to compare rates of each subcategory and higher order category by treatment preference. These analyses were conducted for the primary reason (i.e., the first/most influential reason) as well as for all five reasons combined. A series of five logistic regressions were conducted to examine demographics, PTSD, intentional self-injury history, psychological distress and comorbidity, and emotional experiencing as predictors of treatment preference. Significant predictors from each of these models were then examined together in a final logistic regression model.

Results

Treatment Preference

The majority of participants preferred to receive a combined DBT and PE treatment ($n = 31$, 73.8%) and the remainder preferred to receive DBT alone ($n = 11$, 26.2%). No participants indicated a preference for PE alone.

Qualitative Analysis of Reasons for Treatment Preference

Of the 42 participants, 40 provided at least one reason for their treatment preference. These participants provided a total of 140 reasons ($M = 3.50$, $SD = 1.62$) and the number of reasons given did not differ between women who preferred DBT with PE ($M = 3.48$, $SD = 1.66$) and those who preferred DBT alone ($M = 3.54$, $SD = 1.57$), $t(38) = 0.11$, $p = .91$. Table 1 shows the 11 subcategories and five higher order categories that emerged from the qualitative data analysis, including example responses from each subcategory. Inter-rater reliability for classifying reasons into subcategories was good (Randolph's free-marginal kappa = 77.7%).

Table 1
Summary of Categories of Reasons for Treatment Preferences

Categories	Example responses
<i>Wants relief from distress</i>	
PTSD causes distress	<ul style="list-style-type: none"> • “Suffering from PTSD so much.” • “Constantly haunted by memories, flashbacks, nightmares of my childhood in particular.”
BPD causes distress	<ul style="list-style-type: none"> • “I am most concerned about my Borderline issues. They have gotten me into a lot of trouble – stealing/self-injury.” • “Suicidal a lot and always wanting to cut.”
Both PTSD and BPD cause distress, or distress is more general	<ul style="list-style-type: none"> • “PTSD is what slips me back into BPD episodes where I will spiral down for months at a time.” • “Not feel hopeless.”
<i>Wants specific treatment components</i>	
Wants DBT components	<ul style="list-style-type: none"> • “Group skills training.” • “Availability of phone contact. DBT.”
Wants PE components	<ul style="list-style-type: none"> • “Education about trauma.” • “Confronting the memories.”
Wants common components	<ul style="list-style-type: none"> • “I want to learn new/more coping skills.” • “Individual therapy.”
<i>Concerns about treatment</i>	
Concerns about DBT	<ul style="list-style-type: none"> • “Scared of groups.” • “I [don’t] care to be in a group . . . because I feel that others may inhibit the learning process.”
Concerns about PE	<ul style="list-style-type: none"> • “Prolonged Exposure treatment sounds really scary.” • “I am scared that I will dissociate and hurt myself or others. No PE.”
<i>Treatment efficacy</i>	
Efficacy of DBT	<ul style="list-style-type: none"> • “I have read that DBT is extremely effective for my disorders.” • “Have been in DBT prior and found it very helpful.”
Efficacy of PE	<ul style="list-style-type: none"> • “PE. Although most challenging it will finally get to my emotions and memory of trauma.” • “PE supports a fuller life by decreasing trauma-related fears of situations.”
General efficacy	<ul style="list-style-type: none"> • “The understanding that the treatments work for others with these problems.” • “Trust in the treatment.”
<i>Will do anything to get better</i>	<ul style="list-style-type: none"> • “I want any and all therapies that may be able to help me.” • “I would do almost anything at this point in my life if you told me it would make my future normal and better.”

Note. PTSD = posttraumatic stress disorder; BPD = borderline personality disorder; DBT = dialectical behavior therapy; PE = prolonged exposure.

Quantitative Analysis of Reasons for Treatment Preference

The most common primary reasons underlying treatment preference were a desire to obtain relief from distress ($n = 13$, 32.5%) and to receive specific treatment components ($n = 13$, 32.5%). These were followed by concerns about treatment ($n = 6$, 15.0%), beliefs about treatment efficacy ($n = 5$, 12.5%), and a willingness to do anything to get better ($n = 1$, 2.5%). When all five reasons were combined, 62.5% ($n = 25$) expressed a desire to receive specific treatment components, 52.5% ($n = 21$) described wanting relief from distress, 25.0% ($n = 10$) cited treatment efficacy, 22.5% ($n = 9$) reported concerns about treatment, and 10.0% ($n = 4$) indicated they would do anything to get better.

As shown in Table 2, women who preferred DBT alone were more likely to cite concerns about treatment, and PE in particular, as a reason for their treatment preference (Fisher’s exact tests $p < .001$ for both primary and combined reasons). In contrast, women who preferred a combined

Table 2
Frequency of Primary and Combined Reasons for Treatment Preference

Category	Primary reason		Combined reasons	
	DBT + PE (n = 29)	DBT only (n = 11)	DBT + PE (n = 29)	DBT only (n = 11)
<i>Wants relief from distress</i>	12 (41.4%)	1 (9.1%)	19 (65.5%)	2 (18.2%)*
PTSD causes distress	3 (10.3%)	0 (0%)	10 (34.5%)	0 (0%)*
BPD causes distress	1 (3.4%)	1 (9.1%)	1 (3.4%)	1 (9.1%)
Both PTSD and BPD cause distress, or distress is more general	8 (27.6%)	0 (0%)	10 (34.5%)	1 (9.1%)
<i>Wants specific treatment components</i>	11 (37.9%)	2 (18.2%)	22 (75.9%)	3 (27.3%)**
Wants DBT components	6 (20.7%)	2 (18.2%)	13 (44.8%)	2 (18.2%)
Wants PE components	1 (3.4%)	0 (0%)	8 (27.6%)	0 (0%)
Wants common components	4 (13.8%)	0 (0%)	10 (34.5%)	1 (9.1%)
<i>Concerns about treatment</i>	0 (0%)	6 (54.5%***)	1 (3.4%)	8 (72.7%***)
Concerns about DBT	0 (0%)	0 (0%)	1 (3.4%)	1 (9.1%)
Concerns about PE	0 (0%)	6 (54.5%***)	1 (3.4%)	8 (72.7%***)
<i>Treatment efficacy</i>	3 (10.3%)	2 (18.2%)	7 (24.1%)	3 (27.3%)
Efficacy of DBT	1 (3.4%)	2 (18.2%)	4 (13.8%)	3 (27.3%)
Efficacy of PE	1 (3.4%)	0 (0%)	2 (6.9%)	0 (0%)
General efficacy	1 (3.4%)	0 (0%)	2 (6.9%)	1 (9.1%)
<i>Will do anything to get better</i>	1 (3.4%)	0 (0%)	3 (10.3%)	1 (9.1%)
<i>Other</i>	2 (6.9%)	0 (0%)	7 (24.1%)	2 (18.2%)

Note. PTSD = posttraumatic stress disorder; BPD = borderline personality disorder; DBT = dialectical behavior therapy; PE = prolonged exposure.

For the Combined Reasons, subcategory totals may not equal the larger category total because participants may have provided responses in more than one subcategory. Chi-square and Fisher's exact tests were used to compare groups.

* $p < .05$. ** $p < .01$. *** $p < .001$.

DBT and PE treatment were more likely to describe wanting relief from distress (Fisher's exact test $p = .01$), particularly PTSD and trauma-related distress (Fisher's exact test $p = .04$), as a reason underlying their treatment preference. In addition, women who preferred a combined DBT and PE treatment were more likely to report wanting specific treatment components as a reason for their treatment preference (Fisher's exact test $p < .01$).

Prediction of Treatment Preference

As shown in Table 3, the logistic regression model examining PTSD variables as predictors of treatment preference was significant, $\chi^2(4) = 18.0, p = .001$, Nagelkerke $R^2 = 0.51$, with greater re-experiencing symptoms and a childhood index trauma predicting a preference for a combined DBT and PE treatment. This model correctly classified 83.3% of participants, including 63.6% of women who preferred DBT alone and 90.3% of women who preferred a combined DBT and PE treatment. In addition, emotional experiencing variables significantly predicted treatment preference, $\chi^2(8) = 15.91, p = .04$, Nagelkerke $R^2 = 0.50$. In this model, less reduction in positive affect following discussion of trauma history and PTSD symptoms predicted a preference for a combined DBT and PE treatment. This model correctly classified 84.2% of participants, including 60.0% of women who preferred DBT alone and 92.9% of women who preferred a combined DBT and PE treatment. Demographics, $\chi^2(5) = 6.73, p = .24$, intentional self-injury history, $\chi^2(4) = 0.18, p = 1.00$, and psychological distress and comorbidity, $\chi^2(7) = 8.07, p = 0.33$, did not significantly predict treatment preference.

Table 3
Logistic Regressions Examining Predictors of Treatment Preference

Variables	B	SE	p	OR	95% CI for OR
<i>Demographics</i>					
Age	0.08	0.04	.06	1.08	0.99, 1.18
Marital status	-1.04	1.03	.31	0.35	0.05, 2.68
Education	-1.13	1.00	.26	0.32	0.04, 2.31
Ethnicity	-1.74	1.42	.22	0.18	0.01, 2.85
Annual income	0.41	0.95	.67	1.51	0.23, 9.82
<i>PTSD</i>					
Re-experiencing symptoms	0.99	0.48	.04	2.70	1.05, 6.97
Avoidance symptoms	-0.32	0.46	.48	0.73	0.30, 1.78
Hyperarousal symptoms	0.30	0.51	.56	1.34	0.49, 3.66
Childhood index trauma	3.40	1.13	.003	29.88	3.27, 273.11
<i>Psychological distress and comorbidity</i>					
Depression	0.23	0.14	.10	1.26	0.96, 1.66
Anxiety	0.00	0.09	.98	1.00	0.83, 1.19
Anxiety sensitivity	-0.01	0.05	.86	0.99	0.90, 1.09
Dissociation	-0.01	0.03	.79	0.99	0.93, 1.06
No. of current Axis I diagnoses	-0.55	0.34	.10	0.58	0.30, 1.12
No. of current Axis II diagnoses	0.11	0.57	.84	1.12	0.36, 3.45
GAF score	-0.25	0.15	.10	0.78	0.58, 1.05
<i>Suicide and self-injury history</i>					
No. of NSSI acts, past year	0.00	0.01	.98	1.00	0.99, 1.01
No. of suicide attempts, past year	0.02	0.11	.84	1.02	0.82, 1.27
Average medical risk	-0.07	0.19	.71	0.93	0.64, 1.35
Suicidal ideation	0.00	0.02	.97	1.00	0.96, 1.04
<i>Emotional experiencing</i>					
Negative affect	-0.72	0.91	.43	0.49	0.08, 2.92
Positive affect	3.69	1.79	.04	40.19	1.19, 1355.04
Shame	-0.07	0.07	.29	0.93	0.82, 1.06
Anger – In	-0.01	0.13	.96	0.99	0.76, 1.29
Anger – Out	-0.28	0.16	.08	0.75	0.54, 1.04
Anger control	-0.32	0.19	.10	0.73	0.50, 1.06
Trauma-related guilt	-0.08	1.06	.94	0.93	0.11, 7.45
Emotion regulation	0.00	0.03	.95	1.00	0.95, 1.05
<i>Final Combined Model^a</i>					
Re-experiencing symptoms	0.96	0.56	.09	2.61	0.86, 7.87
Childhood index trauma	3.35	1.19	.01	28.40	2.78, 290.21
Positive affect	2.62	1.46	.07	13.72	0.78, 240.14

Note. The final combined model includes significant predictors from the five individual models. OR = odds ratio. CI = confidence interval. The dependent variable of treatment preference was coded as: 0 = DBT alone, 1 = DBT and PE. Binary independent variables were coded as follows: marital status (0 = non-married, 1 = married), education (0 = high school graduate or less, 1 = college graduate or beyond), ethnicity (0 = non-White, 1 = White), annual income (0 = up to \$9,999, 1 = \$10,000+), childhood index trauma (0 = adult trauma (age 17+), 1 = childhood trauma (< age 17)). PTSD = posttraumatic stress disorder; GAF = Global Assessment of Functioning; NSSI = nonsuicidal self-injury.

A final model combining the three significant predictors from the individual models (re-experiencing symptoms, childhood index trauma, positive affect) was significant, $\chi^2(3) = 22.63$, $p < .001$, Nagelkerke $R^2 = 0.63$. This model correctly classified 87.5% of participants, including 81.8% of women who preferred DBT alone and 89.7% of women who preferred a combined DBT and PE treatment. The only significant predictor in this model was childhood index trauma, which greatly increased the odds of preferring a combined DBT and PE treatment. Descriptive data indicate that 89.7% of women with a childhood index trauma preferred the combined DBT and PE treatment compared to 38.5% of women with an adult index trauma.

Discussion

The present study found that a majority (73.8%) of treatment-seeking suicidal and self-injuring women with BPD and PTSD preferred to receive a combined DBT and PE treatment over either treatment alone. This finding has several important implications. First, this indicates that severe BPD patients with PTSD are unlikely to prefer a treatment that addresses only one of these disorders. Instead, a combined DBT and PE treatment appears to be the treatment of choice for these patients, and this treatment approach has shown considerable promise in addressing both PTSD-related and BPD-related problems in this population (Harned & Linehan, 2008; Harned et al., 2012). Second, although clinicians often report concerns about using PE with patients who possess characteristics common in severe BPD (e.g., suicidality, high comorbidity, dissociation, multiple childhood traumas; Becker et al., 2004; van Minnen et al., 2010), the majority of these patients expressed a desire to receive PE, just not as a standalone treatment. This suggests that a significant barrier to using PE in this population may be clinicians' unwillingness to deliver the treatment and not patients' lack of interest in receiving it. Importantly, clinicians' willingness to use PE with more complex patients increases if the patient expresses a preference for trauma-focused treatment (van Minnen et al., 2010). Thus, severe BPD patients may be more likely to receive PE if they express this treatment preference to their therapists. Direct-to-consumer marketing strategies may help to increase patients' awareness of available evidence-based treatments for BPD and PTSD so that they can express informed preferences when seeking treatment (e.g., Santucci, McHugh, & Barlow, 2012).

The present study also examined the reasons underlying patients' treatment preferences. Patients who preferred a combined DBT and PE treatment were more likely to express a desire to obtain relief from distress, particularly PTSD and trauma-related distress, as a reason for their treatment preference. This suggests that these patients would be willing to tolerate the short-term distress associated with processing trauma memories during PE in order to achieve a long-term reduction in PTSD. In addition, this indicates that most patients believe a combined DBT and PE treatment will reduce their overall distress and not increase it. Patients who preferred the combined DBT and PE treatment were also more likely to report a desire to receive specific treatment components as a reason underlying their treatment preference. While many patients expressed a desire for specific DBT components (e.g., group skills training, phone coaching), it is important to note that many also specified an explicit desire to receive components of PE (e.g., confronting trauma memories, psychoeducation about trauma).

The minority of women (26.2%) who preferred DBT alone were more likely to express concerns about PE as the primary reason underlying their treatment preference. These concerns echo those expressed by clinicians, including fears that PE would lead to symptom exacerbation or loss of behavioral control, as well as a general fear of the emotions elicited by trauma processing. However, it is important to note that only a minority of patients expressed concerns about PE (21.4%), whereas previous studies have found that up to 87% of clinicians believe that imaginal exposure for PTSD will lead to symptom exacerbation, other complications, or dropout (Becker et al., 2004). Again, this suggests that clinicians may be more concerned than severe BPD patients about the potential iatrogenic effects of PE, a finding that is particularly troubling given that these common clinician concerns about PE are not supported by empirical data (Foa, Zoellner, Feeny, Hembree, & Alvarez-Conrad, 2002; Hembree et al., 2003). In addition, there is no evidence that an integrated DBT and PE treatment led to exacerbations of intentional self-injury urges or behaviors, PTSD, treatment dropout, or crisis service use among severe BPD patients (Harned et al., 2012).

Three client characteristics were found to predict treatment preference. More severe PTSD re-experiencing symptoms and a childhood index trauma significantly predicted a preference for a combined DBT and PE treatment. This indicates that BPD patients whose PTSD is more severe and related to childhood abuse are particularly likely to want a PTSD-focused treatment in addition to a BPD-focused treatment. This is consistent with the finding that women who preferred the combined DBT and PE treatment were more likely to report a desire to obtain relief from PTSD as a reason underlying this preference. Whereas prior research has found PTSD severity to predict a preference for pharmacotherapy over PE (Zoellner et al., 2009) or to

be unrelated to PTSD treatment preference (Angelo et al., 2008), the present results suggest that PTSD severity is likely to predict a preference for a PTSD treatment (versus none) in comorbid populations. It is also important to note that clinicians are less likely to utilize imaginal exposure with individuals with a history of multiple childhood traumas and instead to view imaginal exposure as most appropriate for individuals with a single trauma in adulthood (van Minnen et al., 2010). This has been shown to be true even when clinicians are better trained in imaginal exposure and believe it to be a more credible treatment (van Minnen et al., 2010). This is, again, a concerning disconnect between patient preferences and clinician beliefs, particularly given that a childhood index trauma was the strongest predictor of a preference for a combined DBT and PE treatment.

The third predictor of a preference for a combined DBT and PE treatment was a smaller decrease in positive affect after discussing one's trauma history and PTSD symptoms. Interestingly, changes in negative affect after such a discussion did not predict treatment preference, nor did trait measures of negative affect (e.g., shame, anger, trauma-related guilt) or emotion dysregulation. This suggests that although negative affect and emotion dysregulation are comparable among individuals who do and do not prefer PE in addition to DBT, those whose positive affect is less impacted by discussions about their trauma may be more interested in receiving a trauma-focused treatment such as PE.

It is also interesting to note that the majority of variables examined did not emerge as significant predictors of treatment preference. Importantly, many client characteristics that clinicians believe to be contraindications for the use of PE (e.g., dissociation, comorbidity, frequency and severity of recent suicide attempts and NSSI, suicidal ideation; Becker et al., 2004) did not significantly predict treatment preference. This suggests that BPD-PTSD patients with more complex co-occurring problems are just as likely to prefer PE in addition to DBT as those with less complex presentations. Finally, although prior studies have found that demographics (higher education, nonminority status) predict a preference for PE over sertraline (Angelo et al., 2008; Feeny et al., 2009; Zoellner et al., 2009), demographics did not predict treatment preference in this study. This may be due to the fact that only psychotherapy treatment options were provided.

The present study has several limitations. First, the only treatment offered for PTSD was PE and including a wider range of PTSD treatments may have altered participants' treatment preferences. Despite this, previous studies have found that when other PTSD treatments are offered, exposure-based therapies such as PE are still one of the most preferred treatments (e.g., Becker et al., 2007; Angelo et al., 2008; Tarrrier et al., 2006; Zoellner et al., 2003; Zoellner et al., 2009). Second, the women in this sample had been accepted into psychotherapy outcome studies that were advertised as studies of a DBT treatment program. This may explain why no participants indicated a preference for PE alone. However, it is also possible that suicidal and self-injuring BPD patients agree with PTSD experts that a treatment focused primarily on trauma processing is not appropriate or desirable given the severity of their co-occurring problems. Additional research using various types of treatment-seeking and community samples, including less severe BPD individuals, is needed to further understand treatment preferences in this population. Finally, the present study does not examine whether providing patients with their preferred treatment leads to improved outcomes and this is an important avenue for future research.

In sum, this is the first study to investigate treatment preferences among individuals with BPD and PTSD. The findings indicate that the majority of these patients prefer a combined DBT and PE treatment and believe that such treatment is likely to help them obtain relief from BPD, PTSD, and general distress. However, these patients are unlikely to be able to access the treatment they prefer given common clinician beliefs that PE is inappropriate for severe BPD patients. Importantly, it appears that clinicians may be more concerned about using PE with severe BPD patients than the patients themselves, particularly when PE is offered in combination with DBT. The knowledge that most suicidal and self-injuring BPD patients with PTSD would choose to receive a combined DBT and PE treatment, along with research indicating that this treatment can be administered safely and effectively for these patients (Harned et al., 2012), may help to increase clinicians' willingness to provide this preferred treatment to this complex patient population. In addition, clinicians may be able to use patients' desire to receive PE as a

way to increase their motivation to gain control over life-threatening behaviors. Specifically, the integrated DBT and PE treatment requires patients to stop engaging in suicidal and self-injurious behaviors before they can begin PE, and this contingency has been effective in motivating severe BPD patients to achieve control over these behaviors (Harned et al., 2012). Thus, orienting to this contingency early in treatment may help to hasten patients' progress towards achieving the stability necessary to begin trauma-focused treatment, particularly for those patients who express a preference for PE.

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