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Experiential avoidance in adolescents with borderline personality disorder: comparison with a non-BPD psychiatric group and healthy controls

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ABSTRACT

Previous research has identified experiential avoidance (EA) as related to a host of adolescent internalizing and externalizing problems, as well as borderline personality disorder, suggesting that it is a crosscutting factor for adolescent psychopathology. It remains unclear whether EA differs among adolescents with BPD compared to adolescents with other psychiatric disorders and healthy adolescents. The aims of this study were to 1) examine EA in adolescents with BPD compared to non-BPD inpatient adolescents and healthy adolescents, and 2) to evaluate whether EA has a unique relationship to borderline pathology over and above internalizing and externalizing. Self-report measures of BPD features, EA, and psychopathology were completed by 692 adolescents (64.5% female, $M_{\text{age}} = 15.20$). This sample included a group of psychiatric inpatient youth ($n = 197$ BPD; $n = 403$ non-BPD) and a group of healthy adolescents ($n = 92$). Results revealed that EA differed significantly across all three groups, with the highest level of EA evidenced in adolescents who had BPD. Furthermore, there was a significant, unique association between BPD symptoms and EA over and above internalizing and externalizing pathology. These findings pinpoint EA as an important risk marker and possible target of prevention or intervention for adolescent BPD.

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Introduction

Experiential avoidance (EA) refers to a person being “unwilling to remain in contact with particular, private experiences,” such as uncomfortable thoughts, bodily sensations, and emotions, and taking steps to escape or avoid these experiences (Hayes, Wilson, Gifford, Follette, & Strosahl, 1996, p. 3). Repeated, prolonged engagement in EA has been shown to have damaging effects, such as alexithymia and emotion dysregulation (Venta, Hart, & Sharp, 2013). In line with these findings, higher levels of EA are linked to several different psychiatric disorders, suggesting that it is a crosscutting factor in psychopathology (Chawla & Ostafin, 2007; Hayes, Luoma, Bond, Masuda, & Lillis, 2006). Though these associations were first shown in adults, studies examining EA in youth have been growing following the

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development and validation of the Avoidance and Fusion Questionnaire for Youth (Greco, Lambert, & Baer, 2008). EA is important to study during youth as it can be learned early in life and reinforced over time (Greco, Blackledge, Coyne, & Enreheich, 2005; Greco & Eifert, 2004), and therefore may play a role in the development of psychopathology. Previous research has indicated that EA is associated with both internalizing and externalizing psychopathology in adolescents, including anxiety (Venta, Sharp, & Hart, 2012), social anxiety (Hayes et al., 1996; Neal & Edelman, 2003; Papachristou, Theodorou, Neophytou, & Panayiotou, 2018), depression (Berking, Neacsu, Comtois, & Linehan, 2009; Mellick, Vanwoerden, & Sharp, 2017), eating disorder symptoms (Cowdrey & Park, 2012), external aggression (Kingston, Clarke, & Remington, 2010), and aggressive behavior (Tull, Jakupcak, Paulson, & Gratz, 2007). Finally, in one study exploring EA in adolescent girls, EA predicted internalizing and externalizing symptoms even after controlling for relational aggression (Shea & Coyne, 2017). Overall, findings on the association between EA and various forms of psychopathology in adolescence suggest that EA is a crosscutting process within adolescent psychopathology (Sharp, Kalpakci, Mellick, Venta, & Temple, 2015).

EA has also been explicitly linked to BPD in adolescence. BPD is a serious psychiatric disorder characterized by impulsivity, instability in mood and identity, and impaired interpersonal relationships (American Psychiatric Association [APA], 2000, 2013). Recent studies have shown that BPD is a valid diagnosis in adolescence (e.g. Chanan, Sharp, Hoffman, 2017; Miller, Muehlenkamp, & Jacobson, 2008; Sharp & Romero, 2007). Importantly, EA has been linked to several constructs related specifically to borderline personality disorder (BPD). For example, Linehan's (1993) biosocial theory asserts that BPD is characterized by broad dysregulation across all aspects of emotional responding (e.g. emotion dysregulation, distress tolerance). EA may play a role in this biosocial model. Given that adolescents with BPD are more prone to emotion dysregulation and have lower tolerance for emotional distress (Crowell, Beauchaine, & Linehan, 2009; Linehan, 1993), this may lead to a greater tendency to avoid painful thoughts and feelings (i.e., experiential avoidance). However, engaging in EA is associated with greater dysregulation; therefore, engaging in EA is likely to only worsen dysregulation in BPD, which could lead to a negative cycle of both dysregulation and EA. In line with these theoretical links, previous studies examining the relationship between EA and BPD in adolescence have found that EA was significantly, positively associated with borderline pathology among psychiatric adolescents (Chapman, Specht, & Cellucci, 2005; Schramm, Venta, & Sharp, 2013), and that EA is a contributor to BPD symptom severity among young adults (Iverson, Follette, Pistorello, & Fruzzetti, 2012). Additionally, EA made a small but significant incremental contribution to borderline features above emotional dysregulation in psychiatric adolescents (Schramm et al., 2013). Finally, Sharp et al. (2015) showed in a large community sample that depressive and anxiety symptoms were no longer significantly related to EA when borderline features were included in the model, and that EA predicted levels of borderline features at a 1 year follow up, controlling for baseline levels of borderline, anxiety, and depressive symptoms. Overall, these findings suggest that there may be unique links between EA and borderline pathology in adolescence.

However, there are gaps in existing research testing associations between EA and borderline pathology compared to other psychiatric disorders. Though Sharp et al. (2015) demonstrated unique links between BPD and EA, the study was conducted in a community sample that most likely included few adolescents with clinically significant BPD

or internalizing problems. Understanding specific links between EA and BPD relative to other psychiatric disorders in a psychiatric sample is useful clinically because it may show EA to be an especially important treatment factor in youth with BPD and may thus improve understanding and treatment of borderline pathology during adolescence. To our knowledge, there has been no study directly comparing EA in clinical adolescents with BPD to clinical adolescents with other psychiatric disorders. Further, no study has concurrently compared EA across adolescents with BPD, adolescents with other psychiatric disorders, and healthy adolescents. Comparing EA across these three groups would allow us to evaluate whether EA impairment is specific to BPD within the context of typical adolescence. Beyond group comparisons, no studies to our knowledge have examined whether there is a unique association between EA and BPD symptoms over and above both internalizing *and* externalizing symptoms, which would further refine our understanding of how EA differentially relates to different forms of adolescent psychopathology.

Our study sought to fill the above gaps. Our first aim was to examine group differences in EA between adolescents who meet DSM-5 Section II defined criteria for BPD, compared to adolescents with other psychiatric disorders (non-BPD psychiatric group) and a community-based sample of healthy controls. In addition to testing between-group differences, our second aim was to take a more dimensional approach by examining the incremental value of EA symptoms over and above internalizing and externalizing pathology in relation to BPD symptoms in the full sample of healthy and clinical adolescents. We used linear regression analyses to test EA as a predictor of BPD features while controlling for levels of internalizing and externalizing psychopathology. This allowed us to tease apart whether EA and BPD have a unique association beyond that of internalizing and externalizing psychopathology. Gender, age, and ethnicity were included in preliminary analyses to evaluate whether they should be included in main analysis as covariates.

Methods

Participants

The sample included 692 adolescents between the ages of 12–17 years old, 64.5% female, $M_{age} = 15.20$ ($SD = 1.49$), including a group of psychiatric inpatient youth ($n = 197$ BPD and $n = 403$ non-BPD), and a group of healthy control adolescents ($n = 92$) recruited from the community. The psychiatric inpatient sample included 12- to 17 year-old youth admitted to the adolescent unit of a private psychiatric hospital in a large metro area in the Southwestern United States. The psychiatric sample included 197 youth ($M_{age} = 15.24$, $SD = 1.51$, 82.2% female) meeting DSM-5 Section II criteria for BPD as determined by the Childhood Interview for Borderline Personality Disorder (CIBPD; Zanarini, 2003), and 403 non-BPD psychiatric inpatient adolescents ($M_{age} = 15.38$, $SD = 1.39$, 56.1% female). Adolescent patients were eligible for the study if they had sufficient fluency in English to complete all research assessments. Exclusion criteria were a diagnosis of a psychotic disorder, IQ below 70, a diagnosis of an autism spectrum disorder (ASD), or due to clinician determination of inability to complete assessments. At each adolescent's admission to the unit, parents were approached for consent for the research study, and if given, adolescents were approached for assent. Of the 646 consecutive admissions, 46 adolescents were excluded for the aforementioned exclusion criteria, culminating in a final sample size

of 600 psychiatric adolescents. See [Table 1](#) for participant characteristics of the two psychiatric groups, including psychiatric diagnoses.

The healthy control sample included 92 healthy adolescents ($M_{\text{age}} = 14.36$, $SD = 1.61$, 60.0% female) recruited from a large metro area in the Southwestern United States, from urban schools and through the community via online advertising. Inclusion criteria were that youth were between the ages of 12–17, were literate in English, and had a living mother. Exclusion criteria for the healthy control group included low reading ability and psychopathology or use of psychiatric medications. Low reading ability was determined during the study appointment using the reading subtest of the Wide Range Achievement Test—Fourth Edition (WRAT-IV; Wilkinson & Robertson, 2006). Participants who scored below a 4th grade reading level on the WRAT were excluded. Psychopathology was determined in several ways. First, during the phone screen, the McLean Screening Instrument for BPD (MSI-BPD; Zanarini et al., 2003) was used to screen out for personality pathology based on parent report of child symptoms. Any use of psychiatric medication by the child or psychiatric diagnosis, as reported by the parent during the phone screen, also was used as a basis for exclusion. Finally, in order to ensure the “healthy controls” group reflected a non-psychiatric sample, participants were excluded from current data analyses if they completed the study but were found to be above the clinical cut off on the YSR ($T > 63$; Achenbach & Rescorla, 2001) or on the BPFSC (> 66 ; Chang, Sharp & Ha, 2011). Of 169 adolescents who participated in the study, 77 were excluded due to lack of consent, missing or corrupted data, being outside the age range, low reading ability, or to psychopathology or psychiatric status revealed during the study appointment, resulting in a final sample of 92 adolescents. See [Table 1](#) for participant characteristics of the healthy control sample.

Measures

Experiential avoidance

The Avoidance and Fusion Questionnaire for Youth (AFQ-Y; Greco et al., 2008) is a 17-item self-report questionnaire measuring psychological inflexibility in youth, which includes cognitive fusion, experiential avoidance, and inaction in response to unwanted internal experiences, in youth. The AFQ-Y was adapted from the Acceptance and

Table 1. Participant characteristics.

	BPD (<i>n</i> = 197, 28.5%)		Non-BPD psychiatric (<i>n</i> = 403, 58.2%)		Healthy controls (<i>n</i> = 92, 13.3%)		χ^2 or <i>F</i>	<i>p</i>
	<i>n</i> or <i>M</i>	% or <i>SD</i>	<i>n</i> or <i>M</i>	% or <i>SD</i>	<i>n</i> or <i>M</i>	% or <i>SD</i>		
Age	15.24	1.51	15.38	1.39	14.36	1.61	18.49	<.001
Female	162	82.0%	226	56.1%	58	63.0%	39.60	<.001
Ethnicity/Race							234.79	<.001
Hispanic/Latinx	13	6.6%	16	16.3%	17	18.5%		
Caucasian	142	72.1%	308	76.4%	20	21.7%		
African- American	4	2.0%	7	1.7%	38	41.3%		
Asian	6	3.0%	14	3.5%	2	2.2%		
Multiracial/ Other	13	6.6%	13	3.2%	15	16.3%		
Diagnosis								
Mood Disorder	137	69.5%	190	47.1%	–	–	31.22	<.001
Anxiety Disorder	134	68.0%	196	48.6%	–	–	22.95	<.001
Externalizing Disorder	108	54.8%	129	32.0%	–	–	31.18	<.001
Eating Disorder	27	13.7%	22	5.5%	–	–	12.28	<.001

Action Questionnaire, a measure used to assess the same constructs in adults (Hayes et al., 2004). The scale includes items such as “I must get rid of my worries and fears so I can have a good life” and “I wish I could wave a magic wand to make all my sadness go away”. Responses are scored on a five-point Likert scale, ranging from 0 = *not at all true* to 4 = *very true*. Higher total scores indicate greater experiential avoidance. Cronbach’s alpha for the total score was $\alpha = .89$.

Borderline personality disorder

The Childhood Interview for DSM-IV Borderline Personality Disorder (CI-BPD; Zanarini, 2003) is a semi-structured interview designed specifically to assess BPD in youth by assessing the nine DSM-IV criteria for BPD: symptoms of inappropriate anger, affective instability, chronic feelings of emptiness, identity disturbance, transient stress-related paranoid ideation or severe dissociative symptoms, fears of abandonment, recurrent suicidality or self-harm behavior, impulsivity, and intense interpersonal relationships. Trained interviewers rated symptoms “0” for absence of symptom, “1” for if the symptom is probably present, and “2” if the symptom is definitely present. A score of 2 on at least five out of nine criteria is required for a full diagnosis of BPD. The CI-BPD was adapted from the borderline module of the Diagnostic Interview for DSM-IV Personality Disorders (DIPD-IV, Zanarini, Frankenburg, Sickel, & Yong, 1996). In the current study, sample two-way agreement (0—BPD absent or sub-threshold; 1—BPD present) was calculated for 15.33% of the clinical sample ($n = 92$) based on ratings of independent raters. The kappa statistic indicated there was good agreement between raters, $\kappa = .74$, $p < .001$. In this study, CI-BPD served as the grouping variable, with those meeting at least five of nine criteria falling into the BPD group.

Borderline features

The Borderline Personality Features Scale for Children (BPFS-C; Crick, Murray-Close, & Woods, 2005) is a 24-item youth self-report measure examining borderline features in children and adolescents aged 9 and older. Features include: identity problems (*How I feel about myself changes a lot*), affective instability (*When I’m mad, I can’t control what I do*), negative qualities of peer relationships (*Lots of times, my friends and I are really mean to each other*), and self-harm (*When I get upset, I do things that aren’t good for me*). Items are measured on a 4-point Likert scale ranging from 1 (*not at all*) to 5 (*always true*). Higher scores indicate greater levels of borderline personality features. Cronbach’s alpha in this sample for the BPFS-C was $\alpha = .90$.

Internalizing and externalizing psychopathology

The Youth Self-Report (YSR; Achenbach & Rescorla, 2001) is a 112-item self-report questionnaire completed by adolescents measuring psychopathology in youth between the ages of 11 and 18. Items are scored on a three-point scale using 0 as “not true”, 1 as “somewhat or sometimes true”, and 2 as “very or often true”. For the present study, *T*-scores from Externalizing Problems and Internalizing Problems subscales of the YSR were used. The YSR has well-established reliability and validity (Achenbach & Rescorla, 2001).

Results

Descriptive and bivariate results

Participant characteristics by group are shown in Table 1. A Pearson chi-square test revealed that adolescents with BPD compared to the non-BPD psychiatric group and healthy controls were more likely to be female, $X^2 = 39.60, p < .001$. Age also differed significantly across groups ($F(2, 689) = 18.49, p < .001$), and post-hoc comparisons using Tukey's HSD test found that the healthy control group ($M_{age} = 14.36, SD = 1.61$) was on average significantly younger than the non-BPD psychiatric adolescents ($M_{age} = 15.38, SD = 1.39, p < .001$) and BPD ($M_{age} = 15.24, SD = 1.51, p < .001$) group. Finally, ethnicity significantly differed across the three groups, $X^2 = 234.79, p < .001$.

Descriptive statistics for key study variables by group are displayed in Table 2. An analysis of variance (ANOVA) was conducted to compare the three groups on YSR internalizing and externalizing problems. Results revealed significant between-group differences in internalizing ($F(2, 680) = 133.92, p < .001$) and externalizing ($F(2, 680) = 122.93, p < .001$) symptoms. Post-hoc comparisons using the Tukey HSD test revealed that, on average, adolescents with BPD had higher scores on YSR internalizing problems ($M = 71.9, SD = 9.76$) and externalizing problems ($M = 66.23, SD = 10.05$) than non-BPD psychiatric controls ($M_{internalizing} = 63.78, SD = 12.50; M_{externalizing} = 58.19, SD = 9.95$) and healthy controls ($M_{internalizing} = 47.53, SD = 7.78; M_{externalizing} = 47.02, SD = 8.42$). The non-BPD psychiatric group also had significantly higher scores on YSR internalizing and externalizing than healthy controls.

Bivariate associations between main study variables were tested using Pearson correlations. As seen in Table 3, EA (AFQ) was found to be significantly, positively correlated to BPFBS Borderline Features ($r = .65, p < .001$), YSR Internalizing Problems ($r = .72, p < .001$), and YSR Externalizing Problems ($r = .33, p < .001$). EA was also

Table 2. EA, borderline, and internalizing/externalizing scores across three groups.

	BPD (<i>n</i> = 197)		Non-BPD psychiatric (<i>n</i> = 403)		Healthy controls (<i>n</i> = 92)	
	<i>M</i>	(<i>SD</i>)	<i>M</i>	(<i>SD</i>)	<i>M</i>	(<i>SD</i>)
Experiential avoidance	36.43	12.73	27.00	13.77	15.64	8.09
Borderline personality features	80.68	13.35	64.79	13.96	48.91	7.99
Internalizing problems	71.19	10.23	63.78	12.58	47.53	7.78
Externalizing problems	66.23	10.05	58.19	9.95	47.02	8.42
Age	15.24	1.51	15.38	1.39	14.36	1.61

Table 3. Pearson correlations between main study variables.

Measure	1	2	3	4	5	6
1. Experiential avoidance	—					
2. Borderline personality features	.65**	—				
3. YSR internalizing problems	.72**	.64**	—			
4. YSR externalizing problems	.33**	.66**	.41**	—		
5. Age	.05	.02	.03	.13**	—	
6. Gender	-.17**	-.16**	-.05	.06*	.10*	—

** Correlation is significant at the .01 level (2-tailed).

* Correlation is significant at the .05 level (2-tailed).

Gender was dichotomously coded with 0 = female and 1 = male.

significantly related to gender ($r = -.17, p < .001$), such that girls reported higher EA than boys. There was no correlation found between EA and age ($r = .05, p = .17$).

Between-group differences in EA

An analysis of covariance (ANCOVA) was then conducted to compare EA among the three groups. We controlled for gender, age, and ethnicity in these analyses because the groups significantly differed on these variables. We did not control for internalizing and externalizing pathology in group analyses because of the inclusion of a non-BPD psychiatric group. In addition, because comorbidity is common among individuals with BPD, we believed that controlling for other diagnoses could make results less ecologically valid and less representative of “real-world” youth with BPD. Further, not controlling for internalizing and externalizing helped to ensure that there was enough differentiation between healthy controls and the non-BPD psychiatric groups. Finally, this decision was justified in that internalizing and externalizing were controlled in regression analyses when BPD is measured continuously, cutting across all three groups.

ANCOVA results demonstrated that all three groups significantly differed on EA levels after controlling for gender, ethnicity, and age (Figure 1), $F(2, 622) = 76.92, p < .001$. Results of contrast tests revealed that adolescents in the BPD group had a higher mean EA score compared to the healthy control group and the non-BPD psychiatric group. The non-BPD psychiatric group also had significantly higher EA scores than the healthy control group. See Table 2 for EA scores across groups. Of note, because ethnicity data was not available for all participants, the sample size for the ANCOVA was reduced to

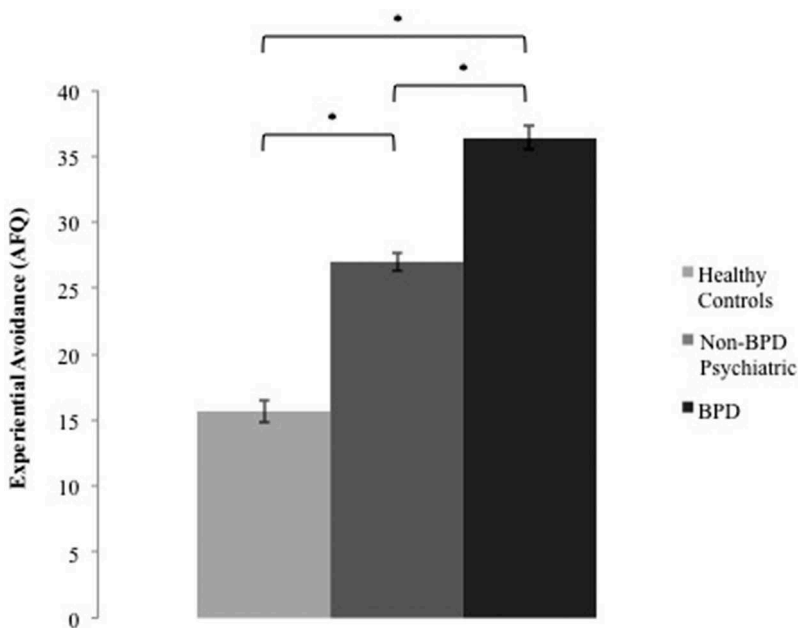


Figure 1. Levels of EA compared among adolescents with BPD, non-BPD psychiatric adolescents, and healthy control adolescents. * $p < .001$.

Table 4. Hierarchical regression models evaluating whether there is a unique association of EA and borderline features over and above internalizing and externalizing pathology.

	b	SE	β	t	p	R ² (adj.) (%)
DV = Borderline features						
Step 1						
Gender	−5.97	.82	−.17	−7.33	<.001	62.9 ^a
Internalizing problems	.53	.03	.43	16.67	<.001	
Externalizing problems	.72	.04	.50	19.36	<.001	
Step 2						
Gender	−4.38	.78	−.13	−5.63	<.001	67.6 ^b
Internalizing problems	.25	.04	.21	6.33	<.001	
Externalizing problems	.69	.04	.48	19.88	<.001	
Experiential avoidance	.37	.04	.32	10.04	<.001	

DV = dependent variable.

^a Model significant, $F(3, 674) = 382.80, p < .001$.

^b Model significant, $F(4, 673) = 354.85, p < .001, R^2$ change significant, $p < .001$.

Tolerance values were all .45 or greater. VIF values were all 2.23 or lower.

$N = 628$, including 92 healthy control youth, 358 non-BPD psychiatric youth, and 178 youth with BPD. Group comparison results were not different when ethnicity was removed as a covariate and all $N = 692$ youth were included.

Incremental association of BPD features to EA above and beyond internalizing and externalizing psychopathology

Next, a hierarchical linear regression model (Table 4) was tested to examine the unique association of EA with BPD, above and beyond the effects of internalizing and externalizing pathology. Because gender was significantly related to BPD features in bivariate analysis, it was included as a covariate in hierarchical regression analyses. In Step 1, internalizing and externalizing problems were entered as independent variables, with BPD features as the dependent variable, and gender included as a covariate. In Step 1, the overall model was significant, and both internalizing and externalizing problems were significantly, positively related to BPD features. At Step 2, EA was added to the model as an additional independent variable. In this step, EA was also significantly related to BPD features. Both internalizing and externalizing problems remained significant in association with EA in Step 2. The overall model was also found to be significant in Step 2. The proportion of variance in BPD features explained by the model significantly increased with the addition of EA ($F(1, 673) = 100.85, p < .001$). The adjusted R^2 value in Step 1 was 62.9%, and 67.6% in Step 2, signifying a 4.7% change in explained variance in BPD features due to EA.

Discussion

The aims of this study were to 1) examine for the first time experiential avoidance (EA) in adolescent inpatients with BPD, compared to both adolescent psychiatric inpatients without BPD and non-clinical adolescent healthy controls, and 2) test the unique association between EA and BPD above and beyond internalizing and externalizing psychopathology. The overall goal was to further explain and understand how EA uniquely relates to BPD in

adolescents. Further, evaluating whether there are specific links between EA and BPD outside of other pathology in adolescence may improve the conceptualization of adolescent BPD as well as inform prevention and treatment for adolescent BPD, which is a high public healthy priority (Chanen, Sharp, & Hoffman, 2017).

Results indicated that inpatient adolescents with BPD had significantly higher levels of EA than inpatient adolescents without BPD and healthy controls. The non-BPD psychiatric group also had higher levels of EA than non-clinical adolescents. Further, results demonstrated that EA accounted for a significant change in variance accounted for in BPD features, over and above the influence of internalizing and externalizing pathology.

The finding that EA is specifically related to BPD in adolescents is in line with previous research suggesting that there is a unique link between EA and BPD (Schramm et al., 2013), as well as previous studies in young adults and adolescents showing that BPD symptoms are positively associated with EA (Chapman et al., 2005). More broadly, this finding is in line with previous research showing that BPD is associated with behaviors often associated with EA, such as less social support seeking and more avoidance/escape behaviors in response to a recent stressor (Bijttebier & Vertommen, 1999). In addition, this finding aligns with the biosocial model of BPD (Linehan, 1993) in that youth with BPD are thought to have dysregulation across domains of emotion regulation. EA is a strategy for avoiding aversive private experiences, including emotions, which tends to lead to greater emotion dysregulation; therefore it makes sense that, in the context of high emotion dysregulation and low distress tolerance in youth with BPD, there would also be a greater tendency toward EA. This result contributes to the conceptualization of adolescent BPD as it suggests that high levels of EA may be one of the ways to pinpoint that an adolescent is at risk for BPD or borderline features. Future work should also examine whether EA plays a role in the development of adolescent BPD.

EA has previously been positively linked to many different types of pathology in adolescents, including anxiety disorders (Venta et al., 2012), depression (Berking et al., 2009), eating disorders (Cowdrey & Park, 2012), and external aggression (Kingston et al., 2010), suggesting that EA is a transdiagnostic psychological mechanism (Sharp et al., 2015). Results strengthened the body of literature suggesting EA is a cross-cutting psychological factor in adolescent psychopathology, as both clinical groups (BPD and the non-BPD psychiatric group) in the present study had higher levels of EA compared to the healthy sample.

Beyond this, however, results indicated higher levels of EA are uniquely associated with adolescent BPD, suggesting that there is a more specific relationship between experiential avoidance and BPD in adolescents. Our findings therefore extend existing knowledge by demonstrating the unique relationship between EA and borderline features, when measured both categorically and dimensionally, in adolescents even when accounting for both internalizing and externalizing pathology. Previous research (Sharp et al., 2015) had only accounted for internalizing psychopathology when testing unique links between BPD and EA in adolescents.

Clinically, results indicate that reducing EA may aid in treating or preventing BPD in adolescents. More specifically, treatments targeting reduction in EA levels in adolescents with borderline features may be beneficial in reducing negative features related to BPD. Theoretically, this may be one reason why treatment models that target concepts

related to EA and other emotion dysregulation concepts (e.g. Dialectical Behavior Therapy, Linehan, 1993; Mentalization-Based Treatment; Bateman & Fonagy, 1999) are widely utilized as useful treatment for individuals with borderline features, and why Acceptance and Commitment Therapy (ACT; Hayes et al., 2006), which has a main focus on reducing EA, has also shown effects for reducing borderline features (Gratz & Gunderson, 2006). Further, it underlines the importance of targeting EA among adolescents with borderline features through the use of acceptance, mindfulness, and other emotion regulation strategies. In particular, acceptance of aversive thoughts, feelings, and private experiences, as the counterpoint to EA, may need to be targeted more specifically in treatment for adolescents with BPD. In DBT, for example, acceptance is taught in the context of mindfulness skills (i.e., contact with present experience), distress tolerance skills (i.e., accepting what cannot be changed), and emotion regulation skills, as well in the dialectic of acceptance versus change (Linehan, 1993; MacPherson, Cheavens, & Fristad, 2013). However, it may be beneficial to increase explicit skill-building for acceptance in DBT, or even to address it as a separate skill, as a means of reducing EA. Although this is an empirical question beyond the scope of the current study, future research is warranted that examines EA reduction as a possible avenue in the treatment of BPD in adolescents.

There are several limitations to consider in the present study. Data collected, such as the AFQ and BPPS-C, was obtained via self-report, thus it is possible the observed relationships in the linear regression analyses were in part a function of shared method variance. However, a semi-structured clinical interview was utilized as an assessment of BPD diagnosis for group comparison analyses, which strengthens findings. Second, the clinical samples from this study consisted of disproportionately Caucasian adolescents of high socioeconomic status, thus limiting the generalizability of our findings. Additionally, the demographics of the clinical samples did not match the healthy sample, which was comprised of more racially, ethnically, and socioeconomically diverse adolescents. Future work should strive to match groups on race, ethnicity, and socioeconomic status.

Overall, the current study is the first to concurrently compare adolescents with BPD to non-BPD psychiatric controls and healthy controls on levels of experiential avoidance. Findings suggest that in addition to being an underlying cross-cutting psychological mechanism for adolescent psychopathology, experiential avoidance also has specific links to BPD such that youth with BPD, or higher levels of borderline features, evidence higher levels of EA, and this is not due to the effects of other forms of psychopathology. These findings pinpoint EA as an important risk marker and possible target for prevention and intervention for adolescent BPD.

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