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# Development of Borderline Personality Disorder in Adolescence and Young Adulthood: Introduction to the Special Section

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## Abstract

Recognizable symptoms and features of borderline personality disorder (BPD) appear during adolescence. However, there has been resistance to diagnose or research this disorder prior to adulthood because of clinical lore that BPD is a long-standing illness and that personality traits are not stable until adulthood. This has resulted in little information regarding the development of and risk factors for BPD in youth. The goal of this special section is to examine the development of BPD in adolescence and young adulthood using a broad collection of approaches, including a theoretical review paper, two prospective studies, and a multi-method cross-sectional study. This body of work provides new insights into vulnerabilities that may transact with early attachment relationships and experiences to predict the emergence of BPD in adolescence and young adulthood. These papers also point to future research that is needed to better understand the etiology, development, and course of BPD.

Borderline personality disorder (BPD) is a complex and extremely debilitating psychiatric disorder that is difficult for clinicians to treat and researchers to study. These difficulties likely stem, at least in part, from the heterogeneity of BPD, which has been characterized by four features that emerge from factor analytic studies and content evaluation of the DSM criteria: emotion dysregulation, impulsivity, interpersonal turmoil, as well as cognitive and identity disturbances (American Psychiatric Association, 2000; Crick, Murray-Close, & Woods, 2005; Linehan, 1993; Sanislow et al., 2002). The diagnostic system contributes to the heterogeneity as no single criterion is required to be present for this diagnosis. The presence of any 5 out of the 9 criteria warrants a diagnosis, resulting in 126 possible combinations of symptoms that would result in a diagnosis. Moreover, the high rate of concurrent comorbid psychiatric disorders and physical health problems leads to complications that must be considered when providing treatment or designing a research study for this population (Frankenburg & Zanarini, 2006; Grant et al., 2008).

Furthermore, individuals with BPD are likely to face a host of negative outcomes, including social stigma (especially within the mental health system), poor treatment response, and poor social and occupational outcomes (Bender et al., 2001; Skodol et al., 2002; Zweig-Frank & Paris, 2002). The day-to-day life of those with this disorder is fraught with high levels of misery, which often endures even after other symptoms remit (Zanarini, Frankenburg, DeLuca, Hennen, Khera, & Gunderson, 1998; Zanarini, Frankenburg, Hennen, & Silk, 2003) and likely drives high rates of treatment utilization (Bagge, Stepp, & Trull, 2005). Even though this disorder affects about only 1 in every 100-200 (0.5-1%) individuals (Lenzenweger, Loranger, Korhne, & Nett, 1997), those with BPD are disproportionately represented in mental health treatment facilities, accounting for 10-20% of all outpatients and 15% of inpatients (Gunderson, 2001), highlighting the enormous burden that this

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disorder places on our health care system. When individuals are in the most acute phase of this disorder and engaging in suicide attempts and other impulsive behaviors, frequent emergency room visits, inpatient hospitalizations, and long-term, intensive care are common (Hörz, Zanarini, Frankenburg, Reich, & Fitzmaurice, 2010). Although rates of this disorder do not appear to vary by gender in the community, in clinical settings 75% of those carrying a BPD diagnosis are women (Grant et al., 2008; Skodol & Bender, 2003). This disparity raises questions about gender differences in the etiology and development of BPD as well as in differential outcomes and impairment for men and women caused by traits and features associated with BPD.

The debilitating nature of this disorder and distress experienced by and imposed upon those living with the afflicted speak to the urgent need with which research is needed to understand the pathogenesis, early risk factors, as well as the developmental course of BPD. Until recently, little attention has been paid to this disorder in youth. By understanding these factors and how the disorder develops in adolescence and young adulthood, we can hopefully reduce and ultimately prevent such suffering.

## BPD During Adolescence

Recognizable symptoms and features of BPD are likely to first manifest during adolescence (Bradley, Conklin, & Westen, 2005; Westen & Chang, 2000). As adolescents are expected to engage in more independent emotion regulation and self-control strategies, deficits in self-regulatory skills become more apparent during this developmental period. Specifically, self-injury, a hallmark feature of this disorder, has been reported to onset by adolescence in 2/3 of BPD patients (Zanarini, Frankenburg, Ridolfi, Jager-Hyman, Hennen, & Gunderson, 2006). Additionally, other impulsive and risk-taking behaviors, such as substance use and risky sexual behavior, also increase during adolescence (Steinberg, 2008).

As BPD symptoms interfere with normative developmental processes of increasing autonomy and self-control, youth with these symptoms are at increased risk for poor outcomes during adulthood. For example, BPD symptoms during the college years have been found to be associated with poor social and academic outcomes (Bagge, Nickell, Stepp, Durrett, Jackson, & Trull, 2004; Trull, Useda, Conforti, & Doan, 1997). BPD symptoms during adolescence have also been shown to predict worse functioning over decades. In a large community sample, higher levels of BPD symptoms during adolescence predicted less productive adult role functioning over 20 years, including poor academic and occupational achievements (Winograd, Cohen, & Chen, 2008). BPD symptoms also predicted poor social and relationship functioning, including lack of social support and less involvement in romantic relationships well into adulthood. Thus, it does not appear that BPD symptoms in adolescence and early adulthood reflect a transitory problem in functioning, but may indicate a poor prognosis for some youth.

There is increasing evidence that BPD can be reliably and meaningfully diagnosed during adolescence (Miller, Muehlenkamp, & Jacobson, 2008). However, there is resistance to diagnose adolescents with this disorder, especially in clinical practice (Griffiths, 2011). The fear that surrounds BPD in many mental health treatment facilities coupled with the lack of access to treatment for youth with BPD may contribute to the unwillingness to diagnose this condition prior to adulthood. However, a proper diagnosis is necessary for appropriate treatment. Without awareness of the number of youth in need, it is unlikely that more services will be made available for this population. Furthermore, the reluctance to diagnose or study BPD in youth results from the notion that personality traits are not stable until adulthood. However, the long-term stability of personality disorders has recently been called into question for both adolescent and adult clinical samples. It appears that BPD remits

within 3 years for most individuals (Mattanah, Becker, Levy, Edell, & McGlashan, 1995; Meijer, Goedhart, & Treffers, 1998; Shea et al., 2002; Zanarini et al., 2003). It is important to note that when studies have considered a more dimensional approach toward classification, the stability and reliability of symptoms and features is higher (Clark, 2009). Specifically, evidence suggests that although there is a decline in the mean level of BPD traits from adolescence into young adulthood, the rank-order stability of these traits is high during this developmental period and parallels the stability of BPD traits found during adulthood (Bornovalova, Hicks, Iacono, & McGue, 2009; Lenzenweger, 1999).

Given the impairment associated with BPD symptoms, it is not surprising that individuals with BPD are likely to first seek treatment during adolescence. In a longitudinal study of adults with BPD, the reported mean age at which individuals sought treatment was 17.3 years (*SD*=6.2 years; Zanarini, Frankenburg, Hennen, Reich, & Silk, 2006). Several clinical trials have been conducted with adolescents who have BPD and have been shown to be effective in reducing symptoms (Chanen et al., 2008; Klein & Miller, 2011). In sum, these findings highlight the need for assessment and treatment services for BPD during this developmental period. Early detection and treatment may lead to improved outcomes for these youth.

The articles in this special section shed light on the development of and risk factors for BPD, with a focus on the adolescent and young adulthood period. One theoretical paper extends our understanding of the transactional nature between early attachment experiences and emotion regulation to help explain the development of emotion dysregulation that is a key component of the manifestation of BPD during adolescence (Hughes, Crowell, Uyeji, & Coan, this issue). Two empirical articles use longitudinal data to identify childhood psychiatric disorders that are risk factors for the development of BPD during adolescence and young adulthood in boys and girls, separately (Burke & Stepp, this issue; Stepp, Burke, et al., this issue). Finally, Crowell and colleagues (this issue) use a multi-method approach to identify markers that distinguish adolescent females who engage in self-injury from those with major depressive disorder to identify early markers of BPD.

## Extending Social Baseline Theory to Explain the Development of Emotion Dysregulation in BPD

Given the importance of insecure attachment and emotion dysregulation in BPD, delineating a model that accounts for the complex interplay between these processes has important implications for our understanding of the development of this disorder. Hughes and colleagues (this issue) extend social baseline theory, a theory regarding the integration of these two processes, as a means to explain the development of BPD. Specifically, the neural mechanisms that mediate the relation between early attachment relationships and the development of emotion regulation (or dysregulation) are explicated. The authors argue that emotion regulation is a costly biological process and that the experience and expectation of secure relationships serve to offset some of this burden. In the absence of such relationships that serve to co-regulate emotions, individuals will deplete their cognitive resources, cascading into further problems with emotion regulation, behavioral control, and interpersonal functioning.

Consistent with the tenets of social baseline theory, adults with BPD often report that caretakers were unavailable or unpredictable in providing emotional support (Gunderson & Lyoo, 1997; Weaver & Clum, 1993). Thus, the attachment style of patients with BPD is overwhelmingly characterized as one of anxiety and preoccupation, resulting in expectations that others cannot be trusted or relied upon to provide emotional support. The over-taxation of the emotion-related cognitive and biological systems leads to ineffective attempts at

emotion regulation and leads to problems in other areas of functioning, including impulse control.

Although integral to the development of many other characteristics of the disorder, emotional dysregulation has traditionally been examined in isolation of other features, ignoring the larger environmental context in which this developmental process occurs. The application of social baseline theory to BPD integrates emotional and interpersonal functioning into a coherent developmental model of BPD.

## ADHD and ODD Confer Risk for BPD in Adolescence and Young Adulthood

Common factors that underlie attention deficit hyperactivity disorder (ADHD) and BPD, including behavioral and neurocognitive impairments, as well as oppositional defiant disorder (ODD) and BPD, such as affective and interpersonal disturbances, point to possible developmental links between these childhood disorders and BPD. Two papers in this section examine ODD and ADHD as childhood risk factors for BPD in adolescence and young adulthood. Interestingly, both papers found a similar pattern of results even though the samples were quite unique, with one consisting of a clinical sample of boys and another comprising a high risk community sample of girls. First, Burke and Stepp (this section) used prospective data from the Developmental Trends Study (Loeber, Green, Lahey, Frick, & McBurnett, 2000), a clinic-referred sample of 177 boys, to test relationships among childhood psychiatric disorders and BPD in young adulthood. They found that childhood and adolescent symptoms of ODD and ADHD as well as marijuana use predicted BPD symptoms at age 24. Upon further examination regarding which factors of ODD predicted BPD, the oppositional behavioral symptoms (e.g., argues), but not the affective symptoms (e.g., angry), were uniquely related to BPD even after accounting for symptoms of other personality disorders. The findings regarding the lack of prospective association between certain childhood psychiatric disorders and BPD are also of interest. Specifically, conduct disorder (CD), depression, and anxiety were not related to BPD symptoms in young adulthood. Additionally, when other personality disorder symptoms were included in analyses, ADHD and marijuana use were no longer related. These findings suggest a unique prospective association between the behavioral dimension of ODD and BPD in young adult men.

Stepp and colleagues (this issue) provide another examination of this topic using data from the Pittsburgh Girls Study (Keenan et al., 2010), an accelerated longitudinal cohort design which oversampled families living in poverty. This study used data from girls in the two oldest cohorts ($N$=1,233) and included data spanning ages 8 through 14 years. These authors examined the childhood and adolescent developmental trajectories of ADHD and ODD symptoms in predicting BPD symptoms during adolescence. Given the overlap among symptoms of childhood psychiatric disorders and BPD symptoms, this study rigorously controlled childhood symptoms of CD and depression. Additionally, to examine whether ADHD and ODD trajectories would specifically predict BPD symptoms during adolescence, adolescent symptoms of CD and depression were included as outcomes. The authors found that ADHD and ODD symptoms at age 8 predicted BPD symptoms at age 14. Moreover, the rate of growth in ADHD symptoms from ages 8-10 years and the rate of growth in ODD symptoms from age 10-13 predicted BPD symptoms at age 14. These patterns of prospective associations were not found for CD and depression at age 14. Specifically, only the age 8 ADHD and ODD symptoms predicted CD at age 14, while only the rate of growth in ODD from ages 10-13 predicted depression at age 14. These results highlight a potential developmental pathway from childhood ADHD and ODD to BPD in adolescence. Increasing ADHD symptoms from ages 8-10 years and increasing ODD symptoms from 10-13 years may indicate risk for girls who will develop BPD symptoms in adolescence.

These two papers highlight specific childhood externalizing disorders that may place youth at risk for BPD. These risk factors appear to impact girls and boys similarly and highlight the shared features among children with ADHD and ODD who may later develop BPD.

## Differentiating Adolescent Self-injury from Depression: Implications for the Development of BPD

Crowell, Beuachaine, and Linehan (2009) described a developmental model of BPD and posit that two traits, impulsivity and emotion dysregulation, are vulnerability factors for the disorder. By adolescence, these traits are thought to manifest as more recognizable features of BPD, such as self-injury. Markers that distinguish self-injury from depression during adolescence could also be early markers of BPD. To identify these markers, Crowell and colleagues (this issue) examined the underlying vulnerabilities of both emotion dysregulation and impulsivity in adolescents who engaged in self-injury. Consistent with the notion that this behavior may be a putative marker for eventual BPD, they found several factors related to both emotional dysregulation and impulsivity distinguished self-injuring adolescents from depressed and healthy comparisons. Specifically, the authors found that adolescent females who engaged in self-injury were characterized by more self-reported emotion dysregulation and impulsivity as well as higher levels of internalizing and externalizing psychopathology compared to depressed and healthy adolescents. Self-injuring adolescents also had lower resting electrodermal reactivity, a biological marker of disinhibition, compared to both comparison groups. The authors conclude that the developmental course of self-injury and depression differ in their trait level of impulsivity and resulting vulnerability to externalizing problems.

In sum, the articles in this special issue provide information that informs etiological models of BPD as well as possible outcomes for children with specific psychiatric disorders and risk factors. It is hoped that this work will stimulate discussion and spark interest in this area of research. The extension of the social baseline theory highlights the importance of considering the interpersonal context in which emotional dysregulation may develop. The research on BPD during adolescence and young adulthood demonstrates that ODD and ADHD as well as emotional dysregulation and disinhibition may confer risk BPD in youth. Taken together, these papers offer new insights regarding the complex interplay between disinhibition and emotion dysregulation in the context of dysfunctional early attachment relationships as setting the stage for the emergence of BPD during adolescence and young adulthood. Future work is needed to test how these childhood vulnerabilities transact with early attachment relationships and experiences to predict BPD during adolescence.

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