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First empirical evaluation of the link between attachment, social cognition and borderline features in adolescents

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Abstract

Objective: Several developmental models of borderline personality disorder (BPD) emphasize the role of disrupted interpersonal relationships or insecure attachment. As yet, attachment quality and the mechanisms by which insecure attachment relates to borderline features in adolescents have not been investigated. In this study, we used a multiple mediational approach to examine the cross-sectional interplay between attachment, social cognition (in particular hypermentalizing), emotion dysregulation, and borderline features in adolescence, controlling for internalizing and externalizing symptoms.

Methods: The sample included 259 consecutive admissions to an adolescent inpatient unit (M_{age} = 15.42, *SD* = 1.43; 63.1% female). The Child Attachment Interview (CAI) was used to obtain a dimensional index of overall coherence of the attachment narrative. An experimental task was used to assess hypermentalizing, alongside self-report measures of emotion dyregulation and BPD.

Results: Our findings suggested that, in a multiple mediation model, hypermentalizing and emotion dysregulation together mediated the relation between attachment coherence and borderline features, but that this effect was driven by hypermentalizing; that is, emotion dysregulation failed to mediate the link between attachment coherence and borderline features while hypermentalizing demonstrated mediational effects.

Conclusions: The study provides the first empirical evidence of well-established theoretical approaches to the development of BPD.

1. Introduction

Despite historical concerns about the validity of the construct of borderline personality disorder (BPD) in adolescence [1], there is now a general consensus that it constitutes a valid and reliable diagnosis [2,3]. Evidence in support of the diagnosis in adolescence includes longitudinal continuity, a genetic basis, overlap between adolescent and adult BPD in terms of the latent variables underlying symptoms and the risk factors associated with BPD, and evidence for marked separation of course and outcome of adolescent BPD and other psychiatric disorders [4]. In adolescence, BPD affects 11% of psychiatric outpatients [5] and 30%–49% of inpatients [2,6]. Populations diagnosed with BPD have increased rates of hospitalization [7], have poor clinical and psychosocial functioning [8], and remain a challenging group to treat [9]. Furthermore, a diagnosis of BPD may negatively impact an adolescent's ability to achieve important developmental milestones as they move into early adulthood [10]. Taken together, these observations strongly suggest that early intervention is important to prevent entrenchment of psychopathology over time.

The identification of factors that may contribute to the causation, maintenance or exacerbation of a disorder is important to advance treatment [11]. Disrupted interpersonal

Abbreviations: BPD, borderline personality disorder; BPFSC, Borderline Personality Disorder Features Scale for Children; CAI, Child Attachment Interview; DERS, Difficulties in Emotion Regulation Scale; MASC, Movie Assessment of Social Cognition; VIF, variance inflation factor.

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relationships and insecure attachment have long been described as important correlates and etiological factors of borderline pathology [12,13]. Empirical evidence has supported the link between insecure attachment and BPD cross-sectionally and retrospectively in adults [14,15], and prospective longitudinal studies have shown that attachment disturbance in infancy and adolescence predicts BPD symptoms in adulthood [16–18]. However, the cross-sectional relation between attachment and borderline features in adolescents is yet to be examined.

While examining the cross-sectional link between adolescent attachment and borderline features is in itself important, such an understanding would be incomplete without considering underlying mechanisms. Two of the most likely mechanisms by which attachment may affect the development of BPD are social cognition (or mentalization) and emotion dysregulation. Mentalizing is defined as a metacognitive capacity to think about one's own thoughts and feelings and those of others as one attempts to predict and understand behavior [19]. It involves attributing mental states (e.g. emotions, desires, beliefs) to self and others and forms the basis for attachment relationships and the development of self [20,21]. Mentalizing includes both interpersonal ("other") and intrapersonal ("self") processing and involves both cognitive and emotional processing. It may be seen as the end-result of optimal meta-cognitive processing, although the latter is conceived of as a broader construct [22]. Due to the multi-component nature of mentalization, it is thought that different components of mentalization may be uniquely affected in certain disorders [23,24]. The mentalization-based theory of BPD as described by Fonagy and colleagues [20,21,25,26] posits that impairment in all the facets of mentalizing capacity partly explains the interpersonal difficulties associated with BPD. Moreover, Fonagy and colleagues have argued that disruptions of early attachment experiences can derail social-cognitive (or mentalizing) development, thereby leading to BPD. While prior studies support the link between mentalizing and BPD in adults (see Sharp and Sieswerda [27] for a review) and, recently, adolescents [28,29], to our knowledge, no studies have directly tested a model in which attachment insecurity is associated with mentalizing impairment, thereby potentiating increases in levels of borderline features. Moreover, while evidence exists for the link between attachment security and mentalizing in infants [30,31] and pre-adolescent children [32,33], there is a lack of empirical evidence in adolescents [34].

The second likely mechanism by which attachment insecurity may affect the development of borderline features lies at the basis of Linehan's [35] developmental model of BPD. Linehan suggested that BPD is primarily a disorder of emotion dysregulation that emerges from transactions between biological vulnerabilities (heightened emotional intensity) and specific environmental influences (an invalidating developmental environment). Linehan's emphasis on the interaction between emotional processing and the attachment environment makes sense against the background of decades of developmental research supporting the link between attachment and emotion regulation [36,37]. These studies have shown that the proximity and responsiveness of attachment figures support a developing child's emotional stability, while suboptimal dyadic interactions elicit emotional disequilibrium, thereby disrupting the optimal development of the child's regulatory strategies. Intensified pursuits of proximity, non-acceptance of attachment needs, and contradictory oscillations between the two, as routinely seen in BPD, are understood as regulation strategies developed to preserve relationships with insufficiently sensitive caregivers and buffer against adverse emotional sequelae [38]. While a large literature now supports the link between emotion dysregulation and BPD in adults (see Putnam and Silk [39]), with emerging literature in adolescence [40], studies examining the interplay between attachment and emotion dysregulation in adolescents are almost non-existent.

In this study, we used a multiple mediational approach to examine the cross-sectional interplay between attachment, mentalizing, emotion dysregulation and borderline features in adolescence. In so doing, we extend prior studies in three important ways. First, we include an interview-based measure of attachment, and emphasize a focus on disorganization of attachment because prior studies have suggested this to be particularly relevant to BPD [14]. To retain a dimensional approach to attachment [41], we used the overall coherence of the attachment narrative, as assessed by the Child Attachment Interview (CAI) [42], as an index of attachment disorganization. The use of this scale is supported by psychometric studies on the CAI demonstrating that this scale represents a central dimension determining attachment classification with low scores indicative of a wide range of distortions in the narrative including idealization and anger [43].

Second, in selecting a social-cognitive construct that may be particularly relevant to BPD, we focus on the construct of hypermentalizing. This rationale is based on prior studies [29,44,45] using the Movie for the Assessment of Social Cognition (MASC) [55] in adolescents with borderline features to demonstrate an anomaly of mentalization—hypermentalizing. Hypermentalizing is a social-cognitive process that involves making assumptions about other people's mental states that go beyond observable data [46]. As such, it involves overattribution of mental states to others and their likely misinterpretation. Hypermentalizing is therefore by its very nature indicative of a metacognitive deficit since an individual engaging in hypermentalizing is failing to attain a higher-order representation from which to question his/her own belief in service of generating an alternative hypothesis regarding a distressing situation [24,47]. More specifically, hypermentalizing reflects a lack of metacognitive differentiation [47] because representation is conflated with reality.

Third, in assessing emotion dysregulation we make use of Gratz and Roemer's [48] conceptual model of emotion