Borderline Personality Features and Implicit Shame-Prone Self-Concept in Middle Childhood and Early Adolescence

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Does the concept of borderline personality features have clinical utility in childhood?

David J. Hawes

Purpose of review
Phenotypic features of borderline personality disorder may first emerge during childhood, alongside symptoms of common externalizing and internalizing disorders. Children with these borderline personality features (BPF) are, therefore, likely to come into contact with clinical services prior to adolescence. This raises the question of whether BPF may be clinically informative with respect to the formulation and treatment of childhood psychopathology.

Recent findings
BPF in late childhood appear to be highly heritable, while also predicted by environmental risk factors that overlap with those related to both externalizing and internalizing disorders. These risk factors include hostile parenting, maternal insensitivity to infant attachment cues, and early peer victimization, thereby implicating both family and peer processes that play out across early development. Children with BPF appear to be further characterized by social–cognitive factors including social perspective coordination deficits, a shame-prone self-concept, and hypermentalizing, which may represent potential therapeutic targets.

Summary
Clinical research into the implications of BPF for the treatment of childhood psychopathology is a current priority. It is proposed that the research designs that have contributed to recent evidence for the clinical utility of childhood psychopathic traits may likewise aid in understanding the potential clinical utility of BPF in children.

Keywords
borderline personality disorder, callous-unemotional traits, children, psychopathy

INTRODUCTION
The importance of early intervention for borderline personality disorder (BPD) is now widely recognized, and has driven much research into the developmental origins of the disorder.

There is now considerable evidence that diagnoses of BPD in adulthood are likely to be preceded in childhood and adolescence by symptoms of common externalizing and internalizing disorders, most notably attention deficit hyperactivity disorder (ADHD) and oppositional defiant disorder (ODD) [1,2,3]. At the same time, developmental research has indicated that phenotypic features of BPD may first emerge during childhood, alongside the symptoms of such disorders [4,5,6]. Children with borderline personality features (BPF) are, therefore, likely to come into contact with clinical services prior to adolescence, albeit with presentations that resemble common childhood disorders. This raises the question of whether BPF may be clinically informative with respect to the formulation and treatment of childhood psychopathology. The current review examines the emerging evidence base for the clinical utility of BPF in children, and recent advances in broader developmental research into personality-based dysfunction that may inform clinical research and perspectives on the topic.

BORDERLINE PERSONALITY FEATURES AND CHILDHOOD DYSFUNCTION
The measurement of BPF in children and adolescents has been a focus of increasing psychometric research in recent years, with validated measures...
such as the Borderline Personality Features Scale for Children (BPFSC; 6) providing means of operationalizing these features in children as young as 9 years. The domains of BPF indexed by the BPFSC, and their corresponding items, include affective instability (e.g., ‘I go back and forth between different feelings, like being mad or sad or happy.’); identity problems (e.g., ‘I feel that there is something important missing about me, but I don’t know what it is.’); negative relationships (e.g., ‘I’ve picked friends who have treated me badly.’); and self-harm (e.g., ‘When I get upset, I do things that aren’t good for me.’).

There is growing evidence that BPF demonstrate incremental validity in the context of child and adolescent psychopathology, accounting for dysfunction that is not explained by the general symptoms of externalizing or internalizing disorders. The most extensive evidence for this has been reported for adolescents (e.g., [7,8]), yet research with children as young as age 9 has found BPF to be uniquely associated with relational aggression [6]. Evidence regarding self-harm has been particularly compelling, with BPF found to account for suicidal ideation and self-injury in early adolescence, independent of comorbid mood disorders [9,10]. Such evidence includes findings that BPF uniquely predict an increased frequency and an earlier onset of suicide ideation between the ages of 12 and 17 [11].

**Childhood Risk Processes and Borderline Personality Features**

Emerging evidence suggests that the problem trajectories of children with BPF are somewhat distinct from those that characterize the development of internalizing and externalizing disorders in the absence of BPF, and implicate both shared and unique risk processes. In recent longitudinal research, BPF at age 12 were found to be highly heritable, while also associated with exposure to earlier physical maltreatment and maternal negative expressed emotion [5]. Likewise, a longitudinal study by Winsper et al. [12] found that BPF at age 11 years were predicted by early family adversity during pregnancy, and early parenting characterized by hostility and resentment. Such parenting was found to contribute in part to BPF at age 12 by increasing risk for symptoms of other childhood disorders at age 7, as well as operating on BPF directly. In another recent longitudinal study, maternal withdrawal to infant attachment cues, as coded at 18 months of age, was found to predict BPF in late adolescence, independent of childhood abuse and mood disorder symptoms [13]. Such evidence is consistent with the theories of a diathesis-stress pathway to BPD involving an interaction between a child’s genetic vulnerability and a harsh, invalidating family environment characterized by disrupted attachment relationships [14]. Peer socialization has also been implicated in risk processes for BPF in childhood, with peer bullying between the ages of 4 and 10 found to predict BPF at age 11.8 years, independent of prenatal adversity, family dysfunction, sexual abuse, and other forms of psychopathology [15]. This is consistent with the findings elsewhere that have associated bullying with self-injury among 11-year olds [16].

Various cognitive risk factors associated with childhood symptoms of internalizing and externalizing disorders also appear to contribute to risk for BPF. These include executive function deficits, which have been shown to predict BPF independently of maltreatment, among children aged 6–12 years [17]. With respect to the processing of emotional stimuli, youth with BPF (aged 15–24 years) have been found to exhibit an attentional bias toward fearful faces, and greater difficulty disengaging attention from such stimuli [18]. Efforts to escape or avoid subjective experiences involving uncomfortable emotions, thoughts, or urges – often termed experiential avoidance – were also found to be associated with BPF in patients aged 12–17 years [19]. Experiential avoidance was further found to mediate the association between emotion regulation difficulties and BPF. In terms of emotion recognition, Robin et al. [20] recently reported that clinic-referred adolescents with BPD showed reduced sensitivity to subtle facial expressions of anger and happiness compared with healthy controls, while showing no difficulty recognizing fully expressed emotions. However, data
regarding emotion recognition deficits have been mixed [21]. Research into social cognition and BPF has further implicated theory of mind problems involving hypermentalizing, or the tendency to make overly complex inferences based on social cues [22].

Various cognitive deficits and biases have also been found to differentiate children and adolescents with BPF from those with features of other forms of psychopathology. For example, Hawes et al. [23] examined associations between BPF and self-concept in a community sample of children aged 10–14 years, using an implicit association test. The identity problems component of BPF was found to predict the occurrence of an implicit shame-prone self-concept, however, only among girls. A shame-prone self-concept was not related to symptoms of any other internalizing or externalizing disorders. This finding is consistent with the previous adult research, in which a shame-prone self-concept has been found to differentiate women diagnosed with BPD from those with social phobia [24]. On the basis of their findings, Rüscher et al. [24] proposed that among individuals with BPD, the implicit cognitive schemas associated with a shame-prone self-concept may influence perception and behavior to confer risk for low self-esteem and high levels of anger and impulsivity. The findings of Hawes et al. [23] also add to evidence from prospective research, which has suggested that identity problems in late childhood may be of particular value as an early marker for BPF [6].

Some specificity with BPF has also been demonstrated for deficits in social perspective coordination – the capacity to differentiate and integrate one’s own perspective with those of others [25]. In a sample of clinic-referred youth, Jennings et al. [26] found that while those with major depressive disorder (MDD) exhibited largely age-appropriate reflective-reciprocal strategies for social perspective coordination, youth with BPF relied primarily on strategies that reflect a failure to simultaneously consider and coordinate another person’s subjective state in relation to one’s own.

**CLINICAL INTERVENTION AND CHILDREN WITH BORDERLINE PERSONALITY FEATURES**

Clinical research has demonstrated that it is possible to achieve significant reductions in BPF and associated dysfunction through intervention in the adolescent years. However, the extent to which one form of treatment may be indicated over another remains unclear. Schuppert et al. [27] found that adolescents with BPF (aged 14–19) showed significant improvements in BPF and general psychopathology following a group-based emotion regulation training program, however, these improvements were no different to those produced by treatment as usual (TAU). A randomized controlled trial (RCT) by Chanen et al. [28] reported a similar finding for cognitive analytic therapy (CAT), whereas subsequent quasi-experimental data indicated that CAT produced faster rates of improvement than TAU, and resulted in lower levels of psychopathology at 2-year follow-up [29]. Additionally, mentalization-based treatment has recently been shown to be more effective than TAU in a sample of self-harming adolescents (aged 12–17), 73% of whom met criteria for BPD [30]. Improvements in self-harm and depression were found to be mediated by the improvements in mentalization and reduced attachment avoidance, and were associated with reductions in BPF.

Emerging evidence, therefore, suggests that BPF have utility in identifying adolescents for whom clinical gains may be enhanced or expedited by interventions that are distinct from those commonly used to treat internalizing and externalizing disorders. At the same time, it has been emphasized that optimal intervention for adolescents with BPF may rely on integrated, multidisciplinary services that are able to provide ‘psychologically informed’ case management, pharmacotherapy, crisis-teams, and in-patient care [31]. Given that features of personality disorders are assumed to become increasingly entrenched and trait-like across adolescence [32], it is therefore likely that less intensive interventions may be effective for this population when delivered prior to adolescence. Likewise, intervention in the childhood years may be more effective in diverting an individual’s trajectory away from BPD in adulthood. The treatment outcomes associated with BPF in clinic-referred children have yet to be investigated in controlled research. However, based on emerging evidence of the developmental characteristics of children with BPF, it has been speculated that various interventions may be indicated. Stepp et al. [3] proposed a role for interventions that draw on the components of evidence-based treatments for ADHD and ODD, which in the childhood years typically target the coercive feedback loops in family interactions that maintain and amplify escalating patterns of aggressive and oppositional behavior. Likewise, Belsky et al. [4] proposed that longitudinal data suggest potential benefits from interventions that promote the facilitation of children’s self-regulation in the family context, with evidence-based protocols for such interventions already available for delivery as early as infancy [33,34] and preschool [35,36].
DISCUSSION

Recent research into BPF in childhood and adolescence has provided evidence that is particularly noteworthy given the lack of empirical research previously available. Such evidence includes findings of family and peer risk factors for BPF in longitudinal studies spanning early to late childhood [4,12,15], and prospective data on temporal associations between externalizing disorders and BPF across childhood and adolescence [1,2,3]. At the same time, there remains limited research into the processes through which parenting may interact and transact with vulnerabilities underlying BPF, and the implications that such processes may present to other forms of externalizing and internalizing psychopathology. On a more basic level, important questions remain concerning the extent to which BPF in childhood are best conceptualized as a global dimension versus distinct components. The measurement of BPF as a unidimensional construct – as seen in most research related to children and adolescents – appears to be based largely on assumptions related to the structure of BPD in adulthood.

It is apparent that the current lack of clinical evidence regarding the treatment of children with BPF stems from a historical reluctance to relate individual differences in these childhood features to adult-based conceptualizations of BPD. By comparison, other domains of personality-based dysfunction that have been subject to more extensive developmental research are better understood in relation to clinical issues in childhood. In my view, the current evidence base for psychopathic traits – often referred to as callous-unemotional traits in childhood – is the best example of this, and has much potential to inform research and clinical perspectives on BPF.

Callous-unemotional traits and BPF share a number of parallels, with both demonstrating high levels of heritability [5,37], and widely regarded as particularly challenging to treat in adulthood. Furthermore, emerging evidence suggests that these two domains may also be related to one another more meaningfully. On the basis of recent data from adult forensic research it has been speculated that BPD may to some extent reflect a female expression of psychopathy [38]. There is also evidence that the dimensions of temperament that characterize female adolescents with BPD (i.e., high novelty seeking and harm avoidance) overlap largely with those associated with psychopathy [39,40]. Finally, data suggest that an interplay between callous-unemotional traits and BPF may account for dysfunction in a subgroup of adolescents [41].

Childhood data on callous-unemotional traits have contributed significantly to current developmental models of antisocial behavior [42]. Support for the clinical utility of callous-unemotional traits in childhood is also substantial, as reflected in the introduction of a diagnostic specifier for these traits in the revised criteria for conduct disorder in the 5th edition of the Diagnostic and Statistical Manual of Mental Disorders [43]. On the basis of research that has demonstrated such clinical utility, I would propose that three broad questions may be of particular value in guiding programmatic research into BPF in children.

First, do BPF impact on the treatment of common childhood disorders? This question concerns the extent to which BPF may uniquely predict or moderate the effects of current evidence-based treatments for specific internalizing and externalizing disorders in childhood. It also concerns the mechanisms that may account for any reduced response among children with BPF. Clinical research has shown that callous-unemotional traits are a marker for relatively poor outcomes following parent-training interventions for ODD in early childhood, as well as differential response to the specific components (e.g., time-out) within such interventions (e.g., [44]). Such prognostic risk is independent of the pretreatment severity of ODD symptoms, and has been demonstrated using multiinformant measures of callous-unemotional traits that overcome the biases that may color perceptions of such traits among individuals in a child’s life [45]. Research has yet to examine whether BPF account for heterogeneity in clinical response to specific interventions for children with ODD or ADHD, which warrants investigation based on the emerging evidence reviewed.

The reduced treatment gains reported for children with conduct problems, and callous-unemotional traits are consistent with the findings that these traits moderate the influence of negative parenting practices on child conduct problems. Research has shown that although conduct problems can often be attributed to harsh/inconsistent discipline, this association is somewhat specific to children with low levels of callous-unemotional traits (see [42]). Conversely, the conduct problems of children with high levels of callous-unemotional traits appear to develop somewhat independently of negative parenting, instead showing more proximal associations with a lack of parental warmth (e.g., [46]). Such findings have clear implications for clinical practice, indicating the various dimensions of parenting for which therapeutic change may be most likely to translate into child behavior change in putative subgroups of children.

Second, do existing treatments for childhood disorders impact on BPF? This question concerns
the extent to which BPF themselves may respond to current interventions for childhood internalizing and externalizing disorders, and the potential to enhance such response through adjunctive, theory-driven components designed to specifically target BPF. Family-based interventions for early-onset ODD/CD have been found to produce reductions in callous-unemotional traits [47,48], with such reductions maintained 3 years following treatment [49]. Analogous findings have recently been reported in relation to BPF, with reductions in hypermentalizing shown to occur following broad-based inpatient treatment for adolescents (aged 12–17 years) characterized predominantly by internalizing and externalizing disorders [50]. On the basis of such evidence, the authors proposed that hypermentalizing may represent a worthwhile social-cognitive treatment target for adolescents with BPF. The findings of a recent RCT for children with complex conduct problems are noteworthy in relation to such a proposal. Dadds et al. [51], found that the combination of an ‘empathic-emotion recognition’ training component with a social-learning-based parent training program significantly enhanced the treatment gains of children with callous-unemotional traits aged 6–16 years. The possibility that a similar adjunctive component may translate into increased gains among children with BPF warrants investigation.

Third, how do BPF and family environment shape one another across childhood? This question concerns the interplay between child characteristics and parenting dimensions in the families of children with BPF, in terms of bidirectional parent–child dynamics. It has been proposed that both BPF and callous-unemotional traits may be implicated in risk trajectories shaped by passive, evocative, or active gene–environment correlations that play out across development [52,53]. Consistent with such a thesis is evidence that, beginning in early childhood, callous-unemotional traits elicit adverse parenting behaviors that may in turn operate to amplify those traits over time (e.g., [54,55]). From a clinical perspective, such evidence suggests that parents of children with callous-unemotional traits may require additional support to maintain gains in the various domains of parenting targeted in childhood interventions for conduct problems. Evidence of such child-driven effects in the families of children with BPF may be equally valuable.

Current literature on early intervention and prevention has highlighted the importance of considering emerging BPF within the context of broader domains of psychopathology. Chanen and McCutcheon [31] proposed that a range of disorders typically diagnosed in childhood, including the disruptive behavior disorders and mood disorders, may represent potential targets for indicated prevention of BPD. The research questions proposed here are in line with this perspective, and at the same time emphasize the need to determine whether the occurrence of BPF in childhood may be associated with specific indications for the treatment of those disorders.

CONCLUSION

Research into the developmental psychopathology of BPD (see [56]) has made considerable advances in recent years, with increasing attention devoted to the childhood years. The extent to which BPF represents a marker for children with unique treatment needs remains unclear, yet the potential for this is suggested by emerging evidence. Such evidence indicates that BPF develop in concert with more common domains of psychopathology, while accounting for unique dysfunction. It also suggests that the causal mechanisms that explain common internalizing and externalizing disorders in childhood contribute independently to BPF, and that the dysfunction associated with these features is shaped further by distinct developmental processes. I have proposed here that the research designs that have contributed to recent evidence for the clinical utility of psychopathic traits in children may likewise provide valuable data on the clinical utility of BPF in children.

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None.

Conflicts of interest

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D.J.H. has no conflicts of interest to report.

REFERENCES AND RECOMMENDED READING

Papers of particular interest, published within the annual period of review, have been highlighted as:

■ of special interest
■■ of outstanding interest


This is the first longitudinal study to examine ADHD and ODD symptom trajectories as specific childhood precursors of BPF in adolescent girls. Increased symptoms of ADHD and ODD at age 8 uniquely predicted BPD symptoms at age 14, as did rates of growth in these symptoms.
Personality disorders


This study examined the development of BPD in a birth cohort of twins studied from age 5 to 12 years. BPD at age 12 years showed comparable heritability to that previously reported for adult BPD. These BPD co-occurred with symptoms of conduct disorder, depression, anxiety, and psychosis, and were uniquely predicted by poor cognitive function and harsh parenting at earlier ages.


Levels of BPD indexed by the Child Interview for DSM-IV/BPD were found to demonstrate incremental validity relative to symptoms of MDD, for suicidal ideation and deliberate self-harm in clinic-referred adolescents aged 12–17 years. This unique association was significant even with the exclusion of the self-harm/suicide criterion for BPD.


This is the first study to examine the prospective association between peer victimization and BPD in childhood. Peer victimization across childhood was a unique predictor of BPD at age 11.8 years, with the highest levels of BPD associated with victimization that was chronic or combined both overt and relational forms.


This is the first study to examine attentional biases for emotional faces at both automatic and controlled stages of information processing in youth with BPD, using a modified dot-probe task. BPD were associated with an attentional bias for fearful faces that reflected difficulty disengaging attention from threatening information during automatic and preconscious stages of attention.


This study is the first to identify, in clinic-referred adolescents (aged 12–17), the relation between experiential avoidance and BPD that has previously been demonstrated in adults.


This study is the first to identify, in a community sample of children (aged 10–14), the relation between an implicit shame-prone self-concept and BPD that has previously been demonstrated in adults. This association was found to be specific to women.


These authors found that while youth with MDD exhibited largely age-appro- spective reflective-reciprocal strategies for social perspective coordination, youth with BPD relied primarily on strategies that reflect a failure to simultaneously consider and coordinate another person’s subjective state in relation to one’s own.


This study evaluated a mentalization-based treatment for self-harming adolescents (aged 12–17), 73% of whom met criteria for BPD. According to the authors, this is the first time that a treatment program specially developed for adolescent self-harm has been shown to be significantly more effective than TAU in terms of reducing self-harm as well as depression.


This RCT provides preliminary evidence that the treatment outcomes of children (aged 6–16) with psychopathic traits – a form of personality-based dysfunction that shares some characteristics with BPF – can be enhanced by delivering an ‘empathic-emotion recognition’ skills component in the context of a family-based parenting intervention.


