



The relations between inadequate parent-child boundaries and borderline personality disorder in adolescence



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ABSTRACT

Borderline Personality Disorder (BPD) is a severe mental illness that onsets in adolescence. Research has demonstrated the central role of parent-child relationships for the development and maintenance of BPD although more research is necessary to clarify the specific dynamics that relate to BPD during adolescence. Based on preliminary research establishing the importance of parent-child boundaries for adolescent BPD, this study sought to evaluate the relations between different forms of inadequate boundaries and BPD in adolescence using a multi-method approach. To that end, 301 adolescents (65.1% female; ages 12–17) inpatients were recruited; parents and adolescents completed questionnaire- and interview-based measures of BPD features in adolescent children and a questionnaire-based measure of parent-child boundaries. Relations were found between parental guilt induction and psychological control with children's BPD features above and beyond relations with psychiatric severity and gender. Relations between parent reports of triangulation (when children are recruited to mediate parental marital conflict) and children's BPD were contingent on the level of children's perceptions of triangulation. Findings confirm previous research suggesting the relevance of inadequate parent-child boundaries to children's BPD features and have important implications for understanding the dynamics in families with adolescents with BPD, representing a relevant treatment target.

1. Introduction

Borderline personality disorder (BPD) is a severe, debilitating disorder with onset in adolescence (Chanen and Kaess, 2012). A diagnosis of BPD in adolescence is predictive of greater comorbidity and poor outcomes both concurrently and longitudinally relative to other adolescent mental disorders (Kaess et al., 2014; Zanarini et al., 2003). Adolescent BPD is also associated with greater prevalence of life-threatening behaviors such as suicidality, self-harm, and impulsivity compared to other adolescent disorders (Kaess et al., 2013; Sharp and Fonagy, 2015), warranting the study of the disorder during this developmental stage. BPD in adolescence is associated with feelings of emptiness and identity disturbance, specifically with a reliance on relationships to maintain a sense of identity in line with suggestions that the core of BPD is interpersonal (Hopwood et al., 2013).

Several authors have proposed that the interpersonal characteristics of BPD originate in the early caregiving context as a function of the quality of the parent-child relationship (Fonagy and Luyten, 2009; Linehan, 1993). It has long been established that a mismatch between a child's temperament and a parent's ability to respond to the emotional

needs of their child leads to maladaptive interpersonal functioning (Agrawal et al., 2004; Fonagy et al., 2000). Despite the strong link between the parent-child relationship and BPD, more work is needed to specify the forms of caregiving that may relate to BPD. For instance, studies examining the relations between parent-child relationships and BPD have focused largely on childhood abuse or maltreatment; however, research shows that childhood abuse is neither necessary nor sufficient in the development of BPD (Zanarini and Wedig, 2014) with a range of early relational disturbances significantly related to adult presentations of the disorder (Carlson et al., 2009).

One form of relational disturbance that may be of particular relevance for BPD is violations of parent-child boundaries. The construct of boundary violations is complicated given its differential operationalization within various theoretical orientations such as family systems and psychodynamic theory (see Macfie et al., 2015; Nuttall and Valentino, 2017 for recent reviews). Within each of these orientations, different terminology has been used to refer to different forms of boundary violations, which sometimes are mutually exclusive and other times overlap. While a comprehensive review of varying definitions of boundary violations is beyond the scope of the current paper and can be

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found elsewhere (e.g., Kerig, 2005; Macfie et al., 2015; Nuttall and Valentino, 2017), a central theme across these literatures describe parent-child relationships in which the parent fails to acknowledge the psychological distinctiveness of the child (Kerig, 2005). Functionally, this refers to when parents look to their child to meet their needs, subsequently leading the child to adopt functions and roles usually maintained by the parent (Macfie et al., 2015). This inappropriate reliance on children may represent an undue burden on children and interfere with their development of an autonomous self as well as self-reliance and a secure attachment (Bellow et al., 2005; Kerig, 2005; Macfie et al., 2015; Nuttall and Valentino, 2017). In an effort to delineate the different dimensions of boundary violations, Kerig (2005) identified four distinguishable but related dimensions of boundary violations: role reversal, intrusiveness, enmeshment, and spousification, each of which has unique consequences for child development.

Role reversal, also referred to as parentification or adultification, describes parent-child relationships in which a child adopts a caregiving role, which can be either instrumental (carrying out concrete functions to support the family such as preparing meals) or emotional (providing emotional support to the parent). Role reversal relates to Macfie et al. (2015) definition of child as peer and can encompass triangulation, in which a child is recruited to mediate or take sides in marital conflict between parents. The second dimension is intrusiveness, which refers to parenting that is psychologically controlling, overprotective and coercive. In these relationships, parents utilize guilt induction or withdrawal of love to manipulate their children, which severely limits the autonomy of the child (Barber, 2002). Third is the dimension of enmeshment, in which parents treat their child as an extension of themselves. This relationship can be described as overly close and dependent. Similar to role reversal, both intrusiveness and enmeshment can serve to create a family dynamic in which the child acts as an emotional caretaker for their parent; however, can also include aspects of functional caregiving (e.g., the child completing tasks for the parent) (Bellow et al., 2005). Therefore, the distinction between these dimensions refers to the form of boundary violations, rather than the function. Finally, spousification refers to a relationship in which parents rely on their child to fulfill needs for affection or sexual intimacy as well as when parents displace hostility or criticism associated with their romantic partner. At the extremes, spousification can be associated with child sexual abuse (Shaffer and Sroufe, 2005).

While boundary violations have negative implications for a range of mental disorders, there has been a substantial interest in the association between parent-child boundaries and BPD. Two studies measured boundary violations among infants and toddlers. One study that measured maternal boundary violations at 18 months of age did not find relations to adult BPD symptoms (Lyons-Ruth et al., 2013). However, another study that measured boundary violations at 42 months of age found prospective relations to BPD symptoms at age 28 (Carlson et al., 2009). In studies with children, verbal abuse, which correlated highly with guilt induction, increased the risk for BPD during adolescence (Johnson et al., 2001). Similarly, children at the age of 8 who displayed punitive or caregiving behavior toward parents had increased BPD symptoms at the age of 20 (Lyons-Ruth et al., 2013). Among young adults, those with a BPD diagnosis perceived their mothers as failing to maintain a responsible and protective parental role during childhood (Lyons-Ruth et al., 2011) and observed role-reversal was the strongest predictor of BPD features, over and above the effects of childhood abuse (Lyons-Ruth et al., 2015). Also in adults, reports of parent-child boundaries have been found to be related to BPD; adult female patients with BPD were more likely to report the presence of punitive or caregiving characterized by controlling behavior toward their parents during childhood when compared to patients with dysthymia (Lyons-Ruth et al., 2007). Similarly, Zanarini et al. (1997) found high percentages of inpatients with BPD who reported role-reversal and a failure of parents to protect them during childhood.

These studies have been instrumental in providing important

empirical support for long-held theories of BPD development (Fonagy and Luyten, 2009; Linehan, 1993) that state that harmful parent-child dynamics contribute to the development and maintenance of BPD. However, these studies were mostly limited to investigating one type of inadequate boundaries (e.g., role-reversal in studies by Lyons-Ruth and colleagues (Lyons-Ruth et al., 2015, 2007)) or included measures of boundary violations that did not differentiate between the different dimensions of boundary violations and rather used a total score of boundary violations (e.g., the study by Carlson et al. (2009)). This is problematic as different types of boundary violations may correlate with one another and obscure the picture of relations between BPD and parent-child boundaries. Additionally, studies have typically not considered the possibility of unique relations with specific features of BPD. Moreover, studies have yet to investigate the interaction between child- and parent-perceptions of boundary violation in the relation with BPD. Finally, to our knowledge, parent-child boundary violations have never been measured during adolescence.

The dearth of adolescent studies in this regard is important, given the important role that parent-child transactions play during adolescence for identity formation and the development of autonomy (Meeus et al., 2005). Adolescence is also a highly relevant time for the natural individuation process, marking a transition in family dynamics toward increased independence of adolescents (Koepke and Denissen, 2012). Specifically, as adolescence is marked by a developmental shift toward greater autonomy, parent-child relationships undergo a shift toward adolescents becoming more independent of parental control (Zimmer-Gembeck, 2005) and the parent-child relationship moving closer toward a peer-like role equalization. Therefore, parent-child dynamics that grant the adolescent child more autonomy and allow them to take on greater responsibility will foster healthy identity development. On the other hand, boundary violations that thwart independence and identity development of the child have the potential to cause harmful long-term effects (Shaffer and Egeland, 2011).

In fact, research has demonstrated that boundary violations reported in adolescence are associated with more general worries and adjustment problems than among younger children experiencing parent-child boundary violations (Cree, 2003). Interestingly, longitudinal research on parent-child boundary violations has found that parent-driven boundary violations in early childhood are later reciprocated by the child during adolescence, which serves to maintain the continuity of these relational dynamics (Shaffer and Egeland, 2011). Therefore, it is suggested that boundary violations and parent-child relationships during adolescence in general may not be best characterized as a parent driven practice or reflecting qualities of the parent, per se, but rather is reflective of the relationship involving actions and directives of both parents and children (Nuttall and Valentino, 2017; Shaffer and Egeland, 2011). To this end, it is important to consider perspectives of both parents and children when assessing relational dynamics.

Against the above background, the aim of the current study was to evaluate the relations between parent-child boundaries and BPD in adolescents. Specifically, in our first aim we sought to replicate previous research demonstrating that boundary violations are related to BPD while addressing methodological limitations of previous studies. As such, we used both a categorical and dimensional approach to measuring BPD in a sample of inpatient adolescents. Additionally, we used a multi-method, multi-informant assessment of BPD in order to reduce any method bias associated with single reports (De Los Reyes and Kazdin, 2004). We also used a multidimensional operationalization of boundary violations in the domains of parentification, triangulation, no boundaries (enmeshment), guilt induction, and psychological control. While these domains do not cover the full spectrum of Kerig's (2005) conceptualization of parent-child boundary violations by not including spousification, we chose our current measure due to the availability of parallel parent and child forms of the measure, allowing for a multiple informant report of boundary violations.

The current sample was chosen because BPD emerges in adolescence and the use of an inpatient sample provides adequate variability of BPD features. Further, conducting these analyses among an inpatient sample was important to determine whether any effects found were specific to BPD, rather than a function of psychiatric severity. Because comorbidity and psychiatric severity tend to be greater among adolescents with a diagnosis of BPD (Ha et al., 2014; Kaess et al., 2013) and boundary violations have been shown to relate to a range of mental disorders (Macfie et al., 2015), we controlled for the level of psychiatric severity to ensure that findings represented unique associations with BPD. We also included gender as a covariate in analyses because previous findings have found greater proportions of females in clinical samples of BPD (Johnson et al., 2003). We hypothesized that, in line with previous findings, we would find relations between BPD and parentification and guilt induction.

The second aim was to evaluate parent-child informant discrepancies of parent-child boundary violations in the prediction of BPD features due to literature confirming low correspondence between parent and child ratings of parenting behaviors (De Los Reyes and Kazdin, 2004; Guion et al., 2009). As described previously, incorporating both parent and child perspectives for parent-child relationship dynamics is imperative as it is a product of the dyad rather than any single member. Further, no previous studies have included both parent and child reports on boundary violations. Therefore, we examined the interaction between parent and child reports of boundary violations in the prediction of BPD. This method offered us the opportunity to not only evaluate whether discrepancies existed in parent and child reports of boundary violations, but also to evaluate how discrepancies (or correspondence) of reports related to child BPD features. Implications of an interaction would be that outcomes of one individual's perceptions of boundary violations is conditional on the other individual's perception. Research and theory of parent-child boundary violations has suggested that boundary violations are not necessarily always harmful to child development. Rather, it is only at the point in which the relationship dynamic exceeds a threshold by which children can cope with or that they deem fair and acceptable (Kerig, 2005; Macfie et al., 2015; Nuttall and Valentino, 2017). Therefore, we hypothesized that effects of parent perceived boundary violations on BPD features would be conditional on child reported boundary violations such that positive, significant relations would be found only when child reports of boundary violations were high. This aim has significant clinical implications because it would inform whether intervention with one individual of the dyad is sufficient, or whether intervention should be targeted toward both members of the dyad.

Finally, the third aim evaluated whether parent-child boundary violations would be uniquely associated with specific symptoms of BPD. To carry out this aim, we examined each of the nine diagnostic criteria for BPD and their relations to boundary violations. We hypothesized that boundary violations would uniquely relate to the interpersonal aspects of BPD including identity disturbance, fears of abandonment, and instability in relationships. This is due to research that has found that adverse caregiving is more likely to exhibit deficits in social-emotional competency with persisting difficulty with social and relationship functioning (Doyle and Cicchetti, 2017).

2. Methods

2.1. Subjects

Adolescents were recruited from a 16-bed inpatient psychiatric unit that serves individuals with severe behavioral and emotional disorders who have not responded to previous interventions. Average length of stay was 36.93 days ($SD = 13.18$). Inclusion criterion was sufficient proficiency in English to consent and complete the necessary assessments, and exclusion criteria were a diagnosis of schizophrenia or another psychotic disorder, an autism spectrum diagnosis, or an IQ of less

Table 1

Chi-square analyses comparing comorbid diagnoses between patients with and without BPD.

	BPD ($n = 131$)	No-BPD ($n = 152$)	χ^2
Depressive Disorder	80%	62%	9.43**
Bipolar Disorder	13%	3%	8.58**
Eating Disorder	17%	5%	8.37**
Externalizing Disorder	53%	33%	10.40**
Anxiety Disorder	76%	61%	6.13*

Note. $df(1161)$; ** $p \leq .01$; * $p \leq .05$; BPD diagnoses determined based on meeting 3 or more criteria on CI-BPD, other diagnoses determined using Y-CDISC; depressive disorder includes positive diagnoses of major depressive disorder or dysthymia; bipolar disorder includes positive diagnoses of hypomania or mania; eating disorder includes positive diagnoses of anorexia or bulimia; externalizing disorder includes positive diagnoses of attention deficit-hyperactive disorder, oppositional defiant disorder, or conduct disorder; anxiety disorder includes positive diagnoses of post-traumatic stress disorder, generalized anxiety disorder, separation anxiety disorder, specific phobia, social phobia, obsessive compulsive disorder, panic disorder, or agoraphobia.

than 70. Of $N = 368$ adolescents and their parents who were approached for consent, $n = 31$ declined and $n = 36$ were excluded based on aforementioned criteria. The final sample consisted of $N = 301$ adolescents (65.1% female; ages 12–17, $M = 15.22$, $SD = 1.44$), with the following racial/ethnic breakdown: 69.4% White ($n = 209$), 6% Hispanic ($n = 18$), 2.7% Asian ($n = 8$), 5.3% mixed or other ($n = 16$), and 15.3% unspecified ($n = 46$). Table 1 displays patterns of comorbidity for the full sample and per group. The study was approved by a human subjects review committee, and subjects participated after signing a written voluntary informed consent form. Adolescents were collectively assessed by doctoral-level clinical psychology students and/or trained clinical research assistants. Assessments were conducted independently and in private within the first two weeks following admission.

2.2. Measures

2.2.1. Borderline personality features

The Childhood Interview for DSM-IV Borderline Personality Disorder (CI-BPD; Zanarini, 2003) is a semi-structured interview for use with children and adolescents. This interview was administered to adolescent children in the current study. The CI-BPD assesses the nine DSM-IV criteria of BPD; each criteria has a set of corresponding prompts used by the interviewer to investigate that criterion, from which they rate with a score of 0 (absent), 1 (probably present), or 2 (definitely present). Adolescents who meet five or more criteria at the 2-level meet diagnostic criteria for BPD. For the purpose of this study, a sub-threshold diagnosis was used, which is met when adolescents meet 3 or more criteria at the 2-level. The use of a lower threshold of BPD symptoms to categorize youth based on findings that categorical stability of a full BPD diagnosis in adolescence is relatively low (Crawford et al., 2001; Mattanah et al., 1995). Additionally, we utilized the Total Score as a dimensional measure of BPD features, which is a sum of scores for each of the 9 criteria (maximum score of 18). Excellent psychometric properties for this measure have recently been demonstrated (Sharp et al., 2012).

The Borderline Personality Disorder Features Scale (BPFS-C; Crick et al., 2005) is a self-reported instrument to assess BPD features in youth, which was administered to adolescent children in the current study. We also administered a parallel parent report version of this scale to parents of adolescents in the current study (BPFS-P; Sharp et al., 2011). The BPFS contains 24 items and was adapted from the BPD scale of the Personality Assessment Inventory (Morey, 1991) for use in children. Items are rated on a 5-point Likert scale ranging from 1 “not true at all” to 5 “always true”. Sample items include “I want to let some people know how much they’ve hurt me,” and “When I’m mad, I can’t control what I do.” Research has supported the criterion and concurrent

validity of both parent and child reports of the BPFS (Chang et al., 2011; Sharp et al., 2011). In the present sample, Cronbach's alpha was .88 for both child and parent report.

The Borderline Scale of the Personality Assessment Inventory for Adolescents (PAI-BOR Morey, 2007) is a part of a 264-item self-report measure of personality functioning adapted from the adult version of the PAI (Morey, 1991), which was administered to adolescent children in the current study. Items are rated on a 4-point Likert scale ranging from 1 “false” to 4 “very true”. For the current study, the sum of items from the Borderline Scale was used. Research has established adequate validity for the adult version of the PAI-BOR (Stein et al., 2007). Adequate psychometric properties have been found for the adolescent version of the PAI (Morey, 2007).

2.2.2. Inadequate boundaries

The Inadequate Boundaries Questionnaire (IBQ; Mayseless and Scharf, 2000) is a 35-item questionnaire assessing boundary violations in the parent-child relationship. For the current study, we utilized parallel parent and child forms of this measure. Therefore, one primary caregiver (either father or mother) completed the questionnaire regarding their relationship with their adolescent child. Adolescent children completed the child report version of the questionnaire regarding their relationship with both their mothers and their fathers. Only one parent was asked to respond to questionnaires and families were given the choice to choose which parent would respond; mothers (83.1%) were the predominant respondent compared to fathers (16.9%). Responses were scored on a 5-point Likert scale ranging from 1 “Never or almost never” to 5 “Always or almost always”. Responses were summed across all items for each subscale and then divided by the total number of items for that scale resulting in measures of the average level of boundary violations in each domain with higher scores indicating higher levels of inadequate boundaries. Subscales include Guilt Induction (8 items; e.g., “If I don’t do what my parent asks me he/she gets offended.”) and describes situations in which children are coerced to comply with parents’ desires and expectations; No Boundaries (6 items; e.g., “My parent relates my problems as if they are his/her own.”), describing when children are perceived as an extension of the parent; Parentification (8 items; e.g., “Sometimes I feel that I am the only person my parent can turn to.”) describing functional and/or emotional role reversal; Triangulation (5 items; e.g., “When my parent argues with the other parent I eventually take sides in their conflict.”), describing a situation in which the child serves as a mediator between parents; and Psychological Control (8 items; e.g., “My parent is always trying to change how I feel or think about things.”), which describes intrusive parenting practices used to deny the child’s autonomy. For parent reports, internal consistency ranged from questionable (No Boundaries and Triangulation) to acceptable or good. For youth reports on maternal and paternal boundary violations, internal consistency ranged from poor (No Boundaries) to acceptable and good (see Table 2). The IBQ has been used in two previous studies with community samples of late adolescents (Mayseless and Scharf, 2009) and young adults (Rousseau and Scharf, 2015) who found similar levels of internal consistency and associations with measures of individuation, interpersonal sensitivity, and psychological distress in children (Mayseless and Scharf, 2009; Rousseau and Scharf, 2015).

2.2.3. Psychiatric severity

Youth Self-Report (YSR; Achenbach, 1991) is a well-established broad-band measure of psychopathology completed by adolescent children. The measure contains 112 problem items, each scored on a 3-point Likert scale from 0 “not true” to 2 “very or often true” and converted to T-scores. The measure yields a number of scales, some of which are empirically derived and some theoretically based as well as three higher order factors: Total Problems, Internalizing, and Externalizing. In the current study, the Total Problems scale was used as a covariate, which is a T-score of general psychiatric functioning and

provides an index of overall psychiatric severity.

The Computerized Diagnostic Interview Schedule for Children (C-DISC; Shaffer et al., 2000) is a structured computer-assisted diagnostic interview used to assess DSM-IV Axis I psychiatric disorders in children and adolescents. This interview was administered to adolescent children. The interviewer is required to follow a series of computerized prompts; each one is read aloud and then the interviewer inputs a response based on each answer the interviewee provides. Positive diagnoses that met DSM-IV criteria in the past year were used to describe the sample. Specifically, we were interested in whether the child reported the presence of any depressive, bipolar, eating, externalizing, or anxiety disorder, which is displayed in Table 1.

2.3. Data analytic strategy

Of the 301 participants, 129 had missing data on the IBQ questionnaires due to discharging early, refusing to complete questionnaires, and error in administration including: IBQ-Y about mom ($n = 119$), IBQ-Y about dad ($n = 127$), and IBQ-P ($n = 74$). Missing data were imputed using the expectation-maximization algorithm in SPSS 24 (IBM Corp, 2016), which estimates means, covariance matrix, and correlation of quantitative variables with missing values in an iterative process. Cases with and without missing data did not differ on any demographic variables or level of BPD features.

Analyses were conducted using SPSS 24 (IBM Corp, 2016). To address the first aim, we first explored categorical conceptualization of BPD; independent samples *t*-tests were run to determine group differences between adolescents with ‘sub-threshold’ levels of BPD symptoms (3 criteria met) and those with low levels of BPD symptoms on parent and youth reported levels of inadequate boundaries controlling for psychiatric severity and gender. For dimensional analyses, a latent variable of BPD features variable was created using principle component analysis from the four available measure of BPD (CIBPD-Total Score, BPFS-C, BPFS-P, and PAI-BOR), which yielded one dominant component accounting for 61% of the total variance. Bivariate correlations were run to determine relations between our dimensional measure of BPD and parent and child reported boundary violations.

To evaluate the second aim of the current study of testing interactive effects of parent and child reports of each of the types of boundary violations on BPD features, a series of five hierarchical regression analyses were conducted with predictors centered at their respective means. Covariates of psychiatric severity and gender were entered in the first step. Mother and child reports of each of the five forms of boundary violations were entered in the second step. The interaction of parent and child reports of boundary violations were entered in the final steps. Planned post-hoc analyses consisted of simple slope analyses for significant interaction terms examining the association of youth reported boundary violations and BPD features at high and low values of parent reported boundary violations. Because mothers were the primary respondents for parent reports ($n = 250$; 83.1%), only these cases were included in these analyses. This method has been used to examine whether parent-child informant discrepancies are informative in predicting outcomes in youth in previous studies in addition to their single perspectives (Laird and De Los Reyes, 2013). Finally, we examined whether inadequate parent-child boundaries had greater relations to specific BPD diagnostic criteria; a linear regression was run with boundary violations as the dependent variable and each of the 9 BPD diagnostic criteria as independent variables.

3. Results

3.1. Preliminary analyses

Table 1 describes comorbid diagnoses based on DSM-IV criteria for adolescents with sub-threshold levels of BPD features as defined by endorsing three or more criteria on the CI-BPD and those with low

Table 2
Descriptive statistics for and bivariate correlations among main study variables.

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
1. Age	1																				
2. Gender	.17**	1																			
3. BPD Features	-.07	-.21**	1																		
4. Guilt Induction-P	.05	.07	.07	1																	
5. No Boundaries-P	.07	-.01	.03	.48**	1																
6. Parentification-P	.06	.05	-.10	.31**	.65**	1															
7. Triangulation-P	.07	.08	-.13	.31**	.32**	.47**	1														
8. Psychological Control-P	.15*	.07	.12*	.68**	.49**	.38**	.38**	1													
9. Mom Guilt Induction	-.06	-.10	.31**	.12*	-.02	-.06	-.03	.22**	1												
10. Mom No Boundaries	-.07	-.07	.10	.02	.11	.24**	.13*	.07	.36**	1											
11. Mom Parentification	.01	-.05	.04	-.12*	-.03	.24**	.15**	.03	.61**	.47**	1										
12. Mom Triangulation	.04	-.05	.07	-.11	-.09	.19*	.25**	.03	.23**	.25**	.65**	1									
13. Mom Psych. Control	-.03	-.10	.29**	.05	-.06	-.18**	-.16**	.15**	.84**	.20**	-.02	.20**	1								
14. Dad Guilt Induction	.00	-.04	.11*	.20**	.08	.23**	.01	.24**	.50**	.28**	.26**	.34**	.12*	1							
15. Dad No Boundaries	.02	.02	.03	-.01	.03	.19**	-.05	.04	.11	.36**	.33**	.26**	.12*	.39**	1						
16. Dad Parentification	.04	.01	-.06	-.05	-.02	.14*	.05	.03	-.02	.21**	.43**	.27**	-.01	.22**	.69**	1					
17. Dad Triangulation	.07	.03	-.02	-.09	-.03	.24**	.18**	.00	.10	.32**	.46**	.73**	.16**	.27**	.46**	.55**	1				
18. Dad Control	-.05	-.07	.13*	.16**	-.05	.02	.03	.06	.38**	.32**	.22**	.29**	.33**	.77**	.31**	.06	.25**	1			
19. Total Problems	-.06	.03	.72**	.02	-.00	-.12	-.10	.08	.22**	.03	-.05	-.02	.20**	.06	.01	-.08	-.04	.08	1		
Mean(SD)	15.22 (1.44)	-.00 (.56)	.00 (.54)	2.36 (.54)	2.52 (.64)	1.80 (.54)	1.60 (.49)	2.10 (.46)	3.24 (.74)	2.63 (.60)	2.61 (.75)	2.03 (.77)	2.87 (.77)	2.87 (.77)	2.87 (.81)	2.24 (.58)	2.08 (.67)	1.84 (.67)	2.57 (.80)	66.70 (9.76)	
Male (n = 105)	15.56 (1.39)	-.28 (.90)	-.28 (.90)	2.41 (.61)	2.52 (.70)	1.84 (.60)	1.65 (.53)	2.14 (.47)	3.15 (.71)	2.57 (.64)	2.55 (.83)	1.98 (.79)	2.76 (.79)	2.83 (.78)	2.25 (.59)	2.09 (.68)	1.87 (.79)	1.87 (.75)	2.50 (8.65)	67.15 (8.65)	
Female (n = 196)	15.04 (1.44)	-.15 (1.01)	.15 (1.01)	2.33 (.54)	2.53 (.61)	1.78 (.50)	1.58 (.47)	2.07 (.46)	3.30 (.75)	2.65 (.59)	2.64 (.71)	2.06 (.75)	2.93 (.76)	2.89 (.83)	2.23 (.58)	2.07 (.67)	1.83 (.60)	1.83 (.60)	2.61 (8.82)	66.48 (10.28)	
Scale Properties																					
α				.81	.72	.78	.70	.70	.85	.56	.83	.79	.85	.87	.60	.81	.72	.85			
Range				-2.60-2.67	.71-4.13	1.00-4.66	.52-3.50	.62-3.60	1.06-3.75	1.00-5.00	1.01-4.67	.99-4.95	.78-5.00	1.00-5.00	.82-4.87	1.00-4.33	.58-5.00	.28-4.60	.56-5.00	40-95	
Skew				.10	.24	.62	1.15	.21	-.19	.21	.44	1.02	.22	.02	.32	.78	.92	.42	-.37		
Kurtosis				-.17	.33	.44	.32	1.81	.72	.50	.66	1.34	.07	-.26	.55	1.28	1.44	.41	.25		

Note. **p ≤ .01; *p ≤ .05; independent sample t-tests comparing levels of all variables between genders run with the only significant difference found between age (t(299) = -3.06, p = .002) and BPD features (t(299) = 3.65, p = .000). BPD was a composite score created with the CI-BPD, PAI-BOR, BPFS-C, and BPFS-P.

Table 3
Independent samples *t*-tests comparing boundary violations between patients with and without sub-threshold BPD.

	BPD (n = 131)	No-BPD (n = 152)	<i>t</i>	η_p^2
Parent Report				
Guilt Induction	2.44 (.51)	2.27 (.61)	−2.54*	.024
No Boundaries	2.65 (.68)	2.42 (.62)	−3.10**	.036
Parentification	1.83 (.52)	1.79 (.57)	−1.81	.012
Triangulation	1.55 (.50)	1.65 (.48)	.95	.003
Psychological Control	2.17 (.42)	2.02 (.50)	−2.37**	.021
Youth Report-Maternal Boundary Violation				
Guilt Induction	3.35 (.77)	3.13 (.70)	−.74	.002
No Boundaries	2.68 (.57)	2.56 (.63)	−1.13	.005
Parentification	2.62 (.71)	2.60 (.81)	−.44	.001
Triangulation	2.04 (.79)	2.04 (.77)	−.12	.000
Psychological Control	2.99 (.78)	2.73 (.75)	−1.01	.004
Youth Report-Paternal Boundary Violation				
Guilt Induction	3.01 (.85)	2.75 (.78)	−2.09*	.016
No Boundaries	2.30 (.63)	2.16 (.53)	−2.49*	.023
Parentification	2.10 (.70)	2.04 (.66)	−1.51	.009
Triangulation	1.83 (.69)	1.86 (.67)	.26	.000
Psychological Control	2.69 (.87)	2.46 (.74)	−1.07	.004

Note. ** $p \leq .01$, * $p \leq .05$; BPD diagnoses determined using CI-BPD; $n = 18$ individuals did not complete the CI-BPD; Analyses run controlling for gender and psychiatric severity.

levels of BPD features (two or fewer BPD criteria endorsed). Results of chi-square analyses demonstrated that adolescents with sub-threshold level of BPD were more likely to have a comorbid diagnosis of a depressive disorder, bipolar disorder, externalizing disorder, eating disorder, and anxiety disorder as measured by the C-DISC. Therefore, YSR Total Problems was entered as a covariate in subsequent analyses to control for the greater level of psychiatric severity present in adolescents with BPD.

Bivariate correlations were run between main study variables (see Table 2); results confirmed that YSR Total Problems was significantly and positively related to BPD features. Independent samples *t*-tests were run to compare males and females on main study variables; results demonstrated gender differences between youth on BPD features and age (Table 2). Therefore, gender and YSR Total Problems were entered as a covariate for subsequent analyses.

3.2. Aim 1: Examining the relations between boundary violations and BPD using a categorical and dimensional approach

Independent samples *t*-tests were run to compare adolescents with sub-threshold BPD and no BPD on parent and child reported boundary violations while controlling for gender and psychiatric severity (see Table 3). Significant group differences were found on parent-reported Guilt Induction, No Boundaries, and Psychological Control as well as youth reported paternal Guilt Induction and No Boundaries with youth with BPD reporting higher levels.

A dimensional approach to measuring BPD features was taken using the composite variable of BPD features. Results of bivariate correlations are displayed in Table 2. BPD features were related to parent reported Triangulation and Psychological Control and child reported maternal and paternal Guilt Induction and Psychological Control (r 's = .11–.31; p 's < .05).

3.3. Aim 2: Informant discrepancy analyses in the relations between boundary violations and BPD

As expected, bivariate analyses demonstrated different relations with BPD features based on respondent. We evaluated differences between child and mother ratings of maternal boundary violations as well as between child reports of paternal and maternal boundary violations using paired sample *t*-tests. Results demonstrated that youth rated higher levels of maternal boundary violations compared to paternal

boundary violations (t 's = 5.69–12.13, $df = 300$, p 's < .001). Paired samples *t*-test comparing mother and child reports of boundary violations demonstrated that youth reported higher levels of maternal boundary violations than their mothers (t 's = 2.42–16.39 $df = 249$, p 's < .05). Overall, results suggest that youth perceived greater levels of boundary violations than mothers. At the bivariate level, relations between child and mother reports of parallel boundary violations ranged from $r = .11$ –.21. Overall, highest levels of boundary violations were reported by youth in regard to mother-child boundaries.

To evaluate informant discrepancies of boundary violations in the prediction of BPD features while accounting for known covariates, a hierarchical linear regression was run; on Step 1, we entered psychiatric severity and gender; on Step 2, we entered parent and child reports of the same boundary violation; and on Step 3, we entered the interaction of parent and child reports of the type of boundary violation (see Table 4). These analyses included child reports of maternal boundary violations and mother reports of boundary violations because mothers made up the majority of parents responding on the IBQ parent form. There were no significant results for No Boundaries or Parentification. In regard to Guilt Induction and Psychological Control, there were positive main effects of parent reports of these boundary violations with BPD features. In regard to Triangulation, there was a significant interaction; results of simple slope analysis suggested that parent reports of Triangulation were associated with BPD only at high levels of youth-reported Triangulation; however, at low levels of youth-reported Triangulation, there were no associations between parent-reported Triangulation and BPD.

3.4. Aim 3: Relations between boundary violations and BPD criteria

Next, to evaluate whether boundary violations demonstrated specific relations with interpersonal BPD diagnostic criteria, separate linear regressions were run with all BPD criteria (CIBPD) entered simultaneously as independent variables, and child reports of each type of maternal boundary violations as the dependent variable. Child reports of boundary violations were used as we considered this to be most relevant to BPD based on previous analyses. In predicting maternal Guilt Induction and Psychological Control, the criteria of abandonment fears was significant (Guilt Induction: $\beta = .19$, $t = 2.65$, $p = .009$; Psychological Control: $\beta = .17$, $t = 2.35$, $p = .020$). However, when predicting maternal No Boundaries, Parentification, and Triangulation, no single BPD criterion maintained significance over and above the other criteria. Therefore, our hypothesis was only partly confirmed with fears of abandonment demonstrating unique relations with boundary violations, while other interpersonal aspects of BPD (identity disturbance and relationship instability) did not demonstrate significant relations with boundary violations.

4. Discussion

The overarching objective of the current study was to examine the relations between parent-child boundary violations and BPD in adolescent children. Results demonstrated that there were relations between adolescent children's BPD features and parent-child boundary violations. Specifically, we found that guilt induction and psychological control had the most robust and positive relations with children's BPD features across categorical and dimensional analyses. Parent reports of no boundaries and triangulation also demonstrated positive relations with children's BPD features. In evaluating discrepancies between parent and child reports of boundary violations, we found an interaction in the prediction of adolescent children's BPD features by reports of triangulation. We found that only when youth reports of maternal triangulation were high was there a significant and positive relation between mother reports of triangulation and adolescent children's BPD features, which suggests that, at least for this form of boundary violations, youth perceptions of boundary violations are particularly

Table 4
Linear regressions predicting BPD features from parent and child reports of boundary violations.

	β	t	p	R^2 Change
Guilt Induction				
Step 1				
Total Problems	.71	16.45	.000	
Gender	-.23	-5.40	.000	.595**
Step 2				
Youth Report-Guilt Induction	.13	2.90	.004	
Parent Report-Guilt Induction	.02	.49	.623	.016**
Step 3				
Youth*Parent Report	-.02	-.45	.652	.000
No Boundaries				
Step 1				
Total Problems	.74	17.30	.000	
Gender	-.23	-5.46	.000	.595**
Step 2				
Youth Report-No Boundaries	.03	.72	.472	
Parent Report-No Boundaries	.01	.21	.836	.001
Step 3				
Youth*Parent Report	.00	.01	.993	.000
Parentification				
Step 1				
Total Problems	.73	17.22	.000	
Gender	-.23	-5.34	.000	.595**
Step 2				
Youth Report-Parentification	.05	1.11	.269	
Parent Report-Parentification	-.02	-.45	.652	.002
Step 3				
Youth*Parent Report	.04	.84	.404	.000
Triangulation				
Step 1				
Total Problems	.73	17.27	.000	
Gender	-.22	-5.30	.000	.595**
Step 2				
Youth Report-Triangulation	.06	1.55	.124	
Parent Report-Triangulation	-.11	-2.44	.016	.011*
Step 3				
Youth*Parent Report	.09	2.09	.038	.007*
Psychological Control				
Step 1				
Total Problems	.71	16.83	.000	
Gender	-.22	-5.35	.000	.595**
Step 2				
Youth Report-Psychological Control	.13	3.00	.003	
Parent Report-Psychological Control	.05	1.09	.276	.020**
Step 3				
Youth*Parent Report	.03	.59	.554	.001

Note. ** $p \leq .01$; * $p \leq .05$.

relevant in the association with adolescents' BPD. Finally, we found that the criterion of abandonment fears had unique relations with guilt induction and psychological control suggesting that these types of parent-child boundary violations are specifically related to this diagnostic criterion of BPD.

In addressing our first aim to replicate previous research, we supported the hypothesis that there would be significant relations between adolescent BPD and boundary violations although findings were mixed. We replicated previous findings that demonstrated associations between guilt induction in the parent-child relationship and children's levels of BPD; although findings of relations between parentification and BPD were limited. Specifically, when taking a categorical approach to measuring BPD, significant differences were found for parental reports of guilt induction, no boundaries, psychological control and youth reports of paternal guilt induction and no boundaries, largely in line with previous findings. When taking a dimensional approach to measuring BPD features, results echoed previous findings. Specifically, adolescent children's BPD features were related to guilt induction and psychological control as reported by mothers when controlling for psychiatric severity and gender.

Unexpectedly, we did not find any significant relations between parentification and BPD features, which was a robust finding from previous studies (Lyons-Ruth et al., 2015, 2013, 2007) although parent reports of triangulation, one aspects of parentification, related to BPD in adolescent children. However, there are several notable sampling and methodological differences between our studies and previous research. Previous studies incorporating longitudinal and cross-sectional designs have observed that parent-child interactions relevant to BPD are characterized by maternal withdrawal and hostility during infancy (Carlson et al., 2009; Lyons-Ruth et al., 2013) whereas during early childhood onward, these dynamics are characterized by role confused interactions with children taking a caregiving and punitive role toward their caregivers (i.e., parentification; Lyons-Ruth et al., 2015, 2013). In examining the measures used for these studies, it is apparent that studies finding associations between BPD and parentification utilized observational paradigms (e.g., Goal-corrected Partnership in Adolescent Coding System; Lyons-Ruth et al., 2005) that did not include specific codes for guilt induction or psychological control making it unclear whether these behaviors were included in their operationalizations. Additionally, it is likely that behaviors that are induced within laboratory based interactions do not capture the full repertoire of parent-child dynamics as laboratory assessments are particularly prone to situational influences given the single time point whereas questionnaire based measures may be more representative of the full range of dynamics (Wrzus and Mehl, 2015). This points to the need for additional investigations with different types of measurement beyond laboratory based tasks.

Despite these differences between the current study and previous research, it is possible that results are more complementary than contradictory. Across all analyses in the current study, guilt induction and psychological control had the most robust relations with adolescent children's BPD features. This finding was consistent to those from Johnson et al. (2001) who found that mothers who reported guilt induction in childhood were more likely to have children with higher BPD features. In the current study, guilt induction and psychological control were highly related to each other, suggesting strong overlap. In fact, guilt induction is often seen as one form of psychological control and both of these constructs fall under Kerig's (2005) boundary violation of intrusiveness. Specifically, psychological control by a parent is an attempt to influence children's behavior by manipulating what they think and feel (Barber, 1996; Soenens and Vansteenkiste, 2010), which can be carried out by pressuring a child through inducing guilt such that they will comply with parental requests (Barber, 2002). In the current measure, items indicate that caregiving of parents is one function of guilt induction (e.g., "If I hurt my parent's feelings, he/she stops talking to me until I please him/her again"). Therefore, the current study suggests that similar to previous research, parents utilize intrusive methods in order to maintain a dynamic in which children provide emotional nurturance toward the parent.

From this research and other theoretical accounts (Fertuck et al., 2013; Franzen et al., 2011), it has been proposed that youth become predisposed toward responding to the needs of their parents above their own, which reinforces interpersonal hypersensitivity (Gunderson and Lyons-Ruth, 2008). Specifically, individuals with BPD become hyper-aware of interpersonal signals of others, particularly signals suggesting rejection or criticism after a pattern of interactions in which parents withdraw or threaten withdrawal of love in order to control their child. In regard to the precursors to these dynamics, longitudinal research on boundary violations has found that intrusive forms of boundary violations are more likely among mothers who have a preoccupied or unresolved-insecure attachment (Hazen et al., 2005). Based on attachment theory, these mothers may present as either passive, helpless, or inconsistent in their own parenting (Madigan et al., 2006) and may serve to elicit nurturance from their own children using maladaptive methods. This is in line with research reviewed demonstrating that among infants at risk for developing BPD, mothers appear to be more

withdrawn and helpless in their interactions with their children (Carlson et al., 2009).

This emphasis on parent bids for their child's attention and nurturance provides a context to understanding findings from the second aim of the current study. Consistent with previous research of discordant views of family dynamics between parents and children (Gaylord et al., 2003; Laird and De Los Reyes, 2013), we found low to moderate agreement between parents and children in their reports of the same boundary violations with adolescents reporting higher levels of boundary violations than their parents. However, when examining effects of parent and child reports of boundary violations together in a regression, we found that maternal reports of guilt induction and psychological control had unique relations with BPD features over and above child reports. This suggests that interventions for adolescent BPD that utilize a family-based approach will further benefit the family dynamic if they address mothers' attachment representations and interpersonal tendencies.

While findings regarding guilt induction and psychological control represent continuity with previous research on BPD and boundary violations, an interesting interaction was found when examining the discrepancies between parent and child reports of triangulation in the prediction of adolescent children's level of BPD features. Specifically, at low levels of youth-reported triangulation, parent-reported triangulation was not related to BPD features, but at higher levels of youth-reported guilt induction, parent reports were associated with higher levels of BPD features. These results suggest that only when both adolescents and parents perceive there to be triangulation within their relationships, there may be risk for BPD features. In line with our hypothesis, this suggests that certain forms of boundary violations are harmful only in certain contexts. Previous research on boundary violations have found that when boundary violations reach a threshold at which children perceive them to be unfair or a burden does it lead to adverse consequences (Fuligni et al., 2009; Kuperminc et al., 2009; Macfie et al., 2015; Titzmann, 2012). However, the fact that we only found an interaction regarding triangulation suggests that this conditional relation may only be relevant for certain types of boundary violations. Additionally, it reinforces the importance of including assessments from both parents and children when evaluating relationship constructs, which consist of dynamic influences on the part of both parents and children.

Finally, our evaluation of relations between boundary violations and specific BPD criteria among adolescent children indicated a picture in line with hypotheses and with previous findings: fears of abandonment were uniquely related to both psychological control and guilt induction. Similar to the theory of interpersonal hypersensitivity discussed previously, these findings suggest that parental bids for nurturance and attention from children, particularly when levied against a parent's love toward their child, may lead the child to be hypersensitive to signals of abandonment and withdrawal. Subsequently, children develop an increased awareness and sensitivity to these interpersonal signals as an adaptive mechanism to maintain interpersonal connection. This dynamic has long-term implications for BPD development by generalizing to relationships outside of the family environment. In fact, a longitudinal study of BPD symptoms found that symptom areas of BPD reflecting chronic dysphoria (loneliness/emptiness) and interpersonal symptoms reflecting abandonment and dependency issues are the most stable over time and represent more enduring aspects of the disorder (Zanarini et al., 2007). Specifically, while other symptoms of BPD remitted relatively quickly over time, these symptoms were still present in 20–40% of individuals after 10-years even in the absence of a full BPD diagnosis. Therefore, positive relations between psychological control and guilt induction with abandonment criteria may reflect more longstanding effects on the course of BPD for these adolescents.

Several limitations of this study must be acknowledged. First, the use of questionnaire based instruments have the potential to reflect personal biases rather than reality. Another limitation of the current measure was apparent in the high overlap between guilt induction and psychological control discussed earlier. Future research should conduct psychometric work to establish construct validity of this measure, particularly in regard to examining associations with observational methods of boundary violations and to evaluate internal structure of the measure. Second, the use of an inpatient sample of adolescents limits generalizability to samples with less severe psychopathology and healthy adolescents. Researchers have emphasized the need to study BPD in high-risk community samples to assess how early experiences may shape adult life (Paris, 2000; Rogosch and Cicchetti, 2005). Finally, the cross-sectional design of the study limits any inferences to be made regarding causality. Specifically, due to the transactional nature of parent-child relationships through development (Sameroff, 2009, 1995), it is likely that the presence of BPD features in childhood elicits boundary violations from parents by adolescence. However, given that numerous studies have demonstrated prospective relations between parent-child boundary violations and later presence of BPD features, there is likely some directional effects of these relationship dynamics on the development of BPD.

Despite these limitations, the significance of this study lies in its expansion of previous findings and theory on the family dynamics that are associated with risk for BPD in adolescent children. Specifically, by utilizing a measure that simultaneously assessed multiple types of boundary violations, we are able to extend previous findings on parentification and BPD by suggesting that the effects of parentification on BPD in children are driven specifically by parental guilt induction and psychological control. Additionally, by simultaneously evaluating both parent and child reports of boundary violations, we suggest that the primary mechanism influencing BPD are maternal representations of the parent-child relationship. This points to the need to include parents in interventions for adolescent BPD and in particular to address their own working models of relationships and how they contribute to relationship dynamics. Finally, our results support theories of interpersonal hypersensitivity in BPD by suggesting that particular boundary violations are related to increased abandonment fears, which may present prolonged influences on BPD development.

References

- Achenbach, T.M., 1991. Integrative guide for the 1991 CBCL/4-18, YSR, and TRF profiles. Department of Psychiatry, University of Vermont.
- Agrawal, H.R., Gunderson, J., Holmes, B.M., Lyons-Ruth, K., 2004. Attachment studies with borderline patients: a review. *Harv. Rev. Psychiatry* 12, 94–104. <http://dx.doi.org/10.1080/10673220490447218>.
- Barber, B.K., 2002. Intrusive parenting: how psychological control affects children and adolescents. *American Psychological Association*, Washington, DC, US.
- Barber, B.K., 1996. Parental psychological control: revisiting a neglected construct. *Child Dev.* 67, 3296–3319. <http://dx.doi.org/10.1111/j.1467-8624.1996.tb01915.x>.
- Bellow, S.M., Boris, N.W., Larrieu, J.A., Lewis, M.L., Elliot, A., 2005. Conceptual and clinical dilemmas in defining and assessing role reversal in young child-caregiver relationships. *J. Emot. Abus.* 5, 43–66. <http://dx.doi.org/10.1300/J135v05n02-03>.
- Carlson, E.A., Egeland, B., Sroufe, L.A., 2009. A prospective investigation of the development of borderline personality symptoms. *Dev. Psychopathol.* 21, 1311–1334. <http://dx.doi.org/10.1017/S0954579409990174>.
- Chanen, A.M., Kaess, M., 2012. Developmental pathways to borderline personality disorder. *Curr. Psychiatry Rep.* 14, 45–53. <http://dx.doi.org/10.1007/s11920-011-0242-y>.
- Chang, B., Sharp, C., Ha, C., 2011. The criterion validity of the borderline personality features scale for children in an adolescent inpatient setting. *J. Personal. Disord.* 25, 492–503. <http://dx.doi.org/10.1521/pedi.2011.25.4.492>.
- Crawford, T.N., Cohen, P., Brook, J.S., 2001. Dramatic-erratic personality disorder symptoms: ii. Developmental pathways from early adolescence to adulthood. *J. Personal. Disord.* 15, 336–350. <http://dx.doi.org/10.1521/pedi.15.4.336.19185>.
- Cree, V.E., 2003. Worries and problems of young carers: issues for mental health. *Child Fam. Soc. Work* 8, 301–309. <http://dx.doi.org/10.1046/j.1365-2206.2003.00292.x>.
- Crick, N.R., Murray-Close, D., Woods, K., 2005. Borderline personality features in

- childhood: a short-term longitudinal study. *Dev. Psychopathol.* 17, 1051–1070.
- De Los Reyes, A., Kazdin, A.E., 2004. Measuring informant discrepancies in clinical child research. *Psychol. Assess.* 16, 330–334. <http://dx.doi.org/10.1037/1040-3590.16.3.330>.
- Doyle, C., Cicchetti, D., 2017. From the cradle to the grave: the effect of adverse caregiving environments on attachment and relationships throughout the lifespan. *Clin. Psychol. Sci. Pract.* 24, 203–217. <http://dx.doi.org/10.1111/cpsp.12192>.
- Fertuck, E.A., Grinband, J., Stanley, B., 2013. Facial trust appraisal negatively biased in borderline personality disorder. *Psychiatry Res.* 207, 195–202. <http://dx.doi.org/10.1016/j.psychres.2013.01.004>.
- Fonagy, P., Luyten, P., 2009. A developmental, mentalization-based approach to the understanding and treatment of borderline personality disorder. *Dev. Psychopathol.* 21, 1355–1381. <http://dx.doi.org/10.1017/S0954579409990198>.
- Fonagy, P., Target, M., Gergely, G., 2000. Attachment and borderline personality disorder: a theory and some evidence. *Psychiatr. Clin. North Am.* 23, 103–122. [http://dx.doi.org/10.1016/S0193-953X\(05\)70146-5](http://dx.doi.org/10.1016/S0193-953X(05)70146-5).
- Franzen, N., Hagenhoff, M., Baer, N., Schmidt, A., Mier, D., Sammer, G., Gallhofer, B., Kirsch, P., Lis, S., 2011. Superior “theory of mind” in borderline personality disorder: an analysis of interaction behavior in a virtual trust game. *Psychiatry Res.* 187, 224–233. <http://dx.doi.org/10.1016/j.psychres.2010.11.012>.
- Fulgini, A.J., Telzer, E.H., Bower, J., Cole, S.W., Kiang, L., Irwin, M.R., 2009. A preliminary study of daily interpersonal stress and C-reactive protein levels among adolescents from Latin American and European backgrounds. *Psychosom. Med.* 71, 329–333. <http://dx.doi.org/10.1097/PSY.0b013e3181921b1f>.
- Gaylord, N.K., Kitzmann, K.M., Coleman, J.K., 2003. Parents’ and children’s perceptions of parental behavior: associations with children’s psychosocial adjustment in the classroom. *Parent. Sci. Pract.* 3, 23–47. http://dx.doi.org/10.1207/S15327922PAR0301_02.
- Guion, K., Mrug, S., Windle, M., 2009. Predictive value of informant discrepancies in reports of parenting: relations to early adolescents’ adjustment. *J. Abnorm. Child Psychol.* 37, 17–30. <http://dx.doi.org/10.1007/s10802-008-9253-5>.
- Gunderson, J.G., Lyons-Ruth, K., 2008. BPD’s interpersonal hypersensitivity phenotype: a gene-environment-developmental model. *J. Personal. Disord.* 22, 22–41. <http://dx.doi.org/10.1521/pedi.2008.22.1.22>.
- Ha, C., Balderas, J.C., Zanarini, M.C., Oldham, J., Sharp, C., 2014. Psychiatric comorbidity in hospitalized adolescents with borderline personality disorder. *J. Clin. Psychiatry* 75, e457–e464. <http://dx.doi.org/10.4088/JCP.13m08696>.
- Hazen, N., Jacobvitz, D., McFarland, L., 2005. Antecedents of boundary disturbances in families with young children: intergenerational transmission and parent-infant caregiving patterns. *J. Emot. Abus.* 5, 85–110. <http://dx.doi.org/10.1300/J135v05n02-05>.
- Hopwood, C.J., Wright, A.G.C., Ansell, E.B., Pincus, A.L., 2013. The interpersonal core of personality pathology. *J. Personal. Disord.* 27, 270–295. <http://dx.doi.org/10.1521/pedi.2013.27.3.270>.
- Corp, I.B.M., 2016. IBM SPSS Statistics for Windows, Version 24.0. IBM Corp, Armonk, NY.
- Johnson, D.M., Shea, M.T., Yen, S., Battle, C.L., Zlotnick, C., Sanislow, C.A., Grilo, C.M., Skodol, A.E., Bender, D.S., McGlashan, T.H., Gunderson, J.G., Zanarini, M.C., 2003. Gender differences in borderline personality disorder: findings from the collaborative longitudinal personality disorders study. *Compr. Psychiatry* 44, 284–292. [http://dx.doi.org/10.1016/S0010-440X\(03\)00090-7](http://dx.doi.org/10.1016/S0010-440X(03)00090-7).
- Johnson, J.G., Cohen, P., Smailes, E.M., Skodol, A.E., Brown, J., Oldham, J.M., 2001. Childhood verbal abuse and risk for personality disorders during adolescence and early adulthood. *Compr. Psychiatry* 42, 16–23. <http://dx.doi.org/10.1053/comp.2001.19755>.
- Kaess, M., Brunner, R., Chanan, A., 2014. Borderline personality disorder in adolescence. *Pediatrics* 134, 782–793. <http://dx.doi.org/10.1542/peds.2013-3677>.
- Kaess, M., von Ceumern-Lindsten, I.-A., Parzer, P., Chanan, A., Mundt, C., Resch, F., Brunner, R., 2013. Axis I and II comorbidity and psychosocial functioning in female adolescents with borderline personality disorder. *Psychopathology* 46, 55–62. <http://dx.doi.org/10.1159/000338715>.
- Kerig, P.K., 2005. Revisiting the construct of boundary dissolution: a multidimensional perspective. *J. Emot. Abus.* 5, 5–42. http://dx.doi.org/10.1300/J135v05n02_02.
- Koepke, S., Denissen, J.J.A., 2012. Dynamics of identity development and separation–individuation in parent–child relationships during adolescence and emerging adulthood – A conceptual integration. *Dev. Rev.* 32, 67–88. <http://dx.doi.org/10.1016/j.dr.2012.01.001>.
- Kuperminc, G.P., Jurkovic, G.J., Casey, S., 2009. Relation of filial responsibility to the personal and social adjustment of Latino adolescents from immigrant families. *J. Fam. Psychol.* 23, 14–22. <http://dx.doi.org/10.1037/a0014064>.
- Laird, R.D., De Los Reyes, A., 2013. Testing informant discrepancies as predictors of early adolescent psychopathology: why difference scores cannot tell you what you want to know and how longitudinal regression may. *J. Abnorm. Child Psychol.* 41, 1–14. <http://dx.doi.org/10.1007/s10802-012-9659-y>.
- Linehan, M.M., 1993. *Cognitive-behavioral treatment of borderline personality disorder. Diagnosis and treatment of mental disorders.* Guilford Press, New York, NY, US.
- Lyons-Ruth, K., Brumariu, L.E., Bureau, J.-F., Hennighausen, K., Holmes, B., 2015. Role confusion and disorientation in young adult-parent interaction among individuals with borderline symptomatology. *J. Personal. Disord.* 29, 641–662. <http://dx.doi.org/10.1521/pedi.2014.28.165>.
- Lyons-Ruth, K., Bureau, J.-F., Holmes, B., Easterbrooks, A., Brooks, N.H., 2013. Borderline symptoms and suicidality/self-injury in late adolescence: prospectively observed relationship correlates in infancy and childhood. *Psychiatry Res.* 206, 273–281. <http://dx.doi.org/10.1016/j.psychres.2012.09.030>.
- Lyons-Ruth, K., Choi-Kain, L., Pechtel, P., Bertha, E., Gunderson, J., 2011. Perceived parental protection and cortisol responses among young females with borderline personality disorder and controls. *Psychiatry Res.* 189, 426–432. <http://dx.doi.org/10.1016/j.psychres.2011.07.038>.
- Lyons-Ruth, K., Hennighausen, K., Holmes, B., 2005. Goal-corrected partnership in adolescence coding system (GPACS): Coding manual, Version 2. Unpubl. Manuscr. Dep. Psychiatry Harv. Med. Sch. Camb. MA.
- Lyons-Ruth, K., Melnick, S., Patrick, M., Hobson, R.P., 2007. A controlled study of helpless states of mind among borderline and dysthymic women. *Attach. Hum. Dev.* 9, 1–16. <http://dx.doi.org/10.1080/14616730601151417>.
- Macfie, J., Brumariu, L.E., Lyons-Ruth, K., 2015. Parent–child role-confusion: a critical review of an emerging concept. *Dev. Rev.* 36, 34–57. <http://dx.doi.org/10.1016/j.dr.2015.01.002>.
- Madigan, S., Bakermans-Kranenburg, M.J., Van Ijzendoorn, M.H., Moran, G., Pederson, D.R., Benoit, D., 2006. Unresolved states of mind, anomalous parental behavior, and disorganized attachment: a review and meta-analysis of a transmission gap. *Attach. Hum. Dev.* 8, 89–111. <http://dx.doi.org/10.1080/14616730600774458>.
- Mattanah, J.J., Becker, D.F., Levy, K.N., Edell, W.S., McGlashan, T.H., 1995. Diagnostic stability in adolescents followed up 2 years after hospitalization. *Am. J. Psychiatry* 152, 889–894.
- Maysel, O., Scharf, M., 2009. Too close for comfort: inadequate boundaries with parents and individuation in late adolescent girls. *Am. J. Orthopsychiatry* 79, 191–202. <http://dx.doi.org/10.1037/a0015623>.
- Maysel, O., Scharf, M., 2000. Inadequate Boundaries Questionnaire—IBQ. Unpubl. Manuscr. Univ. Haifa Haifa Isr.
- Meeus, W., Iedema, J., Maassen, G., Engels, R., 2005. Separation–individuation revisited: on the interplay of parent–adolescent relations, identity and emotional adjustment in adolescence. *J. Adolesc.* 28, 89–106. <http://dx.doi.org/10.1016/j.adolescence.2004.07.003>.
- Morey, L.C., 2007. Personality assessment inventory–adolescent (PAI-A). Lutz FL Psychol. Assess. Resour.
- Morey, L.C., 1991. *Personality assessment inventory.* Routledge, Odessa, Florida.
- Nuttall, A.K., Valentino, K., 2017. An ecological-transactional model of generational boundary dissolution across development. *Marriage Fam. Rev.* 53, 105–150. <http://dx.doi.org/10.1080/01494929.2016.1178203>.
- Paris, J., 2000. Predispositions, personality traits, and posttraumatic stress disorder. *Harv. Rev. Psychiatry* 8, 175–183. <http://dx.doi.org/10.1093/hrp/8.4.175>.
- Rogosch, F.A., Cicchetti, D., 2005. Child maltreatment, attention networks, and potential precursors to borderline personality disorder. *Dev. Psychopathol.* 17, 1071–1089. <http://dx.doi.org/10.1017/S0954579405050509>.
- Rousseau, S., Scharf, M., 2015. “I will guide you” The indirect link between overparenting and young adults’ adjustment. *Psychiatry Res.* 228, 826–834. <http://dx.doi.org/10.1016/j.psychres.2015.05.016>.
- Sameroff, A.J., 2009. The transactional model. In: *The Transactional Model of Development: How Children and Contexts Shape Each Other.* American Psychological Association, Washington, DC, US, pp. 3–21.
- Sameroff, A.J., 1995. General systems theories and developmental psychopathology. In: Cicchetti, D., Cohen, D.J. (Eds.), *Developmental Psychopathology Vol. 1: Theory and Methods, Wiley Series on Personality Processes 1.* John Wiley & Sons, Oxford, England, pp. 659–695.
- Shaffer, A., Egeland, B., 2011. Intergenerational transmission of familial boundary dissolution: observations and psychosocial outcomes in adolescence. *Fam. Relat.* 60, 290–302. <http://dx.doi.org/10.1111/j.1741-3729.2011.00653.x>.
- Shaffer, A., Sroufe, L.A., 2005. The developmental and adaptational implications of generational boundary dissolution: findings from a prospective, longitudinal study. *J. Emot. Abus.* 5, 67–84. <http://dx.doi.org/10.1300/J135v05n02-04>.
- Shaffer, D., Fisher, P., Lucas, C.P., Dulcan, M.K., Schwab-Stone, M.E., 2000. NIMH Diagnostic Interview Schedule for Children Version IV (NIMH DISC-IV): description, differences from previous versions, and reliability of some common diagnoses. *J. Am. Acad. Child Adolesc. Psychiatry* 39, 28–38. <http://dx.doi.org/10.1097/00004583-200001000-00014>.
- Sharp, C., Fonagy, P., 2015. Practitioner review: borderline personality disorder in adolescence - recent conceptualization, intervention, and implications for clinical practice. *J. Child Psychol. Psychiatry* 56, 1266–1288. <http://dx.doi.org/10.1111/jcpp.12449>.
- Sharp, C., Ha, C., Michonski, J., Venta, A., Carbone, C., 2012. Borderline personality disorder in adolescents: evidence in support of the Childhood Interview for DSM-IV Borderline Personality Disorder in a sample of adolescent inpatients. *Compr. Psychiatry* 53, 765–774. <http://dx.doi.org/10.1016/j.comppsy.2011.12.003>.
- Sharp, C., Mosko, O., Chang, B., Ha, C., 2011. The cross-informant concordance and concurrent validity of the Borderline Personality Features Scale for Children in a community sample of boys. *Clin. Child Psychol. Psychiatry* 16, 335–349. <http://dx.doi.org/10.1177/1359104510366279>.
- Soenens, B., Vansteenkiste, M., 2010. A theoretical upgrade of the concept of parental psychological control: proposing new insights on the basis of self-determination theory. *Dev. Rev.* 30, 74–99. <http://dx.doi.org/10.1016/j.dr.2009.11.001>.
- Stein, M.B., Pincus, J.H., Hilsenroth, M.J., 2007. Borderline pathology and the Personality Assessment Inventory (PAI): an evaluation of criterion and concurrent validity. *J. Pers. Assess.* 88, 81–89. <http://dx.doi.org/10.1080/00223890709336838>.
- Titzmann, P., 2012. Growing up too soon? Parentification among immigrant and native adolescents in Germany. *J. Youth Adolesc.* 41, 880–893. <http://dx.doi.org/10.1007/s10964-011-9711-1>.
- Wrzus, C., Mehl, M.R., 2015. Lab and/or field? Measuring personality processes and their social consequences. *Eur. J. Personal.* 29, 250–271. <http://dx.doi.org/10.1002/per.1986>.
- Zanarini, M.C., 2003. *Childhood Interview for DSM-IV borderline personality disorder (CI-BPD).* Belmont MA McLean Hosp.
- Zanarini, M.C., Frankenburg, F.R., Hennen, J., Silk, K.R., 2003. The longitudinal course of

- borderline psychopathology: 6-year prospective follow-up of the phenomenology of borderline personality disorder. *Am. J. Psychiatry* 160, 274–283. <http://dx.doi.org/10.1176/appi.ajp.160.2.274>.
- Zanarini, M.C., Frankenburg, F.R., Reich, D.B., Silk, K.R., Hudson, J.I., McSweeney, L.B., 2007. The subsyndromal phenomenology of borderline personality disorder: a 10-year follow-up study. *Am. J. Psychiatry* 164, 929–935. <http://dx.doi.org/10.1176/ajp.2007.164.6.929>.
- Zanarini, M.C., Wedig, M.M., 2014. Childhood adversity and the development of borderline personality disorder. In: Sharp, C., Tackett, J.L. (Eds.), *Handbook of Borderline Personality Disorder in Children and Adolescents*. Springer, New York, pp. 265–276. http://dx.doi.org/10.1007/978-1-4939-0591-1_18.
- Zanarini, M.C., Williams, A.A., Lewis, R.E., Bradford, R., Vera, S.C., Marino, M.F., Levin, A., Yong, L., Frankenburg, F.R., 1997. Reported pathological childhood experiences associated with the development of borderline personality disorder. *Am. J. Psychiatry* 154, 1101–1106.
- Zimmer-Gembeck, M.J., 2005. Autonomy development during adolescence. In: *Blackwell Handbook of Adolescence*. Wiley-Blackwell, Hoboken, NJ, pp. 175–204.