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Maternal Psychological Control, Maternal Borderline Personality Disorder, and Adolescent Borderline Features

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Linehan (1993) theorized that the experience of invalidating parenting interacts with emotional vulnerability in the development of borderline personality disorder (BPD). Parental psychological control is a type of invalidating parenting, defined as manipulation by parents of their offspring's psychological and emotional expression and experience (Barber, 1996). In a normative sample of adolescent females, adolescent-reported maternal psychological control was related to maternal borderline symptoms (Zalwski et al., 2014). The current study expanded on these findings to sample mothers with a diagnosis of BPD ($n = 28$) and normative comparisons ($n = 28$) with male and female adolescents aged 14–18. We assessed maternal and adolescent self-reported borderline features (affective instability, negative relationships, identity disturbance, and self-harm) and coded maternal psychological control from filmed problem-solving interactions. Controlling for current major depressive disorder and family income, mothers with BPD used more total psychological control with their adolescents in comparison with normative mothers. Further, maternal psychological control was positively associated with all mothers' borderline features and with adolescent affective instability. Finally, we found a significant indirect effect for maternal affective instability between maternal total psychological control and adolescent affective instability. We discuss adolescents' risk of developing BPD themselves and prevention and treatment implications.

Keywords: borderline personality disorder, borderline features, psychological control, mother–adolescent interaction, developmental psychopathology

When mothers are unable to be sensitive to their offspring's emotional and psychological needs, they may engage in psychological control, that is, inhibition of, and intrusion on, an adolescent's developmentally appropriate independence with respect to thought processes, emotions, self-expressions, and attachment to parents (Barber, 1996). Psychological control is distinct from behavioral control and comprises interrupting or talking over, negating expressed attitudes or emotions, blaming or mentioning past mistakes, shaming and burdening with responsibility for the parent's needs, physically demonstrating disapproval (e.g., rolling eyes and turning away), and responding with emotional inconsistency in relation to an adolescent (Barber, 1996). Parental psychological control may obstruct and frustrate offspring's desire to independently pursue their basic needs (Mabbe, Soenens, Vans-teenkiste, & Van Leeuwen, 2016). Specifically, during adolescence, psychologically controlling parental behaviors may interfere with psychological exploration, which may in turn hamper identity formation, theorized to be an essential task of this developmental period (Erikson, 1968; Marcia, 1980).

Linehan and colleagues (Crowell, Beauchaine, & Linehan, 2009; Linehan, 1993) proposed a biosocial theory of borderline personality disorder (BPD), such that an invalidating environment interacts with the presence of an emotionally reactive temperament to potentiate the development of the disorder. BPD is a severe and chronic disorder characterized by emotional dysregulation, a distorted sense of self, fear of abandonment, risky behaviors, and difficulties forming and maintaining relationships (American Psychiatric Association, 2013). Parental psychological control is an example of an invalidating environment as defined by Crowell et al. (2009) and Linehan (1993). Study of maternal psychological control in women with BPD and their adolescents may inform putative precursors to BPD given the theorized high risk of offspring developing BPD themselves (Lenzenweger & Cicchetti, 2005; Macfie, 2009), which now has empirical support from longitudinal studies (Barnow et al., 2013; Reinelt et al., 2013; Stepp, Olin, Klein, Seeley, & Lewinsohn, 2013).

The current study addressed the following questions: Do mothers with a categorical diagnosis of BPD exert more psychological control with their adolescents than do normative comparisons? Is maternal psychological control related to (a) maternal and (b) adolescent self-reported borderline features (affective instability, identity disturbance, negative relationships, and self-harm; Morey, 1991)? And do maternal borderline features mediate the relationship between maternal psychological control and adolescent borderline features? These are important questions, as answers may contribute to furthering insight into putative factors (e.g., specific BPD features and

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parenting behaviors) that may potentiate the paths to developing this chronic and debilitating disorder.

Development of Psychological Control and BPD

One pathway to BPD may lie in psychologically controlling behavior that develops following a disorganized attachment in infancy. The attachment system has developed so that a caregiver is able to provide emotional and physical security for an infant (Bowlby, 1969/1982, 1980). Infants who are classified as disorganized in their attachment to their mothers, however, are unable to implement an organized strategy for using the mother as a secure base when distressed, because the caregiver appears either frightening (e.g., abusive) or frightened (e.g., grieving a loss) to the infant; the infant alternates between approach and avoidance, the attachment system breaks down, and the infant is caught in unresolved distress (Main & Hesse, 1990). These infants later develop controlling behavior toward the caregiver, either in a punitive or caregiving manner (van IJzendoorn, Schuengel, & Bakermans-Kranenburg, 1999), observed at age 2 (Macfie, Fitzpatrick, Rivas, & Cox, 2008), age 6 (Main & Cassidy, 1988; Main, Kaplan, & Cassidy, 1985), and age 9 (Bureau, Ann Easlerbrooks, & Lyons-Ruth, 2009). Children are theorized to become controlling as way to maintain proximity by attempting to meet the mother's needs even though she is not able to alleviate the child's distress and may indeed be the cause of it (Main & Hesse, 1990; Main et al., 1985). However, these controlling children are still vulnerable to disorganization under stress. The resulting pattern of controlling relationships combined with disorganization under stress may continue across development and make the development of BPD more likely. Indeed, disorganized attachment in infancy (Carlson, Egeland, & Sroufe, 2009) and controlling behavior at age 8 (Lyons-Ruth, Bureau, Holmes, Easterbrooks, & Brooks, 2013) and at age 20 (Lyons-Ruth, Brumariu, Bureau, Hennighausen, & Holmes, 2015) are associated with BPD symptoms in adulthood. Thus, research suggests that the onset of psychologically controlling behaviors occur in early childhood, preceding the development of BPD and parenthood.

Extending Previous Work

The symptoms characteristic of BPD may negatively interfere with a mother's ability to fulfill the emotional aspects of effective parenting, for example, being able to respond to a child's emotional state (Elliot et al., 2014). Although there is growing research on the offspring of mothers with BPD, there is limited empirical investigation of the functioning of adolescent offspring (see Eyden, Winsper, Wolke, Broome, & MacCallum, 2016 for review). Frankel-Waldheter, Macfie, Strimpfel, and Watkins (2015) found that mothers with BPD were less likely to promote and more likely to inhibit autonomy and relatedness with their adolescents in comparison to normative mothers. Moreover, compared to those with healthy mothers, offspring aged 11–18 of mothers with BPD tended to perceive their mothers as more invalidating (e.g., rejecting, inducing shame and guilt, intrusive, and controlling of personal choices; Barnow, Spitzer, Grabe, Kessler, & Freyberger, 2006). These invalidating parenting behaviors can be defined more specifically as aspects of psychological control. Indeed, Zalewski et al. (2014), in an important study, was the first to examine the

relation between BPD and psychological control, and found that, in a sample of adolescent girls and their mothers, daughter-reported maternal psychological control was significantly related to self-reported maternal borderline symptoms.

The current study aims to build on the work of Zalewski et al. (2014) to include mothers with a diagnosis of BPD in addition to self-reported borderline features, coded observations of maternal psychological control from filmed mother–adolescent interactions instead of adolescent report, adolescent boys in addition to girls, and adolescents' own self-reported borderline features. Zalewski and colleagues (2014) used a nine-item self-report screener (Loranger et al., 1994) to measure borderline symptoms, with 8% of mothers reaching the clinical range. Examining psychological control among mothers, half of whom have a diagnosis of BPD, further tests the link between psychological control and BPD. In the current study, we expected that mothers with BPD would use more psychological control than would healthy comparisons.

Zalewski et al. (2014) used confirmatory factor analysis of the self-report screener of BPD symptoms to identify clusters. They found a significant link between maternal psychological control and affective/behavioral dysregulation, but not with interpersonal dysregulation or identity disturbance (Zalewski et al., 2014). With a sample that includes ~50% mothers with a diagnosis of BPD, we were able to reexamine these relationships using a self-report measure of maternal borderline features (affective instability, identity disturbance, negative relationships, and self-harm/impulsivity), which are highly correlated with a diagnosis of BPD (Morey, 1991). Resultantly, we expected that total maternal psychological control and subtypes would relate to all maternal borderline features (affective instability, identity disturbance, negative relationships, and self-harm/impulsivity), including equivalents to those for which Zalewski et al. (2014) found no relationship.

Zalewski et al. (2014) used an adolescent-report measure of maternal psychological control (Schludermann & Schludermann, 1971) based on Schaefer's (1965) conceptualization. The current study used filmed observations of mother–adolescent problem-solving interactions to measure psychological control based on Barber's (1996) conceptualization. Barber's conceptualization differs from Schaefer's (1965) conceptualization in that psychologically controlling behavior, which includes parental intrusiveness on emotional and psychological features of offspring development, is considered to be located along a separate continuum of parenting than autonomy granting. Moreover, with coded observations of maternal psychological control, we were able to observe specific subtypes (verbal constraint, invalidating feelings, personal attack, guilt induction, love withdrawal, and erratic emotional behavior). Furthermore, observational measurement of maternal psychological control allowed for the assessment of behaviors for which both mothers and adolescents may be unable to report in questionnaires due to limited insight.

Maternal Psychological Control and Adolescent Borderline Features

There is limited research on the examination of offspring borderline features in relation to maternal psychological control. Blossom, Fite, Frazer, Cooley, and Evans (2016) found that adolescent reports of maternal psychological control related to offspring emotion dysregulation. Furthermore, in a college sample, offspring-

reported parental psychological control was related to offspring identity formation problems such as inhibited commitment making and commitment identification, and increased exploration in breadth (Luyckx, Soenens, Vansteenkiste, Goossens, & Berzonsky, 2007). However, there has been no research on maternal psychological control in relation to adolescent negative relationships or self-harm. Given these limited but informative findings and the theorized effects of invalidating parenting (Crowell et al., 2009), we expected maternal total psychological control and subtypes would significantly correlate with adolescent borderline features.

Further, we expected that the combination of maternal psychological control and subtypes would relate to adolescent borderline features through maternal borderline features. Given evidence that offspring of mothers high in BPD symptoms are likely to report BPD symptoms themselves in prospective studies (Barnow et al., 2013, 2006; Reinelt et al., 2013), we expected that maternal borderline features would mediate the relationship between maternal total psychological control and the same adolescent borderline features.

Current Study

We aimed to extend existing research on maternal BPD and maternal psychological control (Zalewski et al., 2014). We sampled mothers with a diagnosis of BPD, normative comparisons, and their male and female adolescents. We also assessed borderline features along a continuum for all mothers and adolescents. Because major depressive disorder (MDD) is often comorbid with BPD (Zanarini et al., 1998) and has deleterious effects on child and adolescent development (Downey & Coyne, 1990), current maternal MDD was controlled for in tests of group differences and indirect effects. We further aimed to measure psychological control using observational assessment rather than adolescent self-report, and to include both male and female adolescents. Lastly, we aimed to examine the relation of maternal psychological control with adolescent borderline features and the mediating role of maternal borderline features.

Specifically, we hypothesized as follows:

Hypothesis 1: Mothers with BPD would use more overall psychological control in interactions with their adolescents than would normative mothers.

Hypothesis 2: Maternal psychological control and each subtype (i.e., verbal constraint, invalidating feelings, personal attack, guilt induction, love withdrawal, and erratic emotional behavior) would correlate with (a) maternal and (b) adolescent borderline features (affective instability, identity disturbance, negative relationships, and self-harm/impulsivity).

Hypothesis 3: Maternal borderline features would mediate the relationships between overall maternal psychological control and the same adolescent borderline features.

Method

Participants

The sample consisted of 56 adolescents age 14–18 years ($M_{\text{age}} = 15$ years 5 months, $SD = 1$ year 2 months) and their biological mothers, with 28 mothers diagnosed with BPD and 28 matched normative comparison mothers with no current BPD diagnosis. Half of the adolescent sample was female in both groups. This sample had low socioeconomic status and had ethnic backgrounds that reflect those of the local community, 92% Caucasian, 7% ethnic minority, and 4% Hispanic. See Table 1 for demographic data.

As part of a larger study, participants were recruited from a five-county region of the United States that included both rural and urban areas. Researchers distributed brochures describing the symptoms of BPD and the study to clinicians at presentations on the treatment of BPD. Further, they asked clinicians to refer clients whom they thought might have BPD and who had an adolescent age 14–18. Researchers handed out brochures to mothers recruited for the comparison group at the local schools, recreation centers, and sporting events and posted flyers in the community to recruit both groups. Participants received compensation for participation.

Table 1
Demographic Information

Variable	Whole sample ($N = 56$) M (SD)	BPD group ($n = 28$) M (SD)	Comparison group ($n = 28$) M (SD)	t
Adolescent age (years)	15.41 (1.19)	15.22 (1.13)	15.61 (1.23)	1.25
Family yearly income (\$)	26,876 (17,119)	22,615 (12,250)	31,138 (20,230)	1.91 [†]
Number of adults in home	1.80 (.72)	1.68 (.67)	1.93 (.77)	1.30
Number of children in home	2.36 (1.53)	2.18 (1.36)	2.54 (1.69)	0.87
	%	%	%	χ^2
Adolescent sex (female)	50	50	50	0
Adolescent ethnic minority	7	4	11	1.08
Adolescent Hispanic	4	4	4	0
Maternal marital status (single)	30	32	29	0.08

Note. BPD = borderline personality disorder.

[†] $p < .10$.

Procedures

Participants first scheduled a home visit or a meeting at a public place of the mother's choosing, during which two research assistants administered informed consent for the mother and assent for the adolescent, plus a demographic interview and a self-report screener for BPD symptoms to the mother. The mother and adolescent then scheduled a laboratory visit, during which time the mother completed a structured clinical interview and both the mother and adolescent completed self-report questionnaires on borderline features and listed topics of conflict between them. Researchers chose three topics of conflict and asked each mother-adolescent dyad to attempt to resolve the issue.

Measures

Demographics. The Mt. Hope Family Center's Interview (Mt. Hope Family Center, 1995) was used with mothers to assess demographic information. See Table 1 for details.

Borderline personality disorder. The Structured Clinical Interview for *DSM-IV* Personality Disorders (SCID-II; First, Gibbon, Spitzer, Williams, & Benjamin, 1997) is a semistructured interview used to diagnose personality disorders. After the completion of the SCID-II Personality Disorders Questionnaire (First et al., 1997), a licensed clinical psychologist then administered the SCID-II interview to assess for maternal BPD diagnosis. There is support for interrater reliability and internal consistency for the structural assessment of BPD diagnosis based on *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)* criteria using the SCID-II (Lobbestael, Leurgans, & Arntz, 2011; Maffei et al., 1997).

Borderline features. The Personality Assessment Inventory (PAI; Morey, 1991) is a self-report inventory that was administered to both mothers and adolescents to evaluate personality characteristics and psychopathology, specifically borderline features. The Borderline Features Scale of the PAI (PAI-BOR) consists of 24 items rated on a 4-point Likert scale as *false*, *slightly true*, *mainly true*, or *very true*. The PAI-BOR includes a total borderline features score made up of four subscales of common factors in BPD: affective instability, identity disturbance, negative relationships, and self-harm. It has been validated as a useful method for evaluating borderline-specific pathology, with support

for criterion (Stein, Pinsker-Aspen, & Hilsenroth, 2007) and convergent (Kurtz & Morey, 2001) validity.

In the current sample, maternal borderline features correlated highly with maternal BPD diagnosis: affective instability, $r = .81$, $p < .001$; identity disturbance, $r = .74$, $p < .001$; negative relationships, $r = .70$, $p < .001$; and self-harm, $r = .57$, $p < .01$. Mothers' borderline features were high in internal consistency, assessed using Cronbach's α : affective instability ($\alpha = .91$), identity disturbance ($\alpha = .85$), negative relationships ($\alpha = .85$), and self-harm ($\alpha = .86$). Adolescents' borderline features were moderate to high in internal consistency: affective instability ($\alpha = .83$), identity disturbance ($\alpha = .67$), negative relationships ($\alpha = .69$), and self-harm ($\alpha = .80$).

The means of adolescent borderline features in the sample as a whole (see Table 2) were similar (within a 2–3 point range) to those found by Bagge et al. (2004) among a sample of 351 college students who fell above and below the PAI-BOR clinical threshold used by Trull (1995).

Major depressive disorder. The Structured Clinical Interview for *DSM-IV-Text Revision* Axis I Disorders (First, Gibbon, Spitzer, & Williams, 1996) is a semistructured interview that was administered to mothers by a licensed clinical psychologist to assess for *DSM-IV* MDD. The Structured Clinical Interview for *DSM-IV-Text Revision* Axis I Disorders has good interrater reliability κ scores for MDD, ranging between 0.66 and 1.00 (First, Gibbon, Spitzer, & Williams, 2002; Lobbestael et al., 2011).

Problem inventory. The Relationship Problem Inventory (Knox, 1971) used to identify issues of conflict among marital couples was adapted for use in the current study to determine topics of disagreement among mother-adolescent dyads. Researchers provided mothers and adolescents a list of common areas of conflict that arise between parents and adolescents (e.g., friends, choice of clothing, and grades) and were asked to identify and mark the issues that cause the most conflict. A research assistant selected three of the marked topics: one rated by the mother, one rated by the adolescent, and one rated by both. For each topic, the mother and adolescent were asked to "come up with a solution" for the presented problem. Participants had 5 min to discuss each topic during filmed discussions through a one-way mirror.

Maternal psychological control. The Psychological Control Scale–Observer Report (PCS-OBS; Barber, 1996) was used to

Table 2

Associations Between Maternal Total Psychological Control and Subtypes and Maternal and Adolescent Borderline Features

Variable	Total psychological control	Verbal constraint	Invalidating feelings	Personal attack	Guilt induction	Love withdrawal	Erratic emotional behavior	<i>M (SD)</i>
Mothers								
Affective instability	.60**	.36**	.54**	.49**	.48**	.57**	.66**	7.05 (5.46)
Identity disturbance	.53**	.28*	.53**	.46**	.38**	.48**	.60**	6.54 (5.34)
Negative relationships	.53**	.30*	.53**	.43**	.42**	.46**	.56**	7.77 (5.05)
Self-harm	.42**	.24†	.43**	.24†	.29*	.48**	.42**	4.05 (4.35)
Adolescents								
Affective instability	.42**	.18	.41**	.38**	.32*	.44**	.36**	7.54 (4.35)
Identity disturbance	.21	.06	.21	.24†	.21	.14	.14	7.93 (3.77)
Negative relationships	.25†	.08	.29*	.28*	.09	.27*	.23†	7.42 (3.73)
Self-harm	.24†	.06	.24†	.31*	.06	.31*	.12	5.18 (3.97)

† $p < .01$. * $p < .05$. ** $p < .10$.

measure observed maternal psychological control during the mother–adolescent problem discussion task. The PCS-OBS calls for separate ratings for each of the six types of psychologically controlling behaviors (constraints of verbal expression, emotional invalidation, personal attacks/blame, guilt induction, love withdrawal, and erratic emotional behavior) using a Likert scale from 0 (*not true*) to 3 (*very true*). Barber (1996) created the PCS-OBS alongside his widely used eight-item Psychological Control Scale–Youth Self-Report and found them to be compatible. The PCS-OBS, with slight adaptations, has been used to measure psychological control in research that explored psychological control in relation to autonomy granting (Kunz & Grych, 2013) and attachment (Kerns, Brumariu, & Seibert, 2011). For the current study, in addition to the subtypes of psychological control, we calculated a global rating of total psychological control using the average standardized scores of the six subtypes.

Coding. With no formal training required for the PCS-OBS (B. K. Barber, personal communication, September 10, 2015), two coders trained on the PCS-OBS by reviewing literature on psychological control and simultaneously coding four mother–adolescent interaction videos not included in the current sample. The coders used the PCS-OBS to code observed maternal psychological control during the videotaped mother–adolescent discussion task. The coders were blind to maternal group status during all coding procedures. We obtained interrater reliability using 25% of the current sample. Scores were generated for total maternal psychological control and subtypes using intraclass correlation coefficients in this study: total, $r_i = 0.91$; verbal constraint, $r_i = 0.87$; invalidating feelings, $r_i = 0.98$; personal attack, $r_i = 0.91$; guilt induction, $r_i = 0.82$; love withdrawal, $r_i = 0.95$; and erratic emotional behavior, $r_i = 0.75$.

Results

Before testing the main hypotheses, we conducted preliminary analyses to test for group differences between mothers with BPD and normative comparison mothers on the demographic data for possible control variables. Total family income marginally differed between groups, $t = 1.91$, $p < .10$. We therefore controlled for total family income in tests of BPD group differences and in mediation models. See Table 1 for descriptive statistics for demographic information.

Group Differences in Maternal Psychological Control

To test Hypothesis 1, we conducted a two-way analysis of covariance. Mothers' BPD group status (yes/no) served as the independent variable, and maternal total psychological control served as the dependent variable. We entered current maternal MDD diagnosis and total family income as covariates. There were no significant main effects for the two covariates. As predicted, results revealed a significant main effect for maternal group status, $F(1, 50) = 28.98$, $p < .001$, such that mothers with BPD ($M = 2.65$, $SD = 3.25$), in comparison with normative controls ($M = -2.65$, $SD = 3.36$), demonstrated significantly more total psychological control with their adolescent offspring.

Borderline Features and Maternal Psychological Control

We tested Hypothesis 2 with zero-order correlations. As predicted, total maternal psychological control and all subtypes significantly positively correlated with all maternal borderline features, with only two exceptions: Maternal verbal constraint and personal attack were marginally correlated with maternal self-harm/impulsivity. For adolescents, affective instability was significantly related to maternal total psychological control and all subtypes (i.e., invalidating feelings, personal attack, guilt induction, love withdrawal, and erratic emotional behavior) except verbal constraint. Further, adolescent negative relationships and self-harm were correlated with total psychological control as well as the subtypes of personal attack and love withdrawal. Adolescent identity disturbance revealed no significant correlations. See Table 2 for correlation coefficients, means, and standard deviations.

Mediation Model

We tested Hypothesis 3 using the Preacher and Hayes's (2004) bootstrapping method, with 5,000 bootstrap resamples. Four separate mediation analyses were conducted, with total maternal psychological control entered as the independent variable, the maternal borderline feature as the mediator variable (separately), and the adolescent borderline feature (the same borderline feature as the mother in each analysis) as the dependent variable. Current maternal MDD diagnosis and total family income were also entered as covariates in all analyses.

Consistent with expectations, results revealed that maternal affective instability mediated the relationships between total maternal psychological control and adolescent affective instability. Unexpectedly, maternal identity disturbance only marginally mediated the relationship between maternal total psychological control and adolescent identity disturbance. Also contrary to expectations, maternal negative relationships and maternal self-harm did not significantly mediate the relationships between total maternal psychological control and adolescent negative relationships and self-harm, respectively. See Table 3 for mediational models.

Discussion

The current study aimed to extend our understanding of the relationships between maternal BPD, maternal psychological control, and adolescent borderline features. First, we found more observed maternal total psychological control exerted by mothers

Table 3
Indirect Effects of Maternal Total Psychological Control via Maternal Borderline Features

Adolescent dependent variable	Effect	SE	Confidence interval
Affective instability	.36	.11	[.20, .57]***
Identity disturbance	.14	.08	[.02, .30]†
Negative relationships	.08	.07	[−.05, .22]
Self-harm	.05	.05	[−.03, .16]

Note. Sample data and bootstrapping effects are equal.

† $p < .10$. *** $p < .001$.

with BPD on their adolescent offspring when compared with that used by their normative comparisons. This finding adds further support for the relation between maternal psychological control and maternal self-reported borderline symptoms found by Zalewski et al. (2014). During their offspring's adolescence, mothers with BPD may ensure their own needs are met by limiting the psychological and emotional independence of their offspring.

This is the first demonstration of the differences between mothers diagnosed with BPD and normative mothers in their use of psychological control, contributing to the identification of psychological control as one parenting behavior that is impacted by the presence of BPD in mothers of adolescent offspring (Stepp, Whalen, Pilkonis, Hipwell, & Levine, 2012). In line with object relations theory (Masterson & Rinsley, 1975), mothers diagnosed with BPD may have difficulty providing adolescent offspring with a "facilitating environment" (Winnicott, 1965). In other words, a mother with BPD may have difficulty being "good enough" (Winnicott, 1965), such that she is unable to adapt to her offspring's developmental maturation, and is therefore unable to allow for her child's separation-individuation (Mahler, 1971), nor can she provide space for her adolescent's psychological exploration (Erikson, 1968; Marcia, 1980).

Second, we found significant positive correlations between maternal total psychological control and subtypes, and all maternal borderline features. Zalewski et al. (2014) found a significant relation between only maternal affective/behavioral dysregulation and maternal control through guilt, but we found that other maternal borderline symptoms are also related to psychological control in a sample in which 50% of mothers had BPD, and using an observational measure. In addition, we found significant positive correlations between maternal total psychological control and subtypes and adolescent borderline features. Specifically, total psychological control and all subtypes (invalidating feelings, personal attack, guilt induction, love withdrawal, and erratic emotional behavior), with the exception of verbal constraint, positively related to adolescent affective instability. Further, maternal invalidation of feelings, personal attacks, and love withdrawal positively correlated with negative relationships and self-harm.

Identification of psychological control as a feature of parenting of mothers with BPD offers important clinical implications. Fonagy and Bateman (2007) theorized that individuals with BPD have deficits in mentalization or reflective functioning, defined as the ability to understand the emotional and cognitive mental states of self and other. Psychologically controlling behavior may inhibit the development of mentalization. Fonagy and Bateman (2007) developed mentalization-based treatment to improve the reflective functioning of individuals with BPD. A central area for future research involves developing clinical interventions that extend mentalization-based treatment to focus on healthy parenting skills (e.g., mindfulness-based parenting skills training; Stepp et al., 2012) among mothers with BPD, aiming to increase maternal self-awareness and decrease patterns of psychologically controlling behaviors and other invalidation of offspring. Consequently, such interventions would be expected to reduce mother and adolescent distress, symptomatology (particularly affective instability, negative relationships, and self-harm), and the intergenerational transmission of BPD. Further, interventions may work toward

preventing the transmission of controlling behaviors beginning in childhood and throughout development to future generations (Jacobvitz, Morgan, Kretchmar, & Morgan, 1991; Macfie, McElwain, Houts, & Cox, 2005).

Third, we found that maternal affective instability mediated the relationship between total maternal psychological control and adolescent affective instability. Contrary to expectations, however, mediations were not significant for the remaining maternal and adolescent borderline features. This finding supports the theory that mothers' controlling behaviors not only relate to their own affective instability but also the affective instability of their adolescent offspring (Siever & Koenigsberg, 2000). In the case of disorganized attachment and attempts to control caregivers, a mother with BPD may not have had the support to develop her own emotion regulation. Thus, the mother may need to create an emotionally safe environment, not by regulating her own emotions and validating her adolescent's, but by controlling the thoughts and emotions of her offspring. Indeed, Buckholdt, Parra, and Jobe-Shields (2014) found that invalidation of adolescents' emotional expression was high among parents with high levels of emotion dysregulation.

There are a number of strengths in the current study. We assessed maternal BPD along a continuum of self-reported borderline features as well as a categorical diagnosis. With half of the mothers in the current sample diagnosed with BPD, the inclusion of the continuous variable of borderline features also introduces relations between certain behaviors characteristic of BPD. Furthermore, the current study used an observational measure of psychological control, which offers a first-hand perspective of how a child might experience a mother's psychologically controlling behaviors. The distinction and measurement of subtypes of psychologically controlling behaviors also introduces novel relations between specific maternal parenting behaviors and adolescent borderline features. Moreover, psychological control was assessed according to the updated operationalization by Barber (1996), excluding autonomy granting.

The current study also has limitations. Although maternal MDD was controlled for, other disorders known to be comorbid with BPD were not included as covariates (e.g., anxiety disorders, other mood disorders, posttraumatic stress disorder, substance use disorders, and eating disorders; Zanarini et al., 1998). Having a clinical comparison group in future studies would increase our understanding as to how BPD differentially impacts parenting as compared with other maternal psychopathology. Additionally, although the sample was representative of the area in which the study was conducted, the sample had a low percentage of participants from minority backgrounds. Further research should include ethnically diverse samples to determine the generalizability of the current findings to different populations. Moreover, the current findings are based on cross-sectional data, highlighting the need for longitudinal studies as well as larger sample sizes to provide greater power. Longitudinal studies could consider the impact and directionality of maternal BPD and psychological control on adolescent outcomes. For example, in addition to psychological control preceding BPD, adolescent borderline features may also elicit greater levels of maternal psychological control in a bidirectional relationship.

Conclusion

The behavioral and emotional dysregulation that characterizes BPD presents significant challenges to parenting, consequently placing adolescent offspring of mothers with BPD at risk for similar problems throughout development (Barnow et al., 2006). The current findings suggest that mothers with BPD are more likely to be involved in psychologically controlling behaviors with their adolescents than healthy comparisons. Additionally, these psychologically controlling behaviors related to both maternal and adolescent borderline features. Further, maternal affective instability mediated the relationship between maternal total psychological control and adolescent affective instability. These findings suggest that controlling behaviors extend into motherhood in the context of BPD, such that mothers may struggle to validate their adolescents' feelings in addition to regulating their own emotions and early traumatic experiences (Stepp et al., 2012). The controlling tendencies may lead mothers with BPD to respond to their offspring with constraint, invalidation, blame, guilt induction, love withdrawal, and emotional inconsistency in an attempt to avoid being abandoned by their increasingly independent adolescent offspring, setting the stage for the development of similar problems among their children.

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