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Effect of Maternal Borderline Personality Disorder on Autonomy and Relatedness in the Mother-Adolescent Relationship

Miriam Rose Frankel
University of Tennessee - Knoxville

To the Graduate Council:

I am submitting herewith a thesis written by Miriam Rose Frankel entitled "Effect of Maternal Borderline Personality Disorder on Autonomy and Relatedness in the Mother-Adolescent Relationship." I have examined the final electronic copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Arts, with a major in Psychology.

Jenny Macfie, Major Professor

We have read this thesis and recommend its acceptance:

Paula Fite, Deb Welsh

Accepted for the Council:
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Vice Provost and Dean of the Graduate School

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Effect of Maternal Borderline Personality Disorder on Autonomy and Relatedness in the Mother-Adolescent Relationship

A Thesis Presented for
the Master of Arts
Degree
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Miriam Rose Frankel
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Abstract

This study examined autonomy and relatedness in a low socioeconomic status sample of adolescent children of mothers with borderline personality disorder (BPD), compared to a normative comparison group, during a video-taped problem solving task. The interpersonal difficulties with individuation and separation within relationships that characterize BPD, may create a diathesis for psychopathology among adolescent children of women with this disorder. The parent-teen interactions were transcribed and coded using Allen, Hauser et al., (2003)'s Autonomy and Relatedness Coding System. Mothers with BPD scored significantly higher on the inhibition of autonomy and inhibition of relatedness than did comparison mothers, although no group differences were evident on promotion of autonomy and relatedness. Mothers with BPD were also more likely to employ the negative behavior of blurring, and hostility than were comparisons. Contrary to hypothesis, no significant group differences were found between the two adolescent samples, either in promotion of autonomy and relatedness, or inhibition of autonomy and relatedness. However, as hypothesized, adolescent children of women with BPD were marginally more likely to employ recanting behaviors, compared to the comparison group. Implications for the maternal-child relationship and adolescent well-being are discussed.

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Introduction

A primary task of adolescence is to balance an emerging sense of autonomy and independence, while renewing meaningful close relationships (Allen, McElhaney et al., 2003; 2007). In non-pathological development, adolescent autonomy sets off a spiral of positive development. Autonomy manifests as a sense of efficacy, self, and separateness. Both autonomy and relatedness increase during healthy adolescent development resulting in the capability to form close, reciprocally gratifying relationships with peers and romantic partners (Allen, Marsh, McFarland, McElhaney et al., 2002). In pathological development one or both of these crucial components may be discouraged, or negated, and the individual may be falsely lead to believe that one comes at the cost of the other. An adolescent may sacrifice his or her budding autonomy in order to maintain a closeness to a parent, in a one-sided or dependent pattern of interaction. Alternatively, he or she may treat others harshly and punitively, asserting their independence by the destruction of a previously valued relationship (Allen, Hauser, O'Connor, Bell, & Eickholt, 1996).

Borderline personality disorder (BPD) is, in part, a failure to adequately balance closeness to others with recognition of independence and autonomy, for self and other. Symptoms of impulsivity, emotion regulation difficulties, and unstable relationships are characteristic of this disorder, and will be described in further detail below. An individual with BPD may struggle with asserting his or her own autonomy, and may struggle to become close to others without fearing obliteration or being consumed by the other (Bradley & Westen, 2005). The current study seeks to explore the impact of maternal

BPD on their adolescent aged offspring. It explores how the mother's behaviors in the mother-adolescent relationship may impinge and alter the adolescent's own developmental task of resolving autonomy and relatedness. Findings may be used as a signpost to guide research and clinical work towards a better understanding of normative and psychopathological intergenerational transmission of interpersonal difficulties in these twin domains of autonomy and relatedness.

Developmental Psychopathology

Developmental psychopathology provides a multi-method-multi-disciplinary approach to understanding human development (Cicchetti, 1984; Sroufe & Rutter, 1984). This prospective enables researchers and clinicians to identify the crucial stage salient failures which impact adult pathology, with the goal of intervention and prevention (Macfie, 2009). This field focuses on how age related challenges, skill acquisition, experiences, and cognitive and physiological growth all impact development. A developmental psychopathology framework may be used to examine an individual's success/failure at meeting their age/culture appropriate challenges and tasks (Sroufe & Rutter, 1984).

Developmental psychopathology seeks to discover the antecedents and pathways connecting stages of development, in terms of both good mental health and also clinical pathology. This field looks at how the failures or "harmful dysfunctions" at one age may predict later mental health vulnerabilities in adulthood, tracking underlying causes rather than age-based manifestations of symptoms (Wakefield, 1997; Weiss et al., 1996). Conversely, the field also explores how early trauma in development sometimes results in

resilience (Sroufe & Rutter, 1984). Developmental psychopathology facilitates the exploration of normal development via the contrast with pathological, and informs us of pathological development in relief against the larger, normative population. In particular, the monitoring of individuals at risk for the development of a particular disorder can provide a prospective sample for monitoring and observation of psychopathology emergence or resilience (Wakefield, 1997). The examination of family environment, temperament, and social support in high-risk samples enrich an understanding of the complex, systemic influences leading to adult pathology (Gottlieb & Halpern, 2002). Developmental psychopathology research explores critical developmental tasks which are hypothesized to be related to adult deficits, and illuminates longitudinal, developmental patterns.

The children of women with borderline personality disorder represent one such at risk sample for later adult pathology, though little is currently known about their development beyond infancy (Macfie, 2009). In the current study we focus on the challenge of adolescence, of separation and individuation. Adolescence is the time young adults begin to seriously take on the issue of identity formation and autonomy, while also developing significant, rich interpersonal relationships outside the family. This prepares these young adults for the challenges of choosing a career, romantic partner, peers, and engaging in citizenship in the larger community (Schulenberg, Bryant, & O'Malley, 2004).

Attachment and Autonomy and Relatedness

Attachment research is one area that has provided key insights into developmental psychopathology and the processes of autonomy and relatedness. Attachment theory posits that family plays a central role in the development of character structure and behavior of the child, adolescent, and adult. The caregiver-child unit is conceptualized as the first and most fundamental source of information for the individual about the outside world (Sroufe & Rutter, 1984). Autonomy and relatedness are both reflections how an individual navigates the complex world of relationships (Allen, Hauser, & Borman-Spurell, 1996). This behavior may be viewed both as a stage salient issue to be worked through in early childhood and again in adolescence, but also can be viewed as continuous challenge across the lifespan. Understanding this life course model may help to explain why some youngsters succeed while others flounder.

There have already been a number of theoretical links made between maladaptive early familial experiences or poor caretaking, and BPD in adulthood. Theoretical and retrospective self-report case studies suggest that for some women with BPD, there existed a pattern of self-sacrifice for the sake of the family at the cost of personal needs and boundaries (Masterson, 1971; Schwoeri & Schwoeri, 1982). In order to survive within their family system, these individuals may have been forced to adapt coping strategies that contributed to later pathology. In these cases, autonomy and the right to separation and individuation may have been seen as threatening and damaging to much needed relationships. Moreover, relatedness, the ability to maintain close relationships, may have been seen as necessarily impinging and destructive of their boundaries, and as

a loss of personal control (Masterson, 1971). These maladaptive family dynamics may be preserved and crystallized in the mind of the young person, and go on to shape future relationships with peers, romantic partners, coworkers, and children. Thus examining the developmental tasks of simultaneous autonomy and relatedness may be particularly sensitive to the deficits evidenced in BPD, which in part have their origins in the family system.

The explication of the attachment process in childhood was the forbearer of acknowledging the significance of autonomy and relatedness in adolescence. Erikson described the task of adolescence as ego development, with the tension of identity and role confusion, highlighting devotion and fidelity (Erikson, 1994). Allen recasts this task as the natural processes of separation and individuation, but adds to it the importance restructuring of key relationships thus creating a link to the earlier attachment experience (Allen & Land, 1999). Although attachment was originally developed to describe the "enduring emotional tie between an infant and a caregiver," this relationship impacts the child's entire interpersonal development across the lifespan (Allen, McElhaney, Kuperminc, & Jodl, 2004; Dehart, Sroufe, & Cooper, 2003). There is a body of research which has found attachment to be generally stable over time, with multiple opportunities for influence at critical developmental transitions and major life events (Allen et al., 2004; Allen, McElhaney et al., 2003). Secure attachment as classified by the Adult Attachment Interview-AAI (George, Kaplan, & Main, 1984) can be described as autonomous yet valuing of attachment relationships. In the parent-teen relationship, this could be seen as a relationship which encourages and supports the adolescent's cognitive

and emotional autonomy, while continuing to build and maintain a relationship (Allen & Land, 1999). The task of establishing autonomy bears a resemblance to the developmental process of the infants' exploration of the environment, while relying on the mother as a secure base; in adolescence the first steps into the world of competency and peer relationships must be buttressed by a secure home base (Allen & Hauser, 1996).

The influence of attachment on the developmental task of autonomy is most salient when the process is dysfunctional. Insecurity of attachment in young adults, assessed with the AAI, is associated with criminal behavior, use of hard drugs, externalizing, and internalizing behaviors (Allen, Hauser, & Borman-Spurell, 1996). Attachment insecurity, and its sub-categories of preoccupied and dismissive, correlate with particular deficits in autonomy and relatedness. Difficulties in the domain of autonomy are typically correlated with a preoccupied style of attachment, whereas trouble with maintaining relatedness are typically correlated with the dismissive style (Allen, Marsh, McFarland, Jodl et al., 2002). Problems in either autonomy or relatedness are correlated with increases in internalizing and externalizing symptoms (Allen, Marsh, McFarland, McElhaney et al., 2002; Berger, Jodl, Allen, McElhaney, & Kuperminc, 2005). Of course during adolescence important friendship and romantic relationships expand the realm of meaningful interpersonal relationships outside the home and family system. Teens who do have close friendships show less drug use and delinquency, than do teens with insecure attachments and no significant social relationships (McElhaney, Immele, Smith, & Allen, 2006). In some cases, adolescents whose needs were not met in the primary relationship within their family, were able to use their interest in others to

help pursue and consolidate friendships with peers, resulting in less externalizing and relative psychological resilience (McElhaney et al., 2006).

Developmental Tasks of Autonomy and Relatedness

Adolescence is the developmental period beginning at the onset of puberty and ending with the transition into early adulthood. Autonomy during adolescence is typically defined as self-governance, self-regulation, and independence (Turner, Irwin, Tschann, & Millstein, 1993). Autonomy entails the ability for the adolescent to assert himself or herself, employ reasoning, and act independently with confidence (Allen, Hauser, Bell, McElhaney, & Tate, 2003; C. R. Cooper, Grotevant, & Condon, 1983). The exploratory system in adolescence, autonomous behavior, is optimally activated where there is a secure base, i.e. strong attachment or relatedness for the child to return to and rely upon (Allen & Land, 1999; C. R. Cooper et al., 1983). Relatedness refers to the maintenance of emotionally close ties to the family which are perceived as supportive, accepting, and involving a shared experience. Relatedness may manifest in an engagement with others, a curiosity about the needs and opinions of others, and the expression of validating and supportive comments (Allen, Hauser et al., 2003; Grotevant & Cooper, 1985). Autonomy is positively associated relatedness, as in continued close emotional ties to parents, rather than a severance or diminishment of these relationships (Grotevant & Cooper, 1985; Turner et al., 1993). The role of parents and caretakers are critical in fostering both autonomy and relatedness within the parent-child relationship. The parents' task for the promotion of autonomy include providing support of the adolescent's independence, and simultaneously upholding relatedness by promoting family cohesion and

acceptance (Skoe & von der Lippe, 1998; Turner et al., 1993).

Although autonomy and relatedness are typically described as issues of adolescence, the antecedents and consequences can be observed across the lifespan. The family unit and primary caretaker are figural in early development, but remain influential into adolescence, despite the expansion of interpersonal relationships to include peers and romantic partners (Skoe & von der Lippe, 1998). In infancy, Sroufe and Rutter (1984) posit that the emotion regulation is provided by the primary caretaker, however over time this process is increasingly internalized, as the young person begins to have meaningful relationships outside the core family unit. Additionally, marking the onset of adolescence, there is an increasing ability to use formal operational thinking, which enables these individuals to process their interactional and attachment experiences with a degree of perspective and insight that was previously not possible. Research that assesses attachment in adults, employing the AAI, has provided some helpful clues into continued influence of maternal attachment, and the intergenerational transmissions of autonomy and security, during adolescence. Similar to findings on infant offspring's attachment, the adolescent mothers' attachment security, and behaviors which promote autonomy and relatedness, are predictive of her teen's successful entrance into a phase of exploration (Allen, Hauser, & Borman-Spurell, 1996). Even at ages 16 and 18, the continuing influence of maternal attachment security is correlated with the relatedness between mother and child, and the child's attachment quality (Allen et al., 2004). In adolescence the continued strength of relatedness, and thereby the attachment bond, facilitates numerous positive social developments, the avoidance of pathology, and internalizing

and externalizing symptoms (Allen, McElhaney et al., 2003; Allen et al., 2007).

However the struggle to achieve sustained autonomy and mature gratifying relationships does not end with the passage of adolescence. This failure or mastery within relationships becomes a significant organizing factor for the remainder of the life course. Adolescent development continues on into adulthood with the universal goals of agency, mastery, independence, friendship, love, connection to a larger society (Bauer & McAdams, 2000; Reis, Sheldon, Gable, Roscoe, & Ryan, 2000). Autonomy and relatedness reflect both the earliest security established during infancy, as well as the malleable, expanding world of object relations for the developing individual in adulthood.

Autonomy and Relatedness and Developmental Research

When studying the relative progress or delays in the development of autonomy and relatedness, it may be fruitful to measure the contribution of both parent and adolescent. The significance of the relationship is best captured by a two person model of contribution, where the mother's behavior either promotes or inhibits the behaviors of the teen, which is distinct and additive to the teen's contribution to their own autonomy, in the context of the relationship. The relative contributions of the mother and teen can each be explored for their respective contribution to the well-being of the adolescent.

Autonomy and relatedness, although related and co-facilitative, can also be examined for their unique contribution to popularity, quality of romantic relationships (Rankin-Esquer, Burnett, Baucom, & Epstein, 1997), drug use, academic success (Allen, Kuperminc, Philliber, & Herre, 1994), vitality (Reis et al., 2000), ego development and

self esteem (Allen, Hauser, Bell, & O'Connor, 1994), and depressive and anxiety disorders (Allen, Hauser, O'Connor et al., 1996). Autonomy, manifested by independent reasoning and confidence, can be undermined by a set pattern of behaviors which diminish the adolescents' competence. Adolescents may fail to assert themselves, engage in self-defeating thoughts, and self-sabotaging behavior; alternatively, they may attack people who challenge their ideas or choices, or use interpersonal pressuring to get their way (Allen, Hauser et al., 2003). Relatedness, too, can be explored by its presence (via validation and engagement) or by its absence. Acts which impede relatedness include rejecting the input of others, acting aggressively or hostile towards others, or a general withdrawal from previously meaningful relationships (Allen, Hauser et al., 2003). Thus both the presence of positive behaviors, as well as counterproductive or inhibitive behaviors play a crucial role in tracing successes and setbacks.

When autonomy is established within the context of secure relatedness, developmental gains can be expected in the interpersonal domain. Hodges, Finnegan and Perry (1999) found that the degree of both autonomy and relatedness in the parent-child relationship was highly related to social adjustment in a mixed gender group of 9-14 year olds, and further predicted relative gains two years later. Measurements of both the maternal and paternal relationship were highly related, and were also moderately correlated with the interactional style with same aged peers (Hodges et al., 1999). This same pattern is believed to emerge as early as kindergarten, as evidenced by Clark and Ladd's (2000) study. One hundred and ninety two kindergarteners of both genders were more likely to have friends, and to be accepted by peers, and express social empathy

when their mothers scored high on measures of supportive relatedness (Clark & Ladd, 2000). Developmentally appropriate facilitation of autonomy by parents helps the child to branch out of the family unit, and establish other social relationships.

The same skill-set learned in the caregiver-child relationship, and expressed in friendship in latency and adolescent years, is also used to establish positive romantic relationships. Smetana and Gettman (2006) monitored the dating habits of 76 middle class African American 9th graders in a five year longitudinal study. In particular the ability to maintain relatedness, without sacrificing one's independence, was predictive of longer and more supportive romantic relationships. However, there was also a significant subset of teens who sacrificed their own independence and autonomy, and simultaneously appeared highly oriented to relatedness. These teens had the longest duration of relationships, but also had a high preponderance of unsatisfying and negative relationships. Thus these individuals were more likely to be committed to the relationship regardless of the quality, as they tended in general to commit to relationships and relatedness above and beyond personal desires and independence (Smetana & Gettman, 2006). Similar findings were reported by Rankin-Esquer et al's (1997) study of marital satisfaction in adults. Autonomy and relatedness within the marriage were positively related to each other, and to marital satisfaction, when both measures were comparably high. When the relatedness score were relatively low, it is only then that autonomy was predictive of poor marital adjustment, as the autonomy was perceived as a threat to the relationship (Rankin-Esquer et al., 1997). These findings highlight the mutually

facilitative role between autonomy and relatedness, and also point to the need for a secure relatedness base from which other satisfying relationships can be initiated.

One important caveat to a discussion of autonomy, is the appropriate matching between caretaker and adolescent. When there is a match between the stance of the parent, and the attitude of the child, the conditions are best for maturation. Marsh, McFarland, Allen, McElhaney and Land (2003), assessed both adolescent and maternal attachment using the AAI (George, Kaplan, & Main, 1986), and Autonomy and Relatedness Coding System (Allen, Hauser et al., 2003), found that adolescent's insecurity can act as a diathesis for maladaptive interactional patterns in the family, among a mixed gender cohort of 16-year olds. Teens with a preoccupied attachment, an insecure relational focused attitude, whose mothers were in contrast high in measures of autonomy, tended to struggle with externalizing problems such as earlier sexual behavior and soft drug use (Marsh et al., 2003). In a two-year longitudinal study Allen et al (2002) found that 9th and 10th graders who were low on measures of autonomy, and had mothers that were highly autonomous tended to have insecure, preoccupied attachments, and tended to decrease in social skills over time. They also showed increases in delinquency (Allen, Marsh, McFarland, Jodl et al., 2002).Providing the optimal scaffolding for autonomy involves a maternal attunement to their child's temperament and attachment.

Autonomy and Relatedness Outcome Studies of Mixed Clinical and Non-Clinical Adolescents

There is also a growing body of research focusing on autonomy and relatedness, using samples of comprised of mixed clinical and non-clinical adolescent populations. To

date, this research is primarily emerging out of the University of Virginia, in Dr. Joseph Allen's research laboratory. The majority of this research combines groups of clinical, e.g. inpatients or those with a variety of anxiety, mood, and conduct problems, and non-clinical adolescents from normative and high risk home environments, e.g. low socioeconomic status. The interaction of autonomy and relatedness tended to work in similar patterns in clinical and non-clinical samples. However, the clinical samples tended to exhibit less mastery of autonomy, poorer quality of relatedness, and increased maladaptive functioning across the relevant outcome measures (Allen & Hauser, 1996; Allen, Hauser, O'Connor et al., 1996).

When both autonomy and relatedness are facilitated within the family, healthy development outside the home is possible. A cohort of 231 fourteen year olds and their parents were assessed then retested at sixteen for ego development, self-esteem, and autonomy and relatedness. Half of the sample was comprised of psychiatrically hospitalized inpatients, the other half a community matched control. The combined autonomy/relatedness rating was positively correlated with present ego-development, defined as the habitual manner of imposing meaning upon their view of self, relationships and their life's experience, and predicted scores two years later (Allen, Hauser et al., 1994). Those with the lowest combined autonomy/relatedness scores had higher rates of externalizing, in addition to less mature ego development. Other studies, using a similarly aged sample found that teens with the lowest combined autonomy/relatedness scores had higher rates of hostility and depression (Allen, Hauser, O'Connor et al., 1996). Those who actively inhibited autonomy and relatedness, by hostile interpersonal behavior and

undercutting others' independence, had the fewest gains between the ages of fourteen and sixteen. Interestingly it was the fathers' autonomy and relatedness, rather than the mothers', which was best predictive of their children, of both gender's, ego development and self-esteem (Allen, Hauser et al., 1994). However, it is the mother's absence of autonomy-supporting behaviors that has been linked to internalizing disorders for their adolescents, in male and female sixteen-year olds (Marsh et al., 2003). These deficits in both autonomy and relatedness during adolescence manifest in social and personal disturbances which make it difficult for the teen to catch up developmentally, explicating how each developmental stage is predicated on success at the previous challenge (Sroufe & Rutter, 1984).

Some teens tend to actively inhibit the autonomy of others, in an attempt to bolster their own separateness and self-assertion. Although they may score highly on measures of autonomy, there is an unhealthy forcefulness, and an unwillingness to accept the independence of others, which characterizes their interaction with others. They are controlling and dominant. Issues of disagreement become viewed as personal attacks, and teens may respond with criticism and over-personalization. When observed in a cohort of fourteen year olds, low autonomy and behaviors that inhibited autonomy were correlated with, and predictive of hostility at age fourteen and age sixteen (Allen, Hauser, O'Connor et al., 1996). Ultimately, impeding the ability of others to assert themselves, instead of bolstering one's own independence, proves to be a limiting coping strategy.

The degree to which an adolescent is able to progress into separation and individuation is one measure of mature development. However, equally significant is

how the adolescent blends their newfound autonomy with the continued safeguarding and commitment to their relationships. When autonomy is average or high, and relatedness is low, the adolescent may feel free and unrestrained; they may exhibit a maladaptive over-competent, and the parental supervisory bonds may be attenuated. Allen, Hauser, et al (1994) found that teens in that group were more hostile, and engaged in externalizing behavior which was maladaptive in social and academic domains. Some adolescents, and parents, actively sabotage their relationships during this time period, by expressing overt hostility, or by rudely interrupting/ignoring a family member (Allen, Hauser et al., 1994). Generally, there is a high preponderance of preoccupied attachment and passivity of thought among this relatedness-inhibiting group of adolescence (Allen & Hauser, 1996).

Hostility and anger, one means of inhibiting relatedness, has been cited as a powerful indicator of the quality of the adolescent's interpersonal relationships, and developmental maturity. In a two-year study of 143 adolescents, hostility within the parent-teen relationship predicted future aggression, and negative perceived quality of relationships (Allen, Hauser, O'Connor et al., 1996; Allen et al., 2006). Interpersonal anger was also associated with insecure attachment, relational anxiety, and hyper-provocative behavior (Critchfield, Levy, Clarkin, & Kernberg, 2008). Moreover, hostility may act as a prohibitive force both to the development of relationships, and also to the development of mature autonomy (Allen, Hauser, O'Connor et al., 1996).

Borderline Personality Disorder

Borderline personality disorder (BPD) occurs in approximately 5.9% of people in the United States (Grant et al., 2008; Posner et al., 2003). It exists equally among men

and women but is most commonly diagnosed in women, and is associated with greater dysfunction in women (Grant et al., 2008). This disorder is defined, by the American Psychiatric Association (APA) in the Diagnostic and Statistical Manual of Mental Disorders (1994), as a lack of one's own identity, impulsivity, instability in affect, and instability in self image. These persons experience rapid changes in mood, and intense unstable interpersonal relationships. People with BPD suffer from intense mental pain, endure stigmatization among healthcare professionals and institutions, and are portrayed negatively in mass media. Due to the characteristic high impulsivity and fluctuating moods, many of these persons are unable to hold high earning, long term jobs, and are overrepresented among those receiving disabilities and federal relief (Grant et al., 2008). Comtois, Russo, Snowden, Srebnik, Ries, and Roy-Byrne (2003) studied 21 people with borderline personality disorder, aged 18-60, and noted that that the presence of parasuicidal behavior was predicative of a high use of inpatient psychiatric care. When there is a comorbid anxiety disorder or cognitive impairment the burden on public mental health services is increased further (Comtois et al., 2003). Approximately 10% of people with BPD will commit suicide (Paris & Zweig-Frank, 2001). Clearly the cost of this illness, to the individual, their family, and our larger society is immense.

BPD is hypothesized to have its antecedents in childhood (Bradley & Westen, 2005). Individuals who develop BPD in adulthood report childhood sexual abuse, physical abuse, or neglect in nearly 80% of diagnosed cases (Golier, Yehuda, Bierer, & Mitropoulou, 2003; Ryan, 2005). People with BPD, relative to others with Axis II pathology, are twice as likely to have a comorbid diagnosis of post-traumatic stress

disorder (Golier et al., 2003). Notably, there is a small but significant subset of adults with BPD, approximately 20% who report no sexual abuse histories (Graybar & Boutilier, 2002). Graybar and Boutilier (2002) explain these cases as having a constitutional vulnerability that develops into florid psychopathology in a non-supportive, invalidating environment, in addition to a significant genetic hereditability (Torgersen et al., 2000). An increased tendency to withdraw, and also high novelty seeking were common tendencies seen in borderline patients, and those features alone account for 8-9% of BPD diagnoses. When these character traits were combined with a history of sexual abuse or neglect, 31% of the variance within the BPD diagnosis was accounted for, as seen in a sample of 180 outpatients (Joyce et al., 2003). Others cite control and attention deficits as requisite but not sufficient to produce BPD psychopathology in adults (Posner et al., 2003). Although a diagnosis can not be made until adulthood, many people with BPD experience self-harming behaviors, lack of ability to control emotions, problems in interpersonal relationships, low anxiety control, and other symptoms in childhood and adolescence (Bradley & Westen, 2005).

One useful way to explain the complex set of symptoms BPD is to conceptualize its root, in part, as a failure to develop autonomy or relatedness. (Bradley & Westen, 2005; Critchfield et al., 2008). Autonomy implies a mindful, integrative, consciously accessible understanding view of self and others. Autonomy is the development of a sense of self which has agency in the world, and is somewhat consistent over time. However, due to a poor early environment, and perhaps other genetic, temperamental, and experience-based causes, persons with BPD may lack this cohesive sense of self

(Ryan, 2005). There are several common maladaptive family interactional patterns which have been commonly reported by patients with BPD. Sexual abuse, particularly by a family member, is highly overrepresented in BPD samples, relative to other clinical populations (Marcus, 1989; Van der Kolk, Hostetler, Herron, & Fisler, 1994). The prevalence for incest is approximately 4-8% in the population, 12-14% among hospitalized patients, but estimates range from 35-75% among BPD samples. Incest, and all the accompanying secretive, duplicitous family roles, may be particularly damaging because it blurs the boundaries between self and other, and internal and external reality. The father, the most common perpetrator, is seen as having omnipotent, intrusive control. This can lead to the symptoms of identity diffusion, affective instability, and the overreliance on primitive defenses such as dissociation (Marcus, 1989; Semiz et al., 2008).

Another commonly observed pattern in the early childhoods of individuals with BPD, is parentification or role reversal (Macfie & Swan, 2009; Zanarini et al., 1997). Their right to autonomy may be sacrificed for the preservation of the family. The young person may opt to take on the role of the adult, comforter, and caretaker for the parents or other siblings. The child may be used to gratify the parents' desires and ambitions, and learn to deny their own (Barone, 2003; Critchfield et al., 2008; Sable, 1997). This can create within the young person a compliant false self who is overinvested in fulfilling the wishes and fantasies of the family, in order to avoid punishment or conflict. This may be manifested in feelings of emptiness, disconnect from one's own emotions, and feeling phony (Bradley & Westen, 2005; First, 2005; Winnicott, 1960). The cost of an

accommodating false-self may be a split self, where the bad is disavowed which can manifest in uncontrolled rage and depression (Force, 2006a; Schwoeri & Schwoeri, 1982). The young person's independence may be inadvertently quashed for the sake of the family, and sham cohesiveness. When such a young person transitions into adolescence, and is faced with the task of autonomous growth, the entire family structure may be threatened. The boundaries of the family necessarily shift, and autonomy, separation, and attachment structures must all be recalculated. This can lead to loss of self esteem, perceived rejection, estrangement, and abandonment of the family bonds (Schwartzman, 2006).

Insecure attachment among these adults with BPD may reflect both an early childhood poor attachment experience, as well as a continuously insecure experience across the lifespan, including during adolescence. Empirical research tracing the continuing influence of insecure attachment in adulthood, may shed light on the importance of separation and individuation, and autonomy and relatedness well past the teen years. Levy (2005) conceptualizes BPD as developing out of difficulties in attachment. He cites evidence that low maternal care, maternal overprotection resulted in the infant's feeling frequently overwhelmed, confused, and fearful (Levy, 2005). In studies of people with BPD, there is support for Levy in high reported prevalence of insecure AAI attachment among people with BPD (Barone, 2003; Sable, 1997). Also the instability of parenting, low family coherence, and decreased empathy are cited as sources of both the broad insecure attachment, as well as the specific symptom manifestations of borderline personality disorder. Barone (2003) used the Adult

Attachment Interview (George et al., 1986) to compare 40 adults with BPD to 40 non-clinical controls, and found that only 7% of the clinical sample were secure/autonomous, whereas 20% were dismissing, 23% were preoccupied/entangled, and 50% were unresolved to trauma (Barone, 2003). There is no evidence to suggest that insecure attachment alone is sufficient to predict future development of BPD (Fossati et al., 2005), and other factors such as temperament and trauma in the latency years may be part of the confluence of factors leading to this particular pathology (Sable, 1997). Thus though there is some evidence to suggest developmental failures across the lifespan in autonomy and relatedness for persons with BPD, there is no direct research to reflect this process over time.

Without a solid sense of identity developed in the context of supportive relationships, persons with BPD may be unable to establish mutually satisfying, healthy relationships with others. Their relatedness and connectedness may be impinged by their ceaseless pattern of approach-avoidance. The patient oscillates between the desperate need to feel loved by others, and the fear of being dominated and abused if she gets too close (Bradley & Westen, 2005; First, 2005). These twin fears of abandonment and domination act in painful opposition within the mind of people with BPD (Melges & Swartz, 1989). In order to reduce anxiety, the individual with BPD may become inappropriately intrusive and jealous then quickly turn to abusive, belittling, and hostile behaviors towards others (Force, 2006b). They may validate, praise, and idealize the other, but then shift to insulting, devaluing, or disengaging with an abnormal degree of intensity and at seemingly insufficient cause; BPD is characterized by this splitting

(Bradley & Westen, 2005; Force, 2006b).

Autonomy and Relatedness in Borderline Personality Disorder

The difficulties mothers with BPD experience in interpersonal relationships may make it more challenging to provide consistent, emotional support for their adolescents during the tumultuous teen years. People with BPD report more negative affect on a daily basis, compared to the general population, and have a more difficult time identifying their emotions (Wolff, Stiglmayr, Bretz, Lammers, & Auckenthaler, 2007). In addition to withdrawing from real relationships, they may over-rely on inanimate and transitional objects for comfort (S. H. Cooper, Perry, Hoke, & Richman, 1985). True closeness, in the form of deep trust, and appropriate perspective taking are extremely difficult within these circumstances. Although there is evidence to suggest that the intensity of these interpersonal extremes tend to mellow somewhat as the individual reaches middle age, this population continues to avoid intimacy into late adulthood (Paris & Zweig-Frank, 2001). Thus even during their parenting years, persons with BPD may be less able to provide emotional availability and consistent positive support for their adolescent children.

Among persons with BPD, impulsive and risk taking behaviors are prevalent, and may pose a serious to their personal safety and relationships (Fossati et al., 2005). This impulsivity may pose a two-fold threat to the well-being of their adolescent offspring. First, it may undermine a stable home environment and a perception of stable, secure parents; second, it models risk-taking and impulsive behaviors which often originate in adolescence (Haugaard, 2004; Paris, 2005). Impulsivity may lead to a capriciousness and

inconsistency in decision making, rule-setting, and parent-adolescent negotiations, which undermine the adolescents ability to adequately assert themselves.

Persons with BPD are less likely to rely on reasoning during conflicts, and instead employ a more reactive response style (Fossati et al., 2005). It is more frequent among persons with BPD to have interpersonal exchanges that are quid pro quo, reactive, and exaggerated rather than measured, unemotional and thoughtful. Of note, decreased reliance on reasoning, and interpersonal attacks are both means of explicitly inhibiting autonomy in relationships (Allen, Hauser et al., 2003).

Cutting, bulimia, suicide attempts, suicide threats, drug use, alcohol use, substance abuse disorder, antisocial acts, petty theft, and reckless spending occur at higher rates within BPD populations (Bradley, Conklin, & Westen, 2005; Force, 2006b). In one two-year study of 621 individuals with BPD, 15.3% had engaged in suicidal behaviors, and 9.3% attempted suicide during the course of the study. Their suicidal gestures were predicted by relatively high rates of impulsivity and identity disturbance. (Yen, Shea, Sanislow, & Grilo, 2004). These dangerous acts may expose teenagers to behaviors which are themselves hallmarks of adolescent pathology (Miller & Plant, 1999).

Anger and hostility, as mentioned above, are a hallmark of interpersonal exchanges among this population (Critchfield et al., 2008; Fossati et al., 2005). Hostility, in contrast to disagreement, in the parent-adolescent and marital relationship is directly related to poor relatedness between mother and teen, and internalizing and externalizing symptoms in adolescents (Allen, Hauser et al., 1994; Allen, Hauser, O'Connor et al.,

1996). Conrad and Morrow (2000) found that men with borderline traits were more prone to dissociation, anger, and use of force when primed with media portrayals of abandonment, compared to those without borderline traits (Conrad & Morrow, 2000). This same relationship in women may be somewhat mediated through shame. In a study of 60 women with BPD, there was a direct link between shame and the severity of angry and violent BPD symptomotology, including suicidal attempts, self-injurious behavior, and interpersonal anger (Rusch, Lieb, Gottler, & Hermann, 2007). It is likely that adolescent offspring of mothers with BPD will be exposed to higher rates of interpersonal hostility, in addition to witnessing marital or familial discord.

The Effect of Maternal Borderline Personality Disorder

In addition to the description above, which enumerates how the interpersonal problems of BPD are manifest in interpersonal relationships overall, there has been a small but growing body of research looking specifically at maternal borderline personality disorder and child development. This small set of studies focus on young children of mothers with borderline personality disorder. Since there is no current research about the impact of maternal BPD on the developmental task of autonomy and relatedness with adolescents, these studies from earlier developmental periods may suggest particular hypothesis about what might occur during adolescence. An exploration of the heritability and genetic diathesis is beyond the scope of this review, despite its potentially significant contribution to the intergenerational transmission of this disorder; estimates by one study are as high as 50% for a genetic inheritance diathesis model (via emotional regulation and other temperament traits), with the other 50% accounted for by

environmental factors (Crowell et al., 2005). Instead this brief review will highlight the environmental and socialization impact of the maternal caretaking on their children.

As early as two months old, there is evidence to suggest that infants of mothers with BPD experience disturbances in self-regulation (Crandell, Patrick, & Hobson, 2003). Crandell et al (2003) compared 8 mothers with BPD to 12 non-psychiatric mothers, and found that mothers with BPD were in fact more insensitive to their infant's gestures. The infants looked away from their mothers more often during a still-face task, which the authors posit to be a sign of dysfunctional self-regulation. At 13 months Feldman et al. (1995) found a similar pattern of infants being less willing to engage in play with a stranger, less expression of positive affect, and 80% were disorganized in their attachment to their mothers, which is the same percentage as found in maltreated children. It quickly becomes evident that maternal deficits may impact their children's ability to engage (relate) with others in a secure (autonomous) manner, though the mechanism of this difference may contain causal multiple pathways including genes, temperament, and early caregiver interactions. Newman, Stevenson, Bergman and Boyce (2007) looked at 17 mother-infant dyads with mothers with BPD and 21 matched comparison dyads and found that these infants were less attentive and eager to interact with their mother. Mothers themselves reported feeling more distressed, less competent, and less satisfied in their familial relationships.

The degree to which maternal BPD impacts a child's ability to relate to others and cultivate a sense of secure autonomy is further explicated when the child is able to speak for themselves. Macfie and Swan (2009) administered the MacArthur Story Completion

Task and Story-Stem Battery (Bretherton, Oppenheim, Buchsbaum, Emde, & Group, 1990), to 30 preschool aged children whose mothers had BPD, and 30 comparison 4-7 year olds. Using these open-ended narrative procedures, findings revealed poorer emotion regulation, more fear of abandonment, negative parent-child relationship expectations, and shameful self-representations. Weiss et al.(1996) examined a cross-sectional sample of 21 children offspring of mothers with BPD, and found that children of women with BPD had more psychiatric diagnoses, lower overall functioning, and increased rates of impulse control disorder, relative to a same-aged cohort whose mothers had non-borderline personality disorders. Finally, in a sample of 11-18 year old children whose mothers have BPD, there were increased rates of depression and anxiety, relative to a non-clinical maternal sample, and a depressed maternal sample (Barnow, Spitzer, Grabe, Kessler, & Freyberger, 2006). These findings highlight that the transmission of psychopathology from mother to child is in no way a simple linear, or one-to-one, transmission. Rather, maternal BPD presents a multi-domain diathesis which may impact their children's ability to regulate emotion, engage with others, develop positive self image, and hold positive relationship expectations, all critical components of the adolescent developmental tasks of autonomy and relatedness.

Longitudinal observational case-studies, such as the 18-year follow up of nine offspring of this special population (Danti, Adams, & Morrison, 1985) suggest that the children of mothers with BPD tend to show pervasive emotional delays, and require therapeutic intervention. These children were anxious, showed marked social deficiencies, poor self-esteem, and difficulties performing in school. Moreover they often

found themselves the victim of their mother's splitting, and tended to take on this dichotomous self perception (Danti et al., 1985).

In general, the extent to which a parent engages in some externalizing and maladaptive relational behaviors, can be linked to the presence of these difficulties in their adolescent aged children, including several that are characteristic of BPD. Mothers who use drugs at an early age are predictive of first age and frequency of drug and alcohol use in their children (Garnier & Stein, 2002). Maternal intrusion and overprotection has been linked to their children's increased internalizing, anxiety, and depression (Waxler, Dougan, & Slattery, 2000). Expanding this link, Bezirganian, Cohen and Brook (1993), found in a sample of 776 adolescents that adolescent BPD was predicted by maternal inconsistency in combination with maternal intrusion and over-involvement over a 2 year study. Aggression learned at home is associated with truancy and poor school performance among elementary school aged children, particularly among males (Mezzacappa, Kindlon, & Earls, 1999). Moreover, the diathesis of poor impulse control tends to increase during adolescence and manifest in more severe externalizing problems, such as truancy and aggression, among adolescent males (Miller & Plant, 1999). Parental influence on early adolescent sexual behavior has also been broadly reported, especially when in confluence with early use of marijuana and alcohol (Little & Rankin, 2001). Although adolescents may spend diminishing amounts of time at home with their families, they are no less susceptible to maternal influence, than during other earlier developmental stages.

Borderline Personality Disorder in Adolescence

Although this study aims to explore how maternal BPD impacts the adolescent tasks of autonomy and relatedness, it may be fruitful to examine the specific BPD symptoms which first begin to emerge during adolescence, as children of parents with BPD are five times more likely to develop this particular disorder as Reported in the DSM (2000). Identifying young persons with BPD is somewhat more complex than in adulthood, as risky behavior, poor decision making, intense interpersonal relationships, and impulsivity are features of many adolescents' development. However, when BPD is observed in adolescents, the symptoms in females tend to generally manifest in the same pattern as in adults (Bradley et al., 2005). Symptoms of BPD first tend to emerge in adolescence, but cannot officially be diagnosed until age eighteen, like all personality disorders (First, 2005; Force, 2006b; Paris, 2005). Among male teens there is a higher prevalence of aggressive, antisocial behaviors in favor of internalizing symptoms (Bradley et al., 2005). In a study of 294 adolescents using a Q-sort descriptive technique, Bradley et al (2005) found four subtypes of adolescent BPD: angry externalizers, most similar to the male borderline, depressive internalizers, high-functioning internalizers, and the histrionic (Bradley et al., 2005). These subcategories match up somewhat with Becker, McGlashan, and Grilo's (2006) four factor solution of 123 adolescents with BPD: affective instability/uncontrolled anger, suicidal threats/emptiness, and unstable relationships/fear of abandonment and impulsivity/identity disturbance. It may be therefore difficult to pinpoint one set of symptoms or behaviors as descriptive of

adolescent BPD, and perhaps exploring the impairments in autonomy and relatedness can help point to underlying structural deficits, and potential for intervention.

Other family factors, in addition to maternal BPD, that are associated with adolescent BPD include parental neglect, loss by death or divorce, parental alcohol or drug abuse, and sexual abuse (Harman, 2004; Westen, Ludolph, Misle, Ruffins, & Block, 1990). In one self-report study adolescents with BPD symptoms reported family environments that were perceived by the teen as having poor modeling of problem solving, weak interpersonal boundaries, ineffective and insufficient communication, low tolerance for individuation, inconsistent and intense affect, and non-supportive and rigid family roles (Kirsten, Van Lellyveld, & Venter, 2006). Another study of adolescents with BPD reported that subjective measures of empathy within the families found a higher degree of emotional reactivity, and an underdeveloped use of empathy in the family, when compared to both a non-clinical and anorexic-teen families (Guttman & Laporte, 2000).

Although many teens engage in somewhat risky behaviors in adolescence, those with an emerging borderline personality disorder run great risk of harm to themselves, relationships, and to their future. Impulsivity, which is linked to externalizing behaviors commonly seen among people with BPD, often begins at puberty (Paris, 2005). Self-harming gestures and suicide attempts typically do not appear until adolescence, along with other externalizing behaviors that emerge in full force after the onset of puberty (Westen et al., 1990).

Among outpatient and latency aged children samples, early BPD signifiers include binge-eating, drug use, promiscuous and dangerous sex, and highly impulsive behavior, and suicide attempts. As late teenagers (15-18) they are more likely to drink alcohol and engage in heavier consumption, and to smoke cigarettes. The presence of alcohol abuse has also been shown as a meditational pathway from sexual child abuse to later BPD, via their diminished emotion regulation capabilities (Thatcher, Cornelius, & Clark, 2005). Among nonclinical adolescent populations, those with borderline features typically have poorer academic performance, and social adjustment issues. The relative degree of impulsivity and affective instability were predictive of Axis I pathology of anxiety and depression, lower grades, and more school probation at a two year follow up (Bagge et al., 2004). This breadth of problem behaviors points to the utility of assessing adolescents' autonomy and relatedness as a means of teasing out the extent of their developmental and relational problems.

The Current Study

There remains a significant gap in the literature, in understanding the profound impact of maternal borderline personality disorder on the development of adolescent offspring. To date, there are no studies that explore the unique impact of specific parental pathology on the development of autonomy and relatedness; nor are there any studies that explore the effect of maternal BPD on adolescent offspring. Therefore we are unable to fully trace the intergenerational transmission of this psychopathology, nor accurately assess the best method of intervention and prevention. There are many parallels between the deficiencies and symptoms manifested in borderline personality disorder, and the

developmental challenges of adolescence, assertion of secure-autonomous sense of self, and a simultaneous cultivation of close, supportive relationships. There has been no data published noting the points of intersection between these pathological and normative interpersonal functioning processes.

This research represents the first comparison between clinical and nonclinical populations, using Allen et al's (2003) Autonomy and Relatedness Coding System. Adolescence may be a particularly stressful time for teens and their parents, sometimes rife with tension and a redefinition of roles, rules, and boundaries. It is likely to cause a readjustment of boundaries in the family, which can lead to a reactivation of maternal concerns about her adolescent's increasing autonomy, and shifting relationships (Schwartzman, 2006). Thus, studying this critical period may lead to new insights into the manner in which BPD impacts parenting, and the parent-child relationship. It can potentially inform us about the transmission of pathological patterns of interaction, which are passed down across familial generations. It may also provide information about normative development, resilience, and preventative intervention opportunities to improve the well-being of adolescents.

It is hypothesized that:

1. Mothers with BPD will perform non-optimally on measures of autonomy and relatedness, when compared to matched comparisons. They will score lower on promotion of autonomy and promotion of relatedness, while scoring higher on inhibiting the autonomy of their children, and inhibiting relatedness.

2. Adolescent children of women with BPD will perform non-optimally on measures of autonomy and relatedness, when compared to matched comparisons. They will score lower on promotion of autonomy and promotion of relatedness, while score higher on inhibiting autonomy and inhibiting relatedness.

3. BPD mothers and their teens will have higher scores on the specific behavioral measures of hostility, interpersonal pressuring as a negotiating style, and recanting statements, and will use less reasoning skills, relative to the comparison sample.

4. Across the samples, mothers' low relatedness will correlate with adolescent's low autonomy and relatedness.

Methods

Participants

The sample consisted of 47 mother-adolescent dyads (N = 94), 25 mothers with BPD, and 22 matched controls, along with their 14-17 year old children. The adolescent sample was 56% female, with 17% from an ethnic minority. The average family income was slightly below $25,000 dollars. Over 60% of the sample mothers were married and living with their partner.

Recruitment

Comparison mothers and adolescents were recruited from the community via fliers and postering. Researchers set up booths at Boys and Girls Clubs, local parks and swimming pools, and adolescent sporting events at schools where they handed out pamphlets and study brochures. Posters were also hung in downtown areas throughout the community. Mothers with BPD were recruited via presentations for clinicians at hospitals, clinics, and private practice, and through fliers and posters in the community. Pamphlets were also given to potential participants by their therapists. Both samples were drawn from rural and urban areas in a five-county region, in South-East United States. Mothers with BPD that completed the study received a $100 gift certificate to Wal-Mart, while their teens received a $75.00 gift certificate. Comparison mothers received $75.00, and their adolescents received $50.00. Mothers within the BPD sample received somewhat more compensation due to the challenges of participation due to their psychological illness.

Procedures

Phone Screen: (1/2 hour) After initial contact had been made, all participants were screened, and those meeting the criteria for BPD were scheduled for a home visit.

Home Visit: (1-2 hours) The mothers' informed consent and adolescents' informed assert were obtained, in addition to demographic and familial information. A self report screen was administered to assess for a BPD diagnosis (First, Gibbon, Spitzer, Williams, & Benjamin, 1997).

Lab Visit: (2-3 hours) The lab visit took place in a university laboratory setting, and was part of a broader study exploring the impact of maternal BPD. The mother was given a structured clinical interview by a PhD level psychologist for Axis II mental health disorders (First et al., 1997). Mother and adolescent each completed a Problem Discussion Inventory separately. The dyad was reunited in an observation room, and participated in three 5-minute problem discussion tasks, in which they were videotaped through a one-way mirror while trying to solve a meaningful problem in their relationships. These tapes were later transcribed, coded, and scored for autonomy and relatedness.

Follow Up: The day following the lab visit, mothers were phoned by the project director to assess for satisfaction and/or residual distress.

Measures

Structured Clinical Interview Diagnostic Axis II Disorders: (First et al., 1997). This assessment tool is based on the Diagnostic and Statistical Manual of Mental Disorders-IV's (1994) symptom criteria for Axis II personality disorders. It has reliability for diagnosis of BPD ranging from .72 to .91. A self-report questionnaire was followed up with a structured clinical interview.

Problem Discussion Inventory: This is form is based on the Relationship Problem Inventory by Knox (1971) for marital couples. It was adapted for use with mother-adolescent dyads. Participants, both mother and adolescent, were given a list with twelve common problems that adolescents and their mothers often have. Participants are asked to elaborate on those prompts which apply to them. For example, prompts include: choice of friends, grades, communication. Both mothers and adolescents stared the single most conflict-causing issue. Participants were asked to try to solve their problem for a full five minutes; they were informed to "try and come up with a solution," and to keep going if they got stuck. Three topics were chosen among those prompts that were starred, and elaborative comments of mother and adolescent. They were given a total of three topics to problem-solve, for a total of fifteen minutes.

Autonomy and Relatedness Coding System, Manual, Version 2.14: (Allen, Hauser et al., 2003) This coding system was used to quantify the videotaped mother adolescent problem discussion task. It has been applied to this exact task many times in previous research (Allen and Hauser, 1996; Allen, Hauser, Eickholt, and Bell, 1994; Samuolis, Hogue, Dauber, and Liddle, 2005; etc). See Figure 1.

This system has established internal consistency, as reported by the authors, with Cronbach's alpha ranging from .31 (for inhibiting other's autonomy), .55 (inhibiting others relatedness), and .82 (promotion of one's own autonomy and relatedness). The assertion of one's own autonomy and relatedness was not correlated with either inhibiting scale r =.08 (inhibiting other's autonomy) and r = -.13 (inhibiting other's relatedness), but the two inhibiting scores were moderately correlated with each other r = .34. (Allen, Hauser, Bell, and O'Connor, 1994).

The author and an undergraduate research assistant were trained to become reliable coders in collaboration with Dr. Allen's research team at the University of Virginia. The two coders involved in this project established inter-rater reliability by double-coding 30% of the tapes, 43 of 141 video segments. Both coders were ignorant of BPD status of the dyads prior to coding. Their inter-rater reliability was ranged from r_i = .73 (Recanting) to r_i = .91 (Blurring, Confidence). The average reliability for the Promotion of Autonomy and Relatedness was r_i = .85, and r_i = .80 for Inhibition of Autonomy and Relatedness. See Table 1 for inter-rater reliability scores.

Coding the Videotapes: The three, five-minute problem discussions were coded separately, and their scores were summed. Each discussion was transcribed verbatim, including length of silences and notable gestures, by undergraduate research assistants, who were ignorant of the BPD status of the participants. Coders, also ignorant of the participants' status, then reviewed the transcript and watched the videotaped interaction, looking for the ten specific dimensions of behavior. Each of the ten subscales: reasoning, confidence, recanting, blurring, pressures, queries, validates, engaged, distracting, and

hostility, were assessed separately by reviewing the video and transcript line by line. Each subscale incorporates behavioral, vocal, tonal, attention, and other observable aspects, from across the length of the video-taped interaction, that reflect that particular relational construct.

Scoring: The composite number of these scores was then standardized to yield a score ranging from 1-4, on a ½ point increment scale. Each individual was coded separately, e.g. the mother receives a score on each of the ten subscales, based on her contribution to the conversation, and the adolescent received a separate score on each of the subscales.

The ten subscales were summed into four larger factors, again separately for the mother and adolescent. These factors are the promotion of autonomy (reasoning and confidence), promotion of relatedness (queries, validates, and engaged), inhibition of autonomy (recanting, blurring, and pressures) and inhibition of relatedness (distracting, and hostile).

Each person's composite score of "promotion of autonomy" equal the summed ratings of expressing reasons behind disagreements, and confidence in stating one's positions. "Promotion of relatedness" equals the summed ratings of validation and agreement with another's position, and attending to the other person's statements. The "inhibiting autonomy" score equals the summed ratings of over-personalizing a disagreement, recanting a position without appearing to have been persuaded the position is wrong (thus ending the discussion), and pressuring another person to agree (other than by making rational arguments); these undermining behaviors make it more difficult for

individuals to express autonomy in a discussion. “Inhibiting relatedness” equals the summed rating of expressing hostility, and rudely interrupting/ignoring a family member. Through the use of these ten subscales, the content of each utterance is weighted, and incorporated into a larger assessment of how each member of the discussion acts toward each other.

Results

Descriptive Statistics

Preliminary analysis of BPD and comparison group differences on family income, adolescent gender, ethnicity, and age on the primary outcome variables indicated that the two groups were matched on all outcome variables, except adolescent age $t(46) = 2.91$, $p = .005$. As Adolescent age was not significantly correlated with any outcome variables it was not necessary to control statistically for it in subsequent analyses. Please see Table 2 for demographic and descriptive variable information.

Restatement of Hypotheses, and Test of Hypotheses:

Hypothesis 1: Mothers with BPD will perform non-optimally on measures of Autonomy and Relatedness, when compared to matched comparisons. They will score lower on promotion of autonomy and promotion of relatedness, while scoring higher on inhibiting the autonomy of their children, and inhibiting relatedness. As hypothesized, mothers with BPD score significantly higher on inhibition of autonomy and inhibition of relatedness than did the comparisons, $t(46) = 2.36$, $p = .02$. There were no group differences on promotion of autonomy and relatedness $t(46) = 0.22$, $p = .83$. See Table 3.

Hypothesis 2: Adolescent children of women with BPD will perform non-optimally on measures of autonomy and relatedness, when compared to matched comparisons. They will score lower on Promotion of Autonomy and Promotion of Relatedness, while score higher on Inhibition of Autonomy and Inhibition of Relatedness. Contrary to hypothesis, no significant group differences were found between the two

adolescent samples, either in promotion of autonomy and relatedness, $t(46) = 0.89$, $p = .38$, or inhibition of autonomy and relatedness, $t(46) = 1.08$, $p = .29$. See Table 3.

Hypothesis 3: BPD mothers and their teens will have higher scores on the specific behavioral measures of hostile, interpersonal pressuring as a negotiating style, recanting statements, and will use less reasoning skills, relative to the comparison sample. As predicted, mothers with BPD were more likely to employ the negative behavior of blurring, $t(46) = 2.59$, $p = .01$. As hypothesized mothers with BPD were also found to engage in more expressed hostility towards their adolescent child, $t(46) = 2.41$, $p = .02$. However, contrary to prediction, there were no group differences for maternal pressuring, $t(46) = 1.60$, $p = .12$, recanting, $t(46) = 0.81$, $p = .42$, or reasoning, $t(46) = 0.79$, $p = .43$.

As hypothesized, adolescent children of women with BPD were marginally more likely to employ recanting behaviors, compared to the comparison group, $t(46) = 1.78$, $p = .08$. There were no group differences for adolescent blurring $t(46) = 0.61$, $p = .54$, hostility $t(46) = 1.26$, $p = .21$, pressuring $t(46) = 0.05$, $p = .96$, or reasoning, $t(46) = 1.14$, $p = .26$. See Table 3.

Hypothesis 4: Across the samples, mothers' relatedness will correlate with adolescent's autonomy and relatedness. Contrary to hypothesis, maternal relatedness did not significantly correlate with adolescent autonomy and relatedness, $r = .18$, $p = .33$. See Table 4.

Post Hoc Analysis of Relationship Between Mother and Adolescent Scores. Post-hoc bivariate correlations were conducted on mothers' and adolescents' scores. Across both samples, adolescents' promotion of autonomy was significantly correlated with their

own promotion of relatedness, $r(46) = .41$, $p = .003$. Moreover promotion of autonomy and relatedness of the adolescent was significantly correlated with mother's own promotion of autonomy and relatedness, $r(46) = .39$, $p = .007$. Adolescents' promotion of relatedness correlated with maternal promotion of relatedness, $r(46) = .40$, $p = .005$. Additionally, maternal promotion of autonomy correlated significantly with adolescents' promotion of relatedness, $r(46) = .36$, $p = .013$. See Table 4.

A similar pattern of congruence emerged when looking at the inhibitive behaviors of both parent and adolescent. Inhibition of autonomy and relatedness by the adolescent was associated with maternal inhibition of autonomy and relatedness $r(46) = .50$, $p = .001$. For adolescents, inhibition of autonomy was correlated with inhibition their relatedness, $r(46) = .41$, $p = .004$.

Interestingly, when looking at inhibitive and promoting behaviors in combinations, a pattern emerges for adolescents that suggests that the inhibiting of autonomy and relatedness was associated with promotion of their autonomy, $r(46) = .58$, $p = .001$. See Table 4.

Discussion

This study examined autonomy and relatedness in a low socioeconomic sample of adolescent children of mothers with borderline personality disorder, compared to a normative comparison group, during a problem solving task. The parent-teen interactions were transcribed and coded using Allen, Hauser et al., (2003)'s Autonomy and Relatedness Coding System. Results indicate important group differences among maternal and adolescent behavior in the domains of inhibition of autonomy and inhibition of relatedness detailed below.

Maternal Findings

Mothers with BPD tended to engage in more negative and inhibitive behaviors than did comparisons, that both diminished the adolescent's freedom to assert themselves, such as pressuring their teen to cede or attacking their personal attributes. Mothers with BPD may be interacting with their teens in a way that results in interpersonal pressure on their teens to remain dependent, via inhibiting their teen's ability to assert their own opinions. Mothers with BPD also engaged in more deterring of positive exchanges of connectedness and mutual regard, e.g. acting hostile and cutting off their teen. Mothers with BPD employed more attacking, hostile, critical statements towards their adolescent, relative to the comparison mothers. Some adolescents whose mothers have BPD may be receiving the message that their newfound autonomy comes at the cost of essential relationships with their families, as evidenced by the fact that mothers with BPD used negative, inhibitive regarding both independence/autonomy and closeness/relatedness. At this critical developmental moment, these adolescent children

may be hampered in their work of identity formation, and learning to think independently.

Maternal use of blurring, which was elevated among those with BPD, consisted of elevated frequency of character attacks, painting herself as a victim, and involving third parties in the debate, e.g. "your sister does her chores, so why can't you be more like her." Blurring is characteristic of borderline psychopathology in that disagreements are interpreted as personal attacks, and tend to elicit emotional and relational-oriented responses (Comtois et al., 2003). Maternal hostility was also significantly elevated within the BPD group, and was reflected in statements that were simply insulting, or delivered in a hostile or aggressive tone. This findings of inhibition of relatedness supports previous research findings of increased interpersonal hostility among persons with BPD (Critchfield et al., 2008), and expands these findings explicitly to the family domain. The increased level of maternal hostility may ultimately compromise some teens' sense of self-efficacy and willingness to experiment with independence. Adolescents within the BPD group showed a significantly higher rate of squashing their own needs, and recanting their assertions, relative to comparisons. These adolescents may be blocking themselves out of important opportunities to form new, mature egalitarian relationships with peers and romantic partners.

No differences among mothers were found on dimensions of promotion of autonomy and relatedness. Thus both mothers with BPD and the comparisons group did not differ significantly on positive, encouraging scaffolding of independence, in addition to expressions of love and interest, including asking questions and giving compliments.

Although this was contrary to the hypothesized relationship, it is indicative of the presence of positive affect, and expressions of affection by mothers with BPD, similar to the comparison mothers. Mothers with BPD exhibited no significant differences in promotion of independence, and relationship building; they were just as likely to exhibit warmth, support, and confidence.

Among mothers with BPD, the presence of elevated inhibiting and normative promoting behaviors implies an overall high rate of emotional engagement for mothers with BPD towards their adolescents, both in positive and negative ways. Mothers with BPD were overall highly engaged with their adolescents, which may differ from other clinical maternal samples, such as avoidant or schizoid personality disorders or people with depression (Force, 2006b). The unique impact of BPD, and the combination of high positive and negative engagement, may result in perceived enmeshment by the adolescent (Kirsten et al., 2006; Masterson, 1971). Alternatively, for some adolescents the presence of high positive affectivity may serve to buffer some of the negative interactions.

There were no significant differences between the groups of mothers in terms of confidence, continued assertiveness throughout the discussion, and the use of well-reasoned points. This lends support to the significance of the emotional aspects of the mother-adolescent interaction, rather than any cognitive difference or impairments between the two maternal groups.

Adolescent Findings

There is some evidence of heightened maladaptive behavior among the adolescent children of women with BPD. Among adolescents, those with mothers with BPD, were

more likely than were comparisons to make a point and then back down, quit, or rescind their position. Those with mothers with BPD were more willing than were comparisons to simply give up and back off, despite their equally skillful capacity for reasoning and debate. As noted above, this recanting may be interpreted in light of the perceived fragility of their relationship with their mother, which appears to be contingent on vigilantly monitoring her responses and emotional states, and engaging in excessive accommodating to her position while sacrificing their own needs and desires.

Interestingly, there were no overall group differences among the adolescent on promotion or inhibition of autonomy and relatedness. These findings, contrary to hypothesis, suggest several possible explanations. The most parsimonious explanation is that no group differences exist, and that adolescents are simply resilient enough to use other relationships to supplement the deficits in the mother-adolescent interaction. Or, that the presence of positive affect (promotion of autonomy and relatedness) serves to mediate the high degrees of inhibition of autonomy and relatedness. It is also possible that this instrument is picking up on a trend in the development of BPD symptoms among the adolescents, namely role reversal or parentificiation, which was not assessed in the current study. There is a growing body of theoretical literature that posits that persons with BPD were forced to take care of their parents (role reversal), or assume a pseudo maturity within the family, which may appear healthy but is based on a conditional and false self (Macfie, 2009; Schwoeri & Schwoeri, 1982). There is also one empirical study by Zanarini et al.(1997) of 358 mixed gender patients with BPD, in which 60% reported having to care for their parents, and some degree of role reversal. Since the risk of

development of BPD is higher among first degree relatives (1994), there may be a significant subset of adolescents who are functioning well currently, but are actually at acute risk for future psychopathology. One final possibility for these findings is that overall group differences are in part obscured by the low SES of the entire sample, which is in itself associated with adolescent stressors and markers of diminished well being.

Contrary to hypotheses, adolescents of women with BPD were no different from comparisons in their ability to create well reasoned arguments. Adolescents within the BPD group were no more likely than comparisons to insult their mothers, or employ personal attacks, aggressive blackmailing, or whining. Adolescents may be able rely on other relationships, both within the family unit and through peers, to achieve normative interactional skills.

Relationships among Autonomy and Relatedness Variables

Adolescents' promotion of autonomy was correlated with their promotion of relatedness, which is consistent with theory and previous findings (Allen et al., 2007). This supports the theoretical and established empirical connection between the existence of secure, positive, attachments with increasing ability for exploration and autonomy. Maternal promotion of autonomy also correlated with adolescents' promotion of relatedness, and adolescent promotion of autonomy and relatedness was correlated with maternal promotion of autonomy and relatedness. This suggests that mothers' own example of autonomy in the context of a supportive relationship coincides with a continued relatedness for the adolescents during their emerging independence (Clark &

Ladd, 2000; Marsh et al., 2003; Skoe & von der Lippe, 1998; SmithBattle & Leonard, 2006).

Maternal inhibition of autonomy and relatedness was correlated with adolescent inhibition of autonomy and relatedness. These findings suggest the existence of a meaningful relationship between maternal inhibition behaviors, and an emerging maladaptive adolescent approach to relationships, though a causal relationship cannot be determined.

Study Findings and Attachment Theory

The findings of this study provide evidentiary support for the ongoing importance of the mother (caregiver) - child relationship across the developmental stages including adolescence. Moreover, they provide a first step towards an empirical links between autonomy and relatedness and adolescent attachment among at risk populations. Attachment theory delineates several possible ways that individuals can respond to interpersonal relationships, originating within the primary bonding relationship of mother and infant. The quality of the attachment can be secure or insecure, which can be further classified into dismissing, preoccupied, or unresolved and disorganized (George, Kaplan, & Main, 1984; Berger et al., 2005). Autonomy and relatedness in emerged from the broader theory of attachment relationships during the stage of adolescence. Future research may test established links between externalizing, internalizing, autonomy and relatedness and attachment, among this unique at-risk population, in order to integrate the developmental tasks across the lifespan. For example, it may be helpful to understand if children of women with BPD are at elevated risk for psychopathology due to the impact

of adolescent attachment, autonomy and relatedness diathesis, or if other pathways are relatively more impactful. Understanding the relative roles of adolescent attachment, in terms of autonomy and relatedness, along with behavioral measures of well-being, may provide important implications for family and individual therapy and the formulation of theory.

Attachment and Adolescence: There is a body of research which has found attachment to be generally stable between infancy and adulthood, with multiple opportunities for influence at critical developmental transitions and major life events (Allen et al., 2004; Allen, McElhaney et al., 2003). Secure attachment, measured as adults' stance towards their childhood, is classified by the Adult Attachment Interview (George, Kaplan, & Main, 1984), and can be described as autonomous yet valuing of the attachment bonds to significant caretakers. In the parent-teen relationship, this could be seen as a relationship which encourages and supports the adolescent's "cognitive and emotional autonomy," while continuing to build and maintain a relationship (Allen & Land, 1999). The task of establishing autonomy bears a resemblance to the developmental process of the infants' exploration of the environment, while relying on the mother as a secure base; in adolescence the first steps into the world of competency and peer relationships must be buttressed by a secure home base (Allen & Hauser, 1996). These definitions were then operationalized as constructs by Allen et al's (2003) Autonomy and Relatedness Coding System employed in this research used to measure the dyadic interaction employed in this study.

In adolescent attachment findings, maternal security of attachment, assessed with the AAI, predicted the adolescent's security of attachment, although with less power than it predicts the security of infants measured in the strange situation (Allen & Hauser, 1996; Allen, McElhaney et al., 2003; Dehart et al., 2003). Allen, McElhaney, Land, et al (2003) looked at a mixed gender cohort of 9th and 10th graders, and found that security of attachment predicted 40% of the variance seen in measures of autonomy and relatedness. Security, which was not related to the subjective overall positive or negative quality of the relationship, still plays a powerful role in facilitating the development of autonomy for teens. Those adolescents with secure attachments, also tended to have high scores on autonomy, and high abilities in the relatedness domain (Allen, McElhaney et al., 2003). Future research my determine if adolescents, both with mothers with BPD and comparisons, with high rates of autonomy and relatedness will present with secure attachments at higher frequencies, than those with low promotion of autonomy and relatedness.

Attachment Insecurity and Autonomy and Relatedness: The influence of attachment on the developmental task of autonomy may be most salient when the process is dysfunctional. Insecurity of attachment in young adults is associated with criminal behavior, use of hard drugs, externalizing, and internalizing behaviors. (Allen, Hauser, & Borman-Spurell, 1996). Adult attachment insecurity, assessed by the AAI, and its sub-categories of preoccupied and dismissive attachment, correlate with particular deficits in autonomy and relatedness. Difficulties in the domain of autonomy are typically correlated with a insecure-preoccupied style of attachment, whereas trouble with maintaining

relatedness are typically correlated with the insecure-dismissive style (Allen, Marsh, McFarland, Jodl et al., 2002). Problems in either autonomy or relatedness are correlated with increases in internalizing and externalizing symptoms. However, there is a greater predictive power for difficulties in preoccupied attachments predicting internalizing, and problems with dismissive attachment in relation to externalizing. (Allen, Marsh, McFarland, McElhaney et al., 2002; Berger et al., 2005).

Relatedness Outside the Nuclear Family. During adolescence, there is a transition away from the nuclear family as the sole source of meaningful relationships, and close friendships can help mitigate the impact of attachment insecurity. Those teens who do have close friendships show less drug use and delinquency, then do teens with insecure attachment and no significant relationships (McElhaney et al., 2006). In some cases, adolescents with a preoccupied attachment style, whose needs were not met in the primary relationship within their family, were able to use their interest in others to help pursue and consolidate friendships with peers, resulting in less externalizing. Adolescence may offer a unique opportunity for interventions within the family systems with impact that reaches across all relational domains. Therefore multi-domain informants on adolescent functioning, e.g. parental, teacher and peer, may each contribute unique facets of the adolescent's overall relational stance.

Strengths

This study offers a unique contribution to the emerging body of literature on the impact of maternal BPD. These findings give access to a population of individuals which are difficult to access, persons living in low socio-economic status, who have BPD.

Moreover, the women with BPD in this sample were recruited both from clinical settings and from the broader community, thereby more closely representing the population of women in BPD both in treatment and not. This diverse sample of women with BPD included a significant percentage of minority participants, which allowed for greater generalizability of these findings.

A notable strength of this study was the use of clinical diagnostic interviews in order to ensure appropriate group diagnoses, i.e. BPD Axis II only for the BPD group and no Axis II diagnosis for the comparison group. In order to establish a diagnosis a clinical interview were conducted by trained clinicians, rather than relying upon self-report measures, which can only assess for the presence of BPD features.

A primary strength of this research was the use of observational, rather than self-report, measures to assess for the dependent variables. Observational measures were employed in order to assess autonomy and relatedness, again allowing access to a more real-life means of observation and assessment. Observational measures diminish participant's ability to "fake good" or "fake bad" or other impression management biases that sometimes obscure self-report findings. Participants were not aware which specific behaviors were being evaluated during their dyadic interactions. Although the participants were filmed, the research examiner left the room during their taped interaction in order to further facilitate a more authentic mother-adolescent interaction.

Finally, this study represents the first effort at exploring autonomy and relatedness in the adolescent aged children of mothers with a personality disorder. Due to the elevated risk of psychopathology, and Axis II symptomology, among first degree

relatives of those with personality disorders, this study provides some insight into the possible transmission of pathological development (American Psychological Association, 1994; (Bradley & Westen, 2005). Autonomy and relatedness may play important contributory roles into other psychopathology including dependent PD, some types of depression (e.g. abandonment depression), and social anxiety. This study is a first step in exploring that theoretical developmental model.

Limitations

This study represents a relatively small sample, although it is the only sample of adolescents of BPD mothers that has been collected, and is over twice as large as the only other sample in a developmental study of mothers with BPD (Crandell et al., 2003; Hobson, Patrick, Crandell, Garcia-Perez, & Lee, 2005).

Another limitation of this research was associated with the statistical tests employed. This research had an increased risk of Type-1 errors, due to the high number of t-tests used in the tests of hypotheses. We attempted to control for this problem, by using a hierarchy approach, in which first the broadest aggregate variables were tested for significance. Only if significant differences were found (using t-tests) then the sub-scales could be compared and analyzed for possible group differences.

This study did not distinguish the impact of maternal BPD from other maternal psychopathology, in terms of both maternal and adolescent autonomy and relatedness behaviors. This study is unable to distinguish the degree to which maladaptive maternal behaviors are due to the specific symptoms of borderline psychopathology, or to the general presence of mental illness. Maternal depression, anxiety or other Axis II

pathology may yield convergent or divergent pathways of influence on the mother-adolescent relationship.

Future Directions

Borderline personality disorder is first diagnosed in adolescence(1994). The impairments evidenced in borderline psychopathology can be understood as deficits in autonomy and relatedness. Future research should therefore include measures of BPD symptoms for adolescents. Noting the emergence of BPD symptoms among the adolescent offspring of women with BPD may help trace the differences in number of symptoms, and the possible mediation role of autonomy and relatedness.

These findings highlighted some of the ways in which the relationship between mothers and adolescents differs in the presence of maternal BPD. In normative research autonomy and relatedness has been correlated to increases in internalizing and externalizing symptoms (Allen, Marsh, McFarland, McElhaney et al., 2002; Berger et al., 2005). In clinical and nonclinical adolescent populations autonomy and relatedness has correlations with popularity, quality of romantic relationships (Rankin-Esquer et al., 1997), drug use, academic success (Allen, Kuperminc et al., 1994), vitality (Reis et al., 2000), ego development and self esteem (Allen, Hauser et al., 1994), and depressive and anxiety disorders (Allen, Hauser, O'Connor et al., 1996). These findings regarding adolescent functioning may be applicable among offspring of mothers with BPD. It is valuable to understand the ways in which this population may differ from both clinical and non-clinical (low risk) adolescent groups. Future research might examine reports of

adolescent psychopathology, externalizing, internalizing, academic success, behavior compliance, involvement in the community, and drug and alcohol use.

It might be fruitful to include attachment information on both mother and adolescent using the Adult Attachment Interview (George et al., 1986). Consistent with the outcome studies reported above, (Allen, Hauser, & Borman-Spurell, 1996; McElhaney et al., 2006), it would be possible to test if problems in either autonomy or relatedness are correlated with increases in internalizing and externalizing symptoms. Future research may explore if difficulties in the domain of autonomy are correlated with a insecure-preoccupied style of attachment, and if inhibition of relatedness correlates with the insecure-dismissive style (Allen, Marsh, McFarland, Jodl et al., 2002). Expanding this study to include measures of attachment would enable further testing of the hypotheses that difficulties in preoccupied attachments predict internalizing, and problems with dismissive attachment predict externalizing symptoms (Allen, Marsh, McFarland, McElhaney et al., 2002; Berger et al., 2005).

The coding system employed in this research did not assess for role reversal (Danti et al., 1985; Macfie et al., 1999). Since role reversal is found among some persons with BPD, and adolescent offspring are at risk for development of BPD, it may play a significant meditational role in intergenerational transmission of psychopathology. Some teens, particularly among the children of mothers with BPD, may be expressing a pseudo-maturity or a false self and thus may incorrectly appear to have healthy scores of autonomy and relatedness. A measure of role-reversal including in the coding system, might yield interesting results within this sample. Specifically, inclusion of such a

measure might enable two distinct sub-groups to emerge, a pseudo-adult and truly mature set of teens, thereby enabling more accurate prediction of social measures of achievement, adjustment, and well-being.

Conclusion

This study stands as a first effort to highlight the impact of maternal BPD on the adolescent task of emerging autonomy and maintaining relatedness. Findings point to the continuing importance of the mother-child bond into the teenage years. Although adolescence is the time period of "sturm und drang", stress and storm (Hall, 1904), for some struggling adolescents, the process of emerging autonomy can successfully and smoothly occur within the context of a supportive mother, and reorganization of the family structure. Understanding the specific behaviors within the mother-adolescent dyad that contribute to psychopathology may help to illuminate pathways to resilience, and also the etiology of maladaptive interactional patterns in later peer and romantic relationships. This research lends itself to future replication and expansion of the core constructs being assessed, namely autonomy, relatedness, adolescent functioning, and BPD symptomology.

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Appendix

Appendix A

Variable	(r_i)
Promotes Autonomy and Relatedness	.85
Inhibits Autonomy and Relatedness	.80
Promotes Autonomy	.88
Reasoning	.85
Confidence	.91
Inhibits Autonomy	.81
Recanting	.73
Blurring	.91
Pressures	.78
Promotes Relatedness	.82
Queries	.82
Validates	.79
Engaged	.86
Inhibits Relatedness	.83
Distracting	.80
Hostile	.77

Table 1. Inter-rater Reliability, Intraclass Correlation Coefficient (r_i)

Appendix B

Variable	*Whole Sample N= 47 M(SD)*	*BPD N = 25 M(SD)*	*Comparison N = 22 M(SD)*	*t (df = 46)*
Household				
Family Yearly Income	23,924 (15,197)	21,928 (12,458)	26,191 (17,843)	0.96
				χ^2
Marital Status (partnered)	64%	68%	57%	0.65
Adolescent				*T*
Age	15.58 (1.22)	15.12 (1.04)	16.09 (1.22)	2.91*
				χ^2
Gender (female)	56%	60%	52%	0.42
Ethnicity (minority)	17%	8%	27%	0.08
Ethnicity (Hispanic)	04%	8%	5%	0.93

*p < .05

Table 2, Parent and Adolescent Demographic and Descriptive Variables

Appendix C

Variable	*Whole Sample N= 47 M(SD)*	*BPD n = 25 M(SD)*	*Comparison n = 22 M(SD)*	*t (df = 46)*
Mother				
Promotes Autonomy and Relatedness	30.49 (4.37)	29.92 (4.20)	31.11 (4.55)	0.22
Inhibits Autonomy and Relatedness	8.07 (4.38)	9.30 (4.66)	6.74 (3.70)	2.36*
Promotes Autonomy	15.01 (3.60)	14.68 (3.27)	15.57 (3.96)	0.09
Reasoning	6.93 (1.88)	5.08 (1.92)	7.39 (1.85)	0.79
Confidence	8.17 (2.08)	8.16 (1.84)	8.17 (2.37)	0.54
Inhibits Autonomy	4.66 (2.86)	5.52 (3.10)	3.72 (2.28)	2.55*
Recanting	0.42 (0.79)	0.46 (0.88)	0.37 (0.69)	0.81
Blurring	2.42 (1.51)	2.90 (1.68)	1.89 (1.13)	2.59*
Pressures	1.82 (1.67)	2.16 (1.86)	1.46 (1.38)	1.60
Promotes Relatedness	15.39 (2.28)	15.24 (2.21)	15.54 (2.39)	0.55
Queries	5.47 (1.44)	5.70 (1.34)	5.22 (1.53)	1.55
Validates	3.08 (1.63)	2.98 (1.46)	3.20 (1.83)	0.13
Engaged	6.83 (1.09)	6.56 (1.05)	7.13 (1.07)	0.38
Inhibits Relatedness	3.42 (1.95)	3.78 (2.04)	3.02 (1.81)	1.56
Distracting	2.46 (1.28)	2.46 (1.16)	2.46 (1.43)	0.40
Hostile	0.96 (1.14)	1.32 (1.29)	0.57 (0.80)	2.41*
Adolescent				
Promotes Autonomy and Relatedness	22.30 (6.76)	22.66 (5.93)	21.91 (7.68)	0.89
Inhibits Autonomy and Relatedness	9.08 (4.07)	9.38 (4.15)	8.76 (4.04)	1.08
Promotes Autonomy	11.44 (4.51)	11.64 (3.67)	11.22 (5.37)	0.78
Reasoning	4.88 (1.97)	5.08 (1.92)	4.65 (2.05)	1.14
Confidence	6.56 (2.77)	6.56 (2.06)	6.57 (3.44)	0.47
Inhibits Autonomy	3.72 (2.35)	3.96 (2.34)	3.46 (2.37)	1.33
Recanting	1.01 (1.21)	1.26 (1.31)	0.74 (1.06)	1.78†
Blurring	2.05 (1.58)	2.08 (1.53)	2.02 (1.67)	0.61
Pressures	0.66 (0.75)	0.62 (0.77)	0.70 (0.95)	0.05
Promotes Relatedness	10.86 (3.50)	11.02 (3.61)	10.70 (3.44)	0.76
Queries	2.67 (1.58)	2.88 (1.62)	2.43 (1.55)	1.28
Validates	2.69 (1.30)	2.44 (1.34)	2.96 (1.22)	0.93
Engaged	5.42 (1.45)	5.50 (1.52)	5.33 (1.39)	0.91
Inhibits Relatedness	5.36 (2.50)	5.42 (2.59)	5.30 (2.44)	0.56
Distracting	4.23 (1.69)	4.08 (1.52)	4.39 (1.89)	0.14
Hostile	1.14 (1.34)	1.34 (1.60)	0.91 (0.96)	1.26

†$p < .10$, *$p < .05$

Table 3, Parent and Adolescent Group Differences in Autonomy and Relatedness

Appendix D

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. Maternal promote autonomy	__										
2. Adol. promote autonomy	.25†	__									
3. Maternal promote relatedness	.05†	-.04†	__								
4. Adol. promote relatedness	.57*	.41**	.40**	__							
5. Maternal promote A&R	.85**	.19	.57**	.50**	__						
6. Adol. promote A&R	.35*	.88**	.18	.79**	.39**	__					
7. Maternal inhibit autonomy	.37*	.50**	-.08	.14	.26†	.41**	__				
8. Adol. inhibit autonomy	.32**	.61**	.11	.47**	.32*	.65**	.47**	__			
9. Maternal inhibit relatedness	.24†	.47**	-.28	.12	.06	.38**	.65**	.41**	__		
10.Adol. inhibit relatedness	-.07	.38**	-.10	-.15	-.11	.18	.31*	.41**	.33*	__	
11. Maternal inhibit A&R	.35*	.54*	-.17	.14	.20	.43**	.94**	.49**	.87**	.35*	__
12. Adol. inhibit A&R	.14	.58**	.002	.18	.12	.49**	.46**	.83**	.43**	.85**	.50**

†p < .10, *p < .05, **p<.01

Table 4, Inter-correlations among autonomy and relatedness variable in the sample N = 48

Appendix E

Maternal Contribution		Adolescent Contribution	
Promotes Autonomy	*(scored 0-8)*	*Promotes Autonomy*	*(scored 0-8)*
Reasoning	(scored 0-4)	Reasoning	(scored 0-4)
Confidence	(scored 0-4)	Confidence	(scored 0-4)
Inhibits Autonomy	*(scored 0-12)*	*Inhibits Autonomy*	*(scored 0-12)*
Recanting	(scored 0-4)	Recanting	(scored 0-4)
Blurring	(scored 0-4)	Blurring	(scored 0-4)
Pressures	(scored 0-4)	Pressures	(scored 0-4)
Promotes Relatedness	*(scored 0-12)*	*Promotes Relatedness*	*(scored 0-12)*
Queries	(scored 0-4)	Queries	(scored 0-4)
Validates	(scored 0-4)	Validates	(scored 0-4)
Engaged	(scored 0-4)	Engaged	(scored 0-4)
Inhibits Relatedness	*(scored 0-8)*	*Inhibits Relatedness*	*(scored 0-8)*
Distracting	(scored 0-4)	Distracting	(scored 0-4)
Hostile	(scored 0-4)	Hostile	(scored 0-4)

Note. Scores were given on .5 intervals

Figure 1.Scoring Rubric for Autonomy and Relatedness Coding

Vita

Miriam Rose Frankel graduated from Emory University in Atlanta, Georgia in 2006 with a B. A. in Psychology. There she graduated with highest honors and completed an independent research study entitled *Healthcare Providers Attitudes' Towards HIV/AIDS Patients*. In 2006 she entered the doctoral program in clinical psychology at the University of Tennessee, Knoxville. Since 2006 she has worked as a graduate research assistant under the supervision of Dr. Jenny Macfie studying the effect of maternal borderline personality disorder on adolescent and preschool aged children. In addition to her research pursuits, Miriam has been working as a graduate student clinician at the University of Tennessee Psychological Clinic from 2007 to present. Since August 2008, she has also been working as therapist for Peninsula Village in Knoxville, Tennessee. She also presently works at Cherokee Health Systems in New Tazewell, Tennessee, since August 2009.