

ABSTRACT

Title of Document: THE ROLE OF MOTHER-CHILD RELATIONSHIP QUALITY IN THE LINK BETWEEN MATERNAL PSYCHOLOGICAL CONTROL AND INTERNALIZED MALADJUSTMENT IN EARLY ADOLESCENCE

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Self-determination and attachment theorists and researchers have recently hypothesized about the role of parent-child relationship quality as a mediator or moderator in the relation between parental psychological control and child and adolescent internalized maladjustment. Thus, the overall purpose of the present study was to empirically investigate the interrelations among maternal psychological control, mother-child relationship quality, and young adolescent internalized maladjustment. Ninety 5th and 6th grade young adolescents and their mothers participated in videotaped shared activities and completed questionnaires in a laboratory visit. The study sample consisted of mostly middle class, well-educated, two-parent families. The following variables were assessed and were of primary importance to the present study: maternal-reported psychological control; observed positivity and negativity in the mother-child relationship; youth-perceived positivity and negativity in the mother-child relationship; youth-perceived attachment security to mother; youth-reported self-esteem; and maternal-

reported youth internalizing problems. Both a mediation and moderation model were examined.

Simple mediation analysis was conducted in order to examine mother-child relationship quality as a mediator of the relation between maternal psychological control and young adolescent internalized maladjustment. However, no evidence of mediating processes was found. Hierarchical multiple regression analysis was conducted examining mother-child relationship quality as a moderator of the relation between maternal psychological control and young adolescent internalized maladjustment. Results revealed significant maternal psychological control \times youth-perceived mother-child relationship quality interaction effects on young adolescent self-esteem and internalizing problems. More specifically, young adolescents who perceived the lowest levels of negativity their relationships also reported higher levels of self-esteem when their mothers reported using low levels of psychological control. In addition, young adolescents who perceived the highest levels of positivity in their relationships had mothers who reported using low levels of psychological control and reported observing lower levels of internalizing problems in their children. Another important finding of the present study was the significant main effect of observed positivity in the mother-child relationship on youth-reported self-esteem. This finding was obtained despite the greater difficulty in obtaining significance when using independent reporters for the constructs of interest.

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THE LINK BETWEEN MATERNAL PSYCHOLOGICAL CONTROL
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DEDICATION

I dedicate this dissertation to my amazing family and closest friends (you know who you are). Thank you all for your unwavering faith in me during my graduate studies. To my mother, Frida, thank you for always being here for me and helping me whenever I need you and for your unending faith, support, and encouragement. To my brother, Erez, thank you for always keeping me and my life in check – you are the best lil’ bro. To my amazing husband and soul mate, Yossi, I thank you most deeply for being my strongest ally with your boundless devotion, encouragement, and enthusiasm throughout the years. There is no way I could have done this without you! To my adorable sons, Eitan and Noam, thank you for bringing so much joy and happiness to my life and to the lives of all who know you.

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CHAPTER I

INTRODUCTION

“Anxiety and depression, typically labeled as internalizing symptoms/disorders, are among the most common forms of psychopathology affecting children and adolescents” (Brumariu & Kerns, 2010, p. 177). Anxiety can be described as intense fear or worry, whereas depression is often described as sadness and lack of energy. Low levels of self-esteem and high levels of internalizing problems have been found to increase during early adolescence when children are beginning the transition into adolescence (e.g., Harter 2006) and have been associated with negative outcomes, such as suicidal ideation, loneliness, and eating disorders (Harter, Marold, & Whitesell, 1992; Qualter & Munn, 2002; Tanofsky-Kraff, Faden, Yanovski, Wilfley, & Yanovski, 2005). Thus, it is important to examine factors in the lives of young adolescents that may give rise to their internalized maladjustment (e.g., Brumariu & Kerns, 2010).

Researchers have demonstrated that the single most consistent predictor of adolescent emotional and psychological well-being is the quality of the parent-child relationship (see Steinberg, 2001, for a review; Steinberg & Silk, 2002). Furthermore, parental psychological control is a parenting practice that manipulates children and adolescents by inducing guilt and instilling anxiety (Barber, 2002), sometimes leading to low levels of self-esteem and high levels of internalizing problems in children and adolescents (see Barber & Harmon, 2002, for a review; Grolnick, 2003). Parents who practice this type of negative controlling parenting often make their love and affection contingent upon whether the child is feeling, thinking, or behaving in a certain way – the parent’s way (Barber and Harmon, 2002). Although most parents are well-meaning in

their socialization practices, their means (i.e., psychological control) can be detrimental to their children's emotional and psychological well-being. Furthermore, researchers have asserted that a parent who uses psychological control when parenting their child is manipulating the child's emotional bond (i.e., attachment) and the love the child has for his/her parent (Doyle & Markiewicz, 2005). It is intuitive, then, that the use of maternal psychological control would negatively affect the mother-child relationship, or attachment bond. Given this, it is extremely important to examine the role the mother-child relationship has in the relation between maternal psychological control and child and adolescent emotional and psychological well-being.

Even though for almost half a century extensive theoretical and empirical research has been conducted linking parental psychological control with children's and adolescents' emotional and psychological adjustment, it is surprising that only in the past few years have researchers begun examining the links between parental psychological control and the parent-child relationship (Doyle & Markiewicz, 2005; Karavasilis, Doyle, & Markiewicz, 2003; Ojanen & Perry, 2007; Shek, 2006), in fact finding a negative relation between the two constructs. Even more importantly, despite the theoretical and empirical research finding negative associations between parental psychological control and child and adolescent adjustment, and between parental psychological control and parent-child relationship quality, almost no research to date has investigated the interrelations between parental psychological control and the parent-child relationship in predicting child and adolescent adjustment.

To date, only one study has investigated these interrelations, specifically examining parent-child relationship quality (i.e., attachment security) as a mediator in the

relation between parental psychological control and adolescent internalizing problems (Doyle & Markiewicz, 2005). Despite finding that parental psychological control negatively predicted attachment security and positively predicted internalizing problems in adolescents, these investigators did not find attachment security to be a mediator. They explained that perhaps their mediation model would have yielded significant results if they had used a different measure of attachment. However, Doyle and Markiewicz *did* find that attachment security mediated the relation between parental warmth and adolescent self-esteem, but not internalizing problems. Because Doyle and Markiewicz obtained partial support for their hypothesis that attachment security mediated the relation between parenting practices and adolescent adjustment, they concluded that it is important to further examine attachment security as a mediator of the relation between parenting practices and adolescent internalized maladjustment. Since Doyle and Markiewicz's (2005) study, there have been a few researchers who have similarly hypothesized, based on theoretical research (i.e., self-determination theory), that the quality of the parent-child relationship should be examined as a *mediator* (e.g., Bosmans, Braet, Van Leeuwen, & Beyers, 2006; Brumariu & Kerns, 2010; Soenens & Vansteenkiste, 2010) in the link between parenting practices and child and adolescent adjustment. In contrast, based on attachment theory research, researchers have recently hypothesized that parent-child relationship quality should be examined as a *moderator* in this link (e.g., Brumariu & Kerns, 2010; Karavasilis et al., 2003; NICHD, 2006; Ojanen & Perry, 2007), arguing that parenting practices must be examined within the context of the relationship when predicting adjustment outcomes. Thus the *overall purpose* of the present study was to illuminate our understanding of the possible intervening and

interacting processes linking maternal psychological control, mother-child relationship quality, and internalized maladjustment in early adolescence.

Specific Aims

Very recently, scholars have reviewed the theoretical literature on parental psychological control, in particular, and have hypothesized that the quality of the parent-child relationship (i.e., attachment security) should mediate the relation between parental psychological control and child outcomes (Soenens and Vansteenkiste, 2010). They have based this hypothesis on the fact that parental psychological control manipulates the child's attachment bond (e.g., by using conditional love (or regard) towards the child) and undermines the child's sense of closeness (i.e., relatedness) to the parent. Thus, the *first specific aim* of the present study was to examine a primary mediation model where mother-child relationship quality mediates, or intervenes in, the relation between maternal psychological control and young adolescent internalized maladjustment. In contrast, a few researchers have hypothesized that perhaps it is parenting practices that serve as the mediator in the relation between parent-child relationship quality and children's adjustment (e.g., Branstetter, Furman, and Cottrell, 2009; Hair, Moore, Garrett, Ling, and Cleveland, 2008); therefore, an alternative mediation model where maternal psychological control mediates, or intervenes in, the relation between mother-child relationship quality and young adolescent internalized maladjustment was explored as well.

Existing research on parental psychological control reveals: (a) a negative relation with youth self-esteem (e.g., Barber & Harmon, 2002, Ojanen & Perry, 2007); (b) a positive relation with youth internalizing problems (e.g., Barber &

Harmon, 2002; Doyle & Markiewicz, 2005); and (c) a negative relation between parental psychological control and parent-child relationship quality (e.g., Karavasilis et al., 2003; Shek, 2006). Furthermore, previous research linking parent-child relationship quality with children's and adolescents' psychological adjustment has found it to be positively linked with youth self-esteem (e.g., Deković, 1999) and negatively linked with youth internalizing problems (e.g., Brumariu & Kerns, 2010). Therefore, the *second specific aim* of the present study was to examine the individual contributions of maternal psychological control and mother-child relationship quality in predicting young adolescent self-esteem and internalizing problems.

Importantly, relationship theorists have recently recommended that the impact of parental discipline practices be regarded within the context of the broader relational quality (Laible & Thompson, 2007). More specifically, they have hypothesized that the quality of the parent-child relationship *moderates* the link between parenting and children's adjustment. Similarly, it has been suggested that the quality of the parent-child relationship can moderate the effects of specific parenting behaviors or practices, such as psychological control, on children's emotional and psychological adjustment (see Darling & Steinberg, 1993, for a review on parent-child emotional climate as a moderator of parenting practices). Given this, one would assume that the quality of the parent-child relationship can serve either a protective or exacerbating role in the relation between parental psychological control and young adolescent internalized maladjustment. Thus, the *third specific aim* of the present study was to investigate a moderation model where mother-child relationship quality moderates, or interacts in, the relation between maternal psychological control and young adolescent internalized maladjustment.

CHAPTER II

BACKGROUND AND SIGNIFICANCE

The Developmental Period of Early Adolescence

The developmental period of early adolescence is a potentially stressful time in young adolescents' lives, characterized by many new developmental changes occurring simultaneously – biological (pubertal), emotional, cognitive, and social (e.g., Alsaker & Flammer, 2006; Eccles, 1999; Paikoff & Brooks-Gunn, 1991; Simmons, Burgeson, Carlton-Ford, & Blyth, 1987; Smetana, Campione-Barr, & Metzger, 2006; Steinberg & Morris, 2001; Wigfield, Byrnes, & Eccles, 2006). Researchers have divided adolescence into three developmental periods: early adolescence (ages 10 – 13), middle adolescence (ages 14 – 17), and late adolescence (18 into early twenties) (Smetana et al., 2006). The present literature review is focused on the development of young adolescents, or youth in the period of early adolescence (10 – 12 years of age). Researchers have found an increase in negative mood or affect in children (Larson & Asmussen, 1991; Montemayor, Eberly, & Flannery, 1993), and well as prevalence of low self-esteem and more internalizing difficulties, such as anxiety and depressed affect (Blyth, Simmons, & Carlton-Ford, 1983; Dubois & Tevendale, 1999; Eccles et al., 1993; Elias et al., 1986; Fenzel, 2000; Hirsch, DuBois, & Brownell, 1993; Harter, 2006; Hirsch & Rapkin, 1987; Seidman, Allen, Aber, Mitchell, & Feinman, 1994; Seidman, Lambert, Allen, & Aber, 2003; Simmons & Blyth, 1987; Simmons, Rosenberg, & Rosenberg, 1973) during early adolescence.

During this developmental period, young adolescents typically rely on their parents for emotional support and advice, and likely see their parents as significant positive

influences on their lives (e.g., Blyth, Hill, & Thiel, 1982; Maccoby and Martin, 1983). However, during the transition from childhood to adolescence, in healthy families, young adolescents begin a process of individuation, or autonomy, in which they gradually come to see themselves as separate from parents (McElhaney, Allen, Stephenson, & Hare, 2009). Young adolescents' newfound desire for autonomy (Collins, Madsen, & Susman-Stillman, 2002; Eccles, Lord, Roeser, Barber, & Jozefowicz, 1997) has been linked to a rise in tension, negativity, and conflict in the parent-child relationship (Eccles et al., 1993; Furman & Buhrmester, 1992; Laible & Carlo, 2004; Laursen, Coy, & Collins, 1998; Paikoff & Brooks-Gunn, 1991; Smith & Forehand, 1986; Smetana, 1989; Steinberg, 1990; Steinberg & Silk, 2002) likely to negatively influence the *quality* of the parent-child relationship (Youniss & Smollar, 1985).

More specifically, adolescent autonomy has been found to be facilitated by parenting that is supportive, sensitive, and responsive to adolescent needs (Allen et al., 2003; McElhaney et al., 2009), as well as by warmer, more accepting, and less affectively negative interactions with parents (Ducharme, Doyle, & Markiewicz, 2002). Thus, the parent-child relationship, which may be challenged during early adolescence, must adapt or adjust in order to accommodate these new needs and normal, transitional changes in young adolescents' lives (Paikoff & Brooks-Gunn, 1991; Steinberg, 1990). Researchers have explained how young adolescents and their parents can maintain a close relationship during this challenging developmental period; they can do so by: (a) redefining their relationship in ways that will not threaten the individuality or autonomy of the adolescent (Youniss & Smollar, 1985); (b) preserving their emotional bond (Steinberg & Silk, 2002); and (c) preventing detachment from each other (Beveridge & Berg, 2007;

Steinberg, 1990). Without accommodation to the young adolescent's newly desired autonomy, the parent-child relationship may decline in quality (Montemayor, 1986; Paikoff & Brooks-Gunn, 1991), and therefore, may not be able to act as a significant source of support serving to protect young adolescents from adjustment difficulty during this developmental period.

To counter some misleading messages that have been communicated via the mass media, Steinberg and colleagues (Steinberg, 2001; Steinberg & Silk, 2002) have urged policy makers to change the way in which parents of adolescents view their role in their children's development, discounting their possible beliefs that they, as parents, do not matter in adolescence. They have also asserted that it is not enough to simply tell parents that they matter, but that *specific* messages that have been agreed upon by researchers must be disseminated to parents. More specifically, they have explained that parents need basic information about: (a) normative developmental changes in adolescents; (b) effective parenting during adolescence which is sensitive to young adolescents' changing needs; and (c) how their relationship will change during the developmental period of adolescence.

It is important to note that the influence of *peers* on self-esteem and internalizing problems grows stronger and may come to equal the influence of parents during the period of adolescence (Harter, Whitesell, & Junkin, 1998; Harter, 2006; Rubin, Bukowski, & Parker, 2006). Moreover, researchers have shown that *both* parental *and* peer influences are important during the developmental period of early adolescence (DuBois et al., 2002; Roberts et al., 2000). Importantly, researchers have demonstrated that adolescents who perceive a positive relationship with *both* their parents *and* their

peers are seen to be the best-adjusted (Laible, Carlo, & Raffaelli, 2000). Although peers may become more central determinants of adolescent adjustment, researchers have documented that parental influence during the adolescent developmental period “does *not* decline” (Harter, 2006, p. 396). Researchers have asserted that parents, in fact, *do* matter a great deal (Eccles et al., 1997; see Steinberg, 2001, for a recent review), despite a somewhat recent argument that parents matter very little with regard to the development of young adolescents (Harris, 1998).

The nature of parent-child relationships is that there is a power difference in the relationship where parents have significantly more power and authority; this may allow parents to get away with using negative controlling parenting practices (e.g., psychological control; see Eccles, 2002). Parental psychological control, a parenting practice which intrudes upon, manipulates, and controls the psychological world of children and adolescents (i.e., their thoughts, feelings, and behaviors) can have adverse effects on children’s and adolescent’s emotional and psychological development (e.g., Aunola & Nurmi, 2005; Barber, Olsen, & Shagle, 1994; Eccles, 2002; Soenens, Luyckx, Vansteenkiste, Duriez, & Goossens, 2008a). Parental psychological control can be especially harmful during the years of early adolescence, a developmental period when children typically begin to establish some psychological distance from their parents (Erikson, 1968), which in itself threatens the quality of the parent-child relationship.

Defining Psychological Control

Two widely accepted parenting dimensions are parental warmth-responsiveness and control-demandingness (e.g., Baumrind, 1971). The dimension of warmth-responsiveness ranges from nurturance, sensitivity, and acceptance to rejection and

hostility; whereas control-demandingness ranges in type of power assertion from providing structure, supervision, and fostering autonomy to punishment, love withdrawal, and guilt induction. The latter two forms of behavior comprise the negative parenting construct, psychological control. Schaefer (1965) was the first researcher to examine the construct of parental psychological control. He defined parental psychological control as “covert, psychological methods of controlling child’s activities and behaviors that would not permit the child to develop as an individual apart from the parent” (p.555). He proposed a three-factor conceptual model of parent behavior in his Children’s Report of Parental Behavior Inventory (CRPBI). The three factors were labeled “acceptance versus rejection,” “lax control versus firm control (i.e., behavioral control),” and “psychological autonomy versus psychological control.” In the last factor, psychological autonomy and psychological control were considered opposite ends of the same continuum, where psychological control was viewed as an intrusion into the psychological autonomy of the child.

Over the next few decades, researchers had focused mostly on aggregated measures of parenting, or parenting typologies, specifically authoritative, authoritarian, indulgent/permissive, and indifferent/uninvolved parenting styles (Baumrind, 1966, 1967, 1978; Maccoby & Martin, 1983). Authoritative parenting has been proven to be the most effective childrearing style to date in European American children, and features of authoritative parenting have been suggested to be part of optimal parenting in any culture (see Baumrind & Thompson, 2002). Authoritative parents are characterized as being highly demanding and highly responsive, providing firm control (i.e., structure), warmth, and encouraging of autonomy (Steinberg & Silk, 2002). The remaining three parenting

styles are not considered to be optimal and can be harmful to children's and adolescents' development. More specifically, authoritarian parents are considered to be highly controlling, low in warmth/responsiveness, parent-centered, punitive, lacking respect for their children, and restricting their children's autonomy (Steinberg & Silk, 2002); indulgent (or permissive) parents are high in warmth/responsiveness, but low in control, monitoring, and supervision (Steinberg & Silk, 2002); and indifferent (or uninvolved) parents are neither demanding nor warm/responsive, and can even be neglectful in severe cases (Steinberg & Silk, 2002).

Despite the lack of distinction of the construct of "psychological control" within the aggregated measure of authoritarian parenting, included in part of Baumrind's (1996) description of the "authoritarian" parenting typology is that this parental attitude violates the child's psychological world (Barber & Harmon, 2002). Similarly, Maccoby and Martin (1983) also included in their description of authoritarian parenting that this type of parental attitude is unresponsive to the psychological needs of the child. While describing the construct of parental psychological control, Steinberg (1990) had characterized it as the "absence of 'psychological autonomy'" (p. 274) for the child. Soon after, other researchers began further defining this parenting practice, describing it as an intrusion on the degree of psychological distance a child experiences from his or her parents (Barber et al., 1994). In 2002, Barber described parental psychological control as intruding upon, manipulating, and constraining children's and adolescents' psychological worlds and as "a type of interpersonal interaction in which the parent's psychological status and relational position to the child is maintained and defended at the expense and violation of the child's development of self" (2002b, p. 6). More

specifically, parental psychological control has been characterized as a form of insensitive parenting which undermines the child's sense of self by inducing guilt, arousing anxiety, provoking shame, and withholding affection and love by making them contingent upon the child's behaviors (Barber, 2002; Doyle & Markiewicz, 2005; Pettit & Laird, 2002). Parents who are psychologically controlling have been characterized as controlling their children's attitudes, behaviors, feelings, and thoughts through manipulative means, and using psychological tactics such as conditional approval and shaming (Barber, 1996).

Grolnick (2003) has given a clear example of parental psychological control by depicting three different parental approaches to the same situation. In her example, a child comes home with three Cs on her report card (two more than in the previous grading period) and her parents are upset and concerned. Her parents want their daughter's grades to improve on the next report card. The three different parental approaches are as follows: (a) a positive controlling approach, where the parents use positive reinforcement (e.g., monetary reward) as an incentive for the daughter to improve her grades in the future; (b) a psychological controlling approach, where the parents tell their daughter that they are disappointed in her and that she let them down again (i.e., use of guilt induction) and they are cold to her for a few days speaking only to answer questions in order to prove to her how upset they are (i.e., love withdrawal); and (c) an autonomy-supportive approach, where the parents sit down together with their daughter and ask her what she thinks went wrong with her grades this period and then brainstorm with her about what she thinks might help improve her grades in the future (i.e., involving their daughter in the decision-making process). Grolnick (2003) has

explained that the first two approaches are both controlling and have a similar goal – coercing the child into changing her behavior. In both situations, the daughter feels pressure from her parents – in the first case, pressure from the desired reward, and in the second case, pressure from fear of losing her parents’ love, as well as their disappointment and anger. Grolnick (2003) has further explained that in the first two approaches, the child will be changing her behavior for external reasons - to either obtain money or to avoid parental hostility. However, in the third case, the daughter does not feel pressure and feels that she is the one who can initiate changes in her own behavior.

Barber and Harmon (2002) have described four main characterizations of parental psychological control. First, it is “*covert* and *indirect*... (qualifying) the psychological state or intent of parent who engages in this behavior” (p. 19). Second, it is a type of parenting which is *intrusive* in that it “intrudes” upon the child’s psychological world. Third, parental psychological control is characterized as *manipulative* in that parents “manipulate” their child and the relationship between the parent and the child using three main strategies: controlling through guilt, withdrawing love (making the parent’s attention or affection contingent on the child being or behaving in the way a parent wishes), and instilling anxiety. Finally, the fourth main characterization of parental psychological control is that it is *constraining* in that parents “constrain” their children’s verbal and emotional expression inhibiting their children’s discovery and expression of the self.

Measurement of psychological control. Many researchers have used either Schaefer’s (1965) CRPBI or Barber’s (1996) *Psychological Control Scale – Youth Self-Report* (PCS-YSR) to assess parental psychological control in their studies. However,

some researchers have developed their own measures of parental psychological control for their studies (e.g., Shek, 2007; Wang, Pomerantz, & Chen, 2007), while others have created an index of parental psychological control from existing questionnaires assessing parental behavior that were not originally intended to measure psychological control (e.g., Aunola & Nurmi, 2004; Aunola & Nurmi, 2005; Doyle & Markiewicz, 2005; Ojanen & Perry, 2007; Sher-Censor, Parke, & Coltrane, 2010; Silk, Morris, Kanaya, & Steinberg, 2003). These researchers have focused on a few items tapping into particular forms of psychologically controlling behavior. For example, Doyle and Markiewicz (2005) formed their 3-item parental psychological control index by choosing three relevant items from a parental punishment scale (Haapasalo & Tremblay, 1994). Similarly, Ojanen and Perry (2007) created their own 6-item psychological control subscale from an existing measure of parenting behavior which included items that tap into psychological control (Perceived Parenting Scale; Finnegan, Hodges, & Perry, 1998).

More pertinent to the present study are studies which have extracted an index of psychological control specifically using the Child-Rearing Practices Report (CRPR; Rickel & Biasatti, 1982) measure (e.g., Aunola & Nurmi, 2004; Aunola & Nurmi, 2005; Sher-Censor, Parke, & Coltrane, 2010). For example, Sher-Censor, Parke, and Coltrane (2010) created an 11-item index of parental psychological control from the CRPR (Rickel & Biasatti, 1982) by choosing 11 psychological control items, from the 58-item measure, based on face validity or the resemblance of the items to those in extant measures of psychological control (e.g., anxiety and guilt induction, love withdrawal, etc.). In contrast, Aunola and Nurmi (2005) chose a different way to create their index of parental

psychological control in a previous study (Aunola & Nurmi, 2004), conducting an exploratory principle components analysis using promax rotation (oblique rotation, because they did not expect uncorrelated factors) on the Finnish version of Block's CRPR (Roberts, Block, & Block, 1984). They obtained three parenting dimensions: affection (10 items, $\alpha = .82$), behavioral control (6 items, $\alpha = .66$), and psychological control (4 items, $\alpha = .79$). It is important to distinguish parental psychological from three other parenting practices with which it is sometimes confused: (a) behavioral control; (b) psychological autonomy granting; and (c) overprotection.

Psychological control versus behavioral control. In 1990, Steinberg distinguished between psychological control and behavioral control (or firm control). He described psychological control as the "absence of 'psychological autonomy'" and behavioral control (or firm control) as "the presence of 'demandingness'" (p. 274). More recently, psychological control has been distinguished from behavioral control in that parents who are "controlling" (i.e., use psychological control) foster maladjustment in their children, whereas parents who are "in control" (i.e., use behavioral control) foster positive developmental outcomes in their children (Grolnick, 2003). Parental psychological control has also been defined as control over the child's psychological world (feelings, verbal expressions, identity, attachment bond), whereas parental behavioral control is control over the child's behavior (daily activities, manners, whereabouts, etc.; Barber, 2002). Furthermore, parental behavioral control has been described as structuring, managing, regulating, and influencing children's behaviors, activities, and actions in a way that promotes normative, developmentally-appropriate, behavioral patterns (Barber, 1996; Gray & Steinberg, 1999).

Parents have been described as being posed with a challenge to allow sufficient psychological autonomy to their child without allowing too much behavioral autonomy (Steinberg, 1990). However, researchers have cautioned against considering psychological control and behavior control as opposite ends of a single continuum, explaining that the constructs are conceptually orthogonal in that the level of one does not necessarily change the level of another and that psychological control and behavioral control restrict or manage different things (Barber et al., 1994). More specifically, psychological control refers to control over a child's psychological world, whereas behavior control refers to control over the child's whereabouts and activities. For instance, some families may exhibit high levels of both psychological and behavioral control, while others may only exhibit high levels of psychological control, but no behavioral control (i.e., permissive), or vice versa. Furthermore, psychological control has been found to uniquely predict internalized forms of adolescent maladjustment, whereas the *absence* of behavioral control is uniquely related to externalizing problems (e.g., Barber, 1992; Barber et al., 1994).

Psychological control versus overprotection. As mentioned above, the opposite of encouraging independence is not psychological control, but rather overprotection (Bögels & van Melick, 2004). Recently, McShane and Hastings (2009) divided parental psychological control into two constructs: overprotection and critical/negative control. They characterized overprotection as restricting the child's independence and activities and excessive or unnecessary affection and warmth; whereas, critical or negative control was described as the negative component of psychological control characterized as emotionally manipulative and threatening the child's sense of security with the parent-

child bond. In their study, McShane and Hastings (2009) examined the relation between parental psychological control (i.e., overprotection versus critical or negative control) and young children's internalizing problems, in 2 to 4 year old children. When measuring internalizing problems using the mother-reported *Child Behavior Checklist*, for 1 ½ to 5 year old children (a version of this same measure for older children was used in the present study), they found that mothers who were highly critically controlling reported that their children had more internalizing problems, six to nine months later. However, this relation was non-significant for highly *overprotective* mothers. Similarly, a recent study by Coplan, Arbeau, and Armer (2008) did not find that maternal overprotective (or fretful) parenting was related to young children's internalizing problems; however, when children's level of shyness was taken into account it interacted with maternal overprotective parenting in predicting internalizing problems. In other words, maternal overprotective parenting exacerbated the link between children's shyness and later internalizing problems. Therefore, it may be the case that overprotective parenting is related to children's internalizing problems only when taking into account children's level of shyness; overprotective parenting has been found to be related to children's shyness (e.g., Coplan, Reichel, & Rowan, 2009; Rubin & Burgess, 2002). Findings from both McShane and Hastings (2009) and Coplan and colleagues (2008) lend support to researchers who have asserted that promotion of independence (i.e., opposite of overprotection), or psychological autonomy granting, is not related to internalizing problems (Silk et al., 2003). Therefore, in the present study, when the term maternal psychological control is used, it refers to the critical or negative components of psychological control, rather than overprotection. It is important to note that a recent

study linked overprotective parenting with adolescents' internalizing problems (Muris, Meesters, & van den Berg, 2003); however, it seems that the measure used may not have been an appropriate measure of overprotective parenting. More specifically, the example they had given for an item on the overprotection subscale was "your parents want you to reveal your secrets to them," which seems more like intrusive negative control than overprotection.

Psychological control versus psychological autonomy granting. Recent research has suggested that psychological control and psychological autonomy granting are *not* part of one continuum, as was originally proposed by Schaefer in 1965 when he labeled one of the parenting factors "psychological autonomy versus psychological control." In this parenting factor, the absence of psychological control suggests the presence of psychological autonomy. However, recently researchers have explained that if a parent does not use psychological control it does not necessarily mean she/he is encouraging autonomy in the child (Barber, Bean, & Erickson, 2002; Silk et al., 2003). In contrast, if a parent does not foster autonomy it does not automatically mean that he or she is violating the child's autonomy through psychological control. Moreover, psychological autonomy granting and psychological control have *not* been found to correlate highly enough to imply that they are opposite ends of one continuum (Barber et al., 2002). In fact, psychological autonomy granting has been found to be more closely related to parental supportive behavior than to psychological control. Finally, parental psychological control has been found to be related to adolescent internalizing problems, whereas psychological autonomy granting has not (Silk et al., 2003).

Most recently, researchers have explained that the difference between psychological control and psychological autonomy-granting is not nearly as clear as once believed (Soenens & Vansteenkiste, 2010). More specifically, autonomy-support has been defined in two different ways in the extant literature: (a) promotion of independence (from others) and (b) promotion of volitional functioning. Soenens and Vansteenkiste (2010) have argued that the opposite of promoting independence (i.e., separation and-individuation) would not be psychological control, but rather fostering dependence/reliance on the parent or overprotection (Bögels & van Melick, 2004). Furthermore, they have explained that promotion of independence is orthogonal to psychological control in that parents may or may not use psychological control when promoting independence or dependence. They have given a clear example of this explaining that parents can induce guilt in their children when they are not able to live independently (i.e., on their own, away from their parents); this guilt-induction encourages independence in a psychologically controlling way. In contrast, parents can encourage independence, in a supportive way, by allowing their children as much choice as possible when making decisions (i.e., promotion of volition). Therefore, based on self-determination theory (which is discussed in further detail below), psychological control is at the opposite end from promotion of volitional functioning on the same continuum (Soenens & Vansteenkiste, 2010). More specifically, parents who use psychological control ignore their children's perspectives, ideas, and feelings and do not allow them to have a "developmentally appropriate degree of choice" (p. 84). Furthermore, they have asserted that parental psychological control can be measured equivalently across race and culture. More specifically, Soenens and Vansteenkiste have explained that since

psychological control is not defined as promoting dependency, but rather as frustrating people's universal psychological need for volitional functioning, it makes sense that psychological control would universally adversely affect children's development in any culture. In contrast, incorrectly defining psychological control as promoting dependence would adversely affect those who live in individualistic cultures that promote independence more than those who live in collectivistic cultures that promote interdependence and compliance. From here on out, when the term "autonomy" is used it refers only to the promotion of volitional functioning, which is negatively linked to psychological control.

Parental Psychological Control and Internalized Maladjustment in Childhood and Adolescence

The use of parental psychological control which interferes with and compromises children's development of psychological autonomy (or volitional functioning) can be detrimental to children's emotional and psychological well-being (e.g., Barber, 2002; Barber & Harmon, 2002; Doyle & Markiewicz, 2005; Grolnick, 2003). Researchers have stressed the importance of verbal interchange between parents and children and the importance of child's self-expression in the development of the child's sense of self and well-being (see Barber and Harmon, 2002). In an extensive literature review, Barber and Harmon (2002) investigated studies of the conceptualization, measurement, and child and adolescent correlates of parental psychological control published between 1946 and 2002. They reviewed 108 studies relating to psychological control and constructs similar to it, 66 percent of which (71 studies) were published since 1990. Barber and Harmon separated studies of psychological control from those examining authoritarian parenting,

which is in part also described as a parenting practice that violates the development of the child's sense of self. Furthermore, researchers have stated that it is difficult to explain to what extent psychological control is the driving force linking authoritarian parenting to child outcomes and there is not enough research verifying that psychological control is the determining component of the authoritarian typology (Barber et al., 2002).

Of the 108 studies that Barber and Harmon reviewed, only 34 studies examined the links between the explicit construct of parental psychological control (as a disaggregated parenting practice) and child and adolescent adjustment. Of these studies, 20 examined the relation between parental psychological control and self-esteem and/or internalizing problems (i.e., anxiety or depression) and found a significant link between these constructs (see Barber & Harmon, 2002, for more detail on these studies). Since Barber and Harmon's (2002) review of the empirical studies linking parental psychological control with child and adolescent self-esteem and internalizing problems, I have found 26 relevant studies, to date, published between 2001 and 2009. An overview of these studies is presented in Table 1. The samples in these studies ranged in socioeconomic status from low income to middle-to-upper class. With regard to race and ethnicity, the samples were predominantly Caucasian/European American and a few were predominantly African American or Chinese. In addition, some of the samples were described as being Belgian, English Canadian, or Finnish. Most of the samples in which family structure was reported were described as coming from two-parent families, whereas a few samples were described as being comprised of about half single-parent families and half two-parent families, or single-parent families.

The predominant finding from these studies was consistent with findings from Barber and Harmon's (2002) review that parental psychological control negatively and significantly predicted child and adolescent self-esteem and positively and significantly predicted internalizing problems. Only four studies did not report a significant relation between parental psychological control and internalized maladjustment (i.e., self-esteem, anxiety, or depression) in their samples: European American adolescents from two-parent, working-to-middle class families, ages 11 to 15 years (Galambos, Barker, & Almeida, 2003); 9 to 12 year old children from Holland, predominantly from intact families (Bögels & van Melick, 2004); African American adolescents in 5th, 8th, and 10th grades, from single- and two-parent, low income families, (Bean, Barber, & Crane, 2006); and African American adolescents, ages 10 to 18 years, from either two-parent or divorced/separated families (Krishnakumar et al., 2003). Perhaps the studies mentioned above did not find significant findings for the following reasons (in respective order by study): (a) using an aggregated score of both mothers' and fathers' psychological control, rather than each parent's separate score, may lead to different adolescent outcomes; (b) psychological control may not be related to anxiety in various countries such as Holland; and (c & d) in African American samples, adolescents (ages 10 to 16 years) may not be as negatively affected by parental psychological control as are younger children - three studies examining parental psychological control on African American children in middle-to-late childhood (ages 7 to 10 years) found significant relations with their internalized maladjustment (Caron, Weiss, Harris, & Catron, 2006; Feng et al., 2009; Morris et al., 2002).

Studies comparing maternal and paternal psychological control have indicated that maternal, but not paternal, psychological control predicted internalizing problems (Aunola & Nurmi, 2005; Feng et al., 2009; Rogers, Buchanan, & Winchel, 2003; Soenens et al., 2008a). In line with these findings, a study conducted on a Chinese sample found that maternal psychological control was a more potent predictor of adolescent self-esteem than was paternal psychological control, and Chinese mothers displayed significantly higher levels of psychological control than Chinese fathers (Shek, 2007).

Four longitudinal studies investigated the direction of influence between parental psychological control and children's internalizing problems (Doyle & Markiewicz, 2005; McShane & Hastings, 2009; Rogers et al., 2003; Soenens et al., 2008a). More specifically, these studies examined whether: (a) parental psychological control influenced children's internalizing problems; (b) children's internalizing problems influenced parental use of psychological control; or (c) the relation between the two constructs was reciprocal. Mostly, a reciprocal effect was found where the parent and child mutually influence one another (McShane & Hastings, 2009; Rogers et al., 2003; Soenens et al., 2008a); however, some researchers did not find a reciprocal effect, but rather that the direction of influence was only from the parent to the child (Doyle & Markiewicz, 2005). Perhaps this inconsistency reflects age differences in the samples; a reciprocal effect was found in studies that were conducted on younger samples (i.e., toddlers, children in early and middle childhood, and young adolescents), whereas a direction of influence from parent to child was found in a study conducted on a middle adolescent sample.

Studies examining sex differences show somewhat consistent findings. More specifically, studies found internalized maladjustment (i.e., low levels of self-esteem and/or internalizing problems) to be more prevalent in female younger and older adolescents (10 to 20 years old) than in males; this was true for European American and African American samples coming from diverse income, single- and two-parent homes (Krishnakumar, Buehler, & Barber, 2003; Rogers et al., 2003), as well as for a Belgian sample (Soenens, Vansteenkiste, Luyten, Duriez, & Goossens, 2005).

To summarize, most of the studies have indicated that parental psychological control is a significant predictor of internalized maladjustment (i.e., low self-esteem, anxiety, and depression). This was found in toddlers, children, adolescents, and young adults, as well as in a variety of ethnic, racial, and cultural samples, including Caucasian/European American, African American, Chinese, Latino, English Canadian, Finnish, and Belgian participants. Furthermore, one study comparing a European American sample with a Chinese sample has found that in both samples, parental psychological control predicted young adolescents' decreased self-esteem over time, after adjusting for their initial functioning (Wang et al., 2007).

Importantly, some studies have explored third variables intervening in the relation between parental psychological control and child and adolescent internalized maladjustment as well as variables interacting with parental psychological control in predicting child and adolescent internalized maladjustment. More specifically, three mediators were found intervening in the relation between parental psychological control and younger and older adolescents' depressive symptoms: (a) young adolescents' high level of internal attributional style (self-blame for negative events (Garber & Flynn,

2001); (b) female adolescents' low level of sense of self-control (over their own behavior and future), (Mandara & Pikes, 2008); and (c) adolescents' high level of maladaptive perfectionism (Soenens et al., 2008b). In addition to the three mediators, four variables interacted with *maternal* psychological control in predicting child and young adolescent internalizing problems: (a) maternal affection, where mothers who were high in both psychological control and affection had children with higher levels of internalizing problems over time (Aunola & Nurmi, 2005); (b) maternal behavioral control, where mothers who were high in both psychological control and behavioral control had children with higher levels of internalizing problems (Caron et al., 2006); (c) female young adolescents' low level of expressed positive emotion in observed interaction with their mothers, where girls who had expressed low levels of positive emotion and whose mothers were high in psychological control had higher levels of depressive symptoms (girls) (Feng et al., 2009); and (d) children's high level of irritable distress, where children whose mothers were high on psychological control and had (children) high levels of irritable distress had higher levels of internalizing problems (Morris et al., 2002). In summary, there is evidence of third variables mediating and moderating the link between parental psychological control and child and adolescent internalizing problems, indicating that the relation may no longer be a direct one as once believed. It is important to note, however, that none of these studies have investigated this link within the context of the *dyadic*, parent-child relationship, as well as the possible role that the quality of the parent-child relationship may have as an intervening (i.e., mediating) or interacting (i.e., moderating) variable in this link. The remainder of the present literature review covers both the theoretical and empirical research on the importance of focusing

on the quality of the parent-child relationship when investigating the link between parental psychological control and child and adolescent internalized maladjustment.

Linking Parental Psychological Control, Parent-Child Relationship Quality, and Internalizing Maladjustment in Early Adolescence

Given that low self-esteem and internalizing problems are prevalent during early adolescence, it is critical to understand the mechanisms or processes by which these difficulties emerge. Low self-esteem and internalizing problems, such as anxiety and depression in young adolescents, have been linked to social and interpersonal roots (see Harter, 2006). Harter (2006) has asserted that “caregiving practices resulting in very negative perceptions of the self put children at risk for serious forms of depressive symptomology” (p. 389). Low self-esteem and internalizing problems have been found to be more prevalent among families where there are negative communication patterns or negative parenting practices (Allen, Hauser, Eickholt, Bell, & O’Connor, 1994, Allen et al., 2006; Marsh, McFarland, Allen, Boykin McElhaney, & Land, 2003).

Self-determination theory. Recently, self-determination theorists have investigated how parental psychological control may theoretically be related to children’s and adolescents’ emotional and psychological well-being through the parent-child relationship (Soenens & Vansteenkiste, 2010). Self-determination theorists assert that there are three basic, psychological needs that are innate to humans and necessary for psychological development and well-being; needs for competence, autonomy, and relatedness (see Deci & Ryan, 2000, for a recent review). First, the need for *competence* can be described as the need for “the experience of effectiveness in carrying out a particular activity” (Soenens & Vansteenkiste, 2010, p. 89) or feeling capable of

accomplishing tasks. Second, the need for *autonomy* can be described as “a sense of volition or willingness when engaging in a task” (Soenens & Vansteenkiste, 2010, p. 77); in other words, following one’s interests and engaging in activities out of one’s own choice or desire (i.e., not feeling coerced or manipulated). Third, the need for *relatedness* refers to an innate, psychological need for “a sense of connectedness with significant others” (Soenens & Vansteenkiste, 2010, p. 90) or feelings of security and intimacy with important people in one’s life.

The latter two psychological needs (i.e., autonomy and relatedness) are pertinent to the present study. Self-determination theorists have asserted that the negative controlling parenting practice of psychological control can threaten children’s and adolescents’ satisfaction of their need for *autonomy*, as well as undermine children’s and adolescent’s satisfaction of their basic need for *relatedness* with significant others. It has been argued that these two psychological needs are positively related to one another and to psychological well-being, and that this positive relation is because the need for *autonomy* is defined as a need for a sense of volition or willingness to behave, think, or feel a certain way (Deci & Ryan, 2000). In contrast, this definition of autonomy is not in line with autonomy as defined as independence or detachment from others (see the definition of autonomy-support in the “psychological control versus psychological autonomy granting” section above, for more details on this distinction), which would not, theoretically, be related to fulfillment of the need for *relatedness* (Patrick, Knee, Canevello, & Lonsbary, 2007).

With regard to children’s and adolescents’ psychological well-being, self-determination theorists have explained that individual differences in developmental

outcomes are due to “the interaction between individuals' needs and the social context that supports versus thwarts them” (Deci & Ryan, 2000, p. 261). They have compared this theory to attachment theory which argues that the interaction between the children’s need for relatedness and the support or neglect/rejection of this need by children’s social world (i.e., caregiver) relates to children’s emotional and psychological development. However, self-determination theorists have asserted that the main difference between their theory and attachment theory is that while the latter theory holds that “attachment styles (working models) are developed in interactions with primary caregivers and show a high degree of stability over time and generality across partners” (Deci & Ryan, 2000, p. 262), self-determination theory “gives more emphasis to the immediate social context...(and) consider(s) proximal supports for basic psychological needs in any relationship” (p. 262), rather than focusing on the primary caregiver relationship.

Based on this fundamental difference between these theories, the present study relies on both theories for different purposes. More specifically, self-determination theory was relied upon as a theory explaining that *parental psychological control* can be detrimental to the satisfaction of children’s and adolescent’s psychological need for relatedness, in particular. Most significant to the present study, Soenens and Vansteenkiste (2010) have called for future research to investigate their hypothesis that children’s “thwarted need satisfaction” for relatedness (i.e., insecure attachment, poor relationship quality with parents) *mediates* the negative relation between parental psychological control and children’s psychological adjustment (e.g., self-esteem, internalizing problems). In contrast to self-determination theory, attachment theory was relied upon as a theory explaining why the *parent-child relationship*, in particular, is

crucial in determining young adolescents' psychological well-being, as opposed to the quality of other relationships in young adolescents' social world.

Attachment theory. Proponents of attachment theory have argued that the quality of the early mother-child relationship and the caregiving experienced by the young child influence the child's feelings of self-worth (Bowlby, 1969, 1982; Cassidy, 1988; Erickson Sroufe, & Egeland, 1985; Verschueren, Marcoen, & Schoefs, 1996). These theorists have maintained that there is a set of expectations an infant has of the primary caregiver (or attachment figure) and their relationship. These expectations are that the caregiver is accessible and responsive, and that the self is worthy of such care by the caregiver (Ainsworth, 1989; Bowlby, 1982; Bretherton, 1990). These expectations or internal "working models" are developed when a child repeatedly experiences specific types of interactions with his or her primary caregiver. The child internalizes these expectations, which are integrated into the child's personality and tend to persist across development (Bowlby, 1969/1982, 1973, 1980; Bretherton, 1985). More specifically, Bowlby (1973) explained that a child who experiences reliable and responsive care from his or her primary caregiver will develop internal working models that the caregiver is emotionally available and sensitive to his or her needs, and also that he or she (the child) is worthy of such care, loved, and valued (Renken, Egeland, Marvinney, Mangelsdorf, & Sroufe, 1989). A child who develops the type of internal working model described above should exhibit a secure attachment to his or her primary caregiver, whereas an insecurely attached child would *not* have the expectation that his or her caregiver will regularly be available and responsive. Furthermore, Bowlby (1988) argued that internal working models influence the ways in which individuals see and understand themselves and others

in the context of interpersonal relationships. Significant interpersonal exchanges and experiences have been found to serve as a template (or internal working model) through which future interactions and subsequent relationships will be interpreted and perceived by the individual (Baldwin, 1992; Bowlby, 1973, 1988).

Responsiveness and availability of the primary caregiver (e.g., mother) have been found to influence how the child views him or herself later in life (Ainsworth, Blehar, Waters, & Wall, 1978). Furthermore, expanding upon Bowlby's ideas, Ainsworth (1989) asserted that these internal working models of attachment to parents have significant influence on the individual's personality and behavior well into adolescence and adulthood. These internal working models that have been created based on interactions between the child and parent can become more complex throughout development and be replaced with newer models (Bretherton, 1985; 1990), which can be either more or less appropriate than the original model. In addition, adolescence has been described as "a developmental period that is particularly ripe for revision of internal working models, especially given that teens are much better able than younger children to reflect on the thoughts, feelings, and experiences that comprise their internal working models" (McElhaney et al., 2009, p. 369). Recently, researchers have explained the etiology of anxiety and depression from an attachment theory perspective (Brumariu & Kerns, 2010). More specifically, they asserted that Bowlby (1973, 1980) emphasized that children's concerns about the availability of their caregiver can lead to anxiety and depression especially when children predict that their caregiver will be unavailable in times of need (whether this is actual or just a perception). Furthermore, Brumariu and Kerns have concluded that there is no conclusive evidence linking *specific* insecure attachment

patterns with internalizing problems, and that therefore, the focus instead should be the broad construct of insecure attachment when linking it to internalizing problems.

In support of the premises of *attachment theory*, researchers have reported that young children with positive self-esteem experience positive early interactions with their mothers (Cassidy, 1988; Erickson et al., 1985; Verschueren et al., 1996). Similarly, studies have shown that a secure attachment with parents during early, middle, or late adolescence is related to positive self-esteem and lower levels of anxiety and depression (Armsden and Greenberg, 1987; Barber, Hall, & Armistead, 2003; Deković, 1999; Dickstein & Posner, 1978; Greenberg, Siegel, & Leitch, 1983; Kerns, Klepac, & Cole, 1996; Lacković-Grgin, Deković, & Opačić, 1994; Muris, Meesters, van Melick, & Zwambag, 2001; Rubin et al., 2004; Simons, Paternite, & Shore, 2001), as well as to a higher quality of attachment, or parent-child relationship, characterized by higher levels of trust and lower levels of alienation (Muris et al., 2001). Conversely, researchers have linked insecure attachment styles, or a negative mother-child relationship, with negative self-esteem and maladjustment in childhood and adolescence (Deković, 1999; Doyle & Markiewicz, 2005; Gamble & Roberts, 2005; Harvey & Byrd, 1998; Rubin et al., 2004; Sroufe & Waters, 1977; Wissink, Deković, & Meijer, 2006).

In accordance with attachment theory, Rogers (1951) asserted that children's self-esteem is enhanced by parental acceptance. However, parents who selectively praise their children for certain qualities but not others may inadvertently undermine their children's self-esteem. This behavior was referred to by Rogers as "conditions of worth," leading children to believe that parental love is conditional and dependent on their exhibiting certain qualities and behaviors. In line with Rogers' assertion, more recently,

researchers have described parental psychological control as including love withdrawal (or conditional love) (Barber, 1996) and as a threat to the child's or adolescent's attachment bond to his or her parents (Barber, 2002). Similarly, self-determination theorist have argued that parents who use conditional, or contingent, love as a means of forcing or manipulating their children to do or be what they desire are essentially "pitting the (psychological) need for *relatedness* against the need for *autonomy*" (Deci & Ryan, 2000, p. 249); moreover, according to these theorists children who choose to behave in a way to gain parental love (i.e., relatedness), at the expense of their own autonomy (i.e., volition or willingness), are expected to have feelings of low self-esteem as well as other negative internalized outcomes.

Recently, researchers have connected attachment theory with self-determination theory (see La Guardia, Ryan, Couchman, & Deci, 2000, for a review). More specifically, they have argued that the primary caregiver's sensitivity, responsiveness, and warmth fulfill the child's three innate psychological needs, for competence, autonomy, and relatedness, as well as serve to promote attachment security. In other words, parents who respond to children's actions, encourage exploration, and provide unconditional love and warmth for their children are supporting their basic psychological needs. In line with this view connecting these two theories, La Guardia and colleagues found that attachment security in undergraduate students (regarding relationships in general, not a particular relationship) partially mediated the relation between psychological need fulfillment (for competence, autonomy, and relatedness) and well-being (i.e., self-esteem, anxiety, and depression).

During the often stressful developmental period of early adolescence, a rise in tension, negativity, and conflict have been found in parent-child relationships.

Researchers have found that parent-child conflict during early adolescence is present more often with mothers than with fathers, most likely because young adolescents spend more time with their mothers than with their fathers (Collins & Russell, 1991). There are families in which conflict can be unhealthy and dysfunctional, especially if it occurs within a parent-child relationship that is characterized as being emotionally distant or negative in quality (Steinberg, 1990). In other words, typical parent-child conflicts that would otherwise not negatively affect the young adolescent's well-being may in fact do harm or exacerbate already existing adjustment difficulties if they occur within a parent-child relationship that is negative in quality (Steinberg, 1990). In contrast, warm and positive parent-child relationships in which young adolescents are permitted to have their own opinions, disagree with their parents' views, and express their individuality and autonomy, foster healthy emotional and psychological adjustment (Steinberg, 1990), especially in relationships where parents show "unconditional" warmth and love (Brown, 1993; Rogers, 1951).

In summary, the theoretical and empirical research conducted by self-determination theorists and attachment theorists has asserted the importance of the basic psychological need for relatedness, or close and supportive relationships with significant others, as well as the importance of a high quality parent-child relationships in young adolescent developmental outcomes. What is meant by a *relationship* is discussed further in the next section.

A relationship approach to parenting and child outcomes. Hinde (1979)

described a “relationship” as a series of interactions between two people over an extended period of time, with a degree of continuity between each interaction.

Furthermore, a relationship is much more than simply the sum of individual interactions between the two people in that each interaction is affected by past interactions and may affect future interactions in that relationship. This view of relationships is in line with that of attachment theorists, described above.

Hinde (1979) has explained that interactions between two people have four distinct qualities: (a) intensity (e.g., whispering versus shouting); (b) content and presentation of verbal material (e.g., tone of voice); (c) non-vocal communication (e.g., facial expressions, hugging, pushing); and (d) relations between the behaviors of the two participants (e.g., synchrony, shared positive/negative affect). All four of these qualities are captured by the observational measure (*Mother-Child Relationship Quality Scale*) that was used in the present study to assess the interactional quality of the mother-child relationship.

Beyond Hinde’s (1979) description of interactions, relationship theorists have examined general qualities of the relationship, including *warmth* (i.e., “noncontingent display of affection” and “shared positive affect”), *security* (i.e., “parental sensitivity or responsiveness”), and *mutual reciprocity* (i.e., “dyadic relational harmony”) (Laible & Thompson, 2007, p. 183). Furthermore, they have focused on different qualities of the parent-child relationship as opposed to focusing only on the *child’s* feelings of attachment (or perceptions of security) in the relationship. More specifically, they have explained that children who share a close emotional attachment with their parents are

motivated to attend to their parents' socialization messages (i.e., parenting strategies). More specifically, they have hypothesized that a parent-child relationship characterized by *warmth* and *security* would allow children to be receptive to parenting and enhance compliance with their parents' requests. Additionally, when children are part of a parent-child relationship that has *mutual reciprocity* they are ready and willing to be socialized and even feel obligated to follow their parents' requests due to their parents' past responsive and sensitive parenting. It is important to note that even though there are bidirectional influences in the parent-child relationship, the parents' influence is primary because of their children's emotional attachment to them and the vertical relationship between the parent and child where parents have power over their children's socialization (Laible & Thompson, 2007), which is still the case in early adolescence. Furthermore, it is important, not only who the partner (i.e., parent) is, but the meaning of the partner's behavior within the context of the relationship shared with the child (Laible & Thompson, 2007). In other words, parenting practices have different meaning depending on the quality of the parent-child relationship.

Parental psychological control as linked with parent-child relationship

quality. Very recently, researchers have begun linking parental psychological control and parent-child relationship quality. Only four studies, to date, have been conducted from 2003 to 2007 on this topic (Doyle & Markiewicz, 2005; Karavasilis, et al., 2003; Ojanen & Perry, 2007; Shek, 2006). The participants in these studies ranged broadly in age from 10 to 19 years and the samples were ethnically diverse - English Canadian, Finnish, and Chinese, respectively. These studies have all found a negative association between parental psychological control and parent-child relationship quality, measuring

the construct of parent-child relationship quality in different ways: child-parent attachment security (Doyle & Markiewicz, 2005; Karavasilis, et al., 2003); trust in mother (Ojanen & Perry, 2007); and parent-child relational qualities (satisfaction with parental control, readiness to communicate with parents, and perceived mutual trust between parents and their children) (Shek, 2006). Parental psychological control and parent-child relationship quality were negatively correlated in each study, parental psychological control also longitudinally predicted parent-child relationship quality (Doyle & Markiewicz, 2005). This was true for younger and older adolescents, as well as for various different ethnic samples, including English Canadian, Finnish, and Chinese.

As shown above by the present literature review, there has been convincing research linking parental psychological control separately with child and adolescent internalized maladjustment and with parent-child relationship quality; however, we know relatively little about parental psychological control as it relates to young adolescent internalized maladjustment within the context of the parent-child *relationship*.

Recently, Cummings and Cummings (2002) challenged attachment researchers to examine how parenting practices other than parental sensitivity (e.g., psychological control) relate to attachment in predicting child outcomes, as well as have recommended that other parenting researchers include measures of attachment. Furthermore, they have explained that research examining both attachment and parental psychological control, in particular, is needed in order to understand the processes predicting child adjustment. By doing this, they have urged researchers to construct a more integrative model toward explaining the interrelated links among parental psychological control, parent-child relationship quality, and children's adjustment.

Similarly, Laible and Thompson (2007) have recommended that the impact of parental discipline practices be regarded within the context of the broader relational quality, hypothesizing that parent-child relationship quality moderates the link between parenting and children's adjustment. Using this hypothesis, one would assume that the quality of the parent-child relationship would serve a protective or exacerbating role in the relation between parental psychological control and young adolescent internalized maladjustment. In line with their hypothesis, they have asserted that parent-child relationship quality *moderates* the way in which socialization strategies (i.e., child-rearing and discipline practices) affect children's adjustment.

In addition to Laible and Thompson's (2007) hypothesis, several other researchers have also recently hypothesized interrelations linking *negative* parenting practices, parent-child relationship quality, and *internalized* maladjustment via mediation (Allen, Moore, Kuperminc, & Bell, 1998; Bosmans et al., 2006; Brumariu & Kerns, 2010; Doyle & Markiewicz, 2005; Hair et al., 2008; Karavasilis et al., 2003; Soenens & Vansteenkiste, 2010), as well as moderation (Bosmans et al., 2006; Brumariu & Kerns, 2010; Karavasilis et al., 2003; Laible & Thompson, 2007; NICHD, 2006; Ojanen & Perry, 2007). These hypotheses are discussed in greater detail below.

Mediation versus moderation. A test of mediation examines *how* an independent variable is linked with a dependent variable; in other words, by what means is the independent variable associated with the dependent variable. A mediation model is one where it is hypothesized that an independent variable is related to a third variable which is then related to the dependent variable. More specifically, the independent variable is linked to the dependent variable through a mediator variable, or third

explanatory variable. If a mediation model holds true, the direct link between the independent and dependent variable is not showing the full picture; rather the mediator is crucial in explaining the link between the independent and dependent variables.

In contrast, a test of moderation examines *when* would the independent variable be linked with the dependent variable; in other words, under what conditions of the third, or moderating variable, is the independent variable associated with the dependent variable. A moderation model is one where it is hypothesized that the relation between the independent and dependent variables depend on different levels or conditions of a third explanatory variable, or moderator. More specifically, the independent variable may be linked to the dependent variable only at specific levels (e.g., high or low) of a moderating variable. If a moderation model holds true, the direct link between the independent and dependent variables does not show the full picture; rather, the moderator explains that in some conditions the independent and dependent variables are not related at all, whereas in other conditions they are highly related.

Mediation models. Soenens and Vansteenkiste (2010) have recently reviewed the theoretical literature on parental psychological control and have proposed that parental psychological control manipulates the child's attachment bond (e.g., by using conditional regard, or love, towards the child) and undermines the child's sense of closeness (i.e., relatedness) to the parent; and therefore, attachment should *mediate* the relation between parental psychological control and child adjustment.

In line with this assertion, Karavasilis and colleagues (2003) have found that parental psychological control (i.e., less encouragement of psychological autonomy) was related to insecure attachment and that warm parental involvement was related to secure

attachment in adolescence. In addition, warm parental involvement was moderated by parental psychological control (i.e., discouragement of autonomy), where children who perceived their parents as being warmly involved but also discouraging their psychological autonomy were insecurely attached. This implies that parental warmth when combined with psychological control predicts insecure attachment. This type of parenting combination is similar to “overprotection” which was described above as unnecessary or excessive warmth and affection and discouragement of independence. They have concluded that perhaps negative parenting practices lead to “devaluation of the attachment figure” (p. 161) and therefore have recommended that future research investigate whether attachment security mediates the link between parenting and children’s adjustment (e.g., self-esteem).

Soon after Karavasilis and colleagues had hypothesized that the link between parenting and children’s adjustment would be mediated by child-parent attachment security, Doyle and Markiewicz (2005) tested it by investigating whether adolescents’ attachment security to their parents mediated the relation between parenting style in early adolescence (Time 1) and adolescent adjustment in middle adolescence (Time 2). Doyle and Markiewicz concluded that parental psychological control at Time 1 was associated with internalizing symptoms at Time 2, with increases in internalizing problems over time; however, this relation was *not* mediated by attachment insecurity. They have explained that perhaps their mediation model would have been significant if they had used a more differentiated and reliable measure of attachment, rather than having participants rate four single-item paragraphs depicting four different attachment styles. Moreover, perhaps averaging scores on attachment to mother and attachment to father

and creating one attachment score was not an optimal way of measuring attachment. However, they did find that attachment security intervened in, or mediated, the relation between parental warmth and adolescent self-esteem. They have asserted that their findings imply that perhaps the quality of the parent-child relationship (i.e., attachment security) is more important than parenting practices in determining adolescent self-esteem. A strength of their study is that it was longitudinal, following adolescents from 13 years of age (Time 1) to 15 years of age (Time 2), and that they were able to examine direction of influence. They found that psychological control was not a response to child behavior, but rather a negative influence by the parent on the child's internalizing problems. Their finding is supported in the literature by other researchers reporting that parental psychological control and attachment influence adolescent adjustment more than the reverse (e.g., Barber & Harmon, 2002).

Another recent study examined the mediating role attachment security had on the relation between negative parental control and *externalizing* problems in young adolescents (10 to 12 years of age) (Bosmans et al., 2006). They based their mediation model on attachment theory and on Karavasilis and colleagues' hypothesis (Doyle & Markiewicz, 2005; Karavasilis et al., 2003). More specifically, they found that insecure attachment mediated the link between negative parental control and externalizing problems. They also chose to test an alternative mediation model examining whether negative parental control mediated the relation between attachment security and externalizing problems, but did not find support for this model. They have concluded that the fact that parenting did not serve as a mediator supports the direction of links between parenting, attachment, and problem behaviors hypothesized in their study, as

well as the importance of parent-child relationship quality, over and above parenting, in predicting adolescent problem behaviors.

However, in contrast to Bosmans and colleagues' finding that parenting did not act as a mediator, Branstetter and colleagues (2009) have recently found that maternal monitoring partially mediated the relation between attachment security and substance use. More specifically, they have found that high levels of attachment security to parents were related to high levels of maternal monitoring, which in turn was related to low levels of substance use, longitudinally.

Similarly, Hair and colleagues (2008) recently tested whether supportive parenting would mediate the relation between a high-quality parent-child relationship and internalized positive adjustment (i.e., mental well-being) in 12-16 year olds. They found that adolescents who had high-quality relationships with their mothers perceived more maternal support and monitoring, which was related to engaging in fewer delinquent behaviors and greater mental well-being. Furthermore, those who perceived their mothers to be strict reported lower levels of mental well-being. They have concluded that the quality of the parent-adolescent relationship is related to adolescent development primarily through its association with parental support, monitoring, and strictness (versus permissiveness), highlighting the ongoing importance of parenting during adolescence. However, Hair and colleagues did not include a measure of parental psychological control in their study.

In summary, there has been some confusion as to whether one should expect the parent-child relationship *or* parenting style to serve as a mediator in predicting internalized maladjustment. Those researchers hypothesizing and investigating the

quality of the parent-child relationship as a mediator have relied upon theoretical and empirical work investigating the specific parenting construct of *psychological control*. In contrast, researchers hypothesizing and investigating whether parenting would serve as the mediator, have relied upon research examining the parenting constructs of monitoring and support. Therefore, in order to figure out the role of the quality of the parent-child relationship, a primary model was tested where mother-child relationship quality mediates the relation between maternal psychological control and young adolescent internalized maladjustment. However, because Doyle and Markiewicz (2005) did not find support for this mediation model and because research on parental monitoring and support has found that parenting practices served as a mediator, an alternative model was tested exploring the role of parental psychological control examining whether maternal psychological control mediates the relation between mother-child relationship quality and young adolescent internalized maladjustment.

Moderation models. Recently, relationship theorists have recommended that the impact of parental discipline practices be regarded within the context of the broader relational quality (Laible & Thompson, 2007). More specifically, they have hypothesized that the quality of the parent-child relationship *interacts* with parenting in predicting children's adjustment. This view is similar to a recent one by Grolnick (2003) who has based her assertions on Darling and Steinberg's (1993) theoretical work explaining that parenting practices, or "techniques parents use to help them achieve socialization goals" must be viewed within the emotional context, or climate, of the parent-child relationship (p. 31). In other words, the quality of the parent-child relationship (e.g., warm and supportive) can moderate the effects of specific parenting practices, such as

psychological control, on children's emotional and psychological adjustment.

Furthermore, within the context of a high quality parent-child relationship, perhaps parents' use of psychological control will not negatively affect young adolescents' psychological adjustment.

Very recently, researchers, have begun hypothesizing that negative or poor parenting styles interact with the parent-child relationship (i.e., attachment) in predicting internalized maladjustment (Bosmans et al., 2006; Brumariu & Kerns, 2010; Doyle & Markiewicz, 2005; Karavasilis et al., 2003; NICHD, 2006; Ojanen & Perry, 2007). More specifically, Karavasilis and colleagues (Doyle & Markiewicz, 2005; Karavasilis et al., 2003) have recommended that further research is needed to explore the relations between psychological control and mother-child relationship quality, as well as potential moderating effects of relationship quality on the relations between parental psychological control and adolescent adjustment.

NICHD (2006) have recently urged future research to test whether securely attached children are protected against negative parenting practices whereas insecurely attached children would be at greater risk for internalized maladjustment. Although, they did not test this hypothesis in their study, they did find that attachment security moderated the association between positive parenting (i.e., sensitivity) and internalizing problems. More specifically, they have found that high levels of positive parenting were related to lower levels of internalizing problems for securely attached, but not insecurely attached children. They have explained their findings by hypothesizing that perhaps securely attached children approach situations with positive views about others so that even if their mothers use insensitive parenting practices, their children would focus on the

positive aspects of the situation and be less vulnerable to maladjustment than insecure children who may respond negatively in line with their negative expectations of others.

One relevant study tested this moderation model examining whether the parent-child relationship moderates the link between parenting strategies and children's outcomes (Allen et al., 1998); however, they examined *externalizing* problems as an outcome. Their study examined whether maternal behavioral control was more effective when applied by a parent who has established a secure attachment bond with the child than when applied by a parent who has an insecure attachment bond with the child. In other words, the same parenting practice would operate differently depending on the quality of the parent-child relationship. Allen and colleagues found that the security of child-mother attachment moderated the effects of maternal behavioral control on adolescents' (14 to 18 year olds) externalizing problems. More specifically, high maternal behavioral control was related to lower levels of externalizing problems for adolescents who were securely attached to their mothers, but there was relatively little relation for adolescents who were insecurely attached.

A recent study conducted by Feng and colleagues (2009) investigated whether girls' level of expressed positive emotion interacted with maternal psychological control in predicting girls' depressive symptoms in predominantly African American girls from low income families, longitudinally from age 9 to 10 years. They examined maternal psychological control as a moderator, finding that it moderated the link between girls' level of expressed positive emotion and their depressive symptoms. Feng and colleagues included observations of girls' positive and negative emotion with their mothers as a measure of emotion regulation, rather than a measure of the quality of the parent-child

relationship. Girls' emotion regulation does not paint a complete picture of the mother-child relationship; instead, it takes into account only the child's contribution to the quality of the interaction without including the dyadic, mutual relationship between the child and parent.

Another recent study was conducted by Ojanen and Perry (2007) examining whether youth-perceived maternal psychological control moderated the relation between youth-perceived debilitation in conflicts with their mothers (i.e., fearfulness, self-blame, lack of assertiveness, and compulsive obedience) and later self-esteem. More specifically, they found that higher perceived maternal psychological control moderated, or exacerbated, the longitudinal relation between higher perceived debilitation and lower self-esteem. These researchers concluded that, because their findings were based solely on youths' perceptions of their mothers' behavior and their own reactions in interactions with their mothers, their study does not contribute to the literature on relationship or dyadic qualities which may also be important in relation to children's internalized maladjustment.

In another recent study, Bosmans and colleagues (2006) measured parent-child relationship quality (i.e., attachment) investigating whether it interacted with parental negative control in predicting maladjustment; however, they focused on *externalizing*, rather than internalizing, problems in young adolescents (10 to 12 years of age). They found that for adolescents whose father exercised low (but not average or high) levels of negative control were securely attached to their fathers and showed the lowest levels of externalized problem behaviors. Additionally, adolescents with mothers who exercised high (but not low or average) levels of positive parenting were securely attached to their

fathers and showed the lowest levels of externalizing problems. These researchers based their moderation model on an untested hypothesis that parental control and attachment security interact in predicting problem behaviors (Waters, Posada, Crowell, & Keng-ling, 1993).

Most recently, Brumariu and Kerns (2010) have called for future research to investigate whether negative parenting moderates the link between child-parent attachment security and anxiety and depression (i.e., internalizing problems). Additionally, they have concluded that there is no evidence linking *specific* insecure attachment patterns and internalizing problems, and have asserted that instead insecure attachment, as a broad construct, should be the focus as a general factor for internalizing problems.

Although, none of the studies described above have examined the moderating role of the quality of the dyadic parent-child relationship specifically with regard to the relation between parental psychological control and internalized maladjustment, their hypotheses and findings are relevant and important in linking these constructs. Based on these hypotheses and important studies' findings, the interaction between mother-child relationship quality and maternal psychological control was explored in predicting young adolescents' self-esteem and internalizing problems. In order to examine the role of the quality of the parent-child relationship, mother-child relationship quality was examined as a moderator of the relation between maternal psychological control and young adolescent self-esteem and internalizing problems.

The Significance of the Present Study

Although researchers have begun hypothesizing about mediation and moderation models to explain the links among parental psychological control, parent-child relationship quality, and child and adolescent psychological maladjustment, almost no research to date has investigated these hypotheses. The present study has served to further our understanding of: (a) whether the link between maternal psychological control and young adolescent internalized maladjustment (i.e., self-esteem and internalizing problems) can be explained by the quality of the mother-child relationship (i.e., mediation); and (b) under what conditions of mother-child relationship quality does maternal psychological control predict young adolescent internalized maladjustment (i.e., moderation). In addition, the present study controlled for the contributions of both parental warmth and behavioral control when predicting internalized maladjustment from maternal psychological control, just as was done by Doyle and Markiewicz (2005) who found that parental psychological control was a predictor above and beyond warmth and behavioral control, supporting existing literature (Barber & Harmon, 2002).

Findings from the present study may help to inform parenting interventions and relationship interventions by advancing knowledge about the potentially deleterious associations between maternal psychological control and mother-child relationship quality on young adolescent internalized maladjustment. The present study was unique in that it included a multidimensional view of the quality of the mother-child relationship (i.e., youth-report, as well as observer ratings), as well as internalized maladjustment (i.e., youth report, as well as maternal report). It has been asserted that, when examining links between parent-child relationship quality and child adjustment, using separate methods

and reporters of information is more reliable and credible (O'Connor, 2002). Furthermore, using different informants for the various constructs should help in reducing possible confounds of shared method variance when interpreting the results of the present study. For example, researchers have found that when young adolescents perceive a negative relationship with their mothers, they also report having negative self-esteem (Deković, 1999; Doyle & Markiewicz, 2005; Harvey & Byrd, 1998; Wissink et al., 2006). Another recent example is that parents who have reported using high levels of psychological control have also reported *themselves* as being more supportive with their children, but adolescents did *not* agree with their parents (McElhaney, Porter, Thompson, & Allen, 2008). Recently, researchers have argued the importance of collecting data from multiple reporters using multiple methods explaining that, for example, assessing children's internalized maladjustment may be more valid if *both* self-reports and parent-reports are used (Holmbeck, Shapera, & Hommeyer, 2002).

Hypotheses

The present study's hypotheses were focused around the three specific aims (see Table 3 for a list of the Hypotheses). When addressing the first specific aim exploring a primary mediation model, based on researchers' hypotheses that parent-child relationship quality acts as a mediator between parental psychological control and young adolescent internalized maladjustment (e.g., Soenens & Vansteenkiste, 2010), it was expected that both positive (observed, perceived, and attachment security; corresponding to Hypothesis 1) and negative (observed and perceived; corresponding to Hypothesis 2) relationship quality would mediate the relation between maternal psychological control and both youth self-esteem and internalizing problems, separately. Also part of the first specific

aim was exploring an alternative mediation model that maternal psychological control mediates the relation between mother-child relationship quality (positive and negative) and young adolescent internalized maladjustment (self-esteem and internalizing problems, separately; corresponding to Hypothesis 3).

When addressing the second specific aim of the present study examining the individual contributions of maternal psychological control and positive (observed, perceived, and attachment security) and negative (observed and perceived) mother-child relationship quality in predicting young adolescent self-esteem and internalizing problems (self-esteem and internalizing problems, separately), it was expected that maternal psychological control would negatively predict youth self-esteem (e.g., Barber & Harmon, 2002, Ojanen & Perry, 2007; corresponding to Hypothesis 4) and positively predict youth internalizing problems (e.g., Barber & Harmon, 2002; Doyle & Markiewicz, 2005; corresponding to Hypothesis 4), above and beyond other parenting covariates. In addition, it was expected that mother-child relationship quality (positive and negative) would significantly predict youth self-esteem and internalizing problems (e.g., Brumariu & Kerns, 2010; Deković, 1999; corresponding to Hypothesis 5 and 6).

When addressing the third specific aim of the present study that parent-child relationship quality moderates the relation between parental psychological control and young adolescent internalized maladjustment (e.g., Doyle & Markiewicz, 2005; Karavasilis et al., 2003), it was expected that positive (observed, perceived, and attachment security) and negative (observed and perceived) mother-child relationship quality would interact with maternal psychological control in predicting young adolescent

self-esteem and internalizing problems, separately (corresponding to Hypotheses 7 and 8).

CHAPTER III

METHOD

Participants

The present study utilized data from the "Friendship and the Transition to Middle School" study, an NIMH supported investigation (Kenneth H. Rubin, principal investigator). Mother-child observations were collected in the 5th and 6th grades on non-overlapping (non-longitudinal) samples.

Participants were drawn from a larger longitudinal sample ($N = 240$; 111 girls) of fifth- and sixth-grade students from eight public elementary schools and three middle schools in the Washington, D.C. metropolitan area who had parental consent. The study sample included 90 young adolescents (42 girls) ranging from 10 to 12 years of age with a mean age of 10.5 years ($SD = .66$). Of the original 240 participants who were telephoned in an attempt to recruit them to come to the laboratory to complete questionnaires and participate in videotaped activity sessions (see Appendix A), only 95 mother-child dyads agreed to come to the laboratory. However, out of the 95 dyads, only 90 had complete data for the present study; three of the mother-child dyads' videotaped sessions were uncodeable because they spoke a foreign language throughout the tape, and two others did not have complete relevant questionnaire data.

Approximately 72% of the 90 young adolescents in the present study were Caucasian American; 11% African American, 12% multiracial, 3% Latino/Hispanic American, and 1% East Asian American. The average age of the mothers was 41.58 years ($SD = 4.32$; range 30 to 53). The majority of the mothers had received a college/university degree (28% completed a graduate degree; 8% some graduate school;

33% a college/university degree; 22% some college/university courses; 3% completed vocational school; and 6% completed high school). Chi-square analyses were conducted to examine whether there were any significant differences in maternal demographics between the study sample that came in for a mother-child laboratory visit versus the larger sample that did not. Chi-square analyses revealed that the samples did not differ significantly with regard to maternal age [$\chi^2 (2, N = 232) = 1.39, p = .50$], maternal education [$\chi^2 (3, N = 238) = 5.80, p = .12$], or maternal marital status [$\chi^2 (2, N = 238) = 2.92, p = .23$]; however, the two samples did differ significantly with regard to maternal ethnicity, $\chi^2 (4, N = 240) = 28.52, p < .001$. More specifically, approximately 77% of the mothers in the present study's sample were Caucasian American, 11% African American, 6% multiracial, 4% Latina/Hispanic, and 2% East Asian American; whereas in significant contrast, approximately only 48% of the mothers in the rest of the larger sample ($N = 150$) were Caucasian American, 23% East Asian American, 13% African American, 12% Latina/Hispanic, and 3% multiracial. Results are displayed in Table 4. Because of the significant difference in ethnicity between the study sample in comparison with the remaining 150 participants in the larger sample, ethnicity was controlled for in statistical analyses.

Procedures

Mothers and their children were invited to the *Laboratory for the Study of Child and Family Relationships* at the University of Maryland to participate in a videotaped activity session and to complete questionnaires. The mother-child dyads were videotaped as they completed four shared activities: a constructive activity (CA - origami for fifth grade; knot tying for sixth grade; 10 minutes), planning a vacation (PV; 10 minutes),

discussion of a moral dilemma (MD; 10 minutes), and discussion of best times they have had (BT; 5 minutes). The cameras in the observation room were discrete; they were hidden by dark globes in the ceiling; most dyads noticed the existence of cameras in the very beginning of the session; however, the dyads seemed to behave naturally when focusing on completing the shared activities. Both the mothers and young adolescents completed their questionnaires privately in the laboratory before and after the videotaped session. The fifth-grade mother-child dyads were paid \$25 - \$30 (depending on the cohort of children) for their participation, while the sixth-grade mother-child dyads were paid \$40 for their participation. All of the participants who visited the laboratory had parental consent.

Measures

Demographic information. The Demographic Questionnaire was completed by mothers during the laboratory visit (see Appendix B for the questions used in the present study). This questionnaire was used to obtain maternal and child demographic information.

Maternal-reported psychological control. The *Child-Rearing Practices Report* (CRPR; Rickel & Biasatti, 1982; see Appendix C for items loading on the three factors of interest to the present study) is a 40-item questionnaire created from the original 91 CRPR Q-Sort items (Block, 1965). These items formed two factors: nurturance and restrictiveness. This entire questionnaire was used in the NIMH Friendship Study, with the exception of four items dropped because they were inappropriate for the sample. The items on the questionnaire fell on a six-point scale, ranging from 1 (strongly disagree) to 6 (strongly agree).

An exploratory principle components analysis was run on the study sample in order to obtain an index of psychological control items within the CRPR. Following Aunola and Nurmi, (2004; 2005) promax rotation was selected (since the factors were expected to correlate), having in mind a conceptual model of three factors – warmth-support, behavioral control, and psychological control. At first glance, eleven factors had eigenvalues above 1.0; however, this number of factors was conceptually too high. Next, when examining the scree plot, two factors were clearly above the “break” (or bend); however, the next two seemed somewhat separate from the scree (rest of the factors). According to Costello and Osborne (2005), if it is unclear how many factors to interpret, one should run multiple factor analyses by manually extracting different numbers of factors – once at the conceptually expected number, then at the number suggested by the scree test, and finally at numbers below and above those numbers – and then comparing them, finally choosing the “cleanest” factor structure that is most interpretable and best fits the data. Therefore, for the present study, because three factors were expected– warmth-support, behavioral control, and psychological control, three factors were extracted in the first analysis. Then, because the scree plot suggested two clear factors, two factors were extracted in the second analysis. Finally, one last analysis extracting four factors was conducted.

When extracting three factors, the first factor was behavioral control (alpha = .78, 10 items), the second factor was warmth-support (alpha = .73, 12 items), and the third factor was psychological control; however, it had a low alpha of .53 (4 items). Next, two factors were extracted as suggested by the scree plot, but that yielded a broad restrictiveness factor, combining behavioral and psychological control, and a nurturance

factor. Finally, in search of a more reliable index of maternal psychological control, four factors were extracted. The first factor obtained was behavioral control ($\alpha = .73$, 7 items), the second factor was warmth ($\alpha = .69$, 9 items), the third factor was psychological control ($\alpha = .65$, 4 items), and the fourth factor was support-encouragement ($\alpha = .50$, 3 items). When computing the Cronbach's alpha for this last factor, it was suggested that the alpha would increase to .64 if one item was deleted; but, this would yield a weak factor of only two items. Therefore, the first three factors from the four factor extraction were retained for the present study – behavioral control, warmth, and psychological control. The four psychological control items that were used in the present study are: “I believe that scolding and criticism makes my child improve” (Item #28); “I believe my child should be aware of how much I sacrifice for him/her” (Item #29); “I let my child know how ashamed and disappointed I am when he/she misbehaves” (Item #31); and “I want my child to make a good impression on others” (Item #32).

Psychological control can be characterized as parental use of love withdrawal and guilt induction to get a child to think, feel, or behave in a certain way. The construct of greatest interest to the present study was *psychological control*; however, maternal warmth and behavioral control were included in the hierarchical multiple regression analyses as covariates in order to control for their contributions to obtain a purer measure of maternal psychological control.

Recently, researchers have suggested that in late childhood and early adolescence “child reports of parenting practices may be driven by the child's overall perception of the quality of the parent-child relationship rather than the frequency of specific parenting

acts” (Barry, Frick, & Grafeman, 2008, p. 301). Therefore, when measuring parenting, it may be more useful to use a measure where mothers report on their own parenting beliefs, such as the CRPR.

Observed mother-child relationship quality. The Mother-Child Relationship Quality Scale is an observational coding taxonomy used to measure the quality of the mother-child relationship (adapted from the Parent-Child Relationship Quality Scale; Rubin & Burgess, 2000; see Appendix D for the coding manual and coding sheets used for the present study). This coding scheme comprised five relationship quality codes: *involvement* (e.g., how psychologically separate or connected are the mother’s and child’s activities, whether they are oriented toward each other, attending to each other, and checking with each other); *reciprocity* (e.g., whether responses (verbal or physical/nonverbal) are contingent upon, appropriate or relevant to what the other person is saying or doing (verbal or physical/nonverbal), *regardless* of the positivity or negativity of the interactions); *interactional asynchrony* (e.g., disharmony of the interaction, characterizing the non-mutuality, non-contingent or non-reciprocal nature of the interaction, *regardless* of the positivity or negativity of the interactions); *positive connectedness* (e.g., affect for *both* the mother and child must be positive, having fun together, shared giggling, smiling at each other); and *negative connectedness* (e.g., how conflicted, displeasing, unrewarding, boring, negatively sarcastic, or emotionally distressing is the relationship, any belittling, ridiculing, humiliating statements; and negative controlling statements with negative affect).

For the purposes of the present study, the scale was adapted to measure mother-child relationship quality; therefore, some terms in the appended scale (*Mother-Child*

Relationship Quality Scale) may be different from the original scale. Coders rated the quality of the relationship between the mother and child for each of the five qualities on a 0 to 2 scale, where 0 = few instances or not characterized by this quality, 1 = some instances or somewhat characterized by this quality, and 2 = many instances or very much characterized by this quality. Coding segments were broken into 30-second intervals across the four videotaped mother-child activity sessions totaling 35 minutes for each dyad.

The master rater was trained by one of the creators of the Parent-Child Relationship Quality Scale. After achieving interrater reliability on the scale, the highly trained master rater then trained a reliability rater to use the Mother-Child Relationship Quality Scale. Training required the master and reliability raters to both code a few randomly selected videotaped mother-child sessions. Any of these selected videotapes that had unacceptable reliability (i.e., Kappas) were re-coded. This process continued until the coding of the selected videotapes achieved an acceptable level of interrater reliability. The reliability rater coded a randomly selected 21% of the videotapes that were also coded by the master rater. The two raters received a sufficient level of reliability with an overall Kappa of .87 (that ranged between .64 to .96), as well as individual Kappas of .91, .81, .86, .85, and .90, for involvement, reciprocity, interactional asynchrony, positive connectedness, and negative connectedness, respectively. Any disagreements were conferenced with one of the creators of the Parent-Child Relationship Quality Scale and the consensus scores were used in all analyses. The five relationship quality dimensions were referred to as *observed involvement*, *observed reciprocity*,

observed asynchrony, *observed positivity*, and *observed negativity* in the present study. The latter two dimensions were of primary importance to this study.

Youth-perceived mother-child relationship quality. The *Network of Relationships Inventory* (NRI; Furman & Buhrmester, 1985; see Appendix E for the items loading on the two factors of interest to the present study) consists of 35 items that tap into ten relationship qualities - the first eight qualities relate to positive aspects of the relationship and the last two relate to negative aspects of the relationship: affection, intimacy, satisfaction with the relationship, companionship, nurturance of the other, reliability, admiration (reassurance of worth), instrumental aid, punishment, and conflict. These ten relationship qualities provide indexes of the overall nature of the parent-child relationship. Young adolescents answered questions about the quality of their relationship with their mothers.

The present study focused on young adolescents' relationships with their mothers, with regard to the *perceived positivity* (affection, intimacy, satisfaction with the relationship, companionship, nurturance of the other, reliability, admiration, and instrumental aid) and *perceived negativity* (punishment and conflict) perceived in their relationship with their mothers. Participants were asked to rate how much a given relationship construct occurred with their mothers; for example, "How much do you play around and have fun with this person?" Ratings were scored on standard five-point Likert-type scales, ranging from "a little/not at all" to "the most/a ton." The appended measure has been adapted to include only information on the mother, for the purposes of the present study; however, the NRI was administered in its entirety to the participants.

The NRI subscales have been shown to have adequate internal reliability across gender, ethnicity, and adolescent age groups (Furman & Buhrmester, 1992).

An exploratory principle components analysis with varimax rotation was conducted extracting two factors from the NRI: positive relationship quality (i.e. perceived positivity) and negative relationship quality (i.e., perceived negativity). More specifically, 19 items loaded on the “perceived positivity” factor ($\alpha = .88$) and 11 items loaded on the “perceived negativity” factor ($\alpha = .88$). The mean of each factor’s respective items was used to create the composite scores. The two factors correlated highly with similar NRI factors (i.e., social support, positive relationship, and negative interactions) found in the larger sample. More specifically, perceived positivity in the present sample correlated .99 ($p < .001$) with the social support factor and .91 ($p < .001$) with the positive relationship factor in the larger sample; perceived negativity in the present sample correlated .93 ($p < .001$) with the negative interactions factor in the larger sample.

Youth-perceived attachment security to mother. The *Security Scale* (Kerns et al., 1996; see Appendix F for the items pertaining to mothers) is a 15-item self-report measure of children’s perceptions of attachment security in their relationships with their mothers or fathers. In the present study, only attachment security to mothers was measured. The *Security Scale* was designed to measure attachment security in middle childhood, specifically the belief that the attachment figure will be responsive and available if needed, the tendency to turn to the attachment figure when distressed, and ease and interest in maintaining communication with the attachment figure (Kerns et al., 1996). The reliability and validity of this measure have been demonstrated in several

previous studies (see Dwyer, 2005, for a review). Each item is scored on a 4-point scale, with scores ranging from 1 (low) to 4 (high). Each statement is formatted as Some kids/Other kids (e.g., “Some kids go to their mom when they are upset BUT Other kids do not go to their mom when they are upset”). This unique format follows Harter’s (1982) procedure decreasing the chance for socially desirable responses, by having the respondent assume that half of all children would feel one way while the other half would feel another way, thereby normalizing the content and allowing children to answer honestly. When scored, the two options “really true for me” are the more extreme choices for each statement and correspond with greater or lower levels of attachment security, depending on which statement the participant chooses (in the above example, the first sentence would indicate greater security). The more moderate points on the scale are the options which state “sort of true for me” for each of the statements. The 15 items assessing attachment security with mother were averaged to create a mother security scale ($\alpha = .79$), which was labeled *attachment security* in the present study.

Youth-reported self-esteem. The *Self-Perception Profile for Children* (SPPC; Harter, 1985; see Appendix G for the items used in the present study) is one of the most widely used questionnaires for assessing self-esteem in children and young adolescents. Previous research has demonstrated the reliability and validity of this measure (Harter 1982, 1985). The SPPC was designed to assess children’s global feelings of self-worth as well as their perceived competence in five specific domains, or content areas: scholastic competence, athletic competence, peer social acceptance, physical appearance, and behavior conduct. The present study only focused on the global self-worth subscale as a measure of young adolescents’ self-esteem. Five of the 38 items in this measure assess

global self-worth, where each item is scored on a 4-point scale, with scores ranging from 1 (low) to 4 (high), and reverse-scored where necessary. Each statement is formatted as Some kids/Other kids (e.g., “Some kids are happy with themselves as a person BUT Other kids are often not happy with themselves”). This unique format of Harter’s scales decreases the chance for socially desirable responses (Harter, 1982), by having the respondent assume that half of all children would feel one way while the other half would feel another way, thereby normalizing the content and allowing children to answer honestly. When scored, the two options “really true for me” are the more extreme choices for each statement and correspond with greater negative or positive feelings of self-worth, depending on which statement the participant chooses. The more moderate points on the scale are the options which state “sort of true for me” for each of the statements. Global self-worth was referred to as *self-esteem* in the present study.

Maternal-reported youth internalizing problems. The *Child Behavior Checklist* (CBCL; Achenbach, 1991; see Appendix H for the items used in the present study) is a 118-item checklist assesses adjustment and maladjustment in children. Mothers rated statements on a 3-point scale with scores ranging from 0 (low) to 2 (high), where 0 = not true, 1 = somewhat or sometimes true, and 2 = very true or often true. The CBCL yields eight narrow-band factors (e.g., withdrawn, anxious/depressed, aggressive). The reliability and validity of the CBCL have been demonstrated in numerous studies (Achenbach, 1991). A small number of items were dropped from the original questionnaire (e.g., “thinks about sex too much”) to reduce potential difficulties with parents. The present study used the narrow-band “anxious-depressed” factor as a measure of internalizing problems. Fourteen relevant items (e.g., “Feels he/she has to be

perfect,” “Feels or complains that no one loves him/her”) in the CBCL were added to form the “anxious-depressed” score. The alphas for the “anxious-depressed” factor were .79 and .81 for the whole fifth and sixth grade samples, respectively. The “anxious-depressed” subscale was referred to as *internalizing problems* in the present study.

CHAPTER IV

RESULTS

Preliminary Analyses

All analyses have been conducted using SPSS software. For all measures, the following statistics were calculated: mean, standard deviation, minimum, maximum, and Cronbach's alpha reliability (see Table 5). All questionnaire data revealed adequate Cronbach's alpha reliability.

Overview of Data Analytic Plan

First, in order to determine the associations among the study variables, Pearson correlations were calculated between the dependent (self-esteem and internalizing problems) and independent variables (maternal psychological control, observed involvement, observed reciprocity, observed asynchrony, observed positivity, observed negativity [in each activity session and total across activities], perceived positivity, perceived negativity, and attachment security) (see Tables 6-10).

Second, in order to test the hypotheses relating to both the primary and alternative mediation models (i.e., relationship quality as mediator versus maternal psychological control as mediator, respectively; see Appendix I for figures depicting the primary and alternative mediation models along with a list of the independent and dependent variables of interest), the simple mediation method recommended by Preacher and Hayes (2004; Hayes, 2009) was used. They have recently argued that Baron and Kenny's (1986) method for testing mediation is now outdated determining that one does not have to abort analysis of indirect effects if there is no significant relation between the predictor and the outcome variable (or if all preconditions for full mediation are not met), as had been

originally asserted. Moreover, according to Preacher and Hayes, one can test for a significant indirect effect from the predictor to the outcome variable through the mediator, specifically when the coefficient for c' (direct effect of X , or the predictor, on Y , or the outcome, while controlling for the M , or the mediator) is smaller than the coefficient for c (total effect of X on Y) – even if both c' and c are not significantly different from zero. Preacher and Hayes have argued that Baron and Kenny's procedure is very low in power in that it will not likely detect an indirect effect if there is one. In addition, they have argued that the Sobel test (Sobel, 1986) is flawed in that it assumes normality of the sampling distributions when competing tests, such as bootstrapping, that are more powerful and do not make this assumption are available. Preacher and Hayes' (2004; Hayes, 2009, see their papers for more detail on this process) bootstrapping procedure can be used on sample sizes larger than 25 participants and treats the obtained sample size n as a representation of a larger population that is repeatedly resampled during the bootstrapping analysis mimicking the original sampling process, for k times (typically 1,000 or 5,000); the bootstrapping procedure can be applied to small samples with more confidence. This procedure bootstraps the sampling distribution of ab , or the product of path a (from predictor to mediator) and path b (from mediator to outcome variable), and sorts the values of ab (mean of ab computed over the 1,000 samples) from smallest to largest, yielding a 95% or 99% bootstrap confidence interval. Finally, if zero is not between the lower and upper bound of the confidence interval, then the indirect effect from the predictor to the outcome variable through the mediator is statistically different from zero with 95% or 99% confidence at $p < .05$. Therefore, Preacher and Hayes' SPSS macro for statistical mediation analysis to using bootstrapping methods was

used. These tests were conducted for both the primary and alternative mediation models testing whether mother-child relationship quality (i.e., observed involvement, observed reciprocity, observed asynchrony, observed positivity, observed negativity, perceived positivity, perceived negativity, and attachment security) mediated the relation between maternal psychological control and self-esteem/internalizing problems (i.e., primary mediation model), or whether maternal psychological control mediated the relation between mother-child relationship quality (see variables listed above in primary mediation model) and self-esteem/internalizing problems (i.e., the alternative mediation model). All mediation analyses were non-significant; therefore, they were not reported.

Third, in order to test the hypothesis suggesting an interaction between mother-child relationship quality and parental psychological control in predicting self-esteem/internalizing problems, hierarchical multiple regression analyses were conducted (the present sample's *N* of 90 allows adequate power at a .8 level with the number of predictors for each analysis to detect a medium effect size; see Appendix I, for a figure depicting the moderation model along with a list of the independent and dependent variables of interest). Given the significant difference in ethnicity between the study sample and the larger sample, child ethnicity was entered in the first block as a covariate in order to control for its contribution to the dependent variables (i.e., self-esteem or internalizing problems). Child ethnicity was first dummy coded using Caucasian American as the reference group. The following four dummy variables were created and entered in the first block as covariates: Latino/Hispanic, African American, East Asian American, and Multiracial. Maternal warmth and maternal behavioral control were entered in the second block also as covariates. Maternal psychological control was

entered in the third block as the first independent variable (this variable was centered on its mean). Next, one of the five mother-child relationship quality variables (observed positivity, observed negativity, perceived positivity, perceived negativity, or attachment security) was entered in the fourth block as a second independent variable (this variable was centered on its mean), in order to examine the additional explanatory power that positive (observed, perceived, or attachment security) or negative (observed or perceived) mother-child relationship quality contributes in predicting young adolescent internalized maladjustment (self-esteem or internalizing problems, separately) above and beyond that explained by child ethnicity, maternal warmth, maternal behavioral control, and maternal psychological control. Finally, an interaction term (maternal psychological control \times mother-child relationship quality) was entered in the fifth block (the product of both centered variables of interest), in order to examine mother-child relationship quality as a moderator of the relation between maternal psychological control and young adolescent internalized maladjustment. Each hierarchical multiple regression analysis examined: (a) the separate contribution of maternal psychological control to young adolescent internalized maladjustment (self-esteem or internalizing problems, separately; above and beyond the covariates – child ethnicity, maternal warmth, and maternal behavioral control); and (b) the separate contributions of positive (observed, perceived, or attachment security) or negative (observed or perceived) mother-child relationship quality to young adolescent internalized maladjustment (self-esteem or internalizing problems, separately; above and beyond the covariates – child ethnicity, maternal warmth, and maternal behavioral control – and maternal psychological control); and (c) the contributions of positive (observed, perceived, or attachment security) or negative

(observed or perceived) mother-child relationship quality as moderators of the relation between maternal psychological control and young adolescent internalized maladjustment (self-esteem or internalizing problems, separately; see Table 11 for further clarification of the blocks in the each hierarchical multiple regression analysis).

Only significant ($p < .05$) main and interaction effects are reported in Tables 12-20. All significant interactions between mother-child relationship quality and maternal psychological control were probed following the recommendations of Aiken and West (1991). The regression equations were each restructured to express the regression of young adolescent internalized maladjustment (i.e., self-esteem or internalizing problems) on maternal psychological control at three levels of mother-child relationship quality. The three levels of mother-child relationship quality that were used were: one standard deviation below the mean (low), the mean, and one standard deviation above the mean (high). Finally, all simple slopes were tested to examine which of them are significantly different from zero, in order to test at which levels of mother-child relationship quality maternal psychological control was most strongly related to young adolescent internalized adjustment.

Associations among Study Variables

The results of the correlational analyses are reported in Tables 6-10. The association between self-esteem and internalizing problems was moderate ($r = -.27, p < .01$) suggesting that the constructs were relatively independent.

Associations between maternal psychological control and other study variables. Correlations were run between maternal psychological control and the other

study variables. Results revealed that maternal-reported psychological control correlated positively with maternal-reported youth internalizing problems ($r = .18, p < .05$).

Associations between positive mother-child relationship quality and internalized maladjustment. Correlations were run between the indices of internalized maladjustment (i.e., self-esteem and internalizing problems) and observed positivity (in each activity session and total across sessions), perceived positivity, and attachment security. Self-esteem correlated positively with the following relationship quality variables: (a) observed positivity in the CA, PV, and BT sessions, as well as in the total across activity sessions ($r = .22, p < .05$; $r = .25, p < .01$; $r = .28, p < .01$, and $r = .29, p < .01$, respectively); (b) perceived positivity ($r = .24, p < .05$); and (c) attachment security ($r = .39, p < .001$). Internalizing problems correlated negatively only with attachment security ($r = -.20, p < .05$). Results are displayed in Tables 6-10. It seemed interesting that positive relationship quality correlated with self-esteem regardless of reporter or method of measurement, whereas only youth-reported attachment security correlated with maternal-reported youth internalizing problems.

Associations between negative mother-child relationship quality and internalized maladjustment. Correlations were run between the indices of internalized maladjustment (i.e., self-esteem and internalizing problems) and observed (in each activity session and total across sessions) and perceived negativity. Self-esteem correlated negatively with perceived negativity ($r = -.17, p < .05$). Results are displayed in Tables 6-10.

Associations between observed and perceived relationship quality. It seemed important to compare youth-reported with observed mother-child relationship quality.

Observed total involvement correlated negatively with perceived negativity ($r = -.33, p < .01$). Both *observed total reciprocity* and *observed total asynchrony* did not correlate with any positive or negative perceived relationship quality measures; this is in line with the expectation based on the coding manual that these constructs have neither a negative nor positive valence. However, it is important to note that when both observed reciprocity and asynchrony were measured within the separate activity sessions, some correlations with perceived positivity and negativity emerged. More specifically, observed reciprocity in the constructive activity session (CA) correlated *positively* with perceived positivity ($r = .21, p < .05$); but when measured in the discussion of moral dilemma session (MD), observed reciprocity correlated *negatively* with perceived positivity ($r = -.18, p < .05$) (see Tables 7 and 9). Similarly, observed asynchrony in the constructive activity session (CA) correlated positively with perceived negativity ($r = .21, p < .05$), but when observed asynchrony was measured in any other activity sessions it was uncorrelated with perceived relationship quality (see Table 7). As expected, *observed total positivity* correlated negatively with perceived negativity ($r = -.29, p < .01$); however was uncorrelated with perceived positivity (see Table 6). It is important to note observed positivity in the discussion of best times session (BT) correlated positively with perceived positivity ($r = .23, p < .05$) (see Table 10). With regard to negativity in the mother-child relationship, as expected, *observed total negativity* correlated positively with perceived negativity ($r = .38, p < .001$) and correlated negatively with both perceived positivity ($r = -.33, p < .01$) and attachment security ($r = -.43, p < .001$) (see Table 6). In conclusion, observer ratings of the quality

of the mother-child relationship were associated in the expected directions with youth reports of relationship quality.

Mediation Analyses

In order to address the first specific aim of the present study, Hypotheses 1 and 2 were tested examining the primary mediation model suggesting that mother-child relationship quality mediates the relation between maternal psychological control and internalized adjustment (self-esteem/internalizing problems). Simple mediation analysis using Preacher and Hayes' method (2004, Hayes, 2009) was run 13 times - each time with a different mother-child relationship quality variable (i.e., observed positivity, and negativity – in each activity session and total across sessions; perceived positivity and negativity, and attachment security) to predict self-esteem and then 13 more times predicting internalizing problems. Each analysis was run with 1000 bootstrap resamples and because zero *was* found between the lower and upper bound of the confidence intervals, the indirect effect from the predictor to the outcome variable through the mediator was not statistically different from zero with 95% or 99% confidence at $p < .05$. Thus, mother-child relationship quality did not mediate the relation between maternal psychological control and young adolescent self-esteem or internalizing problems. The same procedure was run in order to test the alternative mediation model (Hypothesis 3) suggesting maternal psychological control as a mediator between mother-child relationship quality and internalized maladjustment (i.e., self-esteem/internalizing problems) with the same non-significant results. Thus, maternal psychological control did not mediate the relation between mother-child relationship quality and young adolescent self-esteem or internalizing problems.

Hierarchical Multiple Regression Analyses Predicting Self-Esteem

In order to partially address the second specific aim of the present study, Hypotheses 4, 5, and 6 were tested examining the individual contributions of maternal psychological control and mother-child relationship quality in predicting young adolescent *self-esteem*.

Main effect of maternal psychological control. In order to test the first part of Hypothesis 4 that maternal psychological control negatively predicts self-esteem above and beyond warmth and behavioral control, maternal psychological control was entered third into the hierarchical multiple regression analysis, after the child ethnicity (since ethnicity was a significant difference between the study and larger samples) and maternal warmth and behavioral control covariates. Hypothesis 4 was not supported with regard to self-esteem; the main effect of maternal psychological control on self-esteem was non-significant. In other words, youth self-esteem was not predicted by maternal psychological control.

Main effects of mother-child relationship quality. In order to test the first part of both Hypothesis 5 that each positive relationship quality variable (observed, perceived, and attachment security) would positively predict self-esteem and Hypothesis 6 that each negative relationship quality variable (observed and perceived) would negatively predict self-esteem, a positive or negative relationship quality variable was entered fourth into each hierarchical multiple regression analysis in order to examine its main effect above and beyond the covariates and maternal psychological control. Hypothesis 5 was supported with regard to self-esteem, but Hypothesis 6 was not supported. The main effects of the five relationship quality variables on self-esteem are reported below.

Observed relationship quality. The following main effects of observed relationship quality on self-esteem were significant supporting Hypothesis 5; non-significant main effects were not reported: (a) observed total positivity ($\beta = .35, t(81) = 3.16, p < .01$), (b) observed positivity in CA ($\beta = .25, t(81) = 2.30, p < .05$), (c) observed positivity in PV ($\beta = .28, t(81) = 2.58, p < .05$), and (d) observed positivity in BT ($\beta = .30, t(81) = 2.73, p < .01$). The overall regressions of self-esteem on observed total positivity ($F(8,81) = 2.50, p < .05$) and observed positivity in BT ($F(8,81) = 2.15, p < .05$) were significant. Results are displayed in Tables 12-15. In other words, observer ratings of positivity in the mother-child relationship significantly predicted higher levels of self-esteem in young adolescents.

Perceived relationship quality. The main effect of perceived positivity on self-esteem was significant ($\beta = .25, t(81) = 2.36, p < .05$) supporting Hypothesis 5, but the overall regression of self-esteem on perceived positivity was non-significant. Results are displayed in Table 16. Both the overall regression of self-esteem on perceived negativity and the main effect of perceived negativity on self-esteem were non-significant. In other words, young adolescents' level of self-esteem was significantly predicted by their perceptions of positivity in their relationship with their mothers.

Attachment security. The main effect of attachment security on self-esteem was significant ($\beta = .34, t(81) = 3.17, p < .01$) supporting Hypothesis 5, as was the overall regression of self-esteem on attachment security ($F(8,81) = 2.51, p < .05$). Results are displayed in Table 17. In other words, young adolescents' level of self-esteem was significantly predicted by their reports of attachment security to their mothers.

Interaction effects of maternal psychological control × mother-child

relationship quality. In order to partially address the third specific aim of the present study, Hypotheses 7 and 8 were tested examining a moderation model where mother-child relationship quality was expected to moderate the relations between maternal psychological control and young adolescent *self-esteem*.

In order to test the first part of Hypothesis 7 that each positive relationship quality variable (observed, perceived, and attachment security) acts as a moderator by interacting with maternal psychological control in predicting youth self-esteem and Hypothesis 8 that each negative relationship quality variable (observed and perceived) acts as a moderator by interacting with maternal psychological control in predicting youth self-esteem, an interaction term (maternal psychological control × mother-child relationship quality) was entered fifth into each hierarchical multiple regression analysis in order to examine its interaction effect on self-esteem. Hypothesis 7 was not supported with regard to self-esteem; the interaction effect of maternal psychological control × relationship positivity on self-esteem was non-significant. However, Hypothesis 8 was supported with regard to self-esteem. . In other words, the only moderator that significantly interacted with maternal psychological control in predicting youth self-esteem was young adolescents' perceptions of negativity in the mother-child relationship.

In support of Hypothesis 8, the interaction effect of maternal psychological control × perceived negativity on self-esteem was significant ($\beta = .26, t(80) = 2.31, p < .05$), as was the overall regression of self-esteem on maternal psychological control × perceived negativity ($F(9,80) = 2.03, p < .05$). Results are displayed in Table 18. The significant interaction was explored following the recommendations of Aiken and West

(1991). Self-esteem was regressed on maternal psychological control at levels of perceived negativity. The levels of perceived negativity used were one standard deviation above the mean (high), the mean, and one standard deviation below the mean (low). As indicated in Figure 1, maternal psychological control most strongly predicted young adolescent self-esteem when perceived negativity in the mother-child relationship was low ($\beta = -.32, p < .05$), whereas the simple slopes at medium and high levels of perceived negativity were not significantly different from zero ($\beta = -.06, p = .59$, and $\beta = .20, p = .22$, respectively).

Hierarchical Multiple Regression Analyses Predicting Internalizing Problems

In order to address the remainder of the second specific aim of the present study, Hypotheses 4, 5, and 6 were tested examining the individual contributions of maternal psychological control and mother-child relationship quality in predicting young adolescent *internalizing problems*.

Main effect of maternal psychological control. In order to test the second part of Hypothesis 4 that maternal psychological control positively predicts internalizing problems above and beyond warmth and behavioral control, maternal psychological control was entered third into the hierarchical multiple regression analysis, after the child ethnicity (since ethnicity was a significant difference between the study and larger samples) and maternal warmth and behavioral control covariates. Hypothesis 4 was supported in the regression predicting internalizing problems. The main effect of maternal psychological control on internalizing problems was significant ($\beta = .24, t(82) = 2.27, p < .05$), above and beyond child ethnicity, maternal warmth, and behavioral

control, as was the overall regression of internalizing problems on maternal psychological control ($F(7,82) = 2.75, p < .05$; see Table 19).

Main effects of mother-child relationship quality. In order to test the second part of both Hypothesis 5 that each positive relationship quality variable (observed, perceived, and attachment security) would negatively predict internalizing problems and Hypothesis 6 that each negative relationship quality variable (observed and perceived) would positively predict internalizing problems, a positive or negative relationship quality variable was entered fourth into each hierarchical multiple regression analysis in order to examine its main effect above and beyond the covariates and maternal psychological control. Both Hypotheses 5 and 6 were not supported with regard to internalizing problems; all main effects of observed and perceived relationship quality on internalizing problems were non-significant. In other words, internalizing problems were not significantly predicted by any of the five mother-child relationship quality variables.

Interaction effects of maternal psychological control \times mother-child relationship quality. In order to address the remainder of the third specific aim of the present study, Hypotheses 7 and 8 were tested examining a moderation model where mother-child relationship quality was expected to moderate the relations between maternal psychological control and young adolescent *internalizing problems*.

In order to test the second part of Hypothesis 7 that each positive relationship quality variable (observed, perceived, and attachment security) acts as a moderator by interacting with maternal psychological control in predicting youth internalizing problems and Hypothesis 8 that each negative relationship quality variable (observed and perceived) acts as a moderator by interacting with maternal psychological control in

predicting youth internalizing problems, an interaction term (maternal psychological control \times mother-child relationship quality) was entered fifth into each hierarchical multiple regression analysis in order to examine its interaction effect on internalizing problems. Hypothesis 7 was supported because perceived positivity significantly interacted with maternal psychological control in predicting internalizing problems. However Hypothesis 8 was not supported with regard to internalizing problems; the interaction effect of maternal psychological control \times perceived negativity on internalizing problems was non-significant. In other words, the only moderator that significantly interacted with maternal psychological control in predicting youth internalizing problems was young adolescents' perceptions of positivity in the mother-child relationship.

The interaction effect of maternal psychological control \times perceived positivity was significant in predicting internalizing problems ($\beta = .25$, $t(80) = 2.39$, $p < .05$), as was the overall regression of internalizing problems on maternal psychological control \times perceived positivity ($F(9,80) = 2.94$, $p < .01$). Results are displayed in Table 20. The significant interaction was explored following the same procedure described above. As indicated in Figure 2, the strongest relation between maternal psychological control and internalizing problems was obtained at a high level of perceived positivity ($\beta = .32$, $p < .05$), whereas the simple slopes at medium and low levels of perceived positivity were not significantly different from zero ($\beta = .13$, $p = .25$, and $\beta = -.07$, $p = .72$, respectively).

CHAPTER V

DISCUSSION

The present study sought to extend research examining the link between parental psychological control and children's and adolescents' psychological adjustment. Researchers have *hypothetically* incorporated the quality of the relationship between a child and his/her parent into this link; however, there is a lack of *empirical* research testing these hypotheses. Thus, this study addressed this empirical gap in the literature by examining both hypothetical models suggesting that mother-child relationship quality acts as either a mediator or moderator. The present study is unique in that it included multiple reporters and multiple methods, which allowed for further examination of the models with regard to exploring differences between models that shared a reporter for various constructs versus those that had independent reporters for all three constructs of interest. The present study has advanced the field in several ways, which are discussed in greater detail below.

Maternal Psychological Control and Internalized Maladjustment

The present study lends support to previous research finding that parental psychological control uniquely predicts child and adolescent internalizing problems (e.g., Barber & Harmon, 2002) above and beyond parental warmth and behavioral control (e.g., Doyle & Markiewicz, 2005); however, maternal-reported psychological control was *not* linked at all with youth-reported self-esteem despite previous research that has indicated a negative relation between the two constructs (e.g., Barber & Harmon, 2002; Ojanen & Perry, 2007). Perhaps, the significance of the link between maternal-reported psychological control and maternal-reported internalizing problems resulted from having

the same reporter for each measure (i.e., mother) making it more likely to obtain a significant finding (i.e., O'Connor, 2002). Similarly, the lack of a link between maternal-reported psychological control and youth-reported self-esteem may be due to the fact that it is harder to obtain significant results when using different (i.e., independent) reporters for each measure (i.e., Holmbeck, Shapera, & Hommeyer, 2002). On the other hand, perhaps the lack of finding a significant relation between maternal psychological control and young adolescent self-esteem had to do with the fact that the index of maternal psychological control, while having adequate reliability, was formed using only four items. Moreover, only mothers' reports of psychological control were used; perhaps some mothers underreported using this negative parenting practice. It is possible that observations of maternal psychological control would capture more instances of this controlling maternal behavior. Perhaps the videotaped mother-child sessions should be re-coded using an observational coding scheme that measures maternal psychological control.

Mother-Child Relationship Quality and Internalized Maladjustment

The present study lends support to existing attachment theory literature linking parent-child relationship with young adolescent self-esteem (e.g., Bowlby, 1969, 1982; Cassidy, 1988). As expected, observed and youth-perceived positivity in the mother-child relationship and youths' attachment security to mother predicted higher youth self-esteem. Additionally, youth-perceived negativity in the mother-child relationship predicted lower self-esteem; however, there were no significant associations between *observed* negativity and self-esteem. This finding is in line with research suggesting that one should expect that it would be more likely to obtain a significant finding linking self-

esteem with perceived negativity given that they were both youth-report (i.e., shared reporter); whereas revealing a significant link between youth reports of self-esteem and *observer* ratings of the mother-child relationship (i.e., different reporters) would be less likely (e.g., Burk & Laursen, 2010; Holmbeck et al., 2002; O'Connor, 2002).

Given this explanation of likelihood of obtaining significant results, it is important to highlight one particular finding in the present study: *observed* positivity in the mother-child relationship quality was a significant predictor of youth-reported self-esteem. This finding is a new contribution to the extant literature given that researchers have not, as yet, examined *observations* of shared positivity in mother-child dyads, specifically in the prediction of young adolescent self-esteem; researchers examining the links between parent-child relationship quality and child and adolescent self-esteem often rely on youth perceptions for both measures (e.g., Roberts et al., 2000).

Recently, Beveridge and Berg (2007) reviewed the literature on observational coding of parent-adolescent interactions. They stated that although previous research has demonstrated that warmth in parent-child interactions is linked with positive child adjustment (e.g., Steinberg & Silk, 2002), most coding systems combine warmth with autonomy and control which does not allow for the measurement of the unique contribution of interpersonal warmth in relation to child adjustment. Beveridge and Berg emphasized “the importance of understanding acts of ...interpersonal warmth as being reciprocally related to one another, rather than occurring as individual acts” (p. 49). They recommended that the unit of analysis should be the dyad, focusing on the reciprocal or transactional process involved in parent-adolescent interactions rather than an individual’s behavior in the interaction. In line with their recommendations, the

observational coding scheme used in the present study focused on the dyadic relationship quality as the unit of analysis; for example, *shared* positivity (i.e., smiling, laughter, hugging) and negativity (i.e., fighting, hitting, belittling) were measured (see Appendix D, for a detailed description of the coding for each relationship quality variable). It is interesting to note that although observed positivity predicted youth self-esteem within the constructive activity, planning a vacation, and discussion of best times sessions, it did not predict self-esteem within the discussion of moral dilemma session. Perhaps, very little positivity was observed in the mother-child interactions during the intense discussion of a moral dilemma and therefore was not a strong enough predictor of self-esteem.

Additionally, the present study lends support to existing research by attachment theorists linking parent-child relationship quality with young adolescent internalizing problems (e.g., Brumariu & Kerns, 2010). As expected, there was a negative association between attachment security and internalizing problems supporting previous research finding a link between attachment insecurity and youth anxiety and depression (i.e., internalizing problems; Brumariu & Kerns, 2010). However, internalizing problems were unrelated to both observed and perceived, positive or negative, mother-child relationship quality. It seems that attachment security or insecurity may be a more potent predictor of internalizing problems than are other aspects of the mother-child relationship, such as positivity and negativity; especially given that the two constructs had independent reporters (i.e., youth-reported attachment security and maternal-reported youth internalizing problems). This finding supports attachment theorists' assertions that

an insecure attachment to the primary caregiver can predict anxiety and depression (e.g., Bowlby, 1973, 1980).

Mother-Child Relationship Quality as a Mediator

Although based on self-determination theorists' recent hypothesis and other researchers' hypotheses that parent-child relationship quality (i.e., attachment security) should mediate the relation between parental psychological control and child and adolescent internalized maladjustment, given that parental psychological control undermines attachment security (e.g. Doyle & Markiewicz, 2005; Karavasilis et al., 2003; Soenens & Vansteenkiste, 2010), the present study found no evidence supporting mother-child relationship quality (positivity, negativity, or attachment security) as a mediator or even partial mediator, in the relation between maternal psychological control and internalized maladjustment (i.e., self-esteem and internalizing problems). This non-significant finding was consistent with Doyle and Markiewicz's (2005) conclusion that attachment security did not mediate between parental psychological control and internalizing problems. With regard to the alternative hypothesis in the literature asserting that parenting may serve as the mediator between parent-child relationship quality and child and adolescent adjustment (e.g., Hair et al., 2008), the present study revealed no evidence for this hypothesis as well.

It is important to note that despite going a few steps further than Doyle and Markiewicz, the present study still found no evidence of any mediating processes linking maternal psychological control, mother-child relationship quality, and internalizing maladjustment in early adolescence. More specifically, unlike Doyle and Markiewicz who used Baron and Kenny's (1986) method for testing full mediation, the present study

used Preacher and Hayes' (2004) method for testing simple mediation allowing for the examination of partial mediation even when Baron and Kenny's preconditions were not met. In contrast, Doyle and Markiewicz were only able to test the mediation model predicting to internalizing problems, but not to self-esteem, since the preconditions for testing mediation were not met in the latter case. Furthermore, despite including multiple reporters and multiple methods to assess mother-child relationship quality and young adolescent internalized maladjustment in the present study, no evidence of mediation was revealed in any of the analyses. One important thing to note regarding the mediation model is that mother-child relationship quality has been found to act as a mediator when: (a) linking negative controlling parenting with child and adolescent *externalizing* problems as has been found in the literature (e.g., Bosmans et al., 2007); and (b) linking *positive* parenting, such as warmth, monitoring, and support, with child and adolescent adjustment as previous research has found (e.g., Branstetter et al., 2009; Doyle & Markiewicz, 2005; Hair et al., 2008). Moreover, in the present study as well as in Doyle and Markiewicz's study, parental psychological control was assessed using an index of a few items: four items in the present study and three items in their study. Taken together, perhaps future research can confirm the hypothesis that mother-child relationship quality mediates between maternal psychological control and internalized maladjustment using a more reliable measure of psychological control within a larger, longitudinal study.

Mother-Child Relationship Quality as a Moderator

The present study lends support to recent attachment theorists' and other researchers' hypotheses that the quality of the parent-child relationship *moderates* the link between parenting practices and child and adolescent internalized maladjustment

(e.g. Brumariu & Kerns, 2010; Cummings & Cummings, 2002; NICHD, 2006). Mother-child relationship quality was indeed revealed to interact with maternal psychological control in predicting young adolescent self-esteem. More specifically, maternal psychological control negatively predicted young adolescent self-esteem when the level of perceived *negativity* in the mother-child relationship was lowest. In other words, young adolescents whose mothers did *not* report using psychological control, and who perceived their relationships with their mothers to be *low* in negativity, reported positive levels of self-esteem. With regard to predicting internalizing problems, maternal psychological control was a positive predictor of youth internalizing problems when the level of perceived *positivity* in the mother-child relationship was highest. In other words, young adolescents whose mothers did *not* report using psychological control, and who perceived their relationships with their mothers to be highly positive were reported by their mothers as having *low* levels of internalizing problems.

Taken together, it seemed interesting that the level of *negativity* in the mother-child relationship moderated the relation between maternal psychological control and self-esteem; whereas, the level of *positivity* in the mother-child relationship may be significant with regard to the link between maternal psychological control and internalizing problems. This is consistent with existing research examining the interaction between child relational (not dyadic/relationship) contributions and parental psychological control predicting self-esteem and internalizing problems (Feng et al., 2009; Ojanen & Perry, 2007). More specifically, the assertion that the level of *positivity* in the mother-child relationship (i.e., level of girls' expressed positive emotion in interaction with their mothers) is important in predicting internalizing problems (i.e.,

girls' depressive symptoms) through its interaction with maternal psychological control is supported in the literature (Feng et al., 2009). Similarly, there is support for the assertion that the level of *negativity* in the mother-child relationship (youth-perceived debilitation in conflicts with their mothers) is important in predicting self-esteem (Ojanen & Perry, 2007). Perhaps interventions aimed at raising young adolescents' self-esteem should examine whether *negativity* in the parent-child relationship and parenting practices exacerbates youth's already fragile self-esteem. In contrast, interventions aimed at lowering young adolescents' anxiety and depression should examine whether enhancing the *positivity* in the parent-child relationship and parenting practices may protect youths from internalizing problems.

Shared Reporter versus Independent Reporters

The results of the present study supported existing literature asserting that it is more likely to obtain significant findings when measures for different constructs share a reporter than when there are independent reporters (e.g., Holmbeck et al., 2002) for each measure. For example, in the moderation analyses where each measure was reported by a different source, *none* of the interactions were significant. More specifically, maternal-reported psychological control did not significantly interact with observed relationship quality in predicting youth-reported self-esteem. However, when two of the measures of different constructs shared a reporter, some significant and near significant findings were obtained. For example, maternal-reported psychological control predicted maternal-reported youth internalizing problems (shared reporter), but did not predict youth-reported self-esteem (different reporters). Because significance was found only when there was shared variance in the moderation model, perhaps the observations of the

quality of the mother-child interactions were not powerful enough to drive a significant interaction effect. Although the mother-child dyads were observed for 35 minutes, the observations were conducted in one day per dyad, allowing for only a limited view into the interactional quality of the dyad during that short period of time. It may be more powerful to observe the dyads across multiple days or even multiple time points spanning a year or so, allowing for a better, more reliable measure of relationship quality.

Examination of the Observed Relationship Quality Variables.

Although not originally hypothesized in the present study, correlations among the observed total mother-child relationship quality variables were expected to be in specific directions based on the descriptions in the Mother-Child Relationship Quality Scale (see Appendix D). The correlations among the observed relationship qualities in total across the four mother-child activity sessions are displayed in Table 6, and described in further detail below.

Observed involvement. Evidence was obtained that observed total involvement is a generally positive construct given that it correlated *positively* with observed total positivity; and correlated *negatively* with observed total negativity.

Observed reciprocity. As expected, observed total reciprocity was neither a specifically positive nor a specifically negative construct. Observed total reciprocity correlated positively with both observed total involvement and observed total negativity; however, it was not correlated at all with observed total positivity.

Observed asynchrony. Although according to the observational coding scheme observed total asynchrony is supposed to be neither negative nor positive in valence, it

seems to be a generally negative construct; observed asynchrony correlated negatively with observed total involvement and positively with observed total negativity.

Observed positivity. As expected, observed total positivity was a positive construct in this study. More specifically, it correlated positively with observed total involvement and correlated negatively with observed total negativity.

Observed negativity. As expected, observed total negativity was a negative construct in this study, given that it correlated negatively with observed total involvement and observed total positivity.

Observed and Perceived Relationship Quality

The finding that observed involvement correlated negatively with perceived negativity is consistent with research depicting parental involvement as an important aspect of positive parenting that is related to lower levels of externalizing problems (e.g., Russell & Russell, 1996). Because observed reciprocity and observed asynchrony correlated with perceived positivity or negativity *only* when measured within separate mother-child activity sessions, it seems that perhaps specific activities elicit either positive or negative behaviors. More specifically, when observed reciprocity was measured in the constructive activity session it correlated *positively* with perceived positivity, but when measured in the discussion of moral dilemma session it correlated *negatively* with perceived positivity. It seemed that when working together to construct or build a model (i.e., constructive activity session), those dyads where youths reported *more* positivity in the mother-child relationship were observed to have more positive verbal (i.e., discussion) and nonverbal (e.g., turn-taking) reciprocal behaviors. Whereas when engaging in an intense discussion (e.g., discussion of a moral dilemma), those

dyads wherein youths reported *less* positivity in the mother-child relationship tended to show more *negative* verbal (e.g., argument) and nonverbal (e.g., ignoring) reciprocal behaviors.. Additionally, observed asynchrony was correlated with perceived negativity *only* when measured in the constructive activity session. Perhaps, those dyads in which youths perceived greater negativity in the mother-child relationship found constructing the model (i.e., constructive activity session) stressful and were observed to have more negative verbal (e.g., arguing about how to make the model) and nonverbal (e.g., grabbing) asynchronous exchanges. Lastly, because observed and perceived positivity correlated only when observed positivity was measured in the discussion of best times session, perhaps the shared best times activity was structured in a way that elicits the most positivity from both partners leading to more instances of observed positivity. Taken together, it may be important to take into account the different activities within which the mothers and young adolescents were observed when interpreting the results of this study.

Strengths, Limitations, and Future Directions

The present study is unique in that it used multiple reporters, (i.e., young adolescents, mothers, and observers) and multiple methods (questionnaires and observations), allowing for the comparison of analyses in which there were shared versus independent reporters for the constructs of interest. This study contributed to the literature on parental psychological control by testing two competing models in the literature suggesting that parent-child relationship quality either mediates or moderates the link between parental psychological control and internalized maladjustment. Although, the hypothesized mediation model was not supported (i.e., maternal

psychological control was not related to young adolescent internalized maladjustment through the quality of the mother-child relationship), evidence for the hypothesized *moderation* model was obtained. Therefore, the strength of the relation between maternal psychological control and young adolescent internalized maladjustment depended on the *quality* of the mother-child relationship. More specifically, maternal psychological control predicted young adolescent self-esteem only when taking into account the negativity in the mother-child relationship. Conversely, maternal psychological control predicted internalizing problems only when the positivity of the mother-child relationship was considered.

However, a limitation of the present study was that the *n*'s in the extreme groups in the moderation analyses were fairly small despite the significant findings. For example, when perceived negativity interacted with maternal psychological control in predicting self-esteem, there were 11 participants in the low perceived negativity group, 63 in the medium group, and 16 in the high perceived negativity group. Future research should be conducted with a larger sample to see if any other competing moderation models would also be significant; perhaps perceived positivity in the mother-child relationship would become a significant moderator when predicting self-esteem and perceived negativity in the relationship would become a significant moderator when predicting internalizing problems.

The present study lends support to existing literature finding that it is more likely to obtain significant results when using shared reporters for different constructs in one's analyses (e.g., Holmbeck et al., 2002). For example, only the main effect of maternal-reported psychological control predicting mother-reported youth internalizing problems

(shared reporter) was significant; however, the main effect of mother-reported maternal psychological control was non-significant when predicting youth-reported self-esteem (different reporters). In addition, only moderation models that shared reporters (i.e., mother or youth) for two of the constructs were significant; the moderation model that had independent reporters (mother, observer, and youth) for each of the three constructs was not significant. As noted above, perhaps observations of relationship quality across a more extensive time period would yield significant results in a moderation model using only independent reporters. A significant strength of the present study was the finding that *observed* positivity in the mother-child relationship significantly predicted youth-reported self-esteem, despite the expected difficulty obtaining significance using independent reporters in a relatively small sample size. Although another strength of the present study was that it included two different reporters of mother-child relationship quality (young adolescents and observers) and two different reporters of internalized maladjustment (young adolescents and mothers), future research should also include other, perhaps more objective, reports of maternal psychological control, such as fathers' and observers'.

Importantly, although only mothers and young adolescents were assessed in the present study, an important future direction for research would be to include measurement of fathers' psychological control along with examining the quality of father-child relationships when predicting young adolescents' self-esteem and internalizing problems. Although no research to date has examined the relation between paternal psychological control and father-child relationship quality when predicting internalized maladjustment in children and adolescents, recently researchers have found

significant links between the former two constructs in predicting *externalizing* problems (Bosmans et al., 2006). As mentioned earlier, these researchers found that low paternal negative control interacted with young adolescents' attachment security to their fathers in predicting lower levels of externalizing problems. Future research should examine whether father-child relationship quality acts as a moderator of the link between paternal psychological control and internalized maladjustment in childhood and adolescence.

It is important to note that the mothers and adolescents who participated in the present study can be considered a select sample in that there is probably something special about those particular mother-child dyads that agreed to visit the laboratory for videotaped sessions. When examining the maternal psychological control and attachment security variables more closely, it seemed that although the maternal psychological control variable was fairly normally distributed with scores ranging from low to high psychological control, the young adolescents in this study, for the most part, reported having a secure attachment to their mothers. Perhaps the mothers in the present study were not shy about having their parenting style videotaped since they believed themselves to be good parents and the young adolescents were comfortable visiting the laboratory and being videotaped interacting with their mothers. In addition, the present sample was of relatively high socioeconomic status and was similar to the original larger sample ($N = 240$) with regard to maternal age, education, and marital status in that the vast majority of mothers gave birth to the children in the present study between their mid-twenties to early forties; had completed at least some college/graduate school or had a university or graduate degree; and were married or were living in common law relationships. Perhaps future research should focus also on videotaping interactions and

collecting relationship quality data from mothers and adolescents from lower socioeconomic neighborhoods with varying maternal ages, levels of education, and marital statuses.

Finally, when debating whether or not to aggregate the measures in the present study, it became very clear that it made more sense to *separately* examine each positive (observed, perceived, and attachment security) or negative (observed and perceived) mother-child relationship quality variable and each youth internalized maladjustment variable (self-esteem and internalizing problems). Investigating the separate contributions of the relationship quality variables based on whether measuring positivity or negativity and whether positivity or negativity was observed or perceived allowed for examination of the results based on whether the constructs in each analysis (i.e., maternal psychological control, positive or negative relationship quality, or internalized maladjustment) shared or had independent reporters (i.e., observer ratings, maternal report, or youth report). A risk of analyzing multiple comparisons simultaneously is the likelihood of Type I errors, or rejecting a true null hypothesis. However, given the conceptual importance to this study that each of the five relationship quality variables be analyzed separately in predicting youth self-esteem or internalizing problems, it was intuitive then that each comparison (or analysis) in this study constituted its own individual family with regard to controlling family wise error. This per-comparison approach allowed for the maximization of statistical power using an alpha of .05 for each separate comparison or analysis, within this sample of 90 participants, to detect any significant effects that are likely to be present while maintaining control over the family wise error rate. In fact, Hancock and Klockars (1996) quoted Maxwell and Delaney

(1990) that “each main effect and interaction effect constitute their own family because ‘they represent conceptually distinct questions (p. 259)’” (p. 276). Additionally, Hancock and Klockars mentioned that Miller’s (1981) statement on what constitutes a conceptual family may be “most accurate: ‘there are no hard-and-fast rules for where the family lines should be drawn and the statistician must rely on his own judgment for the problem at hand (p. 35)’” (p. 276).

Conclusions

The present study has contributed to the extant literature on the strong links between maternal psychological control and young adolescent self-esteem and internalizing problems by taking into account the *context* of the mother-child relationship, as was recently hypothesized by attachment theorists. More specifically, young adolescents’ perceptions of the mother-child relationship were found to moderate the relation between maternal psychological control and young adolescent self-esteem and internalizing problems. As mentioned earlier, the period of early adolescence is a sensitive period in a child’s life during which the child transitions into adolescence. Because parents are still significant sources of support in children’s lives in early adolescence, it makes sense that the quality of young adolescents’ relationships with their mothers would be crucial in determining the extent to which negative or positive parenting is related to young adolescents’ emotional and psychological adjustment.

Tables

Table 1.
Overview of Empirical Studies Linking Parental Psychological Control with Child and Adolescent Self-Esteem and Internalizing Problems

Article	N	Age	Sample Characteristics	Source (PC)	Correlates (of PC)
Albrecht et al., 2007	530	12 to 19 (T1); 14 to 21 (T2)	Canadian (86% Caucasian); 69% from two-parent families; about 50% of parents completed college	Youth report	Higher internalizing problems (T1) predicted higher youth-reported mother and father PC (T2)
Arim & Shapka, 2008	267	9 to 16	Canadian (predominantly Caucasian); middle and upper class	Youth report on both mothers and fathers	Higher internalizing problems
Aunola & Nurmi, 2005	196	5 to 6 yrs; 2 and 1/2 year longitudinal	Caucasian and Finnish; 83% from two-parent families; most parents at least had professional/vocational degree	Mother and father report	interacted with higher maternal affection in predicting higher internalizing problems
Bean et al., 2006	202	5th, 8th, & 10th grades	African American; 69% low income and 31% middle income; 50% from single- mother families and 30% lived with both biological parents	Youth report on both mothers and fathers	{NS} Internalizing problems
Bögels & van Melick, 2004	75	9 to 12	Holland; all participated with both biological parents (6% had parents who were split up)	Composite of youth and parents reports	{NS} Anxiety

Table 1.
Overview of Empirical Studies Linking Parental Psychological Control with Child and Adolescent Self-Esteem and Internalizing Problems (Continued)

Article	N	Age	Sample Characteristics	Source (PC)	Correlates (of PC)
Butler et al., 2007	78	11.5 to 17	Youths with Type 1 diabetes; participated with their mothers only; mothers were well-educated		Depressed mood
Caron et al., 2006	70	4th grade	66% African American and 32% Caucasian; low income sample; 51% from single-parent families; 26% from two-biological parent families; 91% of primary caregivers participating were mothers; mean years of education of primary caregivers was 12.5	Observational	Internalizing problems; higher PC interacted with lower parental warmth in predicting higher internalizing problems; higher PC interacted with higher parental behavioral control in predicting higher internalizing problems
Doyle & Markiewicz, 2005	175	13 (T1); 15 (T2)	Canadian; predominantly English Canadian; mean SES was 43.6 for mothers and 43.08 for fathers; range was a low of 19 to a high of 101; 79% from 2-parent homes (90% intact)	Youth report; rated parents as one unit	Higher internalizing problems (T2) and increase in internalizing problems (from T1 to T2)

Table 1.
Overview of Empirical Studies Linking Parental Psychological Control with Child and Adolescent Self-Esteem and Internalizing Problems (Continued)

Article	N	Age	Sample Characteristics	Source (PC)	Correlates (of PC)
Feng et al., 2009	225	9 (T1); 10 (T2)	Depressed girls; 69% African American/multiracial; 30% European American; low income; 50% single-mother families	Youth report	Higher maternal PC moderated the relation between lower girls' observed positive emotion during a task with their mother and higher depressive symptoms (T2)
Galambos et al., 2003	109	6th grade (T1); 3 1/2 year longitudinal	Canadian (White); working-to-middle class sample; from two-parent families	Aggregated score of mother and father reports	{NS} Internalizing problems
Garber & Flynn, 2001	240	6th grade, 3 year longitudinal	Most mothers had mood disorders; 82% White; low-mid socioeconomic status	Composite of mother and youth reports	attributional style (self-blame for negative events) which has been found to increase vulnerability to depression (Beck, 1967; Garber & Flynn, 1998)
Keller et al., 2008	235	kindergarten (T1); 3 year longitudinal	78% White; working-to-middle class sample; 88% married parents; parents averaged 14 years of education	Mother and father reports	Higher PC (T2) predicted higher internalizing problems (T3)

Table 1.
Overview of Empirical Studies Linking Parental Psychological Control with Child and Adolescent Self-Esteem and Internalizing Problems (Continued)

Article	N	Age	Sample Characteristics	Source (PC)	Correlates (of PC)
Krishnakumar et al., 2003	692	10 to 18	Tennessee sample (78% European American; 22% African American; parents were married or divorced/separated (no remarried)	Youth report; rated mothers only	Higher internalizing problems (EA); {NS} internalizing problems (AA); older children reported less PC and less internalizing problems (EA); children from divorced families reported more maternal PC (AA); girls reported more internalizing problems than boys
Kuppens et al., 2009	600	8 to 10	Flemish (92% Belgian); 84% biological parents were married; parents received between 12-15 years of education	Youth and parent reports	Higher emotional symptoms
Loukas, 2009	479	10 to 14 (T1); 11 to 15 (T2)	78% European American and 16% Latino; lived with at least biological mother	Youth report; rated mothers only	Higher internalizing problems (T1 and T2); elevated depressive symptoms (T1) predicted increased levels of perceived maternal PC (T2)

Table 1.
Overview of Empirical Studies Linking Parental Psychological Control with Child and Adolescent Self-Esteem and Internalizing Problems (Continued)

Article	N	Age	Sample Characteristics	Source (PC)	Correlates (of PC)
Mandara & Pikes, 2008	152	9th to 12th grade	African American; low socioeconomic status; 81% lived in a single-parent home	Youth report; rated mothers only	Higher depressive symptoms (girls); no sex differences in amount of maternal PC
McShane & Hastings, 2009	115	2 to 5	Canadian (80% Caucasian and 12% mixed ethnicity); middle class; 86% from two-parent families; 22% of parents had a graduate degree, 43% of mothers and 30% of fathers had an undergraduate degree	Mothers and fathers reported on their own reactions to their children's anxiety and internalizing problems	Higher internalizing problems; children with more internalizing problems at home and preschool had mothers who were increasingly overprotective and critical (characteristics of PC), respectively.
Morris et al., 2002	40	1st and 2nd grade	60% African American and 35% White; diverse socioeconomic status; 51% from two-parent homes; 48% from single parent homes; 43% had completed college, post college education, or professional degree	Youth report (on mothers only)	Higher child irritable distress moderated the relation between higher maternal PC and higher internalizing problems

Table 1.
Overview of Empirical Studies Linking Parental Psychological Control with Child and Adolescent Self-Esteem and Internalizing Problems (Continued)

Article	N	Age	Sample Characteristics	Source (PC)	Correlates (of PC)
Ojanen & Perry, 2007	278	11 to 13; 1 year longitudinal	Finnish	Youth report	Lower self-esteem among peers (T2); decline in self-esteem among peers (from T1 to T2) for boys (but not father PC) was linked to parent-reported internalizing problems (girls only) at T1; T1 maternal and paternal PC predicted T2 internalizing problems; T1 youth-reported (but not parent-reported) internalizing problems predicted T2
Rogers et al., 2003	306	6th and 7th grade; 1 year longitudinal	64% European American and 36% African American; most parents completed at least some college or vocational education; 50% from two-parent families (i.e., always married)	Youth report	Maternal (but not paternal) PC (T1) predicted boys' and girls' self-esteem (T2), mothers displayed higher PC than fathers at T1 and T2.
Shek, 2007	2,758	11 to 19; 1 year longitudinal	Chinese adolescents from Hong Kong; 84% (fathers) and 45% (mothers) employed full-time; most parents had completed or received some secondary school education	Youth report	

Table 1.
Overview of Empirical Studies Linking Parental Psychological Control with Child and Adolescent Self-Esteem and Internalizing Problems (Continued)

Article	N	Age	Sample Characteristics	Source (PC)	Correlates (of PC)
Silk et al., 2003	9,654	9th to 12th grade	Diverse ethnicity (54% White, 12% Asian, 12% Hispanic, and 9% Black); urban and suburban; diverse socioeconomic status; diverse family structure	Youth report; rated parents as one unit	Higher internalizing problems
Soenens et al., 2008a	396	8.5 (T1); 1 year longitudinal	Belgian; 84% intact families (parents married and/or living together)	Youth report; rated parents as one unit	Higher depressive symptoms (T1 and T2), even after controlling for parental responsiveness and behavioral control; adolescent depressive symptoms (T1) predicted parental PC (T2) showing a reciprocal relation
Soenens et al., 2008a	724	14 to 15 (T1); 1 year longitudinal	Belgian; 84% intact families (parents married and/or living together)	Youth report, rated each parent separately	Adolescent depression (T2) for males only; adolescent depression (T1) predicted maternal PC (T2) for males and females

Table 1.
Overview of Empirical Studies Linking Parental Psychological Control with Child and Adolescent Self-Esteem and Internalizing Problems (Continued)

Article	N	Age	Sample Characteristics	Source (PC)	Correlates (of PC)
Soenens et al., 2008b	434	15 to 18; 2 year longitudinal	Belgian; 87% from intact families; mothers averaged 12 years of education and fathers averaged 15 years of education	Youth report, rated each parent separately	{NS} depressive symptoms (T3); maladaptive perfectionism (T2) significantly intervened between parental PC (T1) and depressive symptoms
Soenens et al., 2005	336	18 to 24	Belgian	Youth report, rated each parent separately	maternal and paternal psychological control were significantly and similarly related to self-esteem, depression; psychological control predicted severity of depression, self-esteem
Soenens et al., 2005	338	14 to 20	Belgian	Youth report, rated each parent separately	Lower self-esteem; higher depression; females reported higher levels of depression and lower levels of self-esteem than males

Table 1.
Overview of Empirical Studies Linking Parental Psychological Control with Child and Adolescent Self-Esteem and Internalizing Problems (Continued)

Article	N	Age	Sample Characteristics	Source (PC)	Correlates (of PC)
Wang et al., 2007	806	7th grade; 6 month longitudinal	373 American (88% European American); 433 Chinese (Chinese decent and speaking Chinese); working- and middle-class families	Youth report; rated parents as one unit	well-being (including self-esteem) and increased emotional ill-being (including depressed affect) over

Note: T1 = time 1; T2 = time 2; PC = psychological control; NS = non-significant; EA = European American; AA = African American

Table 2.
Overview of Empirical Studies Linking Parental Psychological Control with Parent-Child Relationship Quality

Article	N	Age	Sample Characteristics	Source (PC)	Correlates (of PC)
Doyle & Markiewicz, 2005	175	13 (T1); 15 (T2)	Canadian; predominantly English Canadian; mean SES was 43.6 for mothers and 43.08 for fathers; range was a low of 19 to a high of 101; 79% from 2-parent homes (90% intact)	Youth report; rated parents as one unit	Insecure attachment; {NS} Attachment as mediator of the relation between PC (T1) and self-esteem and internalizing problems (T2)
Karavasilis, Doyle, & Markiewicz, 2003	202 (4th to 6th grade); 212 (7th to 11th grade)	10 and 15	Canadian	Youth report	Lower PC (i.e., higher psychological autonomy granting) were related to secure attachment
Ojanen & Perry, 2007	278	11 to 13; 1 year longitudinal	Finnish	Youth report	Lower perceived trust in mother; higher perceived defiance (e.g., opposition, aggression) in conflicts with mother; higher perceived maternal PC (T1) interacted with higher perceived debilitation in conflicts with mother (T1) in predicting lower self-esteem

Table 2.
Overview of Empirical Studies Linking Parental Psychological Control with Parent-Child Relationship Quality (Continued)

Article	N	Age	Sample Characteristics	Source (PC)	Correlates (of PC)
Shek, 2006	3,017	11 to 19	Chinese adolescents from Hong Kong; 84% (fathers) and 45% (mothers) employed full-time; most parents had completed or received some secondary school education	Youth report	Lower parent-child relational qualities (satisfaction with parental control, readiness to communicate with parents, and perceived mutual trust between parents and their children)

Note: T1 = time 1; T2 = time 2; PC = psychological control; NS = nonsignificant

Table 3.
Summary of Hypotheses

Mediation Analyses	Prediction
1	Expected each positive relationship quality variable (observed, perceived, and attachment security) to mediate the relation between psychological control and both self-esteem and internalizing problems (separately)
2	Expected each negative relationship quality variable (observed and perceived) to mediate the relation between psychological control and both self-esteem and internalizing problems (separately)
3	No hypothesis given regarding the alternative model examining psychological control as mediating the relation between relationship quality (positive or negative) and both self-esteem and internalizing problems (separately)
Main Effects	Prediction
4	Expected psychological control to negatively predict self-esteem and positively predict internalizing problems, above and beyond warmth and behavioral control (covariates)
5	Expected each positive relationship quality variable (observed, perceived, and attachment security) to positively predict self-esteem and negatively predict internalizing problems
6	Expected each negative relationship quality variable (observed and perceived) to negatively predict self-esteem and positively predict internalizing problems
Moderation Analyses	Prediction
7	Expected each positive relationship quality variable (observed, perceived, and attachment security) to act as a moderator by interacting with psychological control in predicting both self-esteem and internalizing problems (separately)
8	Expected each negative relationship quality variable (observed and perceived) to act as a moderator by interacting with psychological control in predicting both self-esteem and internalizing problems (separately)

Table 4.
Chi-Square Results for Maternal Demographics

Sample	Maternal Ethnicity (p < .001)					Totals
	White	Latina/Hispanic	Black	Asian	Other	
Present Study	69	4	10	2	5	90
Larger Study	72	18	20	35	5	150
Totals	141	22	30	37	10	240

Sample	Maternal Age (ns)			Totals
	27-35 years	36-40 years	41-53 years	
Present Study	8	28	51	87
Larger Study	21	44	80	145
Totals	29	72	131	232

Sample	Maternal Education (ns)				Totals
	E/H/V School	SC or UD	SGS or GD	Other	
Present Study	7	50	32	0	89
Larger Study	23	78	44	4	149
Totals	30	128	76	4	238

Notes. E/H/V School = completed elementary, high, or vocational school; SC or UD = some college or university degree; SGS or GD = some graduate school or graduate degree.

Sample	Maternal Marital Status (ns)			Totals
	Married or CL	Sep. or Div.	Single or Other	
Present Study	67	11	11	89
Larger Study	110	28	11	149
Totals	177	39	22	238

Notes. CL = common law; Sep. or Div. = separated or divorced.

Table 5.
Descriptive Information for Dependent and Independent Variables (N = 90)

Variables	<i>M</i>	<i>SD</i>	Min.	Max.	α
Self-Esteem	3.43	0.56	1.40	4.00	0.93
Internalizing Problems	3.49	3.51	0.00	14.00	0.65
Psychological Control	3.40	0.77	1.75	5.25	0.65
Warmth-Support	5.51	0.37	4.44	6.00	0.69
Behavioral Control	2.58	0.81	1.00	4.71	0.73
Obs. Total Involvement	7.80	0.24	7.14	8.00	--
Obs. Total Reciprocity	5.38	0.73	3.49	6.90	--
Obs. Total Asynchrony	1.66	0.82	0.05	4.36	--
Obs. Total Positivity	2.08	0.90	0.29	4.30	--
Obs. Total Negativity	0.73	0.70	0.00	3.23	--
Obs. Involvement in CA	1.93	0.12	1.43	2.00	--
Obs. Reciprocity in CA	1.34	0.24	0.75	1.85	--
Obs. Asynchrony in CA	0.46	0.25	0.05	1.30	--
Obs. Positivity in CA	0.44	0.25	0.00	1.15	--
Obs. Negativity in CA	0.12	0.15	0.00	0.60	--
Obs. Involvement in PV	1.95	0.10	1.40	2.00	--
Obs. Reciprocity in PV	1.33	0.22	0.70	1.75	--
Obs. Asynchrony in PV	0.43	0.24	0.00	1.15	--
Obs. Positivity in PV	0.40	0.27	0.00	1.05	--
Obs. Negativity in PV	0.21	0.25	0.00	1.14	--
Obs. Involvement in MD	1.97	0.07	1.60	2.00	--
Obs. Reciprocity in MD	1.33	0.27	0.40	2.00	--
Obs. Asynchrony in MD	0.40	0.25	0.00	1.06	--
Obs. Positivity in MD	0.40	0.25	0.00	1.10	--
Obs. Negativity in MD	0.15	0.20	0.00	0.83	--
Obs. Involvement in BT	1.95	0.12	1.50	2.00	--
Obs. Reciprocity in BT	1.38	0.28	0.60	2.00	--
Obs. Asynchrony in BT	0.37	0.27	0.00	1.20	--
Obs. Positivity in BT	0.84	0.45	0.00	1.80	--
Obs. Negativity in BT	0.24	0.32	0.00	1.50	--
Perceived Positivity	4.29	0.44	2.95	5.00	0.88
Perceived Negativity	2.98	0.68	1.36	5.00	0.89
Attachment Security	3.39	0.39	2.13	3.93	0.79

Note. Self-Esteem = SPPC; Anxiety-Depression = Maternal CBCL; Maternal Psychological Control/Warmth-Support/Behavioral Control = CRPR; Obs. Total = mean mother-child relationship quality scores across all 4 videotaped activity sessions [constructive activity (CA), plan a vacation (PV), moral dilemma (MD), and best times (BT)]; Perceived Positivity/Negativity = NRI; Attachment Security = Security Scale.

Table 6.
Correlations Among Dependent, Parenting Style, Observed (Total) Mother-Child Relationship Quality, and Observed Total Mother-Child Relationship Quality Variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12
Internalized Maladjustment:												
1. Self-Esteem	—											
2. Internalizing Problems	-.27**	—										
Maternal Parenting Style:												
3. Psychological Control	-0.08	.18*	—									
4. Warmth-Support	.21*	-.32**	-0.04	—								
5. Behavioral Control	0.10	-0.04	.27**	-0.12	—							
Obs. Total Quality:												
6. Total Involvement	.22*	0.17†	-0.13	0.00	-0.15†	—						
7. Total Reciprocity	0.08	0.11	-0.15†	-0.12	0.03	.26**	—					
8. Total Asynchrony	0.07	0.03	0.00	-0.16†	.20*	-.27**	.27**	—				
9. Total Positivity	.29**	0.05	-0.05	-0.03	-.19*	.41***	0.06	0.11	—			
10. Total Negativity	-0.11	0.00	0.01	-0.13	0.12	-.36***	.26**	.49***	-.24*	—		
Perceived Quality:												
11. Positivity	.24*	-.15†	-0.02	0.04	0.06	0.05	-0.06	0.02	0.09	-.33**	—	
12. Negativity	-.17*	-0.12	0.10	-0.06	0.00	-.33**	0.03	0.11	-.29**	.38***	-.18*	—
Attachment Security:												
13. Attachment Security	.39***	-.20*	-0.14	.27**	0.08	.16†	0.00	-0.09	0.17†	-.43***	.60***	-.31**

Note. Obs. Total Quality = average mother-child relationship quality scores across all 4 videotaped activity sessions (constructive activity, plan a vacation, moral dilemma, and best times); † $p < .09$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 7.
Correlations Among Dependent, Parenting Style, Observed Mother-Child Relationship Quality in Constructive Activity (CA), and Perceived Mother-Child Relationship Quality Variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12
Internalized Maladjustment:												
1. Self-Esteem	—											
2. Internalizing Problems	-.27**	—										
Maternal Parenting Style:												
3. Psychological Control	-.08	.18*	—									
4. Warmth-Support	.21*	-.32**	-.04	—								
5. Behavioral Control	0.1	-.04	.27**	-.12	—							
Obs. Quality in CA:												
6. Involvement	.20*	.05	0.1	-.02	.04	—						
7. Reciprocity	.09	.14	-.21*	-.16†	-.01	.26**	—					
8. Asynchrony	-.04	.07	-.02	-.21*	.09	-.20*	.48***	—				
9. Positivity	.22*	.10	.05	.02	-.15†	.21*	.34***	-.02	—			
10. Negativity	-.03	.02	.03	-.07	.07	-.32**	.15†	.48***	-.17†	—		
Perceived Quality:												
11. Positivity	.24*	-.15†	-.02	.04	.06	.16†	.21*	.08	.14	-.20*	—	
12. Negativity	-.17*	-.12	.10	-.06	.00	-.12	-.07	0.21*	-.20*	.35***	-.18*	—
Attachment Security:												
13. Attachment Security	.39***	-.20*	-.14	.27**	.08	.27**	.19*	-.10	.27**	-.28**	.60***	-.31**

Note. Obs. Quality in CA = average observed mother-child relationship quality during constructive activity session; † $p < .05$. * $p < .01$. ** $p < .001$. *** $p < .0001$.

Table 8.
Correlations Among Dependent, Parenting Style, Observed Mother-Child Relationship Quality in Plan a Vacation Activity (PV), and Perceived Mother-Child Relationship Quality Variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12
Internalized Maladjustment:												
1. Self-Esteem	—											
2. Internalizing Problems	-.27**	—										
Maternal Parenting Style:												
3. Psychological Control	-.08	.18*	—									
4. Warmth-Support	.21*	-.32**	-.04	—								
5. Behavioral Control	.10	-.04	.27**	-.12	—							
Obs. Quality in PV:												
6. Involvement	0.08	.22*	-.19*	.01	-.14†	—						
7. Reciprocity	.04	.16†	-.10	.01	.01	.23*	—					
8. Asynchrony	.09	.01	.09	-.03	.20*	-.15†	.17†	—				
9. Positivity	.25**	-.11	-.13	-.12	-.07	.32**	.15†	.05	—			
10. Negativity	-.07	-.08	.00	-.06	-.02	-.21*	.23*	.38***	-.13	—		
Perceived Quality:												
11. Positivity	.24*	-.15†	-.02	.04	.06	-.06	-.12	.07	-.10	-.16†	—	
12. Negativity	-.17*	-.12	.10	-.06	.00	-.39***	-.10	-.01	-.17†	.26**	-.18*	—
Attachment Security:												
13. Attachment Security	.39***	-.20*	-.14	.27**	.08	-.11	-.01	-.03	.03	-.24*	.60***	-.31**

Note. Obs. Quality in PV = average observed mother-child relationship quality during plan a vacation session; † $p < .09$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 9.
Correlations Among Dependent, Parenting Style, Observed Mother-Child Relationship Quality in Moral Dilemma Activity (MD), and Perceived Mother-Child Relationship Quality Variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12
Internalized Maladjustment:												
1. Self-Esteem	—											
2. Internalizing Problems	-.27**	—										
Maternal Parenting Style:												
3. Psychological Control	-.08	.18*	—									
4. Warmth-Support	.21*	-.32**	-.04	—								
5. Behavioral Control	.01	-.04	.27**	-.12	—							
Obs. Quality in MD:												
6. Involvement	.21*	-.01	-.08	-.01	.04	—						
7. Reciprocity	.07	.04	-.02	-.02	.06	.20*	—					
8. Asynchrony	.11	.03	-.04	-.20*	.13	-.11	.19*	—				
9. Positivity	.05	.01	-.01	-.03	-.24*	.18*	.11	-.04	—			
10. Negativity	-.11	.03	.08	-.01	.15	-.07	.34***	.23*	-.12	—		
Perceived Quality:												
11. Positivity	.24*	-.15†	-.02	.04	.06	.04	-.18*	-.01	-.10	-.32**	—	
12. Negativity	-.17*	-.12	.10	-.06	.00	-.32**	.13	.06	-.15†	.32**	-.18*	—
Attachment Security:												
13. Attachment Security	.39***	-.20*	-.14	.27**	.08	.20*	-.09	-.10	-.02	-.30**	.60***	-.31**

Note. Obs. Quality in MD = average observed mother-child relationship quality during moral dilemma session;
† $p < .09$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 10.
Correlations Among Dependent, Parenting Style, Observed Mother-Child Relationship Quality in Best Times Activity (BT), and Perceived Mother-Child Relationship Quality Variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12
Internalized Maladjustment:												
1. Self-Esteem	—											
2. Internalizing Problems	-.27**	—										
Maternal Parenting Style:												
3. Psychological Control	-.08	.18*	—									
4. Warmth-Support	.21*	-.32**	-.04	—								
5. Behavioral Control	.01	-.04	.27**	-.12	—							
Obs. Quality in BT:												
6. Involvement	.05	.11	-.16†	.02	-.25*	—						
7. Reciprocity	.04	.00	-.12	-.16†	.01	.23*	—					
8. Asynchrony	.06	-.02	-.03	-.10	.23*	.07	.19*	—				
9. Positivity	.28**	.11	-.05	.03	-.13	.27**	-.16†	.16†	—			
10. Negativity	-.12	.04	-.02	-.20*	.15†	.02	.30**	.38***	-.13	—		
Perceived Quality:												
11. Positivity	.24*	-.15†	-.02	.04	.06	-.04	-.07	-.08	.23*	-.31**	—	
12. Negativity	-.17*	-.12	.10	-.06	.00	-.03	.09	.11	-.28**	.27**	-.18*	—
Attachment Security:												
13. Attachment Security	.39***	-.20*	-.14	.27**	.08	.02	-.07	-.05	.19*	-.43***	.60***	-.31**

Note. Obs. Quality in BT = average observed mother-child relationship quality during best times session;

† $p < .09$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 11.
Blocks for Hierarchical Regression Analyses

Block	Description of Block	Variable Entered
1	Child Ethnicity	Latino/Hispanic American African American East Asian American Multiracial
2	Maternal Parenting Practice Covariates	Warmth Behavioral Control
3	Maternal Parenting Practice	Psychological Control
4	Mother-Child Relationship Quality	Observed Positivity Observed Negativity Perceived Positivity Perceived Negativity Attachment Security
5	Psychological Control × Mother-Child Relationship Quality	Psychological Control × Observed Positivity Psychological Control × Observed Negativity Psychological Control × Perceived Positivity Psychological Control × Perceived Negativity Psychological Control × Attachment Security

Table 12.
Hierarchical Multiple Regression Analysis Predicting Youth-Reported Self-Esteem from Maternal Psychological Control and Observed Total Positivity

Predictors	B	SE B	β	ΔR^2
Step 1 (Child Ethnicity Covariates)				
Constant	3.45	.07		.03
Latino-Hispanic	.01	.33	.01	
African American	-.07	.19	-.04	
East Asian American	-.85	.57	-.16	
Multiracial	-.05	.18	-.03	
Step 2 (Maternal Parenting Style Covariates)				
Constant	1.31	.92		.06†
Behavioral Control	.10	.08	.15	
Warmth-Support	.34	.16	.23*	
Step 3				
Constant	1.27	.93		.01
Psychological Control	-.07	.08	-.10	
Step 4				
Constant	.94	.88		.10**
Observed Total Positivity	.22	.07	.35**	
Step 5				
Constant	.91	.90		.00
Psychological Control \times Observed Total Positivity	-.03	.08	-.04	

Note: Observed Total Positivity = observed mother-child relationship positivity across all 4 videotaped activity sessions (constructive activity, plan a vacation, moral dilemma, and best times)
 N = 90; $R^2 = .03$ for Step 1. † $p < .10$. * $p < .05$. ** $p < .01$.

Table 13.
Hierarchical Multiple Regression Analysis Predicting Youth-Reported Self-Esteem from Maternal Psychological Control and Observed Positivity in Constructive Activity

Predictors	B	SE B	β	ΔR^2
Step 1 (Child Ethnicity Covariates)				
Constant	3.45	.07		.03
Latino-Hispanic	.01	.33	.01	
African American	-.07	.19	-.04	
East Asian American	-.85	.57	-.16	
Multiracial	-.05	.18	-.03	
Step 2 (Maternal Parenting Style Covariates)				
Constant	1.31	.92		.06†
Behavioral Control	.10	.08	.15	
Warmth-Support	.34	.16	.23*	
Step 3				
Constant	1.27	.93		.01
Psychological Control	-.07	.08	-.10	
Step 4				
Constant	1.18	.90		.06*
Observed Positivity (in CA)	.55	.24	.25*	
Step 5				
Constant	1.19	.91		.00
Psychological Control \times Observed Positivity (in CA)	.09	.29	.04	

Note: Observed Positivity (in CA) = observed mother-child relationship positivity in constructive activity; N = 90; $R^2 = .03$ for Step 1. † $p < .10$. * $p < .05$.

Table 14.
Hierarchical Multiple Regression Analysis Predicting Youth-Reported Self-Esteem from Maternal Psychological Control and Observed Positivity in Plan a Vacation

Predictors	B	SE B	β	ΔR^2
Step 1 (Child Ethnicity Covariates)				
Constant	3.45	.07		.03
Latino-Hispanic	.01	.33	.01	
African American	-.07	.19	-.04	
East Asian American	-.85	.57	-.16	
Multiracial	-.05	.18	-.03	
Step 2 (Maternal Parenting Style Covariates)				
Constant	1.31	.92		.06†
Behavioral Control	.10	.08	.15	
Warmth-Support	.34	.16	.23*	
Step 3				
Constant	1.27	.93		.01
Psychological Control	-.07	.08	-.10	
Step 4				
Constant	.91	.91		.07*
Observed Positivity (in PV)	.57	.22	.28*	
Step 5				
Constant	.90	.91		.00
Psychological Control \times Observed Positivity (in PV)	-.10	.27	-.04	

Note: Observed Positivity (in PV) = observed mother-child relationship positivity in plan a vacation; N = 90; $R^2 = .03$ for Step 1. † $p < .10$. * $p < .05$.

Table 15.
Hierarchical Multiple Regression Analysis Predicting Youth-Reported Self-Esteem from Maternal Psychological Control and Observed Positivity in Best Times

Predictors	B	SEB	β	ΔR^2
Step 1 (Child Ethnicity Covariates)				
Constant	3.45	.07		.03
Latino-Hispanic	.01	.33	.01	
African American	-.07	.19	-.04	
East Asian American	-.85	.57	-.16	
Multiracial	-.05	.18	-.03	
Step 2 (Maternal Parenting Style Covariates)				
Constant	1.31	.92		.06†
Behavioral Control	.10	.08	.15	
Warmth-Support	.34	.16	.23*	
Step 3				
Constant	1.27	.93		.01
Psychological Control	-.07	.08	-.10	
Step 4				
Constant	1.20	.89		.08**
Observed Positivity (in BT)	.37	.14	.30**	
Step 5				
Constant	1.19	.90		.00
Psychological Control × Observed Positivity (in BT)	-.01	.16	-.01	

Note: Observed Positivity (in BT) = observed mother-child relationship positivity in best times; N = 90; $R^2 = .03$ for Step 1. † $p < .10$. * $p < .05$. ** $p < .01$.

Table 16.
Hierarchical Multiple Regression Analysis Predicting Youth-Reported Self-Esteem from Maternal Psychological Control and Perceived Positivity

Predictors	B	SEB	β	ΔR^2
Step 1 (Child Ethnicity Covariates)				
Constant	3.45	.07		.03
Latino-Hispanic	.01	.33	.01	
African American	-.07	.19	-.04	
East Asian American	-.85	.57	-.16	
Multiracial	-.05	.18	-.03	
Step 2 (Maternal Parenting Style Covariates)				
Constant	1.31	.92		.06†
Behavioral Control	.10	.08	.15	
Warmth-Support	.34	.16	.23*	
Step 3				
Constant	1.27	.93		.01
Psychological Control	-.07	.08	-.10	
Step 4				
Constant	1.41	.90		.06*
Perceived Positivity	.32	.13	.25*	
Step 5				
Constant	1.52	.91		.01
Psychological Control \times Perceived Positivity	.20	.21	.11	

N = 90; $R^2 = .03$ for Step 1. † $p < .10$. * $p < .05$.

Table 17.
Hierarchical Multiple Regression Analysis Predicting Youth-Reported Self-Esteem from Maternal Psychological Control and Attachment Security

Predictors	B	SEB	β	ΔR^2
Step 1 (Child Ethnicity Covariates)				
Constant	3.45	.07		.03
Latino-Hispanic	.01	.33	.01	
African American	-.07	.19	-.04	
East Asian American	-.85	.57	-.16	
Multiracial	-.05	.18	-.03	
Step 2 (Maternal Parenting Style Covariates)				
Constant	1.31	.92		.06†
Behavioral Control	.10	.08	.15	
Warmth-Support	.34	.16	.23*	
Step 3				
Constant	1.27	.93		.01
Psychological Control	-.07	.08	-.10	
Step 4				
Constant	2.22	.93		.10**
Attachment Security	.49	.15	.34**	
Step 5				
Constant	2.16	.94		.00
Psychological Control × Attachment Security	-.09	.20	-.05	

N = 90; $R^2 = .03$ for Step 1. † $p < .10$. * $p < .05$. ** $p < .01$.

Table 18.
Hierarchical Multiple Regression Analysis Predicting Youth-Reported Self-Esteem from Maternal Psychological Control and Perceived Negativity

Predictors	B	SE B	β	ΔR^2
Step 1 (Child Ethnicity Covariates)				
Constant	3.45	.07		.03
Latino-Hispanic	.01	.33	.01	
African American	-.07	.19	-.04	
East Asian American	-.85	.57	-.16	
Multiracial	-.05	.18	-.03	
Step 2 (Maternal Parenting Style Covariates)				
Constant	1.31	.92		.06†
Behavioral Control	.10	.08	.15	
Warmth-Support	.34	.16	.23*	
Step 3				
Constant	1.27	.93		.01
Psychological Control	-.07	.08	-.10	
Step 4				
Constant	1.32	.91		.03†
Perceived Negativity	-.15	.09	-.19†	
Step 5				
Constant	1.04	.90		.05*
Psychological Control × Perceived Negativity	.30	.13	.26*	

N = 90; $R^2 = .03$ for Step 1. † $p < .10$. * $p < .05$.

Table 19.
Hierarchical Multiple Regression Analysis Predicting Maternal-Reported Youth Internalizing Problems from Maternal Psychological Control

Predictors	B	SE B	β	ΔR^2
Step 1 (Child Ethnicity Covariates)				
Constant	3.69	.44		.03
Latino-Hispanic	-1.25	2.09	-.07	
African American	-1.62	1.20	-.15	
East Asian American	-1.69	3.56	-.05	
Multiracial	.31	1.15	.03	
Step 2 (Maternal Parenting Style Covariates)				
Constant	21.79	5.64		.11**
Behavioral Control	-.25	.48	-.06	
Warmth-Support	-3.16	.97	-.34**	
Step 3				
Constant	22.41	5.51		.05*
Psychological Control	1.08	.48	.24*	

N = 90; $R^2 = .03$ for Step 1. * $p < .05$. ** $p < .01$.

Table 20.
Hierarchical Multiple Regression Analysis Predicting Maternal-Reported Youth Internalizing Problems from Maternal Psychological Control and Perceived Positivity

Predictors	B	SE B	β	ΔR^2
Step 1 (Child Ethnicity Covariates)				
Constant	3.69	.44		.03
Latino-Hispanic	-1.25	2.09	-.07	
African American	-1.62	1.20	-.15	
East Asian American	-1.69	3.56	-.05	
Multiracial	.31	1.15	.03	
Step 2 (Maternal Parenting Style Covariates)				
Constant	21.79	5.64		.11**
Behavioral Control	-.25	.48	-.06	
Warmth-Support	-3.16	.97	-.34**	
Step 3				
Constant	22.41	5.51		.05*
Psychological Control	1.08	.48	.24*	
Step 4				
Constant	22.17	5.54		.01
Perceived Positivity	-.56	.82	-.07	
Step 5				
Constant	23.82	5.43		.05*
Psychological Control \times Perceived Positivity	2.96	1.24	.25*	

N = 90; $R^2 = .03$ for Step 1. * $p < .05$. ** $p < .01$.

Figures

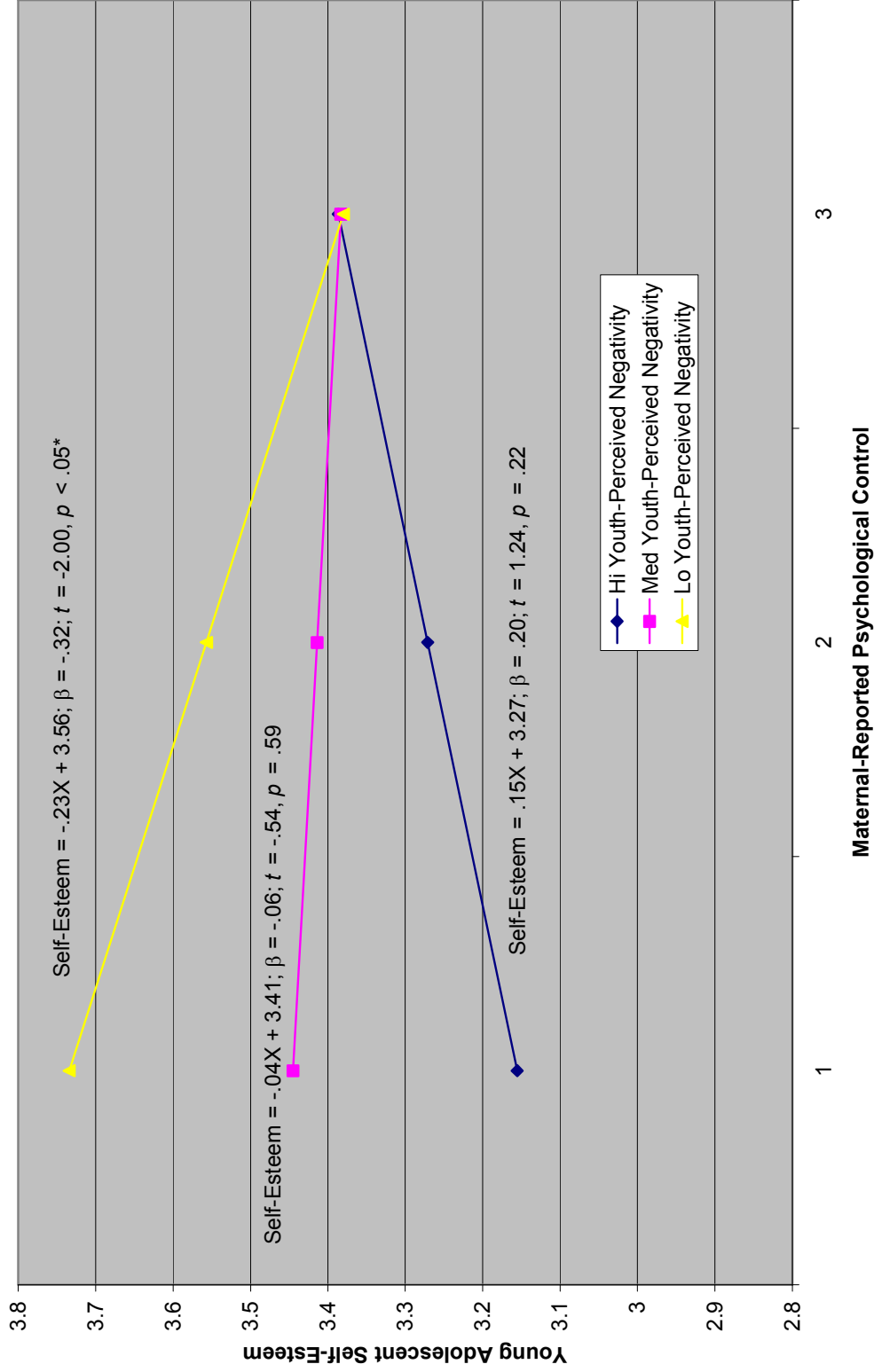


Figure 1. Predicting young adolescent self-esteem from maternal-reported psychological control at levels of youth-perceived mother-child relationship negativity.

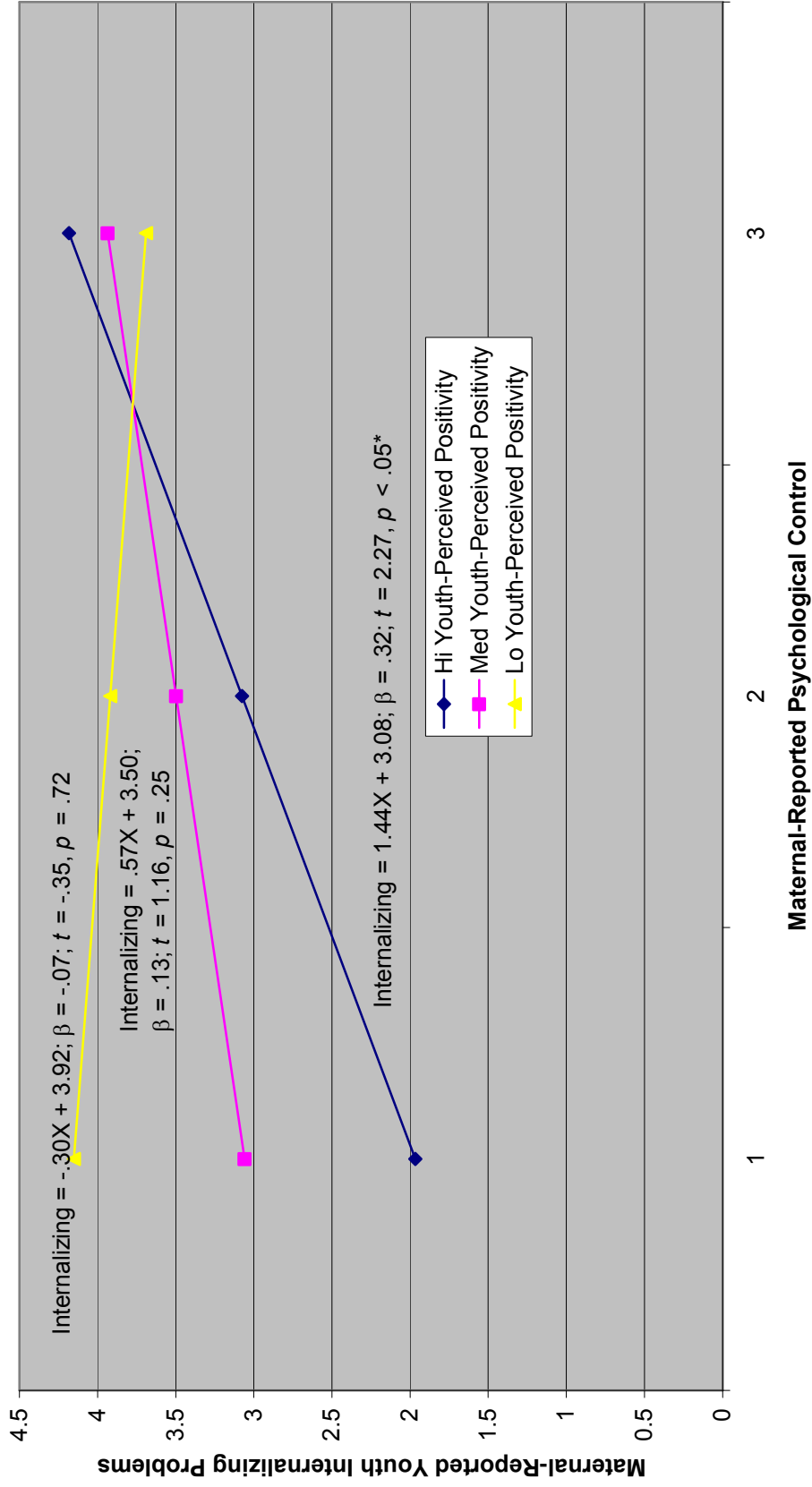


Figure 2. Predicting maternal-reported young adolescent internalizing problems from maternal-reported psychological control at levels of youth-perceived mother-child relationship positivity.

Appendices Appendix A

Consent Form

- Title of Project: Mother-Child Interactions and the Transition to Middle School
Funding for this research is being provided by The National Institutes of Health under the grant title "Friendship and the Transition to Middle School".
- Statement of Consent: I give consent for my child to participate in a program of research being conducted by the Center for Children, Relationships, and Culture at the University of Maryland, College Park.
- Purpose: The purpose of this research is to investigate the nature, quality, functions, and sources of friendship during the transition from elementary school to middle school.
- Procedures: In this session, you and your child will be observed interacting in several situations. First, you and your child will be asked to engage in a paper folding task together. Second, you and your child will be asked to engage in three discussion tasks: One, you and your child will participate in a cooperative planning task; for this task you will plan the itinerary for an imaginary week-long vacation together. Two, you and your child will be asked to discuss some problems or dilemmas on which people are known to differ in opinion. Three, you and your child will be asked to reminisce about special times you have had together in the past.
- The situations described above will be videotaped for the purposes of training, later coding, and analysis by the researchers. Project professors, staff, & student assistants have access to videotapes (kept in UMD office up to 20 years); and videotapes could be used for presentation purposes. Following the videotaped session, your child will be individually interviewed and asked to fill out questionnaires regarding his/her relationships with friends and family.
- Confidentiality: I understand that all of the information collected during the course of this visit will remain confidential and will be identified by number only.
- Risks: I understand that there are no known risks associated with the procedures used in this project.
- Benefits: I understand that the study is not designed to help me or my child personally, but that the investigator hopes to learn more about the relations between friendship, parents, and the transition from elementary school to middle school. If my child or I should have any questions, I understand that we may ask them at any time during the session. If any questions or tasks/ activities make either of us feel uncomfortable, then we are free not to answer. Our participation in this project is purely voluntary and we may choose to withdraw at any time without penalty.
- Principal Investigator: Kenneth H. Rubin, Ph.D.
Dept of Human Development
3304 Benjamin Building
University of Maryland
College Park, MD 20742
- Co-Investigator: Kim B. Burgess, Ph.D.
Dept of Human Development
3304 Benjamin Building
University of Maryland
College Park, MD 20742

Parent's Signature: _____

Child's Name: _____

Date: _____

Mother's Marital Status with
child's biological/ natural
father (check one):

Married _____
Separated _____
Divorced _____
Common law _____
Single _____
Other (specify) _____

Mother's current relationship status (check one):

Married _____
Separated _____
Divorced _____
Common law _____
Single _____
Living with partner _____
Other (specify) _____

Length of current relationship: _____

Appendix C

Child-Rearing Practices Report

(Rickel & Biasatti, 1982)

Name (first and last): _____ Date: _____

CHILD-REARING PRACTICES REPORT QUESTIONNAIRE

(CRPR-Q)—Boys' Version

The following statements represent matters of interest and concern to parents. Not all parents feel the same about them. Read each statement carefully and circle the number at the right which most closely reflects your degree of agreement or disagreement. Please consider each statement in relation to your child who is participating in the study. Try to answer all statements without skipping or looking back.

	1	2	3	4	5	6
	Strongly disagree	Moderately disagree	Slightly disagree	Slightly agree	Moderately agree	Strongly agree
1. I respect my child's opinion and encourage him to express it.	1	2	3	4	5	6
2. I feel a child should be given comfort and understanding when he is scared or upset.	1	2	3	4	5	6
3. I try to keep my child away from children or families who have different ideas or values from our own.	1	2	3	4	5	6
4. I believe that a child should be seen and not heard.	1	2	3	4	5	6
5. I express affection by hugging, kissing, and holding my child.	1	2	3	4	5	6
6. I find some of my greatest satisfactions in my child.	1	2	3	4	5	6
7. I prefer that my child not try things if there is a chance he will fail.	1	2	3	4	5	6
8. I encourage my child to wonder and think about life.	1	2	3	4	5	6
9. I usually take into account my child's preferences in making plans for the family.	1	2	3	4	5	6
10. I feel a child should have time to think, daydream, and even loaf sometimes.	1	2	3	4	5	6

	1 Strongly disagree	2 Moderately disagree	3 Slightly disagree	4 Slightly agree	5 Moderately agree	6 Strongly agree
11. I do not allow my child to say bad things about his teachers.	1	2	3	4	5	6
12. I teach my child that in one way or another punishment will find him when he is bad.	1	2	3	4	5	6
13. I do not allow my child to get angry with me.	1	2	3	4	5	6
14. I am easygoing and relaxed with my child.	1	2	3	4	5	6
15. I talk it over and reason with my child when he misbehaves.	1	2	3	4	5	6
16. I trust my child to behave as he should, even when I am not with him.	1	2	3	4	5	6
17. I joke and play with my child.	1	2	3	4	5	6
18. My child and I have warm, intimate moments with each other.	1	2	3	4	5	6
19. I encourage my child to be curious, to explore and question things.	1	2	3	4	5	6
20. I expect my child to be grateful and appreciate all the advantages he has.	1	2	3	4	5	6
21. I believe in praising a child when he is good and think it gets better results than punishing him when he is bad.	1	2	3	4	5	6
22. I make sure my child knows that I appreciate what he tries to accomplish.	1	2	3	4	5	6
23. I encourage my child to talk about his troubles.	1	2	3	4	5	6
24. I believe children should not keep secrets from their parents.	1	2	3	4	5	6
25. I teach my child to keep control of his feelings at all times.	1	2	3	4	5	6

	1 Strongly disagree	2 Moderately disagree	3 Slightly disagree	4 Slightly agree	5 Moderately agree	6 Strongly agree
26. When I am angry with my child, I let him know about it.	1	2	3	4	5	6
27. I think a child should be encouraged to do things better than others.	1	2	3	4	5	6
28. I believe that scolding and criticism makes my child improve.	1	2	3	4	5	6
29. I believe my child should be aware of how much I sacrifice for him.	1	2	3	4	5	6
30. I do not allow my child to question my decisions.	1	2	3	4	5	6
31. I let my child know how ashamed and disappointed I am when he misbehaves.	1	2	3	4	5	6
32. I want my child to make a good impression on others.	1	2	3	4	5	6
33. I find it interesting and educational to be with my child for long periods.	1	2	3	4	5	6
34. I instruct my child not to get dirty while he is playing.	1	2	3	4	5	6
35. I control my child by warning him about the bad things that can happen to him.	1	2	3	4	5	6
36. I don't want my child to be looked upon as different from others.	1	2	3	4	5	6

Psychological Control factor included the following CRPR variable numbers:
28, 29, 31, and 32

Warmth factor included the following CRPR variable numbers:
1, 5, 6, 9, 14, 15, 17, 18, and 21

Behavioral Control factor included the following CRPR variable numbers:
3, 4, 11, 13, 25, 30, and 34

Appendix D

Mother-Child Relationship Quality Scale

(adapted from the *Parent-Child Relationship Quality Scale*; Rubin & Burgess, 2000)

Activities:

- origami/knot tying (origami in 5th grade; knot tying in 6th grade)
- plan a week-long vacation
- discuss moral dilemmas/problems
- best times together

If the last segment of any session / activity is ≥ 15 seconds, still code it in its own segment.

**For all activities, code for the dyadic (mother-child) interaction at 30 second intervals.*

**Go back to the beginning of the interchange or instance and code it at the beginning of when the reaction started.*

INVOLVEMENT (*Use for all activities*)

This code refers to the connectedness of the relationship; that is, to what extent are the child's and mother's behaviors/actions interconnected? In other words, how psychologically separate or connected are their activities? This code will be defined in terms of *duration* and *intensity* (e.g., tons of eye contact and talking intently) of contact with one another. In light of subsequent codes, the child & mother can be highly connected in the face of reciprocal, asynchronous, positive, or negative interaction. It does not matter who initiates the interaction or what the quality of interaction is, but rather that the individuals are relating to one another. 'Are they oriented toward each other, attending to each other, and checking with each other?'

Are the child & mother paying attention to each other or talking to each other? For example, doing an activity together would receive a higher score than doing a separate activity, whereas separate activity in proximity to one another or merely looking at each other across a distance would receive a lower score.

0 = None or very little involvement – **1-2 exchanges** (verbal or nonverbal) (e.g., brief mutual glance = 1 nonverbal exchange) or **≤ 14 seconds** of involvement. {An exchange is a brief or minor Action-Reaction instance, whereas an interchange is a lengthier event consisting of a more substantial Action-Reaction instance}

1 = Some involvement. **≥ 3 exchanges** (verbal or nonverbal) and/or **15-19 seconds** of involvement.

2 = A lot of involvement. **≥ 20 seconds** characterized by involvement.

RECIPROCITY (*Use for all activities*)

This is the first of four codes to assess the *quality of interaction*. This code has nothing to do with the positivity or negativity of the interaction, but the extent to which the interaction is reciprocal, contingent, or mutual (not whether it is nice).

These are contingent responses (verbal or physical/nonverbal) that are appropriate and relevant to what the other person is saying or doing (verbal or physical/nonverbal).

Other examples might include 'trading, turn-taking behavior - either verbal or physical, offering relevant information or clarifying something, leaning together and whispering'.

0 = No reciprocity. No reciprocal interchanges.

1 = Little or some reciprocity. 1-2 reciprocal interchanges and/or ≤ 19 seconds of reciprocity.

2 = A lot of reciprocity. ≥ 3 reciprocal interchanges and/or ≥ 20 seconds of reciprocity.

Note: A simple "yeah," "yes," "ok," "no," or synonyms of these do not count as part of an interchange. Those are considered exchanges and are coded under the Involvement code.

FOCUS ON NONVERBALS AS WELL!!

INTERACTIONAL ASYNCHRONY. (*Use for all activities*)

This code assesses the asynchrony or disharmony of the interaction, characterizing the non-mutuality or non-reciprocal nature of the interaction. This code has nothing to do with the positivity or negativity of the interaction, but pertains to the *asynchronous, non-contingent nature of the interaction*, and whatever makes the interaction unequal (or asymmetrical). When conflicts involve getting in the other's way, 'not letting the other speak (i.e. interrupting each other*)', or not showing evidence of hearing what the other is saying', then their interactions qualify as *asynchronous*. Overt indicators include: 'not partaking of each other's agenda within the same task or activity (only if they're already on task or engaged in something), fighting for the floor (overtaking the other), talking past each other, and being unresponsive' (e.g., if the mother or child asks a question and it is not verbally or nonverbally responded to). 'Intrusiveness and unresponsiveness' are prototypic forms of disharmony.

* Code all instances, even if they are repetitive, as multiple instances of asynchrony.

Asynchrony may not only be characterized by interactions wherein the individuals seem to "clash" with each other, but also as an imbalance in the interactional processes (e.g., 'when one partner continues to dominate the conversation or activity, especially without letting the other partner take a turn'). In an asynchronous interchange or episode, it may appear that the 'goals of one person do not match the goals of the other.' If both the mother and child start to talk at the same time (by accident), then it is not asynchronous, unless they keep trying to verbally overtake and compete with each other.

Interrupting or grabbing gets coded here **only** if it is one-sided (initiated by one person and is an independent act) and it comes out of the blue (not a response to something); it is an intrusive initiation. If it is reciprocal interrupting (e.g., arguing) or grabbing, then don't code it as asynchronous (because it is reciprocal). *Note:* Action-Reaction is not asynchronous. If the other person grabs back (reciprocal grabbing), then it is not asynchronous. **HOWEVER**, the first grab is coded as asynchronous, BUT if the other person grabs the object back, this second grab is characterized as reciprocity, and becomes a reciprocal interchange (it would be coded under the Reciprocity code).

- ❖ When considering intrusiveness by the mother, you must consider the task instructions (i.e., the mother was instructed to help her child with the task) and therefore, in some situations the mother's actions do not come out of the blue and would NOT be coded as asynchronous.
- ❖ If the mother asks a question and then immediately asks another unrelated question or does something else before the child can respond to the first question, if the child responds to either question or the action, code the child's response as synchronous under the Reciprocity code.
- ❖ If the mother or child responds to the other's initiation more than 30 seconds after the initiation (or after an entire full segment elapses), first code the unresponsiveness as asynchrony and then code the later response as its own new initiation of an interchange (i.e., "Action" in the possible Action-Reaction sequence).

0 = No asynchrony. No asynchronous interchanges.

1 = Little or some asynchrony. 1-2 asynchronous interchanges and/or ≤19 seconds of asynchrony.

2 = A lot of asynchrony. ≥3 asynchronous interchanges and/or ≥20 seconds of asynchrony.

POSITIVE CONNECTEDNESS (*Use for all activities*)

This code rates the *positiveness of the mother-child connectedness*. To what extent are the child and mother positively connected or "linked" to each other, and aware of each other? This code assesses the extent to which the child and mother have fun together, and whether they show explicitly kind, cooperative, helpful (especially unexpectedly), and considerate behavior toward each other. There is active or explicit agreeing and cooperating on the task (not neutral cooperation that is minimally required to complete the task). Code any positive agreeing as positive connected. This code is defined in terms of duration, intensity, and *mutuality* of the affect and behaviors. Prototypical forms of explicit* joint pleasure and having a good time together would include giggling or laughing together, and (shared) smiling at each other. Children and mothers high on this code appear to be getting along well together and are cooperative in their interactions. Also consider positive nonverbal affect like hugging or touching in a positive way.

- This code does NOT involve judgments of *implicit* satisfaction and enjoyment.

Instances of 'mutually caring or empathetic behavior' should also be coded as positive connectedness, as well as any behavior displayed by the child and mother where they are trying to make each other more comfortable in the room.

Eye contact is not essential, but the reason for smiling or laughing should be the same. The affect for both the mother and child must be positive (e.g., a smile or laugh for a negative reason like ridicule would NOT be coded as positive connectedness).

0 = No explicit positive connectedness. No instances of positive connectedness.

1 = A little explicit positive connectedness. 1 instance of positive connectedness and/or ≤ 9 seconds of explicit positive mutual behavior.

2 = A lot of explicit positive connectedness. ≥ 2 instances of positive connectedness (or 1 intensely emotional positive instance) and/or ≥ 10 seconds of explicit positive mutual behavior

Note: If the receiver's reaction to a positive nonverbal/physical initiation is neutral or positive, then it is positive connected.

NEGATIVE CONNECTEDNESS (*Use for all activities*)

To what extent is this relationship characterized by conflict, disagreement, or aversive interchanges? Focus on how conflicted, displeasing, unrewarding, boring, *negatively* sarcastic, or emotionally distressing the relationship is; although negative acts initiated by either the mother or child will also be considered. Consider the intensity, *mutuality*, and duration of the interaction. Be aware of the *reciprocity* of the conflict or aversive interactions. For example, *single negative events will be coded lower than mutually negative interchanges*. Thus, 'arguments will be coded here, as well as single negative verbal statements, such as belittling, ridiculing, or humiliating statements; and negative controlling statements' (e.g., "Hurry up") with negative affect (not simply assertive statements)

DO NOT CODE negative initiations by either the mother or child due to FRUSTATION WITH THE TASK as negative connectedness.

Other examples would be 'hitting, smacking, saying "you're stupid," grabbing, fighting, arguing, and disagreeing. Also, rejecting bids to interact will be coded here, with consideration of how it is done. If a child or mother rejects a bid to interact by politely saying "No, thank you", or politely offers a reason why s/he cannot engage in interaction, negativity would *not* be coded. However, if the partner says something like "No, that's a stupid idea" or "No" with a whiney tone of voice or *negative* sarcasm, then it would be coded as negative connectedness.

A slight argument or disagreement would be coded as negative if it is in a 'put down' way or negative in any way, but not if it is a friendly disagreement or clarification. Take into account how it would make the other person feel. Also, a critical comment or comment in a whiney tone of voice would be coded as negative connectedness (Remember: do NOT code if it is due to frustrations with the task).

* "Shut up" with positive affect is NOT coded as negative connectedness.

0 = No explicit negative connectedness. No instances of negative connectedness.

1 = A little explicit negative connectedness. 1 instance of negative connectedness and/or ≤ 9 seconds of explicit negative mutual behavior.

2 = A lot of explicit negative connectedness. ≥ 2 instances of negative connectedness (or 1 intensely emotional negative instance) and/or ≥ 10 seconds of explicit negative mutual behavior

Note: If the receiver's reaction to a negative nonverbal/physical initiation is neutral or positive, then it is positive connected.

Summary of Coding Rules

INVOLVEMENT:

0 = 1-2 exchanges (verbal or nonverbal) or **≤14 seconds** of involvement.

1 = ≥3 exchanges (verbal or nonverbal) and/or **15-19 seconds** of involvement.

2 = ≥20 seconds characterized by involvement.

RECIPROCITY:

0 = No reciprocal interchanges.

1 = 1-2 reciprocal interchanges and/or **≤19 seconds** of reciprocity.

2 = ≥3 reciprocal interchanges and/or **≥20 seconds** of reciprocity.

Note: A simple “yeah,” “yes,” “ok,” “no,” or synonyms of these do not count as part of an interchange. Those are considered exchanges and are coded under the Involvement code.

INTERACTIONAL ASYNCHRONY:

0 = No asynchronous interchanges.

1 = 1-2 asynchronous interchanges and/or **≤19 seconds** of asynchrony.

2 = ≥3 asynchronous interchanges and/or **≥20 seconds** of asynchrony.

Notes: *Grabbing:* the first grab is coded as asynchronous, BUT if the other person grabs the object back, this second grab is characterized as reciprocity, and becomes a reciprocal interchange (it would be coded under the Reciprocity code).

Code all instances of interrupting or asynchrony, even if they are repetitive, as multiple instances of asynchrony.

Do NOT code any asynchronous behavior by the mother IF it is task-dependent (i.e., trying to keep the child on-task).

POSITIVE CONNECTEDNESS:

0 = No explicit positive connectedness. No instances of positive connectedness.

1 = A little explicit positive connectedness. 1 instance of positive connectedness and/or **≤9 seconds** of explicit positive mutual behavior.

2 = A lot of explicit positive connectedness. ≥2 instances of positive connectedness (or 1 intensely emotional positive instance) and/or **≥10 seconds** of explicit positive mutual behavior

Note: If the receiver’s reaction to a positive nonverbal/physical initiation is neutral or positive, then it is positive connected.

NEGATIVE CONNECTEDNESS:

0 = No explicit negative connectedness. No instances of negative connectedness.

1 = A little explicit negative connectedness. 1 instance of negative connectedness and/or **≤9 seconds** of explicit negative mutual behavior.

OVERALL GLOBAL RATING OF MOTHER-CHILD RELATIONSHIP QUALITY

5-Point Scale:

1 = Below Average

2 = Average

3 = Good

4 = Very Good

5 = Excellent

5-Point Coding System:

1 point for HIGH involvement – characterized by at least double the number of “**2**”s than there are “**1**”s and “**0**”s on all sessions*.

1 point for HIGH reciprocity - characterized by more “**1**”s and “**2**”s than “**0**”s on all sessions*.

1 point for LOW asynchrony - characterized by at least double the number of “**0**”s than there are “**1**”s and “**2**”s on all sessions*.

1 point for HIGH positive connectedness - characterized by more “**1**”s and “**2**”s than “**0**”s on all sessions*.

1 point for LOW negative connectedness - characterized by at least double the number of “**0**”s than there are “**1**”s and “**2**”s on all sessions*.

* All four sessions combined: Origami/Knot Tying, Plan a Vacation, Moral Dilemma, and Best Time

MOTHER-CHILD RELATIONSHIP QUALITY CODING SHEET – Grade 5

ID#: _____ Coder's Name: _____ Date: _____

Tape # _____ Cohort & Grade: _____

Session: origami / plan a vacation / moral dilemma / best time (30 second intervals)

Time Start: _____

End: _____

1. Involved: _____

2. Reciprocity: _____

3. Asynchrony: _____

4. Positive
Connected: _____5. Negative
Connected: _____

Session: origami / plan a vacation / moral dilemma / best time (30 second intervals)

Time Start: _____

End: _____

1. Involved: _____

2. Reciprocity: _____

3. Asynchrony: _____

4. Positive
Connected: _____5. Negative
Connected: _____

MOTHER-CHILD RELATIONSHIP QUALITY CODING SHEET– Grade 6

ID#: _____ Coder's Name: _____ Date: _____

Tape # _____ Cohort & Grade: _____

Session: knot tying / plan a vacation / moral dilemma / best time (30 second intervals)

Time Start: _____

End: _____

1. Involved: _____

2. Reciprocity: _____

3. Asynchrony: _____

4. Positive
Connected: _____5. Negative
Connected: _____

Session: knot tying / plan a vacation / moral dilemma / best time (30 second intervals)

Time Start: _____

End: _____

1. Involved: _____

2. Reciprocity: _____

3. Asynchrony: _____

4. Positive
Connected: _____5. Negative
Connected: _____

Appendix E

Network of Relationships Inventory

(Furman & Buhrmester, 1985)

ID #: _____ Cohort: _____ Grade: _____ Date: _____

Birthdate _____
 month day year

General Instructions

On these questionnaires you are going to fill out, we want to know what you really think about each question; so answer as honestly as possible. There are no right or wrong answers. All this information will be kept private and confidential, which means that your name will not be on any of the forms, and nobody will know how you answered any of the questions. Read carefully and try to answer every question. If you have any questions as you go along, please ask me – I'll be in the next room.

Directions for the Relationships Questionnaire

Everyone has a number of people who are important in his or her life. For example, your parents, brothers or sisters, other relatives, teachers, and friends are people who might be important to you. The questions below are about your relationships with your family members and friends.

1. Circle all the parents you have who are alive:

mother father step-mother step-father

2. Circle the parents you live with right now:

mother father step-mother step-father

3. Which of the following relatives is most important to you?

a grandmother a grandfather an aunt an uncle

4. What is the name of the teacher at your school who is most important to you?

The next questions ask about your relationships with each of the following people:

1) your mother or step-mother (if you have both, describe your relationship with the one you live with); 2) your father or step-father (if you have both, describe your relationship with the one you live with); 3) your friend; 4) your teacher; 5) your relative; and 6) each of your siblings. Answer each of the following questions for each person. Sometimes the answers for different people may be the same; sometimes they may be different.

When answering questions about your **friend**, it should be the same person you named on page 2 (question #5). When answering questions about your **relative**, it should only be the person you named on page 2 (question #3).

1. How much **free time** do you spend with this person?

	None	Little	Some	A lot	Almost all
Mother	1	2	3	4	5
Father	1	2	3	4	5
Friend	1	2	3	4	5
Teacher	1	2	3	4	5
Relative	1	2	3	4	5
Sibling 1	1	2	3	4	5
Sibling 2	1	2	3	4	5
Sibling 3	1	2	3	4	5
Sibling 4	1	2	3	4	5

2. How much do you and this person get upset with each other or mad at each other?

	None	Little	Some	A lot	Almost always
Mother	1	2	3	4	5
Father	1	2	3	4	5
Friend	1	2	3	4	5
Teacher	1	2	3	4	5
Relative	1	2	3	4	5
Sibling 1	1	2	3	4	5
Sibling 2	1	2	3	4	5
Sibling 3	1	2	3	4	5
Sibling 4	1	2	3	4	5

3. How much does this person teach you how to do things that you don't know how to do?

	None	Little	Some	A lot	Almost always
Mother	1	2	3	4	5
Father	1	2	3	4	5
Friend	1	2	3	4	5
Teacher	1	2	3	4	5
Relative	1	2	3	4	5
Sibling 1	1	2	3	4	5
Sibling 2	1	2	3	4	5
Sibling 3	1	2	3	4	5
Sibling 4	1	2	3	4	5

4. How satisfied are you with your relationship with this person?

	Not satisfied	A little satisfied	Somewhat satisfied	Very satisfied	Extremely satisfied
Mother	1	2	3	4	5
Father	1	2	3	4	5
Friend	1	2	3	4	5
Teacher	1	2	3	4	5
Relative	1	2	3	4	5
Sibling 1	1	2	3	4	5
Sibling 2	1	2	3	4	5
Sibling 3	1	2	3	4	5
Sibling 4	1	2	3	4	5

5. How much do you tell this person everything?

	Tell nothing	Tell a little	Tell some things	Tell a lot of things	Tell all
Mother	1	2	3	4	5
Father	1	2	3	4	5
Friend	1	2	3	4	5
Teacher	1	2	3	4	5
Relative	1	2	3	4	5
Sibling 1	1	2	3	4	5
Sibling 2	1	2	3	4	5
Sibling 3	1	2	3	4	5
Sibling 4	1	2	3	4	5

6. How much do you help this person with things she/he can't do by her/himself?

	Not at all	A little	Somewhat	A lot	Almost always
Mother	1	2	3	4	5
Father	1	2	3	4	5
Friend	1	2	3	4	5
Teacher	1	2	3	4	5
Relative	1	2	3	4	5
Sibling 1	1	2	3	4	5
Sibling 2	1	2	3	4	5
Sibling 3	1	2	3	4	5
Sibling 4	1	2	3	4	5

7. How much does this person like or love you?

	Not at all	A little	Somewhat	A lot	Very much
Mother	1	2	3	4	5
Father	1	2	3	4	5
Friend	1	2	3	4	5
Teacher	1	2	3	4	5
Relative	1	2	3	4	5
Sibling 1	1	2	3	4	5
Sibling 2	1	2	3	4	5
Sibling 3	1	2	3	4	5
Sibling 4	1	2	3	4	5

8. How much does this person punish you?

	Not at all	A little	Somewhat	A lot	Very much
Mother	1	2	3	4	5
Father	1	2	3	4	5
Friend	1	2	3	4	5
Teacher	1	2	3	4	5
Relative	1	2	3	4	5
Sibling 1	1	2	3	4	5
Sibling 2	1	2	3	4	5
Sibling 3	1	2	3	4	5
Sibling 4	1	2	3	4	5

9. How much does this person treat you like you're admired and respected?

	Not at all	A little	Somewhat	A lot	Very much
Mother	1	2	3	4	5
Father	1	2	3	4	5
Friend	1	2	3	4	5
Teacher	1	2	3	4	5
Relative	1	2	3	4	5
Sibling 1	1	2	3	4	5
Sibling 2	1	2	3	4	5
Sibling 3	1	2	3	4	5
Sibling 4	1	2	3	4	5

10. How often does this person tell you what to do?

	Never	Seldom	Sometimes	Often	Always
Mother	1	2	3	4	5
Father	1	2	3	4	5
Friend	1	2	3	4	5
Teacher	1	2	3	4	5
Relative	1	2	3	4	5
Sibling 1	1	2	3	4	5
Sibling 2	1	2	3	4	5
Sibling 3	1	2	3	4	5
Sibling 4	1	2	3	4	5

11. How sure are you that this relationship will last no matter what?

	Not at all	A little sure	Somewhat sure	Very sure	Extremely sure
Mother	1	2	3	4	5
Father	1	2	3	4	5
Friend	1	2	3	4	5
Teacher	1	2	3	4	5
Relative	1	2	3	4	5
Sibling 1	1	2	3	4	5
Sibling 2	1	2	3	4	5
Sibling 3	1	2	3	4	5
Sibling 4	1	2	3	4	5

12. How much do you play around and have fun with this person?

	Not at all	A little	Somewhat	A lot	A ton
Mother	1	2	3	4	5
Father	1	2	3	4	5
Friend	1	2	3	4	5
Teacher	1	2	3	4	5
Relative	1	2	3	4	5
Sibling 1	1	2	3	4	5
Sibling 2	1	2	3	4	5
Sibling 3	1	2	3	4	5
Sibling 4	1	2	3	4	5

13. How much do you and this person disagree and quarrel?

	Not at all	A little	Somewhat	A lot	A ton
Mother	1	2	3	4	5
Father	1	2	3	4	5
Friend	1	2	3	4	5
Teacher	1	2	3	4	5
Relative	1	2	3	4	5
Sibling 1	1	2	3	4	5
Sibling 2	1	2	3	4	5
Sibling 3	1	2	3	4	5
Sibling 4	1	2	3	4	5

14. How much does this person help you figure out or fix things?

	Not at all	A little	Sometimes	A lot	The most
Mother	1	2	3	4	5
Father	1	2	3	4	5
Friend	1	2	3	4	5
Teacher	1	2	3	4	5
Relative	1	2	3	4	5
Sibling 1	1	2	3	4	5
Sibling 2	1	2	3	4	5
Sibling 3	1	2	3	4	5
Sibling 4	1	2	3	4	5

15. How happy are you with the way things are between you and this person?

	Not happy	A little happy	Somewhat happy	Very happy	Extremely happy
Mother	1	2	3	4	5
Father	1	2	3	4	5
Friend	1	2	3	4	5
Teacher	1	2	3	4	5
Relative	1	2	3	4	5
Sibling 1	1	2	3	4	5
Sibling 2	1	2	3	4	5
Sibling 3	1	2	3	4	5
Sibling 4	1	2	3	4	5

16. How much do you and this person annoy or bug each other?

	Never	A little	Sometimes	Often	Very often
Mother	1	2	3	4	5
Father	1	2	3	4	5
Friend	1	2	3	4	5
Teacher	1	2	3	4	5
Relative	1	2	3	4	5
Sibling 1	1	2	3	4	5
Sibling 2	1	2	3	4	5
Sibling 3	1	2	3	4	5
Sibling 4	1	2	3	4	5

17. How much do you share your secrets and private feelings with this person?

	Never	A little	Sometimes	Often	Very often
Mother	1	2	3	4	5
Father	1	2	3	4	5
Friend	1	2	3	4	5
Teacher	1	2	3	4	5
Relative	1	2	3	4	5
Sibling 1	1	2	3	4	5
Sibling 2	1	2	3	4	5
Sibling 3	1	2	3	4	5
Sibling 4	1	2	3	4	5

18. How much do you protect and look out for this person?

	Never	A little	Sometimes	Often	Very often
Mother	1	2	3	4	5
Father	1	2	3	4	5
Friend	1	2	3	4	5
Teacher	1	2	3	4	5
Relative	1	2	3	4	5
Sibling 1	1	2	3	4	5
Sibling 2	1	2	3	4	5
Sibling 3	1	2	3	4	5
Sibling 4	1	2	3	4	5

19. How much does this person really care about you?

	Not at all	A little	Somewhat	A lot	Very much
Mother	1	2	3	4	5
Father	1	2	3	4	5
Friend	1	2	3	4	5
Teacher	1	2	3	4	5
Relative	1	2	3	4	5
Sibling 1	1	2	3	4	5
Sibling 2	1	2	3	4	5
Sibling 3	1	2	3	4	5
Sibling 4	1	2	3	4	5

20. How much does this person discipline you for disobeying him/her?

	Not at all	A little	Somewhat	A lot	Very much
Mother	1	2	3	4	5
Father	1	2	3	4	5
Friend	1	2	3	4	5
Teacher	1	2	3	4	5
Relative	1	2	3	4	5
Sibling 1	1	2	3	4	5
Sibling 2	1	2	3	4	5
Sibling 3	1	2	3	4	5
Sibling 4	1	2	3	4	5

21. How much does this person treat you like you're good at many things?

	Not at all	A little	Somewhat	A lot	Very much
Mother	1	2	3	4	5
Father	1	2	3	4	5
Friend	1	2	3	4	5
Teacher	1	2	3	4	5
Relative	1	2	3	4	5
Sibling 1	1	2	3	4	5
Sibling 2	1	2	3	4	5
Sibling 3	1	2	3	4	5
Sibling 4	1	2	3	4	5

22. How often is this person the boss in your relationship?

	Never	Seldom	Sometimes	Often	Always
Mother	1	2	3	4	5
Father	1	2	3	4	5
Friend	1	2	3	4	5
Teacher	1	2	3	4	5
Relative	1	2	3	4	5
Sibling 1	1	2	3	4	5
Sibling 2	1	2	3	4	5
Sibling 3	1	2	3	4	5
Sibling 4	1	2	3	4	5

23. How sure are you that your relationship will last even if you have fights?

	Not at all sure	A little sure	Somewhat sure	Very sure	Extremely
Mother	1	2	3	4	5
Father	1	2	3	4	5
Friend	1	2	3	4	5
Teacher	1	2	3	4	5
Relative	1	2	3	4	5
Sibling 1	1	2	3	4	5
Sibling 2	1	2	3	4	5
Sibling 3	1	2	3	4	5
Sibling 4	1	2	3	4	5

24. How often do you go places and do enjoyable things with this person?

	Never	Seldom	Sometimes	Often	Always
Mother	1	2	3	4	5
Father	1	2	3	4	5
Friend	1	2	3	4	5
Teacher	1	2	3	4	5
Relative	1	2	3	4	5
Sibling 1	1	2	3	4	5
Sibling 2	1	2	3	4	5
Sibling 3	1	2	3	4	5
Sibling 4	1	2	3	4	5

25. How much do you and this person argue with each other?

	Not at all	A little	Sometimes	A lot	Very much
Mother	1	2	3	4	5
Father	1	2	3	4	5
Friend	1	2	3	4	5
Teacher	1	2	3	4	5
Relative	1	2	3	4	5
Sibling 1	1	2	3	4	5
Sibling 2	1	2	3	4	5
Sibling 3	1	2	3	4	5
Sibling 4	1	2	3	4	5

26. How often does this person help you when you need to get something done?

	Never	Seldom	Sometimes	Often	Always
Mother	1	2	3	4	5
Father	1	2	3	4	5
Friend	1	2	3	4	5
Teacher	1	2	3	4	5
Relative	1	2	3	4	5
Sibling 1	1	2	3	4	5
Sibling 2	1	2	3	4	5
Sibling 3	1	2	3	4	5
Sibling 4	1	2	3	4	5

27. How good is your relationship with this person?

	Bad	A little bad	Good	Very good	Great
Mother	1	2	3	4	5
Father	1	2	3	4	5
Friend	1	2	3	4	5
Teacher	1	2	3	4	5
Relative	1	2	3	4	5
Sibling 1	1	2	3	4	5
Sibling 2	1	2	3	4	5
Sibling 3	1	2	3	4	5
Sibling 4	1	2	3	4	5

28. How much do you and this person hassle or nag one another?

	Not at all	A little	Sometimes	A lot	Almost always
Mother	1	2	3	4	5
Father	1	2	3	4	5
Friend	1	2	3	4	5
Teacher	1	2	3	4	5
Relative	1	2	3	4	5
Sibling 1	1	2	3	4	5
Sibling 2	1	2	3	4	5
Sibling 3	1	2	3	4	5
Sibling 4	1	2	3	4	5

29. How much do you talk to this person about things that you don't want others to know?

	Not at all	A little	Some	A lot	Very much
Mother	1	2	3	4	5
Father	1	2	3	4	5
Friend	1	2	3	4	5
Teacher	1	2	3	4	5
Relative	1	2	3	4	5
Sibling 1	1	2	3	4	5
Sibling 2	1	2	3	4	5
Sibling 3	1	2	3	4	5
Sibling 4	1	2	3	4	5

30. How much do you take care of this person?

	Not at all	A little	Some	A lot	Very much
Mother	1	2	3	4	5
Father	1	2	3	4	5
Friend	1	2	3	4	5
Teacher	1	2	3	4	5
Relative	1	2	3	4	5
Sibling 1	1	2	3	4	5
Sibling 2	1	2	3	4	5
Sibling 3	1	2	3	4	5
Sibling 4	1	2	3	4	5

31. How much does this person have a strong feeling of affection (love or liking) toward you?

	Not at all	A little	Some	A lot	Very much
Mother	1	2	3	4	5
Father	1	2	3	4	5
Friend	1	2	3	4	5
Teacher	1	2	3	4	5
Relative	1	2	3	4	5
Sibling 1	1	2	3	4	5
Sibling 2	1	2	3	4	5
Sibling 3	1	2	3	4	5
Sibling 4	1	2	3	4	5

32. How much does this person scold you for doing something you're not supposed to do?

	Not at all	A little	Some	A lot	Very much
Mother	1	2	3	4	5
Father	1	2	3	4	5
Friend	1	2	3	4	5
Teacher	1	2	3	4	5
Relative	1	2	3	4	5
Sibling 1	1	2	3	4	5
Sibling 2	1	2	3	4	5
Sibling 3	1	2	3	4	5
Sibling 4	1	2	3	4	5

33. How much does this person like or approve of the things you do?

	Not at all	A little	Some	A lot	Very much
Mother	1	2	3	4	5
Father	1	2	3	4	5
Friend	1	2	3	4	5
Teacher	1	2	3	4	5
Relative	1	2	3	4	5
Sibling 1	1	2	3	4	5
Sibling 2	1	2	3	4	5
Sibling 3	1	2	3	4	5
Sibling 4	1	2	3	4	5

34. How often does this person take charge and decide what should be done?

	Never	Seldom	Sometimes	Often	Always
Mother	1	2	3	4	5
Father	1	2	3	4	5
Friend	1	2	3	4	5
Teacher	1	2	3	4	5
Relative	1	2	3	4	5
Sibling 1	1	2	3	4	5
Sibling 2	1	2	3	4	5
Sibling 3	1	2	3	4	5
Sibling 4	1	2	3	4	5

35. How sure are you that your relationship will continue in the years to come?

	Not at all sure	A little sure	Somewhat sure	Very sure	Extremely sure
Mother	1	2	3	4	5
Father	1	2	3	4	5
Friend	1	2	3	4	5
Teacher	1	2	3	4	5
Relative	1	2	3	4	5
Sibling 1	1	2	3	4	5
Sibling 2	1	2	3	4	5
Sibling 3	1	2	3	4	5
Sibling 4	1	2	3	4	5

Perceived Positivity factor included the following NRI variable numbers:
3, 5, 7, 9, 11, 12, 14, 17, 18, 19, 21, 23, 24, 26, 29, 30, 31, 33, and 35

Perceived Negativity included the following NRI variable numbers:
2, 8, 10, 13, 16, 20, 22, 25, 28, 32, and 34

Appendix F

The Security Scale (Kerns, Klepac, & Cole, 1996)

ID #: _____ Cohort: _____ Grade: _____ Date: _____

Birthdate _____
 month day year

General Instructions

On these questionnaires you are going to fill out, we want to know what you really think about each question; so answer as honestly as possible. There are no right or wrong answers. All this information will be kept private and confidential, which means that your name will not be on any of the forms, and nobody will know how you answered any of the questions. Read carefully and try to answer every question. If you have any questions as you go along, please ask me – I'll be in the next room.

Directions for the "What I'm Like (Part 2-Kerns)" Questionnaire

Now we are going to ask you some questions about you and your Mom. We are interested in what each of you is like, what kind of person you are like. First let me explain how these questions work. On this questionnaire, we are going to ask you to mark the box which describes you the best. The following are step-by-step instructions for how to answer every question.

- Look at the two statements in the example:
"Some kids would rather play outdoors in their spare time." or "Other kids would rather watch TV."
- Decide which statement is more like you.
*Are you the type of person who would rather play outside, **OR** do you prefer watching TV?*
- After you choose one of the two statements (either the one on the left side or the one on the right side), you decide how true the statement is for you.
Is the statement "Sort of True" for you or "Really True" for you.
- Mark the box which you think best fits you.

Only select ONE answer. You should have only ONE box checked for each number.

Remember this is not a test; just choose which statement is like you most of the time.

(a)	Really True for me	Sort of True for me		Sort of True for me	Really True for me		
	<input type="checkbox"/>	<input type="checkbox"/>	Some kids would rather play outdoors in their spare time	BUT	Other kids would rather watch T.V.	<input type="checkbox"/>	<input type="checkbox"/>

Now we're going to ask you some questions about **you and your Mom or stepmother.**
 (If you have both a mom and a stepmother, describe your relationship with the one that you live with.)

Are you answering the questions below about your mother or your stepmother?

_____ (write which one)

- | | | | | | | |
|----|--------------------------|---------------------------|---|---------------------------|---|--------------------------|
| 1. | Really
True
for me | Sort of
True
for me | | Sort of
True
for me | Really
True
for me | |
| | <input type="checkbox"/> | <input type="checkbox"/> | Some kids find it easy
to trust their mom | BUT | Other kids are not
sure if they can trust
their mom | <input type="checkbox"/> |
| 2. | Really
True
for me | Sort of
True
for me | | Sort of
True
for me | Really
True
for me | |
| | <input type="checkbox"/> | <input type="checkbox"/> | Some kids feel like
their mom butts in a lot
when they are trying to
do things | BUT | Other kids feel like
their mom lets them do
things on their own | <input type="checkbox"/> |
| 3. | Really
True
for me | Sort of
True
for me | | Sort of
True
for me | Really
True
for me | |
| | <input type="checkbox"/> | <input type="checkbox"/> | Some kids find it easy
to count on their mom
for help | BUT | Other kids think it's
hard to count on
their mom | <input type="checkbox"/> |
| 4. | Really
True
for me | Sort of
True
for me | | Sort of
True
for me | Really
True
for me | |
| | <input type="checkbox"/> | <input type="checkbox"/> | Some kids think that
their mom spends
enough time with them | BUT | Other kids think that
their mom does not
spend enough time
with them | <input type="checkbox"/> |

5. **Really True for me** **Sort of True for me** Some kids do not really like telling their mom what they are thinking or feeling **BUT** Other kids do like telling their mom what they are thinking or feeling **Sort of True for me** **Really True for me**
6. **Really True for me** **Sort of True for me** Some kids do not really need their mom for much **BUT** Other kids need their mom for a lot of things **Sort of True for me** **Really True for me**
7. **Really True for me** **Sort of True for me** Some kids wish they were closer to their mom **BUT** Other kids are happy with how close they are to their mom **Sort of True for me** **Really True for me**
8. **Really True for me** **Sort of True for me** Some kids worry that their mom does not really love them **BUT** Other kids are really sure that their mom loves them **Sort of True for me** **Really True for me**
9. **Really True for me** **Sort of True for me** Some kids feel like their mom really understands them **BUT** Other kids feel like their mom does not really understand them **Sort of True for me** **Really True for me**

10. Really True for me Sort of True for me Some kids are really sure their mom would not leave them **BUT** Other kids sometimes wonder if their mom might leave them Really True for me
11. Really True for me Sort of True for me Some kids worry that their mom might not be there when they need her **BUT** Other kids are sure their mom will be there when they need her Really True for me
12. Really True for me Sort of True for me Some kids think their mom does not listen to them **BUT** Other kids do think their mom listens to them Really True for me
13. Really True for me Sort of True for me Some kids go to their mom when they are upset **BUT** Other kids do not go to their mom when they are upset Really True for me
14. Really True for me Sort of True for me Some kids wish their mom would help them more with their problems **BUT** Other kids think that their mom helps them enough Really True for me
15. Really True for me Sort of True for me Some kids feel better when their mom is around **BUT** Other kids don't feel better when their mom is around Really True for me

Appendix G

Self-Perception Profile for Children

(Harter, 1985)

ID #: _____ Cohort: _____ Grade: _____ Date: _____

General Instructions

On these questionnaires you are going to fill out, we want to know what you really think about each question; so answer as honestly as possible. There are no right or wrong answers. All this information will be kept private and confidential, which means that your name will not be on any of the forms, and nobody will know how you answered any of the questions. Read carefully and try to answer every question. If you have any questions as you go along, please ask me – I'll be in the next room.

Directions for the "What I'm Like" Questionnaire

On this questionnaire, we are going to ask you to mark the box which describes you the best. The following are step-by-step instructions for how to answer every question.

- Look at the two statements in the example:
"Some kids would rather play outdoors in their spare time." or "Other kids would rather watch TV."
- Decide which statement is more like you.
Are you the type of person who would rather play outside, **OR** do you prefer watching TV?
- After you choose one of the two statements (either the one on the left side or the one on the right side), you decide how true the statement is for you.
Is the statement "Sort of True" for you or "Really True" for you.
- Mark the box which you think best fits you.

Only select ONE answer. You should have only ONE box checked for each number.

Remember this is not a test; just choose which statement is like you most of the time.

Example

(a)	Really True for me	Sort of True for me			Sort of True for me	Really True for me	
	<input type="checkbox"/>	<input type="checkbox"/>	Some kids would rather	BUT	Other kids would	<input type="checkbox"/>	<input type="checkbox"/>
			play outdoors in their		rather watch T.V.		
			spare time				

- | | | | | | | |
|----|--------------------------|---------------------------|---|------------|--|--------------------------|
| 1. | Really
True
for me | Sort of
True
for me | | | Sort of
True
for me | Really
True
for me |
| | <input type="checkbox"/> | <input type="checkbox"/> | Some kids wish they
could be a lot better
at sports | BUT | Other kids feel they
are good enough at
sports | <input type="checkbox"/> |
| 2. | Really
True
for me | Sort of
True
for me | | | Sort of
True
for me | Really
True
for me |
| | <input type="checkbox"/> | <input type="checkbox"/> | Some kids find it hard
to make friends | BUT | Other kids find it's
pretty easy to make
friends | <input type="checkbox"/> |
| 3. | Really
True
for me | Sort of
True
for me | | | Sort of
True
for me | Really
True
for me |
| | <input type="checkbox"/> | <input type="checkbox"/> | Some kids are happy
with the way they
look | BUT | Other kids are <u>not</u>
happy with the way
they look | <input type="checkbox"/> |
| 4. | Really
True
for me | Sort of
True
for me | | | Sort of
True
for me | Really
True
for me |
| | <input type="checkbox"/> | <input type="checkbox"/> | Some kids often do not
like the way they behave | BUT | Other kids usually
like the way they
behave | <input type="checkbox"/> |
| 5. | Really
True
for me | Sort of
True
for me | | | Sort of
True
for me | Really
True
for me |
| | <input type="checkbox"/> | <input type="checkbox"/> | Some kids are happy
with themselves as a
person | BUT | Other kids are often
<u>not</u> happy with
themselves | <input type="checkbox"/> |

- | | | | | | | |
|-----|--------------------------|---------------------------|--|------------|---|--------------------------|
| 6. | Really
True
for me | Sort of
True
for me | | | Sort of
True
for me | Really
True
for me |
| | <input type="checkbox"/> | <input type="checkbox"/> | Some kids feel that they
are just as smart as other
kids their age | BUT | Other kids aren't so
sure and wonder if
they are as smart | <input type="checkbox"/> |
| | | | | | | <input type="checkbox"/> |
| 7. | Really
True
for me | Sort of
True
for me | | | Sort of
True
for me | Really
True
for me |
| | <input type="checkbox"/> | <input type="checkbox"/> | Some kids have a lot
of friends | BUT | Other kids don't
have a lot of
friends | <input type="checkbox"/> |
| | | | | | | <input type="checkbox"/> |
| 8. | Really
True
for me | Sort of
True
for me | | | Sort of
True
for me | Really
True
for me |
| | <input type="checkbox"/> | <input type="checkbox"/> | Some kids find it easy
to ask other children
for help | BUT | Some kids find it
hard asking other
kids for help | <input type="checkbox"/> |
| | | | | | | <input type="checkbox"/> |
| 9. | Really
True
for me | Sort of
True
for me | | | Sort of
True
for me | Really
True
for me |
| | <input type="checkbox"/> | <input type="checkbox"/> | Some kids are happy
with their height and
weight | BUT | Other kids wish their
height or weight were
different | <input type="checkbox"/> |
| | | | | | | <input type="checkbox"/> |
| 10. | Really
True
for me | Sort of
True
for me | | | Sort of
True
for me | Really
True
for me |
| | <input type="checkbox"/> | <input type="checkbox"/> | Some children have
problems getting other
kids to play with them | BUT | Other kids find
it pretty easy | <input type="checkbox"/> |
| | | | | | | <input type="checkbox"/> |

- | | | | | | | |
|-----|--------------------------|--------------------------|--|------------|---|--------------------------|
| 11. | Really True for me | Sort of True for me | | | Sort of True for me | Really True for me |
| | <input type="checkbox"/> | <input type="checkbox"/> | Some kids usually do the right thing | BUT | Other kids often don't do the right thing | <input type="checkbox"/> |
| 12. | Really True for me | Sort of True for me | | | Sort of True for me | Really True for me |
| | <input type="checkbox"/> | <input type="checkbox"/> | Some kids <u>don't</u> like the way they are leading their life | BUT | Other kids <u>do</u> like the way they are leading their life | <input type="checkbox"/> |
| 13. | Really True for me | Sort of True for me | | | Sort of True for me | Really True for me |
| | <input type="checkbox"/> | <input type="checkbox"/> | Some kids are pretty slow in finishing their school work | BUT | Other kids can do their school work quickly | <input type="checkbox"/> |
| 14. | Really True for me | Sort of True for me | | | Sort of True for me | Really True for me |
| | <input type="checkbox"/> | <input type="checkbox"/> | Some kids would like to have a lot more friends | BUT | Other kids have as many friends as they want | <input type="checkbox"/> |
| 15. | Really True for me | Sort of True for me | | | Sort of True for me | Really True for me |
| | <input type="checkbox"/> | <input type="checkbox"/> | Some kids think they could do well at just about any new sports activity they haven't tried before | BUT | Other kids are afraid they might <u>not</u> do well at sports they haven't ever tried | <input type="checkbox"/> |

16. **Really True for me** **Sort of True for me** Some kids wish their body was different **BUT** Other kids like their body the way it is **Sort of True for me** **Really True for me**
17. **Really True for me** **Sort of True for me** Some kids usually act the way they know they are supposed to **BUT** Other kids often don't act the way they are supposed to **Sort of True for me** **Really True for me**
18. **Really True for me** **Sort of True for me** Some kids do very well at all kinds of sports **BUT** Other kids don't feel that they are very good at sports **Sort of True for me** **Really True for me**
19. **Really True for me** **Sort of True for me** Some kids find it easy to talk to other kids **BUT** Some kids find it hard talking to other kids **Sort of True for me** **Really True for me**
20. **Really True for me** **Sort of True for me** Some kids are always doing things with a lot of kids **BUT** Other kids usually do things by themselves **Sort of True for me** **Really True for me**

21. **Really True for me** **Sort of True for me** Some kids feel that they are better than others their age at sports **BUT** Other kids don't feel they can play sports as well **Sort of True for me** **Really True for me**
22. **Really True for me** **Sort of True for me** Some kids wish their physical appearance (how they look) was different **BUT** Other kids like their physical appearance the way it is **Sort of True for me** **Really True for me**
23. **Really True for me** **Sort of True for me** Some kids usually get in trouble because of the things they do **BUT** Other kids usually don't do things that get them in trouble **Sort of True for me** **Really True for me**
24. **Really True for me** **Sort of True for me** Some kids don't think that having a lot of friends is important **BUT** Other kids think that having a lot of friends is important **Sort of True for me** **Really True for me**
25. **Really True for me** **Sort of True for me** Some kids like the kind of person they are **BUT** Other kids often wish they were someone else **Sort of True for me** **Really True for me**

26. **Really True for me** **Sort of True for me** Some kids find it quite hard to join in when other kids are playing together **BUT** For other kids joining in is quite easy **Sort of True for me** **Really True for me**
27. **Really True for me** **Sort of True for me** Some kids wish that more people their age liked them **BUT** Other kids feel that most people their age do like them **Sort of True for me** **Really True for me**
28. **Really True for me** **Sort of True for me** In games and sports some kids usually watch instead of play **BUT** Other kids usually play rather than just watch **Sort of True for me** **Really True for me**
29. **Really True for me** **Sort of True for me** Some kids wish something about their face or hair looked different **BUT** Other kids like their face and hair the way they are **Sort of True for me** **Really True for me**
30. **Really True for me** **Sort of True for me** Some kids do things they know they **BUT** Other kids hardly ever do things they **Sort of True for me** **Really True for me**

31. **Really True for me** **Sort of True for me** Some kids are very happy being the way they are **BUT** Other kids wish they were different **Sort of True for me** **Really True for me**
32. **Really True for me** **Sort of True for me** Some kids find it hard to get other kids to like them **BUT** For other kids it is pretty easy **Sort of True for me** **Really True for me**
33. **Really True for me** **Sort of True for me** Some kids are popular with others their age **BUT** Other kids are not very popular **Sort of True for me** **Really True for me**
34. **Really True for me** **Sort of True for me** Some kids don't do well at new outdoor games **BUT** Other kids are good at new games right away **Sort of True for me** **Really True for me**
35. **Really True for me** **Sort of True for me** Some kids think that they are good looking **BUT** Other kids think that they are not very good looking **Sort of True for me** **Really True for me**

36. **Really True for me** **Sort of True for me** Some kids behave themselves very well **BUT** Other kids often find it hard to behave themselves **Sort of True for me** **Really True for me**
37. **Really True for me** **Sort of True for me** Some kids think it's important to be popular **BUT** Other kids don't think that being popular is important **Sort of True for me** **Really True for me**
38. **Really True for me** **Sort of True for me** Some kids are not happy with the way they do a lot of things **BUT** Other kids think the way they do things is fine **Sort of True for me** **Really True for me**

Self-Esteem subscale included the following SPP-C variable numbers:
5, 12, 25, 31, and 38

Appendix H

Child Behavior Checklist

(Achenbach, 1991)

CHILD BEHAVIOR CHECKLIST (1991 Version)

Below is a list of items that describe children. For each item that describes your child **now or within the past 6 months** please circle the **2** if the item is **very true or often true** of your child. Circle the **1** if the item is **somewhat true or sometimes true** of your child. If the item is **not true** of your child, circle the **0**. Please answer all items as well as y even if some do not seem to apply to your child.

0 = Not True (as far as you know) **1 = Somewhat or Sometimes True** **2 = Very True or Often True**

- | | | | | |
|-----|--|---|---|---|
| 1. | Acts too young for his/her age | 0 | 1 | 2 |
| 2. | Allergy (describe): _____
_____ | 0 | 1 | 2 |
| 3. | Argues a lot | 0 | 1 | 2 |
| 4. | Asthma | 0 | 1 | 2 |
| 5. | Behaves like opposite sex | 0 | 1 | 2 |
| 6. | Braggs, boasts | 0 | 1 | 2 |
| 7. | Can't concentrate, can't pay attention for long | 0 | 1 | 2 |
| 8. | Can't get his/her mind off certain thoughts; obsessions (describe): _____
_____ | 0 | 1 | 2 |
| 9. | Can't sit still, restless, or hyperactive | 0 | 1 | 2 |
| 10. | Clings to adults or too dependent | 0 | 1 | 2 |
| 11. | Complains of loneliness | 0 | 1 | 2 |
| 12. | Confused or seems to be in a fog | 0 | 1 | 2 |
| 13. | Cries a lot | 0 | 1 | 2 |
| 14. | Cruel to animals | 0 | 1 | 2 |
| 15. | Cruelty, bullying, or meanness to others | 0 | 1 | 2 |
| 16. | Day-dreams or gets lost in his/her thoughts | 0 | 1 | 2 |
| 17. | Demands a lot of attention | 0 | 1 | 2 |
| 18. | Destroys his/her own things | 0 | 1 | 2 |
| 19. | Destroys things belonging to his/her family or other children | 0 | 1 | 2 |

	0 = Not True	1 = Somewhat or Sometimes True	2 = Very True or Often True
20. Disobedient at home	0	1	2
21. Disobedient at school	0	1	2
22. Doesn't eat well	0	1	2
23. Doesn't get along with other children	0	1	2
24. Doesn't seem to feel guilty after misbehaving	0	1	2
25. Easily jealous	0	1	2
26. Eats or drinks things that are not food – don't include sweets (describe): _____ _____	0	1	2
27. Fears certain animals, situations, or places other than school (describe): _____ _____	0	1	2
28. Fears going to school	0	1	2
29. Fears he/she might think or do something bad	0	1	2
30. Feels he/she has to be perfect	0	1	2
31. Feels or complains that no one loves him/her	0	1	2
32. Feels others are out to get him/her	0	1	2
33. Feels worthless or inferior	0	1	2
34. Gets hurt a lot, accident-prone	0	1	2
35. Gets in many fights	0	1	2
36. Gets teased a lot	0	1	2
37. Gets upset easily -	0	1	2
38. Hangs around with children who get in trouble	0	1	2
39. Hears sounds or voices that aren't there (describe): _____ _____	0	1	2

	0 = Not true	1 = Somewhat or Sometimes True	2 = Very True or Often True
40. Impulsive or acts without thinking	0	1	2
41. Likes to be alone	0	1	2
42. Lying or cheating	0	1	2
43. Bites fingernails	0	1	2
44. Nervous, highstrung, or tense	0	1	2
45. Nervous movements or twitching (describe): _____ _____	0	1	2
46. Nightmares	0	1	2
47. Not liked by other children	0	1	2
48. Too fearful or anxious	0	1	2
49. Feels dizzy	0	1	2
50. Feels too guilty	0	1	2
51. Overeating	0	1	2
52. Overtired	0	1	2
53. Overweight	0	1	2
54. Physical problems without known medical cause:			
a. Aches or pains	0	1	2
b. Headaches	0	1	2
c. Nausea, feels sick	0	1	2
d. Problems with eyes (describe): _____	0	1	2
e. Rashes or other skin problems	0	1	2
f. Stomach-aches or cramps	0	1	2
g. Vomiting, throwing up	0	1	2
h. Other (describe): _____	0	1	2

0 = Not True	1 = Somewhat or Sometimes True	2 = Very True or Often True	
55. Physically attacks people		0	1 2
56. Picks nose, skin, or other parts of body (describe): _____ _____		0	1 2
57. Poor school work		0	1 2
58. Poorly coordinated or clumsy		0	1 2
59. Prefers playing with older children		0	1 2
60. Prefers playing with younger children		0	1 2
61. Reacts intensely when upset -		0	1 2
62. Refuses to talk		0	1 2
63. Repeats certain acts over and over; compulsions (describe): _____		0	1 2
64. Runs away from home		0	1 2
65. Screams a lot		0	1 2
66. Secretive, keeps things to self		0	1 2
67. Sees things that aren't there (describe): _____ _____		0	1 2
68. Self-conscious or easily embarrassed		0	1 2
69. Sets fires		0	1 2
70. Showing off or clowning		0	1 2
71. Shy or timid		0	1 2
72. Sleeps less than most children		0	1 2
73. Sleeps more than most children during day and/or night (describe): _____		0	1 2
74. Speech problem (describe): _____		0	1 2
75. Stares blankly		0	1 2

	0 = Not True	1 = Somewhat or Sometimes True	2 = Very True or Often True
76. Steals at home	0	1	2
77. Steals outside the home	0	1	2
78. Stores up things he/she doesn't need (describe): _____ _____	0	1	2
79. Strange behavior (describe): _____	0	1	2
80. Strange ideas (describe): _____	0	1	2
81. Stubborn, sullen, or irritable	0	1	2
82. Sudden changes in mood or feelings	0	1	2
83. Sulks a lot	0	1	2
84. Suspicious	0	1	2
85. Swearing or obscene language	0	1	2
86. Talks or walks in sleep (describe): _____	0	1	2
87. Talks too much	0	1	2
88. Teases a lot	0	1	2
89. Temper tantrums or hot temper	0	1	2
90. Tends to be emotional -	0	1	2
91. Threatens people	0	1	2
92. Thumb-sucking	0	1	2
93. Too concerned with neatness or cleanliness	0	1	2
94. Trouble sleeping (describe): _____ _____	0	1	2
95. Truancy, skips school	0	1	2
96. Underactive, slow moving, or lacks energy	0	1	2
97. Unhappy, sad, or depressed	0	1	2
98. Unusually loud	0	1	2

	0 = Not True	1 = Somewhat or Sometimes True	2 = Very True or Often True
99. Uses alcohol or drugs for nonmedical purposes (describe): _____	0	1	2
100. Vandalism	0	1	2
101. Whining	0	1	2
102. Wishes to be of opposite sex	0	1	2
103. Withdrawn, doesn't get involved with others	0	1	2
104. Worrying	0	1	2
105. Please write in any problems your child has that were not listed above: _____	0	1	2
_____	0	1	2
_____	0	1	2
106. When upset, calms down when talked to -	0	1	2
107. Is very sociable -	0	1	2

Anxious-Depressed factor included the following CBCL variable numbers:
11, 13, 29, 30, 31, 32, 33, 44, 48, 50, 68, 84, 97, and 104

Appendix I

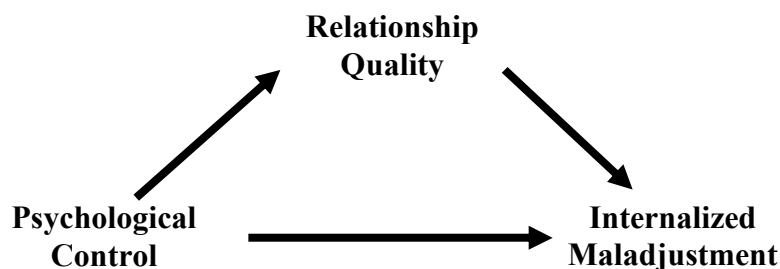
Independent Variables of Interest:

- *Maternal Psychological Control* (CRPR; maternal report)
- Observed Mother-Child Relationship Quality (observer ratings during each of the four shared activities (CA, PV, MD, BT, and averaged across the four activities)
 - *Observed Positivity*
 - *Observed Negativity*
- Perceived Mother-Child Relationship Quality (NRI and Security Scale; youth report)
 - *Perceived Positivity*
 - *Perceived Negativity*
 - *Attachment Security to Mother*

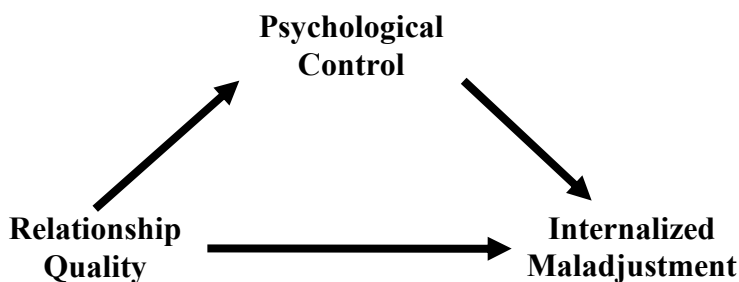
Dependent Variables of Interest:

- Youth *Self-Esteem* (SPP-C; youth report)
- Youth *Internalizing Problems* (CBCL; mother-report)

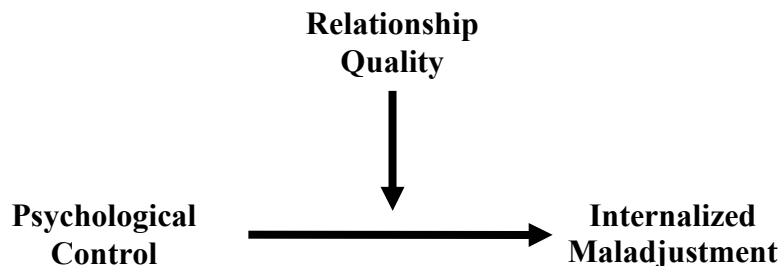
Primary Mediation Model:



Alternative Mediation Model:



Moderation Model:



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