An examination of predictors of relational and physical aggression among African American early adolescent girls: the role of father involvement, temperament, and self-regulation

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AN EXAMINATION OF PREDICTORS OF RELATIONAL AND PHYSICAL AGGRESSION AMONG AFRICAN AMERICAN EARLY ADOLESCENT GIRLS:
THE ROLE OF FATHER INVOLVEMENT, TEMPERAMENT, AND SELF-REGULATION

by

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Abstract

Informed by an ecological systems perspective (Bronfenbrenner, 1979 1992) integrated with prominent social-cognitive and developmental theories of self-regulation, affect, and temperament, the present study sought to examine a hypothesized model of the influences of father involvement and negative affect on self-regulation and aggression in early adolescent African American girls. A subset of 58 African American girls between the ages of 10 and 13 were selected from a larger sample of 291 boys and girls recruited from an urban, Northeastern public school district. Initially, this work tested an additive model to determine the unique and shared effects of maternal involvement and father involvement on self-regulation and aggression in African American girls. Next, the present study examined a hypothetical model of mediated-moderation in which father involvement and negative affect were expected to interact in the prediction of self-regulation and, in turn, relational or physical aggression. Results did not support the hypothesized model. However, there were several significant main effects of parenting self-regulation and relational aggression. Notably, more mother involvement was related to greater self-regulation while greater father involvement was related to more relational aggression. In addition, father involvement and temperament interacted in the prediction of physical aggression in girls. In particular, for girls high in negative emotionality, father involvement increased as physical aggression increased. Similarly, in a subset of girls high in relational aggression, the positive relations between father involvement and relational aggression were stronger for girls reporting higher levels of negative affect. This finding suggests the existence of a high-risk group of early adolescent African American girls who are prone to negative emotionality and for whom father involvement
is strongly and positively related to their displays of physical or relational aggression. As such, this work suggests the importance of the early identification of African American girls prone to negative mood states and aggression. Moreover, the present study has important implications for future research and the development of clinical interventions targeting aggression among vulnerable African American female populations. The present work highlights the critical need for further investigation of the complex, dynamic interactions between African American fathers and daughters living in urban, low-income communities.
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Introduction

Urban youth violence is a serious problem in American society and violence among female youth is a growing and important part of this overall dynamic. Although physical aggression is less common among girls than boys, mean rates of aggression for boys and girls do not differ significantly when verbal (yelling, teasing, insulting) and relational forms of aggression (secrets, gossip, spreading rumors, exclusion of peers) are included in comparisons by gender (Chesney-Lind, 2001; Crick & Grotpeter, 1995; Letendre, 2007). There is a growing body of research that suggests that girls participate in the same broad array of antisocial behaviors as boys, albeit at lower prevalent rates (Frick, 2004; Robins, 1986). Although boys outnumber girls within the psychiatric literature as well, with a male: female ratio of Conduct Disorder of about 4:1 (Cohen et al.; 1993; Schaeffer et al., 2006), most epidemiological studies of children and adolescents have found that conduct disorder is the second most common psychiatric disorder among girls (Robins, 1986). It should also be noted that while male adolescents continue to commit the majority of violent crime, the absolute number of severely antisocial girls has rapidly increased in recent years (Borduin & Schaeffer, 1998; Silverthorn & Frick, 1999). According to the Office of Juvenile Justice and Delinquency Prevention (OJJDP), in 2002, youth violence declined overall. However, during the same year, the crime rate for adolescent girls increased by 7% compared to a 29% decrease for males. In fact, according to the OJJDP, within the past two decades, violent crime among girls has increased at a much higher rate than for any other segment of the population. Specifically, the percentage of girls involved in violent crime increased by 103% during the period 1984-1993 and law enforcement agencies reported 641,000 arrests of girls
under the age of 18 in 2007. These arrests accounted for 29% of the total juvenile arrests made that year (Office of Juvenile Justice Prevention, 2007). Moreover, between 1998 and 2007, arrests of girls increased more than boys in several categories, including simple assault and drug abuse violations and decreased less than male arrests in most offense categories including aggravated assault and burglary (Office of Juvenile Justice and Delinquency Prevention, 2007).

Unchecked, relational and physical forms of aggression place girls at significant risk for the development of more serious social and emotional problems later in adolescence and adulthood (Coie & Dodge, 1998; Craig, 1998; Crick & Grotpeter, 1995). One of the more consistent and troubling findings is that aggression places girls at concurrent risk for early sexual activity, teen pregnancy, and early childbearing (Huizinga, Loeber, & Thornberry, 1993; Moffit, Caspi, Rutter, & Silva, 2001; Underwood, Kupersmidt, & Coie, 1996; Woodward & Fergusson, 1999). This is particularly disturbing because aggressive girls frequently become harsh, punitive mothers and both early childbearing and harsh parenting are risk factors for the development of behavioral difficulties in offspring (Foster, 2005; Gorman-Smith, 2003). In addition, aggressive adolescent girls have higher rates of depression than their peers (Moffit et al., 2001). They also experience school failure or drop-out, engage in risky sexual behaviors, exhibit a host of other antisocial behaviors, and develop violent relationships with romantic partners (Crick & Grotpeter, 1995; Moffit et al., 2001; Smith & Thomas, 2000). Furthermore, as adults, aggressive girls become perpetrators and victims of domestic violence and engage in more serious criminal behaviors as they act out in increasingly violent ways (Gorman-Smith; Smith & Thomas, 2000).
In addition to the psychological and health costs associated with female youth aggression, there are also social and economic consequences of these behaviors. For example, because aggressive girls experience academic difficulties and often leave school prematurely, they are more likely than their non-aggressive peers to be supported by welfare as young adults (Moffitt et al., 2001). Moreover, aggression during childhood and early adolescence are strongly predictive of chronic psychological difficulties and serious violent and/or criminal behaviors in adulthood (Hinshaw & Lee, 2003; Loeber, Burke, Lahey, Winters, & Zera, 2000; Ollendick & King, 1994; Robins, 1996). As such, the costs associated with rehabilitation, incarceration and long-term residential or hospital care are estimated to be in the hundreds of millions of dollars (Osofsky & Osofsky, 2001). Thus, the increase in female youth violence necessitates the need to create and fund programs designed to address the unique needs of youthful female offenders.

Girls from urban, low-income communities are disproportionately exposed to psychosocial risk factors such as poverty, neighborhood dysfunction, and family violence, which have been shown to increase their risk for developing aggressive behaviors (Barbarin, 1993; Barbarin & Soler, 1993). In fact, research has shown that girls living in low SES environments are more likely than their higher SES peers to be overtly aggressive (Coie & Dodge, 1998). In addition, Xie and colleagues (2002) found that girls from inner-city neighborhoods display higher levels of physical aggression in comparison to children from rural or suburban communities (Xie, Cairns, & Cairns, 2002; Xie, Farmer, & Cairns, 2003). Given that African Americans girls are more likely than their European American counterparts to live in urban, low-income neighborhoods, they may be more vulnerable than European American youth to the development of aggressive
behaviors (Barbarin & Soler, 1993; McLoyd, 1998). Indeed, African American girls are
overrepresented in the juvenile justice system due to their engagement in violent crimes
or other antisocial behaviors (Federal Bureau of Investigation, 2003). Because African
American girls in poor, urban communities are disproportionately exposed to risk factors
which increase their risk for engagement in aggressive behaviors, it is of critical
importance to identify potential pathways leading to the development of aggression in
this vulnerable population.

Historically, few studies of aggression have included girls (Kann & Hanna, 2000).
Females have routinely been excluded from this research because they have been
considered marginally important to understanding aggression (Glueck & Glueck, 1950;
Hirschi, 1969; Robins, 1986). Problems of this kind were thought to be rare among girls
and women. Thus, the inclusion of females in studies of risk and development was
deemed unnecessary (Gorman-Smith & Loeber, 2005). As such, little is known about the
mechanisms by which aggression develops in girls. Given that theories of violence,
aggression, conduct problems, and antisocial behaviors have primarily focused on male
populations (Keenan, Loeber, & Green, 1999), it is unclear if these models are applicable
to girls. Moreover, to date, literature in this area has focused primarily on European
American youth (Broidy et al., 2003; Cote, Zoccolillo, Tremblay, Nagin, D., & Vitaro,
2001). Thus, very little is known about pathways leading to aggression in African
American children and even less about the development of aggression in African
American girls.
Conceptualization of Aggression in Girls

Since the 1990’s, the definition of violence has broadened to include relational forms of aggression and accumulating evidence suggests that girls may be just as aggressive as their male counterparts. For example, Everett and Price (1995) suggest that girls are proportionately likely to be classified as being aggressive when measures of relational aggression are included, even though females exhibit lower rates of school violence in comparison to males when violence is defined as overt aggression. Crick (1995) adds that “the degree of aggressiveness exhibited by girls has been underestimated in prior studies, largely because forms of aggression relevant to girls (i.e., relational or indirect forms of aggression) have not been assessed” (p. 719). The work of Bjorkqvist and his colleagues in Finland (Bjorkqvist, Lagerspetz, & Kaukiainen, 1992; Bjorkqvist & Osterman, 1992) has contributed significantly to our understanding of relational forms of aggression and the ways in which girls enact aggression in comparison to their male counterparts. According to Bjorkqvist (1994) “there is actually no reason to believe that girls should be less hostile and less prone to aggressive conflicts than males” (p. 179). Bjorkqvist further suggests that girls develop other means of aggressively asserting themselves because they are typically the physically weaker sex. Particularly, when social skills develop, more sophisticated strategies of aggression are possible, enabling the aggressor to harm a target person indirectly or without even being identified (Bjorkqvist, 1994; Bjorkqvist, Lagerspetz, & Kaukiainen, 1992). Thus, by using social relationships to inflict damage, relational female aggressors do social harm to others directly or through ambiguous or covert means (e.g., rumor spreading, negative gossip).
Notably, the provocative nature of targeted relational aggression may ultimately lead to increased physical aggression among girls (Letendre, 2007).

Based on these conceptualizations, female aggression can either be described as physical which involves direct harm to another’s body or possessions, or as relational aggression which constitutes social rejection, exclusion by peers, harm to self-esteem, social rejection (i.e., ostracism), malicious gossiping, or withdrawal of friendship. In other words, physical aggression refers to physical damage to property or person., whereas, relational aggression describes behaviors that are intended to harm another’s reputation and social relationships, or to incite feelings of exclusion by the peer group (Putallaz, Grimes, Foster, Kupersmidt, Coie, & Dearing, 2007).

**Parenting, Self-regulation, Temperament, and Aggression**

Previous research indicates that parenting behaviors including parental involvement are relevant to the development of girls’ aggressive behaviors (Patterson & Stouthamer-Loeber, 1984; Peterson, Ewigman, & Kivlahan, 1993; Singer, Miller, Guo, Flannery, Frierson, & Slovak, 1999; Webb, Bray, Getz, & Adams, 2002). In particular, low parental involvement has been associated with higher rates of conduct problems, delinquency, school failure, substance abuse, aggression, antisocial behavior, and violent behaviors among boys and girls (Singer et al., 1999; Webb, Bray, Getz, & Adams, 2002). Moreover, less parental involvement has been linked to girls’ increased risk for early sexual initiation, teen pregnancy, and problematic romantic relationships (Huizinga, Loeber, & Thornberry, 1993; Underwood, Kupersmidt, & Coie, 1996).

In addition to being directly associated with girls’ aggressive or antisocial behaviors, parenting has been shown to have indirect relations to girls’ negative
outcomes via an impact on the development of self-regulation (Kochanska, Murray, & Harlan, 2000; Olson, Sameroff, Kerr, Lopez, & Wellman, 2005; Posner & Rothbart, 2000). Moreover, research has shown that relations involving parenting and children’s negative outcomes are moderated by individual differences in temperament (e.g., Eisenberg, Fabes, Guthrie, & Reiser, 2000; Rothbart, Ahadi, & Evans, 2000). In other words, temperamental differences render certain children more or less vulnerable to the influence of parenting behaviors and the development of problem behaviors (Nigg, 2006; Rothbart, Ahadi, & Evans; Morris, et al., 2002). Taken together, findings from these studies suggest that parenting may influence children differently depending on their temperamental differences and that children prone to negative affective states may be more susceptible to the development of self-regulatory problems and in turn, aggression. Given that urban youth are more likely than suburban or rural youth to develop aggressive behaviors, it is likely that urban youth with temperamental predispositions toward irritability, anger, or sadness may, as a group, be at greatest risk for the development of aggression. Unfortunately, most studies have been conducted with European American samples of children and parents and aggression is most frequently studied in males (Kann & Hanna, 2000). However, studies among vulnerable African American female populations are warranted. For example, understanding the ways in which mothering and fathering relate to African-American girls’ externalizing behaviors is especially important as researchers seek to understand the challenges facing early adolescents living in urban, low-income environments (Collins & Laursen, 2004). Effective treatment and prevention of delinquency, antisocial behaviors, and aggression among early adolescent African American girls depends on our understanding of how
these behaviors develop (Gorman-Smith & Loeber, 2005). In addition, research has indicated that children’s aggressive behaviors reach their highest peak between the ages of 9 and 11, during the period of middle childhood that typically precedes the transition to puberty (Lagerspetz, Bjorkqvist, & Peltonen, 1988). Thus, it would be important to study the development of aggression among children as they enter early adolescence because this has been shown to be an important developmental period. Furthermore, given that aggression in early adolescence is a risk factor for more serious aggressive or antisocial behaviors later in adolescence and adulthood (Frick, 2004), pathways leading to the development of these problems need to be identified early.

**Parenting Research: Moving Beyond the Mother-only Paradigm**

Studies investigating relations involving parenting, temperament, and self-regulation have added greatly to our understanding of processes leading to the development of problem behaviors in girls. Yet, the majority of the research on parenting has focused exclusively on measures of mothering behaviors, with little consideration of the role of fathers (Stolz, Barber, & Olson, 2005). This is due to three basic assumptions: 1) fathers contribute less to the social and emotional development of their children in comparison to mothers (Boyd, 1985), 2) fathers are more involved with sons than daughters (Lamb, 2000; Palkovitz, 2002), and 3) fathers exert a greater influence on the socioemotional development of the boys whereas mothers’ behaviors are thought to be more influential on girls (Isley, O’Neil, & Parke, 1996). As a result, relatively few studies have assessed the influence of fathers’ behaviors on the socioemotional development of girls, particularly among girls who develop gender-atypical behaviors such as aggression.
In the past, theories of mothering behaviors have been applied directly to fathers (Day & Mackey, 1989) and more recently, fathering theories have been developed to aid the field in moving beyond mother-only research (Stolz et al., 2005). While this work has led to important findings regarding the nature of relations among fathering, mothering, and child outcomes, theoretical models of parenting have rarely been tested on mothers and fathers together, in a manner that evaluates the extent to which theories are supported for mothers and fathers, while taking into account the unique and additive predictive abilities of maternal and paternal measures (Amato, 1998). Studies that do not assess the impact of mothers and fathers provide a limited assessment of children’s socioecological contexts and thereby reduce our ability to meaningfully assess potential developmental pathways leading to aggressive behaviors in children.

Research on African American Fathers: Conceptual and Methodological Challenges

Unfortunately, due to various conceptual and methodological challenges, there can be difficulty in the examination of the joint influences of fathering and mothering among urban, African-American families. A primary challenge is the overwhelming number of African-American children living in families headed by single mothers. Estimates suggest that as many as 69% percent of urban African American children do not live with their fathers (DeBell, 2008). Because of the large proportion of African American children being parented by single-mothers, some researchers have suggested that studies of father involvement among this group may be better conceptualized as studies of father absence. For example, several researchers have compared outcomes of children with fathers present in the home to outcomes of children with absent fathers (DeBell, 2008; Pfiffner, McBurnett, & Rathouz, 2001). Findings from these studies are
inconsistent, with several studies showing worse outcomes for children living without fathers in comparison to children living in other family arrangements (DeLeire & Kalil, 2002; Entwisle & Alexander, 1995; Hetherington, Camara, & Featherman, 1983) and at least one large-scale study showing only weak associations between father absence and children’s well-being (DeBell, 2008).

Other studies have not utilized the father-absent versus father-present comparison paradigm (De Bell, 2008), but provide substantial indirect evidence that children living without fathers are more likely than children living with fathers to have health concerns, to live in poverty, to perform poorly in school, and to have socioemotional problems (for a review see Sigle-Rushton & McLanahan, 2004). Moreover, other demographic variables such as income and various child outcomes are highly correlated with measures of father involvement and with measures of father absence. Thus, there is some support for evaluating the influence of father absence or presence as a proxy for father involvement in relation to other relevant variables (Duncan & Brooks-Gunn, 1997; Horn & Sylvester, 2002). While this may make sense intuitively, father absence research does not study the influence of fathering on children directly, but rather, infers the fathers’ influence from what occurs during his absence. Therefore, studies of father absence cannot provide information on paternal influences (Kotelchuck, 1976; Pedersen, 1976).

Another challenge to fathering research is the substantial amount of within-group heterogeneity (De Bell, 2008). For example, the father present/involved category may include children living with single-fathers, biological fathers and step-mothers, or both biological parents. In addition, children in relationships with non-residential or “social fathers” (i.e., men who serve as father figures) would also (theoretically) be considered
among those in the father-present/involved category. Researchers interested in studying the impact of fathers on child development must acknowledge this heterogeneity and decide which kinds of families to include in their studies. Otherwise, it would be difficult to generalize study findings to a specific type of family.

A final challenge to father research is the fact that fathers are most often studied through mothers’ reports of paternal behavior, and therefore conclusions are often drawn from second-hand, biased sources (Boyd, 1985; Coley, 2003). In addition, few studies assess children’s perceptions of fathering behaviors despite the fact that children’s own subjective experiences of parenting are likely to have the greatest impact on subsequent development. The present study seeks to build on extant research examining the impact of fathers on African American girls by examining girls’ perceptions of the degree to which fathers are involved in their lives. In the short-term, the present study may provide a better understanding of the ways in which relations among paternal behaviors and aggressive behaviors in early adolescent African American girls are either exacerbated or mitigated by temperamental dispositions and establish whether the influence of these variables are mediated by self-regulation. In the long term, this work may contribute to the creation of gender-specific interventions designed to decrease the development of aggression in vulnerable African American female adolescent populations.

Conceptual Framework

**Ecological perspectives on the development of problem behaviors.** The current study examined an integrated model of social-cognitive and developmental theories of self-regulation, affect, and temperament and an ecological systems perspective (Bronfrenbrenner, 1979, 1992). Bronfrenbrenner’s ecological systems model provides a
broad, overarching theoretical framework for understanding the interaction between parenting, individual characteristics, and child outcomes. According to Bronfenbrenner’s model, both proximal and distal meso- and micro-level variables including the home, school, and neighborhood environments and individual characteristics influence child development. Moffitt’s (1993, 2005) theories provide specific examples of the ways in which childhood-onset problem behaviors develop through interactions between environmental factors (e.g., parenting) and temperament. Indeed, there is mounting evidence to support these associations and different temperamental pathways to conduct problems characterized by aggression and antisocial behaviors have been articulated (Eisenberg et al., 2001; Frick & Morris, 2004; Lengua, 2006; Rothbart, Ahadi, & Evans, 2000). For example, a “Type II” psychopathic form of aggressive behavior has been delineated which shows strong associations to ecological risk factors such as ineffective parenting, high levels of negative affect and low self-control (Frick et al., 2003; Frick & Morris, 2004; Nigg, 2006; Wooten, Frick, Shelton, & Silverthorn, 1997). Taken together, the integration of Bronfrenbrenner’s (1979) and Moffitt’s (1993, 2005) theoretical models provide a comprehensive explanation of the complex, interactive processes by which aggression develops in children.

**Dual-process model of self-regulation.** In addition to social-cognitive and developmental theories highlighting the interactions between environmental factors and individual child characteristics, the present study utilized a developmental conceptualization of a dual-process model of self-regulation to explain relations among temperament, self-regulation, and affect (Derryberry & Rothbart, 1997; Rothbart, Ahadi, & Evans, 2000; Rothbart & Bates, 1998; Rothbart, Ellis, Rueda, & Posner, 2003).
Rothbart and colleague’s developmental perspective on the dual-process model describes a process comprised of two modes of self-regulation: one for information processing and the other for behavioral regulation (Carver, Johnson, & Joorman, 2008; Derryberry & Rothbart, 1997; Rothbart, Ahadi, & Evans, 2000; Rothbart & Bates, 1998; Rothbart, Ellis, Rueda, & Posner, 2003). According to the dual-process conceptualization, behavior is determined by these two opposing systems: one designed for behavioral control and restraint and the other responsible for emotional, impulsive, or reflexive reactions (Carver, Johnson, & Joorman, 2008; Metcalfe & Mischel, 1999). The two-mode model has been an important presence in developmental psychology (Carver, Johnson, & Joorman, 2008) and has contributed greatly to our understanding of the development of temperament and self-regulation in children. Rothbart and her colleagues (e.g., Derryberry & Rothbart, 1997; Rothbart, Ahadi, & Evans, 2000; Rothbart, Ahadi, Hershey, & Fisher, 2001; Rothbart & Bates, 1998; Rothbart, Ellis, Rueda, & Posner, 2003) have provided evidence of two basic temperament systems for approach and avoidance and a third, overarching regulatory system called effortful control (see also Kochanska & Knack, 2003; Nigg, 2000, 2003, 2006). Approach and avoidance temperaments collectively form a system for reactive control (Carver, Johnson, & Joorman, 2008). The subordinate reactive aspects of temperament can be conceptualized as an individual’s “reflexive, involuntary, automatic tendencies to approach incentives and avoid threats” (Carver, Johnson, Joorman, p. 914). These systems oppose one another and the predominant response system determines overt emotional and behavioral responses to environmental stimuli. Reactive undercontrol (Eisenberg et al., 2004) refers to dominance by the automatic system for approach. Alternatively, reactive overcontrol
refers to the case in which the automatic tendency for avoidance is stronger. Research in this area links regulatory undercontrol to impulsivity and externalizing problems (Rothbart, Ahadi, & Evans, 2000; Rothbart & Bates, 1998) and overcontrol to behavioral inhibition and internalizing disorders (Rothbart, Ellis, Posner, 2004; Valiente, Eisenberg, Smith, Reiser, Fabes, et al., 2003). Effortful control, the system’s mechanism for self-control, functions as the executive system designed to override whichever system is dominant (i.e., approach or avoidant) so that an individual can appropriately self-regulate in response to different environmental stimuli (Rothbart et al., 2004).

Defining Study Constructs: Negative Affect, Effortful Control, and Parental Involvement

Parental involvement. Parental involvement is conceptualized as the extent to which a mother or father is interested in, knowledgeable about, and active in their child’s life (Grolnick & Ryan, 1989). The construct of involvement encompasses a number of specific behaviors including active engagement with children in leisurely activities, involvement or participation in children’s school-related activities, and daily support and guidance of children’s developmental tasks such as chores, homework, and self-care/hygiene (Brody, Stoneman, & Flor, 1995; Williams & Kelly, 2005).

Effortful control (EC). According to Rothbart and colleagues’ conceptualization, effortful control is a superordinate mechanism that reflects an individual’s capacity to inhibit a dominant response and initiate a subdominate response according to situational demands. In other words, EC is viewed as one’s ability to voluntarily inhibit, activate, or change behavior and attention as needed (Derryberry & Rothbart, 1997; Kochanska, Murray, & Coy, 1997; Rothbart, 1989; Rothbart, Ahadi, & Evans, 2000; Rothbart,
Derryberry & Rothbart, 1997). EC functions to regulate the more reactive approach and avoidance aspects of temperament (Kochanska, Murray, & Harlan, 2000; Rothbart & Ahadi, 1994; Rothbart & Bates, 1998; Rothbart, Derryberry, & Posner, 1994). While typically characterized as self-regulation in younger children, EC can be termed “self-control” in older children or adults. Research also links EC to “conscientiousness”, the aspect of personality responsible for directing one’s attention, inhibiting certain behaviors, and the ability to persist in tasks (Jensen-Campbell, Knack, Waldrip, & Campbell, 2007). In the present study, EC includes indices of attentional control (the ability to voluntarily focus or shift attention as needed), inhibitory control (the ability to inhibit a behavior and suppress inappropriate approach behavior), and a measure of activation control, the ability to activate behavior when needed, even when an individual does not feel like doing so (Eisenberg, Fabes, and Murphy, 1996; Kochanska, Murray, & Harlan, 2000; Posner & Rothbart, 2000; Moriya & Tanno, 2007; Rothbard, Ahadi, Hershey, & Fisher, 2001).

Temperament. In the proposed study, temperament is broadly defined as biologically rooted individual differences in affective-motivational reactivity and self-regulation that emerge early in life and are relatively stable across various situations and over the course of time (Bates, 1987, Rothbart & Bates, 1998; Rothbart & Derryberry, 1985). This definition is consistent with the perspective of temperament as the “observable manifestation of the child’s emerging personality” (Matthews, Deary, & Whiteman, 2003; Muris & Ollendick, 2005, p. 273). In the present study, temperament is defined as both negative affect and frustration. These constructs are each defined below.
Negative affect. Negative affectivity (NA) is a temperamental trait that refers to the tendency to experience intense unpleasant feelings such as anger, sadness, irritability, or fear and to respond to situational stimuli with anger and distress (Cropanzano, Weiss, Hale, & Reb, 2003; Derryberry & Rothbart, 1988; Watson, Clark, & Tellegen, 1988). It also includes such affective states as scorn, revulsion, guilt, self-dissatisfaction, feelings of rejection, and to some extent, sadness (Watson & Clark, 1984). Historically, negative affect has been called “neuroticism” (Eysenck & Eysenck, 1968) and later has been identified as “negative emotionality” (Eysenck & Eysenck, 1975). A general measure of negative affect will be examined in the hypothesized model as a potential moderator of relations among father involvement and aggression.

Frustration: An aspect of negative affect. Frustration is an aspect of negative affect that refers to the tendency to experience frustration and anger when progress toward a specific goal is blocked or during an ongoing, challenging task (Rothbart & Bates, 1998; Rothbart, Derryberry, & Posner, 1994). In addition to a general measure of negative affect, a frustration measure will be utilized in the hypothesized model as a potential moderator of relations among father involvement and aggression.

Relational and Physical Aggression in Girls

In general, it is assumed that boys tend to engage in more overt, physical forms of aggression while females tend to internalize negative emotions and to express depression or anxiety rather than aggression (Nolen-Hoeksema & Hill, 2009). However, these assumptions may be misleading (for a review, see Eagly & Steffen, 1986; Else-Quest, Hyde, Goldsmith, & Van Hulle, 2006). Although boys may be viewed as better prepared to inflict physical harm on others, girls may be viewed as equally aggressive if relational...
or “mental” forms of aggression are considered. In fact, the number of studies that show no gender differences in aggression prevalence rates are nearly equal to the number of studies that show higher rates of aggression among boys. For example, a study by Lagerspetz, Bjorkqvist, & Peltonen (1988) showed that direct verbal aggression was displayed equally by both genders in a sample of 11-year olds. Notably, boys more frequently used both verbal and physical forms of aggression while girls typically used indirect means, such as rumor spreading and exclusion of peers.

Putallaz, Grimes, Foster, Kupersmidt, Coie, and Dearing (2007) conducted a comprehensive study of overt and relational aggression and victimization among a large sample of urban African-American and European American 4th grade students. These researchers utilized multiple informants including peers, teachers, and lunchroom observers to evaluate these behaviors. The researchers hypothesized that boys would be perceived by peers as more overtly aggressive and that there would be no gender differences in the use of relational aggression. The results supported this hypothesis. In addition, both controversial and rejected boys and girls were seen by peers as engaging in more aggressive behaviors, both overt and relational, in comparison to other children. With regard to ethnic differences, African American children were perceived by peers as more overtly and relationally aggressive than European American children. While teachers and peers reported a higher use of relational aggression rather than overt aggression among European American girls, lunchroom observers also perceived African American girls as using more relational than overt aggression. Surprisingly, relational aggression among both European American and African American girls did not predict negative outcomes (e.g., loneliness, depression, social anxiety). As suggested by the
authors, further research is needed to understand this latter finding. In addition, this study’s findings suggest a need to further investigate ethnic differences in school-aged children.

There is also evidence to suggest that girls and boys display similar developmental trajectories of aggression over time (Martino, Ellickson, Klein, McCaffrey, & Edelen, 2008; Schaeffer et al., 2006). For example, Schaeffer and colleagues (2006) examined aggressive-disruptive behavioral trajectories during elementary school and their associations to adult antisocial outcomes in a large sample of boys and girls. These authors found two analogous trajectories for boys and girls: chronic, high aggression-disruption (CHAD) and stable low-aggression-disruption (LAD). Girls’ and boys’ initial levels and growth in aggression-disruption over time were identical. In fact, girls in the CHAD group went on to have some of the highest rates of antisocial behavior in adulthood (i.e., comparable to rates among adult men) and the proportion of girls in this group was higher than in previous studies. Consistent with these findings, Martino, Ellickson, Klein, McCaffrey, and Edelen (2008) also found no evidence that boys and girls follow different developmental trajectories in patterns of aggression. Furthermore, boys and girls in the persistently high aggression trajectory demonstrated similar rates of aggressive behaviors. Notably, parenting was one of the strongest predictors of trajectory across gender. Because few studies have focused exclusively on girls, little evidence exists regarding the influence of ecological factors on girls’ aggression and developmental differences between girls who develop aggressive behaviors and those who do not.
Several studies have also shown that girls living in urban communities were more likely than their suburban or rural peers to be overtly aggressive (Coie, Dodge, 1998; Xie Farmer, & Cairns, 2003). For example, Farrell, Kung, White, and Valois (2000) found that females residing in urban neighborhoods tended to report higher overall rates of problem behaviors in comparison to those from rural communities. Additionally, within the urban sample, girls and boys were more similar in their reported rates of physical and non-physical aggression than rural boys and girls. Although the underlying factor structure of problem behaviors was similar across groups, the findings from this work suggest that important differences exist between urban and rural youth with regard to aggression. Consistent with these findings, Schaeffer and colleagues’ (2006) concluded that aggressive-disruptive behaviors may be more normative among both girls and boys living in urban neighborhoods characterized by high levels of violent crime and neighborhood disorganization. Moreover, as highlighted by Schaeffer and colleagues, aggressive behaviors in girls may be more readily accepted or tolerated by peers and adults in these communities given the chaotic, hostile climate in which they live. Collectively, these studies suggest that, “city” girls and girls in other communities display similar rates of relational aggression and less physical aggression than boys (in general). However, “city” girls tend to be more physically aggressive than girls living in other communities and are often as physically aggressive as their male counterparts.

In sum, studies investigating aggression among girls have revealed that relational aggression occurs more commonly among girls but that rates of aggression tend to be equal across gender when considering both relational and physical forms of aggression. In addition, aggressive boys and girls tend to follow similar developmental trajectories.
and girls living in urban, low-income communities display as much physical aggression as their male counterparts. Research also suggests that important qualitative differences in aggression may exist between African American girls and girls of other ethnic groups. In light of these findings, future research should attempt to highlight environmental factors that increase girls’ risk for aggressive behaviors and explore differences that exist within girls from different ethnic backgrounds (Putallaz et al., 2007).

**Supportive Parenting and Aggression in Girls**

Parenting behaviors are viewed as key determinants of children’s emotional and social development (Eiden, Edwards, & Leonard, 2004; Gartstein & Fagot, 2003; Kochanska & Knaack, 2003; Olson, Sameroff, Kerr, Lopez, & Wellman, 2005). Consistent parental involvement and engagement with their children promotes emotional connection, communicates feelings of caring, support, and love to the child, and affords children a solid foundation for the development of important emotional and behavioral skills (Barber, 1997). The construct of parental involvement encompasses a number of specific behaviors including active engagement with children in leisure activities, involvement or participation in children’s school-related activities, and daily support and guidance of children’s developmental tasks such as chores, homework, and self-care/hygiene (Brody, Stoneman, & Flor, 1995; Williams & Kelly, 2005). Numerous cross-sectional and longitudinal studies have demonstrated relations among parental involvement and socioemotional development in children and adolescents (Amato, 1994; Jayakody & Kalil, 2002; McBride, Schoppe, & Rane, 2002) and several studies have shown that parental involvement buffers against the development of delinquent behaviors including aggression (Brody, Dorsey, Forehand, & Armistead, 2002; Brody, Stoneman,
Alternatively, neglectful parenting (i.e., parenting characterized by low involvement, disengagement, and neglect of children’s basic needs has been linked to delinquent or antisocial behaviors (Maccoby & Martin, 1983; Steinberg, Blatt Eisengart, & Cauffman, 2006; Steinberg, Lamborn, Darling, Mounts, & Dournbusch, 1994). For example, Widom (1989) investigated cases in which children were exposed to neglect from their parents and found that by the time these children became adults, they were more likely to have engaged in criminally aggressive activities than controls. Similarly, Rosenbaum (1989) found that 37% of girls involved in the youth correctional system had been exposed to some form of neglect by parents. In addition, a meta-analysis by Hoeve and colleagues (2009) found that a neglectful, non-supportive parenting style was strongly related to delinquent behaviors (including aggression) across studies. Notably, these authors also found that fathers’ supportive parenting behaviors (e.g., involvement) were more strongly related to delinquent behaviors than mothers’ parenting. On the basis of these findings, the authors concluded that future studies could benefit from comparing fathers’ and mothers’ parenting and more clearly distinguishing between reports on fathers’ and mothers’ parenting behaviors.

Notably, the aforementioned studies have increased our understanding of relations among parenting and physical aggression. However, much less is known about the role of parental involvement in the development of relational or social forms of aggression. However, findings from the extant literature suggest that parent socialization processes including parental involvement may be related to the development of relational forms of aggression (Crick et al., 1999; Hart, Nelson, Robinson, Olson, & McNeily-Choque,
In addition, there is evidence to suggest that parent-child relationships teach girls skills for developing and managing other interpersonal relationships (Letendre, 2007; Chamberlain, 2003). In this manner, parents model ways for children to assert themselves, manage anger, maintain friendships, and protect themselves from harm (Letendre, 2007). Inadvertently, parents in families with high levels of conflict and dysfunction may train their children to be aggressive in both direct (e.g., physical aggression against others) and indirect (e.g., malicious talk about others) ways (Chamberlain, 2003). In addition, as cited in Foster (2005), unpublished research by Crick (1999) suggests that children’s relational aggression is associated with children’s reports of their desire for more closeness or engagement with parents and their fathers’ use of withdrawal of affection, particularly during conflicts. Collectively, the extant research suggests that children who are socialized in families that do not provide consistent support and guidance are at risk for developing both physical and relational forms of aggression (Letendre, 2007). However, these models have primarily been tested among two-parent, European American families.

While much knowledge has been gleaned from studies assessing the impact of parenting on the development of aggression, the majority of these studies either focus exclusively on maternal influences on child outcomes or do not specify which parents’ behaviors (i.e., mothers’ or fathers’) are being evaluated. Additionally, it is unclear whether fathers influence children’s development above and beyond the contributions of mothers (Amato, 1994; Parke, 2002). The few studies available suggest that mothers and fathers influence child development independently and that these associations are often dependent on characteristics of the child such as gender or temperament (Day & Padilla-
Walker, 2009; Bjorkqvist & Osterman, 1992). For example, Bjorkqvist & Osterman (1992) investigated parental influence on children’s self-estimated aggression in a sample of Finnish boys and girls. Children estimated their emotional connection to parents as well as their perception of how their parents behave when angry. The results indicated gender-specific effects such that mothers had a stronger impact on sons while fathers had a slightly stronger effect on girls. With regard to fathers, their physical aggression and alcohol use, in addition to a negative emotional relationship, were strong predictors of girls’ aggressiveness. Although these findings are intriguing, it is difficult to generalize these results to girls living in urban U.S. communities.

Collectively, child development studies have shown parenting to be one of the strongest predictors of aggression in children. In particular, supportive parenting behaviors including active involvement tend to protect against the development of aggression in children while negative parenting behaviors (e.g., low involvement) increase children’s vulnerability for aggression. Most studies have assessed physical forms of aggression among boys and primarily evaluated the impact of mothers’ parenting on child outcomes. However, relatively few studies have examined the impact of parenting behaviors on aggression in girls, the joint impact of fathers’ and mothers’ parenting on children’s aggression or relations between parenting and relational forms of aggression. Given that aggression among girls is becoming increasingly common (Borduin & Schaeffer, 1998; Silverthorn & Frick, 1999), studies of this kind are warranted.
Fathering and Aggression in Girls

Much of the existing research on fathering has found that fathers’ presence in children’s lives represents an important source of support for children’s healthy development (Coley, 1998, 2001). This line of research has been based upon several theoretical perspectives focusing on constructs such as accessibility, a father’s presence and availability to a child, engagement, a father’s experience of direct contact, caregiving, and shared interaction with a child, and responsibility, a father’s participation in such tasks as helping with homework and monitoring children’s whereabouts and activities (Cabrera, Tamis-Lemonda, Bradley, Hofferth, & Lamb, 2000; Lamb, Pleck, Charnov, & Levine, 1987). Palkovitz (1997) further explicated this conceptualization by identifying 15 general categories of paternal involvement including doing shared activities with children, helping with homework, and attending school or social activities with the child. These conceptualizations have driven father research during the past two decades and empirical support for fathering theories has emerged. In addition, the use of these conceptualizations has helped facilitate the extension of mothering theories to fathers.

Despite the growing number of studies examining the joint influence of mothers and fathers on child outcomes, it is not clear how fathers contribute to child development. For example, many studies of two-parent families have shown the positive effects of father involvement on child outcomes (Bronte-Tinkew, Moore, & Carrano, 2006; Day & Padilla-Walker, 2009; Stolz, Barber, & Olson, 2005) but have not clearly determined whether fathers make an independent contribution to child outcomes above and beyond the influence of mothers (Amato, 1994). It is possible, that in families with highly
involved fathers, as Amato (1994) highlights, mothers are especially caring, involved, nurturing, and encouraging of the father’s involvement with the child. As such, in these families, fathers’ involvement may not add much above and beyond the contribution of mothers. That is, in some instances, fathers’ involvement may be redundant (Amato, 1994). Additionally, in a large number of families, maternal involvement is generally high and father involvement is relatively low (Nord & West, 2000). Alternatively, when father involvement is low, mothers may overcompensate by being highly involved in their children’s lives in an effort to promote positive child outcomes. Also, more recent literature suggests that in some families, fathers increase their support of children’s development as maternal supportiveness declines (Martin, Ryan, & Brooks-Gunn, 2010).

Generally speaking, findings from more recent studies suggest that in order to accurately assess the influence of fathers on child outcomes, it is necessary to simultaneously examine (and control for) mothering behaviors. Historically, most research has failed to do this. However, several recent studies have examined models that evaluated the unique and shared variance accounted for by fathering and mothering variables (Amato, 1994; McBride, Schoppe, & Rane, 2002; Jayakody & Kalil, 2002; Williams & Kelly, 2005). In addition, several studies sought to determine the relative importance of each parenting variable in the prediction of child outcomes (Day & Padilla-Walker, 2009; Stolz, Barber, & Olsen, 2005). For example, Day and Padilla-Walker explored the ways in which mothers’ and fathers’ involvement influenced the development of externalizing and internalizing problems in early adolescents. Results revealed that father involvement, but not maternal involvement, was inversely related to adolescents’ externalizing problems as measured by the Child Behavior Checklist.
(CBCL; Achenbach, 1991). Moreover, analysis to determine the relative importance of both mother involvement and father involvement in the prediction of externalizing problems revealed that father involvement was not more important than mother involvement. These researchers also assessed interactions between fathers’ and mothers’ involvement and concluded that the influence of one parent’s involvement was not dependent on the others.

Stolz, Barber, & Olsen (2005) used dominance analysis to determine the relative importance of parental support, behavioral control, and psychological control in the prediction of antisocial behaviors, depression, and social initiative in a large sample of adolescents. Contrary to “dad the disciplinarian” adage, findings indicated that maternal behavioral control was relatively more important than fathers’ behavioral control in the prediction of boys’ antisocial behaviors but not for girls’ antisocial behaviors. With regard to youth depressive symptoms, positive mothering (i.e., low levels of psychological control and higher levels of behavioral control) was more important than fathering in the prediction of younger boys’ depressive symptoms, with positive fathering being more important to depression in girls. Fathers’ support of youth was relatively more important in the prediction of youth social initiative and dominated all other predictors in explaining this outcome for both boys and girls. In fact, this was the most robust, overall finding of this study, demonstrating how strongly both girls and boys were impacted by their perception of how much their fathers generally cared for them (Stolz et al., 2005). Collectively, these studies suggest that fathers are salient figures in their sons’ and daughters’ lives and are central to children’s healthy development, beyond the contributions of mothers (Amato, 1994; Coley, 1998; Coley & Medeiros, 2007; Eiden,
Edwards, & Leonard, 2004; Garstein & Fagot, 2003). Thus, despite the challenge of disentangling the impact of mothers and fathers, there is growing evidence that fathers have a unique effect on child outcomes (DeBell, 2008).

Due to increasing divorce rates and the number of nonmarital childbirths (Coely & Medeiros, 2007), a number of studies have examined the growing proportion of American children being raised in single-mother families. For example, a large-scale study by DeBell (2008) showed that children living without fathers were more likely to have school-related problems (e.g., suspensions, expulsions) and that children living with single-fathers had fewer school-related problems than children living with single-mothers. This finding suggests that there is not only a difference between absent-father and two-parent families, but also between households headed by single fathers compared to single mothers.

Researchers have also become interested in understanding behavioral outcomes among children living in non-traditional living arrangements and those involved with non-biological father figures. For example, an emerging body of research focuses on children’s social relationships with non-residential biological fathers or social fathers (i.e., mother’s male relatives, romantic partners, and/or close male family friends) who serve as father figures to children (Jayakody & Kalil, 2002; Tamis-LeMonda & Cabrera, 1999). In this work, the term father is broadly construed to allow mothers or children to nominate a male father-figure (Coley, 2003). Additionally, because African American children are more likely than their white counterparts to grow up in single-mother families and live in poor urban communities, a growing body of research is focused exclusively on understanding the role of African American fathers and fathers from low-
income communities in their children’s lives (Coley, 2003; Coley & Medeiros, 2007; Vogel, Bradley, Raikes, Boller, & Shears, 2006). While research in this area is limited, the available evidence indicates that father involvement is associated with better outcomes for girls, whether it be from residential or non-residential biological or social fathers, (Coley, 2003; Coley & Medeiros, 2007). Thus, this appears to be a promising line of research that is providing a better understanding of the dynamic interactions between African American fathers and daughters.

In addition, a growing number of studies are providing useful demographic information about urban African American families. For example, Coley and Chase-Landsdale (2001a) examined the role of biological and social fathers in a sample of African American adolescent girls and found that 65% percent of the sample identified a father figure. In addition, two thirds identified biological fathers and one third social fathers. In this particular study, findings indicated that paternal emotional and physical disengagement had an additive effect, with the most severe emotional and behavioral problems occurring in girls whose biological fathers were both emotionally alienated and physically absent from their lives (see Coley, 2001, 2003 for a review of father studies).

Vogel, Bradley, Raikes, Boller, and Shears (2006) examined relations between low-incomes fathers’ presence and children’s early developmental outcomes. This work aimed to classify fathers according to their degree of connectedness with their child and to examine relations among these levels of connectedness and children’s developmental outcomes. It was expected that children in stable, intact biological families would have the most contact with their fathers and in turn, the best outcomes (Vogel et al., 2006). Additionally, ethnic group differences were anticipated. The overall results indicated that
children living with their biological fathers tended to be developmentally better off (i.e., better able to self-regulate, less aggressive) than children who did not reside with their biological fathers. With regard to ethnic differences, findings among European Americans were fairly straightforward, indicating that greater, more consistent biological father presence was associated with positive developmental outcomes. Additionally, children with nonresident biological fathers who were at least somewhat involved were better off than those with unstable and transient relationships with their fathers (Vogel et al., 2006). Conversely, findings for African Americans were difficult to interpret as relations among classes of father connectedness and child outcomes did not hold consistently. For example, there were negative and positive associations between classes of father connectedness and child outcomes and these did not occur in the expected manner. This study did not examine gender differences.

Jayakody and Kalil (2002) conducted an interesting study examining the presence and impact of social fathers on children’s development while also considering children’s involvement with biological fathers in a large sample of African American single-family households. These authors were interested in assessing the influence of fathers on the early cognitive and social development of preschool aged children. Descriptive statistics indicated that 51% of the sample had social fathers and nearly 75% of nonresident biological fathers had never lived with their children. Results also indicated that most children had limited contact with their nonresident biological father but frequent contact with a social father (50% of the sample saw their social fathers nearly every day). In addition, findings suggested that boys in particular, benefited from the presence of a male father-figure. One limitation of this study was the use of a simple measure of father
presence/absence. Typically, research that has only assessed the presence or absence of a social father has consistently found no significant effects (Amato & Gilbreth, 1999). Consequently, Jayakody and Kalil’s findings may be considered atypical.

Coley (1998) evaluated the role of biological fathers and men serving as father figures (e.g., grandfathers, mothers’ romantic partners) on the academic achievement and behavioral problems of third- and fourth-grade children. Children reported on provision of emotional and behavioral support of fathers and other male figures in their lives. Notably, the majority of father figures (i.e., not their biological fathers) nominated by children were not male relatives, but rather, the romantic partners of their mothers. Results indicated that children in single-parent homes benefited from social interactions with fathers and other men in both behavioral and academic domains. In addition, gender moderated relations between fathering and child outcomes such that the relationship was stronger for girls. This finding suggests that fathering may be more important to the socioemotional development of girls than previously believed. This finding is inconsistent with previous research showing that parenting by fathers and other male father figures was primarily associated with better adjustment for boys, but not girls (Amato & Rezac, 1994). These mixed findings suggest that additional research is necessary to better understand the impact of fathering on girls’ socioemotional development.

Several longitudinal studies have assessed the impact of fathers’ involvement on children’s later mental health (Amato, 1994; Coley & Medieros, 2007; Flouri & Buchanan, 2002). Flouri and Buchanan (2002) used data on 8,441 cohort members from The National Child Development Study, one of the largest longitudinal studies to date, to
explore links between father involvement at age 7 and emotional and behavioral problems at age 16, and between father involvement at age 16 and psychological distress at 33. The researchers controlled for mother involvement at each time-point and included interaction terms between father involvement and maternal involvement to determine if father involvement was dependent on mother involvement. The findings suggested that father involvement at age 7 protected against psychological maladjustment in adolescents from non-intact families. In addition, father involvement at age 16 protected against psychological distress in women and early father involvement had the greatest impact on decreasing emotional and behavioral problems in adolescence when the father figure was not the biological father of the child. There was also significant interaction between mother and father involvement at age 7 such that the relationship between father involvement at age 7 and psychological distress at age 33 was stronger when mother involvement at age 7 was low rather than high. However, there was no significant interaction between father and mother involvement at age 16, suggesting that father involvement is not dependent on the level of mother involvement in the prediction of child outcomes for older children.

Although, this study was one of the first large-scale, landmark studies of father involvement, one major limitation in the study involves the use of different measures to assess the constructs of interest at each time point. That is, different measures of father involvement and psychological constructs were utilized at ages 7 and 16. At age 7, father involvement was a composite measure assessing various aspects of father involvement and psychological adjustment. At age 16, father involvement was only measured as fathers’ interest in children’s education. Notably, this study was conducted in England
and Wales among middle-class Europeans, thereby making it impossible to generalize these findings to urban, African-American populations.

Several longitudinal studies have also been conducted among American samples (Amato, 1994; Barnett, Marshall, & Pleck, 1992). For example, in 1994, Amato conducted a longitudinal study of married couples and their young adult children (ages 19 or older) through interviews conducted in 1980, 1983, 1988, and 1992. As hypothesized, Amato found that the quality of the adult children’s relationships with their fathers was positively associated with adult children’s psychological well-being independently of their relationship to their mothers for three out of four indicators of psychological well-being (happiness, life satisfaction, and psychological distress). In contrast to other studies (Barnett et al., 1992), this relationship was demonstrated for both sons and daughters. In fact, the only significant difference related to gender was that the quality of the mother-child relationship was more strongly related to psychological distress among sons than daughters. Collectively, these studies suggest that fathers appear to be important to the long-term well-being of their daughters. A major limitation of these studies, however, is that the samples were predominately middle-class and European American, and therefore, can not be generalized to other populations. Because the majority of father studies have focused on married and middle-class samples of fathers and their families, less information about fathers and families who fall outside of these parameters is available (Coley, 2001). Using data from the Welfare, Children, and Families: A Three-City Study, Coley and Medieros (2007) examined bidirectional, longitudinal relations between nonresident father involvement and adolescent engagement in delinquent behaviors in a sample of low-income, African American and Latino early adolescents. These authors
found that higher nonresidential father involvement predicted less delinquency across an 18-month period, particularly for youth who had initially engaged in delinquent behavior at Wave 1. Although adolescent delinquency did not predict changes in father involvement, the two variables covaried, such that father involvement increased as delinquency increased. According to the authors, this finding suggests that fathers may increase their involvement with adolescents as the adolescents engage in more problem behaviors. Notably, this relationship appeared to be stronger among African American families. Unfortunately, these authors did not assess gender differences in this study.

Coley (1998) examined gender differences in an investigation of third-and-fourth grade children residing with their unmarried mothers. The sample consisted of an even number of girls and boys as well as lower-class and middle-class children. Fifty-three percent of the sample was White and 47% were African American. Results revealed that the provision of control (e.g., disciplinary strategies, supervision of daily activities) from non-paternal men predicted fewer teacher-rated behavior problems in school and more prosocial behaviors toward peers across gender. While both boys and girls demonstrated prosocial behaviors toward peers (i.e., playing and working cooperatively), girls were more positively affected by relations with biological and social fathers than were boys. In addition, moderation by race and maternal marital history revealed divorced or separated fathers were more influential for children than never-married fathers and high levels of paternal warmth and control related to better outcomes for children of divorced or separated parents in comparison to children of never-married parents. Finally, moderation by race indicated that for African American children, greater
paternal warmth predicted higher prosocial ratings, whereas this relationship was negative for European American children.

Although there is controversy regarding the use of measures of father absence to evaluate the influence of fathers on child outcomes, a review of the literature would be remiss without consideration of studies of father absence. There is substantial evidence to suggest that father absence or lack of involvement places children at greater risk for the development of aggression than children whose fathers are actively involved in their lives (Amato, 1994; Kraemer, 2005). Using data drawn from the 2003 Parent and Family Involvement in Education Survey of the National Household Education Surveys Program, DeBell (2008) conducted one of the largest investigations of father absence to date. DeBell found that 69% of African American students (compared to 28% of white students and 39% of Latino Students) did not reside with their fathers. The study also examined the association of absent-father status with children’s well-being. Bivariate comparisons between children with present versus absent fathers revealed that father absence was associated with reduced overall well-being including worse health, lower academic achievement, and less parental involvement in school activities. Because the variance accounted for by father absence was relatively small when controlling for other socio-economic factors, DeBell concluded that “conventional wisdom may exaggerate the detrimental effects of father absence” (DeBell, 2008, p. 1). However, these findings are consistent with substantial body of work supporting the notion that father absence is extremely detrimental to child development (for a comprehensive review, see Horn & Sylvestor, 2000).
In sum, although it is still unclear whether fathering uniquely influences children’s outcomes beyond the contributions of mothers, previous research has clearly demonstrated the importance of fathers. Most importantly, research has begun to explore fathering beyond the “middle-class two-parent European American family” paradigm. As such, we know more about fathering in ethnic minority and non-traditional families than ever before. In addition, contrary to previous beliefs, research indicates that fathers are just as important to girls’ development as they are to boys’ and fathering has been shown to be among the strongest predictors of children’s outcomes. Notably, findings from father studies are mixed at best and results can be difficult to interpret due to the unexpected nature of relations between fathering and child outcomes, particularly among African Americans. Furthermore, little is known about the ways in which fathering influences the development of aggression among girls and few studies have focused specifically on African American girls. Thus, the present study seeks to add to the scant literature in this area by investigating relations between father involvement and aggression in a sample of early adolescent African American girls.

**Temperamental Vulnerability and Parenting**

In addition, to highlighting distinctions between mothers and fathers, child development studies have also provided considerable evidence that parenting behaviors do not influence all children in the same way or to the same degree (Morris et al., 2002). Research has also shown that children with varying temperaments are influenced differently by their parents’ behaviors (Loukas & Roalson, 2006; Morris et al., 2002). For example, a child with a difficult temperament (e.g., prone to irritability or anger, poorly self-regulated) is more likely to develop behavioral problems than a child with an “easy”
temperament regardless of the quality of parenting. That is, temperamental vulnerabilities can interact with parenting in ways that have dire consequences for child development. Indeed, studies of temperament and parenting suggest that children with a tendency to react to stressors with a positive attitude, optimism, and good self-control are often resilient (against the effects of poor parenting) and demonstrate behaviors that enhance good parenting and mitigate the effects of poor parenting (Lengua, 2008). In contrast, children exhibiting high levels of negative emotionality including anger, irritability, fear, or sadness and poor self-regulation appear to be more susceptible to the deleterious influence of poor parenting practices and exhibit behaviors that negate the effects of positive parenting (Morris et al., 2002). Children who express high levels of anger, distress, or impulsivity may respond to parenting behaviors with disinhibited, reactive, undercontrolled behaviors that lead to aggression, despite parents’ best (or worst) efforts. Conversely, children exhibiting less negative emotionality may be less influenced by parenting behaviors and less likely to develop aggressive behaviors because they generally maintain a lower baseline level of negative affect than temperamentally vulnerable children.

In sum, while a child’s mood can be expected to fluctuate depending on the situation, those high in negative emotionality will tend to experience (and report) more negative affect across time and regardless of the situation (Watson & Clark, 1984). Thus, temperament can be viewed as a relatively stable individual difference that will moderate the influence of parenting behaviors on children’s subsequent behaviors. From this perspective, negative emotionality may operate as a diathesis such that children high in negative/reactive emotionality are particularly likely to experience behavioral problems.
in response to risk exposure whereas children lower in negative reactivity may be less
vulnerable in the context of risk (Lengua, 2002). Lengua (2002) examined the additive
and interactive effects of multiple risk, emotionality, and self-regulation on the prediction
of children’s adjustment problems in a sample of third-through fifth grade children.
Multiple risk consisted of 11 indices representing demographic (maternal
income/education), psychosocial (maternal depression), and environmental risk factors
(neighborhood environment). Multiple measures of emotionality were used including
observational measures and maternal and child-reports of externalizing and internalizing
behaviors. In this study, positive emotionality (temperament) predicted resiliency and
poor self-regulation predicted vulnerability. Specifically, measures of emotionality
predicted child outcomes above and beyond the influence of multiple risk factors. In
addition, negative emotionality predicted adjustment problems and positive emotionality
predicted positive adjustment. Subsequently, these authors concluded that self-regulation
and emotionality can function as either additional risk factors that increase the likelihood
of adjustment problems or as protective factors that decrease the likelihood of
problematic outcomes in the context of risk.

Morris and colleagues (2002) also examined the influence of emotionality on the
development of externalizing or internalizing problems. Specifically, these researchers
investigated the moderating influence of temperament on relations involving child-
reported negative parenting and teacher-reported externalizing and internalizing problems
in a small sample of first and second-graders. As hypothesized, these authors found that
children with temperamental vulnerabilities were more likely to experience problems
when exposed to hostile or psychologically controlling maternal behaviors than other
children. More specifically, children high in irritable distress were at higher risk for developing externalizing problems when exposed to maternal hostility and internalizing problems when exposed to high levels of maternal psychological control (Morris et al., 2002). These authors interpreted these findings to mean that children experiencing high levels of irritable distress may not have the attentional or inhibitory resources necessary to control dysregulated displays of anger or aggression in the context of negative parenting behaviors. The conclusions drawn from this study are consistent with findings from other work in this area (Bates, 1987; Belsky, 1984; Rubin, 1998). Alternatively, children who were not prone to anger or frustration were more resilient against the influence of negative parenting behaviors. Due to the small sample size, information regarding gender differences was not examined. A notable finding from this study was that children’s report of maternal hostility yielded results that are highly consistent with studies employing parent-report or observational assessments of parenting. This suggests that school-aged children can reliably report on their perceptions of parents’ behaviors (Morris et al., 2002; Sessa, Avenevioli, Steinberg, & Morris, 2001). Historically, child development researchers have not paid sufficient attention children’s subjective experience of the social context (Boyce et al., 1998; Morris et al., 2001). Because children’s own subjective experiences and perceptions of parenting are likely to have the greatest impact on subsequent development and their reports are likely to be accurate, it would be important to include children’s reports in future investigations of parenting behaviors.

Studies of younger children have also provided valuable information regarding interactions between parenting and temperament (Bates, 1987; Belsky, 1984). For
example, McBride, Schoppe, and Rane (2002) examined relations between self-report and interviews measuring father involvement, parenting stress, and child characteristics (e.g., temperament, activity level, adaptability, approach/withdrawal) in a sample of two-parent families with children between the ages of 3 and 5. While associations between parents’ perceptions of child temperament and parenting stress were found for both mothers and fathers, there was a stronger association between perceptions of temperament and parental involvement for fathers. Other studies of father involvement have highlighted interactions between children’s temperament and fathers’ parenting behaviors (Blackson, Tarter, Martin, & Moss, 1994; Belsky, 1984; Mash & Johnston, 1990). For example, Blackson, Tarter, & Mezzich (1996) conducted a study with a sample of preadolescent sons of fathers who abused psychoactive substances and sons of fathers who did not use drugs. These researchers examined the moderating influence of difficult temperament on relations between children’s reports of fathers’ disciplinary strategies and mother-reported externalizing and internalizing problems. The results of the study indicated that difficult temperament moderated relations between fathers’ disciplinary strategies and internalizing and externalizing problems. In addition, difficult temperament and boys’ perceptions of fathers’ disciplinary styles accounted for a significant proportion of the variance in their externalizing behaviors. These findings highlight the moderating influence of children’s temperament and the way in which children’s perceptions of parenting behaviors relate to behavioral outcomes. These findings also suggest that temperamental vulnerabilities (e.g., difficult temperament, high levels of negative emotionality) may be related to fathering and the development of disruptive behavioral problems.
In sum, previous studies have consistently demonstrated interactions between parenting and child temperament. These findings suggest the importance of considering the ways in which children’s individual differences either exacerbate or enhance the influence of parents’ behaviors. In addition, previous studies suggest potentially modifiable ecological and individual factors that may inform interventions designed to decrease children’s vulnerability for the development of aggression and other externalizing behaviors. Notably, the majority of studies have been conducted among middle-class European American samples of parents and focus primarily on the dynamics of same-sex parent child relationships. Questions remain regarding gender differences in temperament and the ways in which fathers’ behaviors interact with girls’ temperamental differences. Thus, the present study seeks to add to the literature by investigating relations between fathering, temperament, and aggression in a sample of African American girls living in an urban, low-income community.

Self-regulation as a Potential Mediator

Several studies have provided evidence that self-regulation often functions as a mediator of the relations between parenting and children’s externalizing behaviors (Brody, Dorsey, Forehand, & Armistead, 2002; Brody, Stoneman, Flor, 1995; Eisenberg et al., 2001; Spinrad et al., 2007). Research in this area has developed largely from a heuristic model proposed in a seminal article by Eisenberg, Cumberland, and Spinrad (1998). Subsequent tests of this model have demonstrated indirect associations from various parenting behaviors including maternal supportive parenting (Spinrad et al., 2007), maternal emotional expressivity (Eisenberg et al., 2001), maternal reactivity (Eisenberg, Fabes, Murphy, 1996), and parental socialization (Eisenberg et al., 1998) to
children’s externalizing problems (i.e., aggression, disruptive or antisocial behaviors) via self-regulation. Recently, support for this model has been obtained from studies of ethnic minority child populations, particularly among Chinese and Indonesian samples (Eisenberg, Chang, Ma, & Huang, 2009; Eisenberg et al., 2007). Similarly, several studies among rural African American samples have found that parenting practices were indirectly related to academic and psychosocial outcomes through child self-regulation (Brody, Dorsey, Forehand, & Rex, 2002; Brody, Flor, & Gibson, 1999; Brody, McBride-Murry, Kim, & Brown, 2002). Collectively, findings from these studies highlight the importance of self-regulation as a mediating process between parenting and socioemotional outcomes in children and adolescents. Eisenberg and colleagues have provided substantial empirical evidence supporting self-regulation as a mediator of the relations between parenting and problem behaviors in school-age children. Similarly, Brody and colleagues have added to our understanding of developmental pathways leading to competency development in African American children from low-income, rural communities (Brody, Dorsey et al., 2002; Brody, McBride-Murry et al., 2002; Brody, Stoneman, & Flor, 1995). There are, however, a number of limitations in previous studies that preclude us from generalizing findings to African American girls living in urban communities. First, most of the previous work has been conducted among middle-class European American samples of mothers and their very young children. Second, the majority of these studies have focused primarily on broad indicators of academic and social competence, rather than specific behavioral problems such as aggression. Also, most studies have focused exclusively on relations between parenting and boys’ outcomes. Finally, findings from this substantial body of work cannot be readily
generalized to African American youth living in urban communities because of differences in the social-ecological context. For example, urban youth are more likely than their rural counterparts or European American children to be exposed to ecological risk factors including neighborhood violence, community disorganization/disadvantage, educational disparities, and family violence (Farrell, Kung, White, & Valois, 2000; McCloyd, Hill, & Dodge, 2005). Given that risk exposure increases urban youths’ risk for negative psychosocial outcomes including aggression, it is likely that developmental pathways associated with aggression would be different among this vulnerable group as compared to rural or suburban African American youth and European American youth in general.

**Rationale for Investigating Mediated-Moderation Models of Fathering, Mothering, and Temperament in Prediction of Relational and Physical Aggression**

Children’s responses to parenting may be influenced by their temperamental predispositions and how much effortful control they can exercise in a given situation (Carver, Johnson, & Joorman, 2008; Posner & Rothbart, 2000). It is important to note that children with a propensity for experiencing high levels of negative affect are more likely to respond poorly to negative parenting behaviors than children not prone to negative emotionality. Research has also provided extensive evidence that children with temperamental vulnerabilities characterized by anger, irritability, sadness, or anxiety tend to have more self-regulatory difficulties and behavioral problems than children without “difficult” temperamental predispositions (Morris et al., 2002). That is, a child’s propensity for reacting in a particular manner to ecological factors (i.e., parenting) will
determine the degree to which a child is able to regulate his or her affective and
behavioral responses across stimuli (Conway, 2005).

Studies of child development have consistently demonstrated the moderating
influence of temperament on relations between parenting and child outcomes (Coley,
1998; Lengua, 2002; Eiden, Edwards, & Leonard, 2004; Morris et al., 2002; McBride,
Schoppe, & Rane, 2002), suggesting that the influence of parenting behaviors on the
development of externalizing problems is often dependent on children’s reactivity to
these behaviors. These studies have revealed that relations between parenting and child
outcomes may be different for children prone to negative affective states including
irritability, anger, sadness, and/or anxiety than among children with less temperamental
vulnerabilities. Temperamental predispositions characterized by anger, irritability, or
anxiety may attenuate or strengthen relations between parenting and child outcomes due
to a child’s propensity for negative reactivity. Alternatively, children who are not prone
to negative reactivity/emotionality may demonstrate behaviors that either protect them
against the influence of negative parenting or enhance the influence of positive parenting.

There is also considerable evidence that relations between parenting and
children’s externalizing behaviors are mediated by child self-regulation (Brody, Dorsey,
Forehand, & Armistead, 2002; Brody, Stoneman, & Flor, 1995; Eisenberg et al., 2001;
Eisenberg et al., 1998; Spinrad et al., 2007). Research in this area has found that
numerous parenting behaviors including parental involvement predict children’s
capacities for self-regulation and in turn, the development of behavioral problems
(Brody, Dorsey et al., 2002; Brody, Flor, & Gibson, 1999; Brody, McBride-Murry et al.,
2002; Eisenberg et al., 2009; Eisenberg et al., 1998; Eisenberg et al., 2007). Collectively,
findings from these studies demonstrate the importance of examining self-regulation as a mechanism by which parenting impacts children’s outcomes.

In sum, there is an abundance of empirical evidence highlighting the moderating influence of temperament on relations between parenting and child outcomes including self-regulation and externalizing problems as well as support for the notion that parenting behaviors indirectly influence child outcomes via self-regulation (Brody, Dorsey, et al., 2002; Brody et al., 1999; Brody, McBride-Murry et al., 2002; Eisenberg et al., 1998; Eisenberg et al., 2007; Loukas & Roalson, 2006; Morris et al., 2002). Yet, few studies have integrated mediation and moderational analyses to evaluate associations between parenting and child outcomes. Utilizing mediation and moderation strategies together would provide more information than either method in isolation. Specifically, integrated analyses would not only help to determine if the strength or direction of relations between two variables is conditional upon the level of a third variable, but also whether this moderating effect occurred via a particular pathway or mechanism. Thus, the present study seeks to test the complex associations between parenting, temperament, self-regulation, and aggression in a sample of African American girls. No studies to my knowledge, have evaluated complex mediated-moderational models among urban, African American early adolescent girls.

The Present Study

There is a dearth of studies examining the relations between fathering and socioemotional development in urban, low-income, African American early adolescent girls, and even fewer studies focused on gender atypical behaviors such as aggression. Because early adolescent African American girls from urban, low-income environments
are at increased risk for the development of disruptive behavioral problems such as aggression, it is important to study this vulnerable group. Previous studies have consistently demonstrated the moderating influence of child characteristics such as temperament on relations between parenting and various child outcomes including aggression (Eiden et al., 2004; Lengua, Wolchik, Sandler, & West, 2000; Morris et al., 2002). In addition, research has shown that parenting indirectly influences children’s temperament and/or aggressive behaviors through the self-regulation mechanism (Brody, McBride-Murry et al., 2002; Eisenberg et al., 2001; Giancola, Roth, & Parrot, 2006). However, although there are many studies investigating mediation, moderation, or both, formal tests of mediated-moderational models are less common (Preacher, Rucker, & Hayes, 2007). To date, no studies have assessed whether the influence of father involvement on aggression differs depending on temperament and if the mediating process underlying this overall moderation is self-regulation (Muller, Judd, & Yzerbyt, 2005).

**Hypothesized Model**

In order to further knowledge about relations between fathering behaviors and aggression in early adolescent African American girls, the present study seeks to examine a mediated-moderational model (see Figure 1 in the Appendix). This model is based on the integration of several theories including an ecological theory of development (Bronfenbrenner, 1986), a feedback-loop theory of self-regulation (Carver & Scheier, 1999, 2000) and a developmental perspective on a *dual-process* model of self-regulation (Derryberry & Rothbart, 1997; Rothbart, Ahadi, & Evans, 2000). In addition, this work is conceptualized based on other theoretical perspectives which highlight associations.
between ecological factors (i.e., parenting), temperament, self-regulation, and the development of a “Type II” psychopathic form of aggressive behavior (Eisenberg et al., 2001; Frick & Morris, 2004; Moffit, 1993, 2005; Nigg, 2006; Rothbart, Ahadi, & Evans, 2000; Wooten, Frick, Shelton, & Silverthorn, 1997).

The primary objective is to determine whether relations between father involvement and aggression are dependent on the child’s level of negative affect and if the influence of these variables on aggression occurs via a self-regulation mechanism. Based on the research reviewed above, the following relationships are hypothesized:

1) The hypothesized model posits mediated-moderation (Baron & Kenny, 1986) where father involvement, negative affect, and the interaction of father involvement and negative affect are expected to relate indirectly to aggression through self-regulation. That is, self-regulation is expected to act as the mediating process underlying the overall moderation (i.e., the overall effect of father involvement by temperament interaction on aggression). Father involvement, negative affect, and their interaction are expected to relate to self-regulation and in turn, aggression. Specifically, father involvement is expected to be positively related to self-regulation and negatively related to aggression. Negative affect is expected to be negatively related to self-regulation and positively related to aggression. It is unclear whether self-regulation will mediate the association between father involvement and aggression to the same degree across girls with differing degrees of negative affect. Thus, no specific hypothesis is formulated in this regard.
2) Negative affect (measured with two different measures of negative affect) is expected to moderate the association between father involvement and self-regulation or aggressive behaviors, by either exacerbating or buffering the association. Specifically, for girls high in negative emotionality, father involvement is expected to be less strongly related (in a positive direction) to self-regulation and more strongly related (in a negative direction) to aggressive behaviors. Alternatively, for girls low in negative emotionality, father involvement is expected to be more strongly, positively related to self-regulation (i.e., more involvement predicts more self-regulation) and less strongly, negatively related to aggressive behaviors.

3) It is expected that self-regulation will partially mediate associations between father involvement and aggression and negative affect and aggression. Specifically, father involvement is expected to predict more self-regulation and in turn, fewer aggressive behaviors. Negative affect is expected to predict less self-regulation, and in turn, more aggression.

4) Father involvement is expected to be uniquely associated with self-regulation and aggression (either physical or relational aggression) above and beyond the contribution of maternal involvement to each of these outcomes. Specifically, it is expected that father involvement will be positively related to self-regulation and negatively related to aggressive behaviors above and beyond the contribution of maternal involvement.
Chapter II: Methods

Procedures

The current study is based on a secondary analysis of data from a school district located in a northeastern, urban city in which the ethnic/racial composition of public schools is as follows: 54.8% African American, 11.08% European American, 30.95% Latino, 1.24% Asian, and 1.86% other (CT Education Department, 2007). Students were recruited through the Office of Social Development within schools in the district. The Social Development team members and the principal investigator collaborated on the instruments included in school district’s bi-annual assessment of students. The data were collected in accordance with the New Haven School District’s ethical guidelines for obtaining parental permission, student assent, and the administration of research to students. Additionally, the primary investigator received approval from the Institutional Review Board at the University at Albany, State University of New York to conduct a secondary analyses of these data.

Participants

Although 291 children in grades 4-12 participated in the school district’s study, the current work is based on a subset of 58 African American girls who met the principal investigator’s inclusion criteria of identifying themselves as being exclusively of African American heritage and between the ages of 10-13. Girls in this age range were chosen because early adolescence represents a critical developmental period during which 1) aggressive behaviors peak and 2) ecological risk factors are likely to have the greatest impact on children’s academic, social, and behavioral outcomes as they transition into puberty (Lagerspetz, Bjorkqvist, & Peltonen, 1988).
The girls ranged in age from 10 to 13 years with a mean age of 11.23 years, \((SD = 1.17)\). The majority of girls were in the sixth grade \((34.2\%)\), followed by fifth \((21.4\%)\) and fourth \((21.4\%)\) grades, seventh grade \((14.3\%)\), and eighth grade \((8.6\%)\). Slightly over half of the participants lived with their mothers in single-parent homes \((53.4\%)\), followed by those who lived with both their mothers and fathers \((24.3\%)\), those who lived with their mother and other adults \((15.7\%)\), and those who lived with their father and other adults \((2.9\%)\). Equal numbers of girls lived with fathers only \((1.4\%)\), adult relatives who were not their biological parents \((1.4\%)\), or adults who were not relatives \((1.4\%)\). The majority \((78.6\%)\) identified their biological mothers as their female caregiver, followed by those who identified their biological grandmother \((11\%)\), a sister \((5.7\%)\), and those who identified another adult female relative (e.g., an aunt or cousin) as their primary caregiver \((4.3\%)\). The majority \((62.9\%)\) identified their biological father as their primary father figure, followed by those who identified a brother \((13.9\%)\), a grandfather \((9.1\%)\), another male not related to them such as a mother’s boyfriend or a step-father \((8.1\%)\), and another male relative \((5.7\%)\). Eighty percent of the girls participated in the subsidized school lunch program.

**Measures**

In addition to demographic questions regarding participants’ gender, age, grade, family structure, and socioeconomic status (as measured by participation in the subsidized school lunch program), participants completed a number of psychosocial measures designed to assess the proposed independent variable (father involvement), covariate (mother involvement), moderator (negative affect), and mediator (self-regulation) variables and the outcome variable (relational and physical aggression).
Independent Variables

**Father involvement.** Father involvement was measured with the Child Report of Parenting Behaviors Inventory (CRPBI, Schaefer, 1965). Girls also provided demographic information regarding their residency status and as described in Coley (2003), a nondirective method of identifying the girl’s primary father figure by asking each respondent if there was an important male caregiver who was involved in various aspects of their lives (for at least 3 months) and whether this person was their biological or social father-figure (e.g., uncle, grandfather, brother). Children reported their perception of their father’s (or male caregiver’s) extent of involvement in their life (e.g., ‘‘My father helped out with school/community activities that I was involved in’’, “My father helped me with my homework”). Participants indicated their responses using a Likert-type scale ranging from 1 (almost never) to 5 (almost always). Scores were computed as a total sum of responses to the 11 items. Higher scores denote greater levels of perceived father involvement. A reliability of .77 has been demonstrated in a sample of African American youth (Krishnakumar, Buehler, & Barber, 2004). In addition, the reliability and validity the CRPBI has been well documented (Krishnakumar, Buehler, & Barber, 2004; Rogers, Buchanan, & Winchell, 2003; Schwarz, Barton-Henry, & Pruzinsky, 1985). In the present study, Cronbach’s alpha was .93.

**Mother involvement.** Mother involvement was measured with the Child Report of Parenting Behaviors Inventory (CRPBI: Schaefer, 1965) and entered as a covariate in each regression. Girls also provided demographic information regarding their residency status and as described in Coley (2003), a nondirective method of identifying the girl’s primary mother figure by asking each respondent whether there is an important female...
caregiver who has been involved in various aspects of their lives (for at least 3 months) and whether this person is their biological mother or social mother-figure (e.g., aunt, grandmother, sister). Children reported their perception of their mother’s (or female caregiver’s) extent of involvement in their life (e.g., “My mother helped out with school/community activities that I was involved in”, “My mother helped me with my homework”). Participants indicated their responses using a Likert-type scale ranging from 1 (almost never) to 5 (almost always). Scores were computed as a total sum of responses to the 11 items. Higher scores denote greater levels of perceived parental involvement. A reliability of .77 has been demonstrated in a sample of African American youth (Krishnakumar, Buehler, & Barber, 2004). In addition, the validity the CRPBI has been well documented (Krishnakumar, Buehler, & Barber, 2004; Rogers, Buchanan, & Winchell, 2003; Schwarz et al., 1985). In the present study, Cronbach’s alpha coefficient was .83.

**Potential Moderator Variables**

**Negative affect.** Affect was assessed with the Negative Affect subscale of the Positive and Negative Affect Schedule for children; (PANAS-C, Laurent, Catanzaro, & Joiner, 2004). The PANAS–C consists of a 12-item PA scale and a 15-item NA scale. The PANAS–C contains a mix of items from the original PANAS, the PANAS–X Basic Negative Emotions, Basic Positive Emotions, and Other Affective States scales (Watson & Clark, 1992) and items that represented synonyms which the authors felt would be more easily understood by children. The PANAS–C instructs children to indicate how often they have felt interested, sad, and so forth, during the past two weeks on a 5-point Likert-type scale (1 = very slightly or not at all to 5 = extremely). Scores were computed
as a total sum of responses to the 11 items. Higher scores denote greater negative affect. Reliability has been demonstrated in children in grades 4 to 8, with studies showing reliability for the PANAS-C Negative Affect subscale ranging from .92 to .94 (Laurent, Catanzaro, Joiner, Rudolph, Potter, et al., 1999). The PANAS-C has been shown to have adequate validity in samples of ethnically diverse pre-adolescent children (Kiernan, Laurent, Joiner, Catanzaro, & MacLachlan, 2001; Laurent et al., 1999). In the present study, Cronbach’s alpha coefficient was .88.

Negative affect was also assessed with the frustration subscale from the Early Adolescent Temperament Questionnaire- Short Form (EAT-Q, Ellis & Rothbart, 2001). The Frustration subscale is described as a dimension of negative affect related to the interruption of on-going tasks or goal-blocking in children ages 10-16 (Ellis & Rothbart, 2001). Participants indicated their responses using a Likert-type scale ranging from 1 (almost always not true) to 5 (almost always true). Total frustration scores were computed as the summation of the 7-items on the scale after reverse-coding. Lower scores denote more frustration. Ellis and Rothbart (2001) reported a Cronbach’s alpha of coefficient of .81 for the entire EAT-Q measure in an urban sample of children ages 10-15. The EAT-Q has also been shown to have adequate validity (Capaldi & Rothbart, 1992; Ellis & Rothbart, 2001). In the present study, Cronbach’s alpha coefficient for the frustration sub-scale was .76.

Potential Mediator

Self-regulation. Self-regulation was assessed with the Early Adolescent Temperament Questionnaire- Short Form (EAT-Q, Ellis & Rothbart, 2001). This is a 14-item self-report measure developed to measure effortful control (i.e. dominant, regulative
temperamental aspects of self-regulation) in children ages 10-16 (Schaefer, 1965). Participants indicated their responses using a Likert-type scale ranging from 1 (*almost always not true*) to 5 (*almost always true*). Effortful control score was computed as the summed mean of the items on the attention, activation control, and inhibitory control subscales. Higher scores denote greater self-regulation (i.e., effortful control). Ellis and Rothbart (2001) reported a Cronbach’s alpha of coefficient of .81 for this measure in an urban sample of children ages 10-15. The EAT-Q has also been shown to have adequate validity (Capaldi & Rothbart, 1992; Ellis & Rothbart, 2001). In the present study, Cronbach’s alpha coefficient was .67.

**Dependent Variable**

**Aggression.** Engagement in aggressive behaviors was measured with a composite of the nonphysical aggression (seven items), and physical aggression (seven items) subscales from the Problem Behavior Frequency Scale (PBFS; Farrell, Kung, White, & Valois, 2000). The PBFS assesses how often youth engage in behaviors such as putting someone down, threatening someone with a weapon, hitting someone, or spreading rumors about someone. Participants were asked to rate how frequently they engaged in each behavior within the past 30 days on a 6-point Likert scale (1 = *never*, 2 = *1-2 times*). Scores for each subscale were computed separately as the total sum of responses of the seven items on that subscale. Higher scores denote greater frequency of engagement in physical or relational aggression. Farrell et al. also provided preliminary evidence for the validity of the nonphysical and physical aggression subscales. These authors estimated the alpha for the nonphysical and physical aggression subscales to be .84 for both subscales in an urban sample of middle school students. In the present study, Cronbach’s
alpha coefficients for the relational aggression and physical aggression subscales were .81 and .76, respectively.
Chapter III: Results

Descriptive Statistics

Means, standard deviations, and Cronbach’s alpha coefficients for study variables are reported in Table 1 for the entire sample of African American girls. Maternal involvement was included as a covariate in the main analyses in an effort to evaluate the influence of fathering when controlling for this variable. Intercorrelations for the main study variables are presented in Tables 2-6. Maternal involvement correlated positively with self-regulation and father involvement but was not related to negative affect, frustration, physical aggression, and relational aggression. Father involvement was positively related to maternal involvement and relational aggression but was not related to frustration, negative affect, self-regulation, and physical aggression. Self-regulation was negatively related to negative affect, frustration, physical aggression, and relational aggression.

The majority of the sample (63.8%) identified their biological fathers as their father-figure and 36.2% of the sample identified a social father (e.g. a grandfather, brother, other adult relative, or non-related male figure). Within the group of girls involved with their biological fathers, slightly over half of the girls lived with their mothers in single-parent homes (51%), followed by those who lived with both their mothers and fathers (35%), those who lived with their mother and other adults (5.4%), those who lived with their father and other adults (2.7%), fathers only (2.7%), and other non-parental adults (2.7%). Within the group of girls involved with social fathers, 47.4% lived with their single mothers, followed by those who resided with their mothers and other adults (31.6%), those who resided with their mothers and (step) fathers (16%), and
those who resided with adult relatives (5.3%). No girls involved with social fathers resided with social fathers alone or with social fathers and other adults.

Means and standard deviations for study variables separated by residency and father-figure status are displayed in Table 2. This descriptive information provides useful information regarding girls’ residency status, the number of girls who identify a primary father figure, preliminary estimates of the range of father involvement in an urban preadolescent female sample as well as the biological and residential status of the nominated fathers. While the majority of the sample did not reside with fathers, all girls reported being regularly involved with either a biological or social father. Tests for mean differences indicate that among girls involved with social fathers, girls living with single mothers reported more frustration ($t(10) = -1.301, p = .016$) than those residing with both mothers and social fathers. Among girls involved with biological fathers, girls living both their biological father and mother reported more relational aggression ($t(30) = 2.401, p = .012$) than girls living with mothers only. There were no other significant mean differences in negative affect, self-regulation, or father involvement among girls involved with biological versus social fathers.

**Overview of Data Analytic Strategies**

As seen in Figure 1, the hypothesized model posits that the influence of father involvement and negative affect, as well as the interaction between father involvement and temperament will be indirectly associated to aggression through self-regulation (mediated moderation). The hypothesized model was tested separately for relational and physical aggression controlling for the effects of maternal involvement on the first step of each model. Each predictor variable was centered to minimize the effects of
multicollinearity, and interaction terms were formed as the product of the two centered predictors. The hypothesized model was examined using procedures outlined by Baron and Kenny (1986) to test for mediation and moderation. According to Baron and Kenny, four conditions must be met for mediation to exist. First, the predictor variable must significantly predict the criterion variable in the absence of the mediator (for an exception, see MacKinnon, Krull, and Lockwood, 2000). Second, the predictor variable must be significantly related to the mediator. Third, the mediating variable must significantly predict the criterion variable. Fourth, the effect of the predictor on the criterion variable must significantly decrease with the addition of the mediating variable to the model. Finally, for mediated moderation to exist, the interaction of father involvement and negative affect would have to predict both self-regulation and aggression. In other words, the magnitude of the hypothesized indirect effect (mediation) must be conditional upon the level of the moderator (Baron & Kenny, 1986). Main effects were considered to be significant at p > .05. However, there is justification for utilizing a less stringent p-value (i.e., .10) to assess interactions (Aiken & West, 1991). Thus, interactions were considered to be significant at p > .10.

Test of the Hypothesized Model with Negative Affect (Moderator) and Physical Aggression (Criterion)

Results of the analyses of the hypothesized model are shown in Figure 2. The first step in testing the hypothesized model involved determining whether a relationship existed between father involvement (predictor) and physical aggression (criterion) and between negative affect (moderator) and physical aggression (criterion) while controlling for mother involvement. Regression analyses revealed that neither father involvement (B
nor negative affect ($B = .128, p = .68$) were significantly related to physical aggression. However, the interaction of father involvement x temperament controlling for mother involvement was related to physical aggression at $p > .10$ ($B = .545, p = .053$) and accounted for 1% of the variance in physical aggression. This finding suggests the magnitude of the relationship between father involvement and physical aggression may be conditional upon the level of negative affect (temperament). Simple slope analyses were conducted using procedures described by Aiken and West (1991). Simple slope analyses conducted at ± 1.0 above and below the mean of negative affect were significant (see Table 5). Thus, the hypothesis regarding the role of negative affect as a moderator of relations between father involvement and aggression was supported. The nature of the interaction was such that, at high levels of negative affect, father involvement increased as physical aggression increased ($B = .311, p = .050$). Alternatively, at low levels of negative affect, father involvement decreased as physical aggression increased ($B = -.322, p = .050$). These results are displayed in Figure 3.

The next step in evaluating the model involved examining the relation between father involvement and physical aggression while controlling for maternal involvement, negative affect and self-regulation. This analysis indicated that the direct association between father involvement and physical aggression was not significant ($B = -.096, p = .61$). The next step in investigating the hypothesized model involved examining whether a relationship existed between father involvement, negative affect, and the hypothesized mediator (self-regulation). These analyses revealed that (controlling for mother involvement) neither father involvement ($B = -.027, p = .57$), negative affect ($B = -.117, p = .09$), nor the interaction of these two variables predicted self-regulation ($B =
-.052, p = .40). As such, the hypothesis that self-regulation would act as the mediating process underlying the overall moderation (i.e., the overall effect of father involvement by temperament interaction on aggression) was not supported.

In order to determine the unique variance in self-regulation accounted for by each of the predictors without the interaction term in the model, each predictor was regressed on self-regulation. Father involvement was not related to self-regulation (B = -.026, p = .59) nor was negative affect related to self-regulation (B = -.115, p = .072). However, mother involvement was positively related to self-regulation (B = .321, p = .032) and accounted for 6% of the variance.

The next step in evaluating the model involved examining the relation between self-regulation and physical aggression while controlling for parenting variables and negative affect. These analyses indicated that self-regulation was significantly related to physical aggression (B = -2.166, p = .000) and accounted for 11% of the variance in physical aggression. The relationship was such that less self-regulation predicted more physical aggression.

Overall, the hypothesized model was unsupported by the data. Neither father involvement nor negative affect predicted self-regulation or physical aggression. However, the interaction of father involvement and negative affect was significantly related to physical aggression. Further evaluation of the simple slopes revealed that at high levels of negative affect, a positive relation between father involvement and physical aggression emerged, whereas, at low levels of negative affect, father involvement was negatively related to physical aggression. Thus, it was concluded that relations between father involvement and physical aggression were moderated by negative affect. However,
results suggest that neither the main effects of father involvement and negative affect on physical aggression, nor their interaction, were mediated by self-regulation.

Test of the Hypothesized Model with Negative Affect (Moderator) and Relational Aggression (Criterion)

Using the same procedures and sequence of steps that were previously described for testing the hypothesized model with physical aggression, the hypothesized model was also tested with relational aggression as the outcome. Results of the analyses of the hypothesized model are shown in Figure 2. Analyses revealed that father involvement was significantly related to relational aggression ($B = .566, p = .016$), such that more involvement predicted more relational aggression. However, negative affect was not significantly related to relational aggression ($B = .039, p = .90$), nor was the interaction between father involvement and negative affect ($B = .361, p = .24$). These findings suggest that father involvement is positively related to relational aggression, but that this association is not dependent on level of negative affect.

Next, the relations between father involvement, negative affect, their interaction, and the hypothesized mediator (self-regulation) were examined. Similar to analyses with physical aggression as the outcome, these analyses revealed that neither father involvement ($B = -.027, p = .57$) nor negative affect ($B = -.117, p = .09$) were significantly related to self-regulation. Therefore, it was concluded that self-regulation was not a mediator of the relations between father involvement and aggression. In addition, the interaction of father involvement and negative affect was not significantly related to self-regulation ($B = -.052, p = .40$). Because father involvement (independent variable) and
negative affect (moderator) were unrelated to the mediator, the hypothesized mediated-
moderation model was unsupported.

The next step in evaluating the model involved examining the relation between self-regulation and relational aggression while controlling for parenting variables and negative affect. These analyses indicated that self-regulation was negatively related to relational aggression ($B = -2.197, p = .001$) and accounted for 16% of the variance in this outcome.

The final step in evaluating the model involved examining the relation between father involvement and relational aggression while controlling for mother involvement, negative affect and self-regulation. This analysis indicated that the father involvement was directly related to relational aggression ($B = .543, p = .013$), with father involvement accounting for 9% of the variance in this outcome while controlling for the other variables.

The above analyses revealed self-regulation and father involvement to be significant predictors of relational aggression. Self-regulation was related in the expected direction to relational aggression. Contrary to expectations, father involvement was positively related to relational aggression. Although, the hypothesized mediated-moderation model was unsupported by the data, the positive relation between father involvement and relational aggression is noteworthy.

Test of the Hypothesized Model with Frustration (Moderator) and Physical Aggression (Criterion)

Using the same procedures and sequence of steps that were previously described for testing the hypothesized model with negative affect, the model was also tested
replacing negative affect with frustration (i.e., a dimension of negative affect associated with a blocked goal or on-going task). Results of the analyses of the hypothesized model are shown in Figure 3. These analyses revealed father involvement was not significantly related to physical aggression \( (B = -.061, p = .77) \). In addition, neither frustration \( (B = .402, p = .13) \), nor the interaction between father involvement and frustration predicted physical aggression \( (B = -.155, p = .46) \).

Next, the relations between father involvement, frustration, including their interaction term (i.e., father involvement x frustration) to self-regulation were examined, while controlling for mother involvement. These analyses revealed that frustration was significantly related to self-regulation \( (B = -.136, p = .05) \) and accounted for 8% of the variance. However, neither father involvement \( (B = -.027, p = .57) \) nor the interaction of father involvement and frustration \( (B = .034, p = .46) \) were significantly related to self-regulation. Because father involvement and the interaction of father involvement and frustration were unrelated to self-regulation or physical aggression, the hypothesized model was not supported.

The next step in evaluating the model involved examining the relation between self-regulation and physical aggression while controlling for parenting variables and frustration. These analyses indicated that self-regulation was significantly related to physical aggression \( (B = -2.022, p = .001) \) such that less self-regulation was related to more physical aggression. Self-regulation accounted for 18% of the variance in physical aggression. The final step in evaluating the model involved examining the relation between father involvement and physical aggression while controlling for frustration and
self-regulation. This analysis indicated that the direct relationship between father involvement and physical aggression was not significant ($B = -.124, p = .61$).

Test of the Hypothesized Model with Frustration (Moderator) and Relational Aggression (Criterion)

Finally, analyses were conducted to examine the impact of father involvement, frustration, and their interaction on relational aggression, while controlling for maternal involvement. Results of the analyses of the hypothesized model are shown in Figure 3. These analyses revealed that father involvement was significantly related to relational aggression ($B = .546, p = .016$) and accounted for 10% of the variance in this outcome. However, neither frustration ($B = .298, p = .31$) nor the interaction of father involvement and frustration ($B = -.106, p = .64$) were significantly related to relational aggression. Next, regression analyses revealed that self-regulation was significantly related to relational aggression ($B = -2.093, p = .002$) while controlling for the parenting variables and frustration. Specifically, self-regulation accounted for 14% of the variance in this outcome. In addition, analyses revealed that father involvement was significantly related to relational aggression ($B = .530, p = .04$) while controlling for frustration and self-regulation. Father involvement accounted for 8% of the variance in relational aggression when controlling for these variables. However, because the interaction of father involvement and frustration did not predict self-regulation and frustration was unrelated to the outcome (relational aggression), the hypothesized model of mediated-moderation was not supported.
Test of Father Involvement as a Unique Predictor

The hypothesis that father involvement would be uniquely related to self-regulation and to aggression (either physical or relational aggression) above and beyond the contribution of maternal involvement could not be tested. Results of analyses revealed that mother involvement was uniquely related to self-regulation and that father involvement was uniquely related to relational aggression. However, mother involvement was not related to relational aggression and neither parenting variable was related to physical aggression. Therefore, the hypothesis regarding the influence of father above and beyond the impact of mothers could not be evaluated using either dimension of aggression as the criterion. That is, because the parenting variables did not jointly predict either outcome, the shared and unique influences of these variables could not be assessed.

To determine if the hypothesized model would be supported when mother involvement was not included in the model as a control variable, analyses were also conducted without mother involvement. Similar to findings obtained with mother involvement included in the model, these analyses revealed that father involvement was not significantly related to physical aggression ($B = .017, p = .93$). With regard to relational aggression, when mother involvement was entered on the first step of the model, father involvement was significantly related to the outcome ($B = .566, p = .016$) and accounted for 10% of the variance in the model. However, the relationship between father involvement and relational aggression decreased without mother involvement in the model ($B = .490, p = .026$), with father involvement accounting for only 8% of the variance in relational aggression. These findings suggest that mother involvement may be
acting as a suppressor of the relations between father involvement and relational aggression.¹

**Post-Hoc Analyses**

Because there is some evidence to suggest that girls who display high levels of aggression may be qualitatively different from girls who display lower levels of aggression (Bierman et al., 2004; Conway, 2005; Schaeffer et al., 2006), the hypothesized model was examined separately for girls high and low in aggression. A median split was used to dichotomize the girls into high (physical = 30; relational = 33) or low (physical = 26; relational = 22) aggression groups. In the low physical aggression group, the majority (81.9%) of girls identified their biological father as their primary father figure, followed by those who identified a male not related to them such as a mother’s boyfriend or a stepfather (7.1%), another male relative (5.7%), and those who identified a brother (4%), and a grandfather (3%). Ninety percent of the girls participated in the subsidized school lunch program. In the high physical aggression group, slightly more than half (55.8%) of girls identified their biological father as primary father figure, followed by those who identified a grandfather, brother, or other adult relative (36%), and those who identified another male not related to them (8.7%). In the low relational aggression group, the majority (64%) of girls identified their biological father as their primary father figure, followed by those who identified a grandfather or brother (17%), another adult relative (13%), and an adult male not related to them (6.7%). Similarly, in the high relational aggression group, the majority (63%) identified their biological father as their primary father figure, followed by a grandfather (12.7%), another male relative (10%), a brother (7%), or and an adult male not related to them (7%).
Descriptive statistics are presented in Tables 6-9. These tables include intercorrelations among study variables for girls displaying high and low (relational or physical) aggression as well as means and standard deviations for study variables grouped by high and low aggression. For girls displaying high physical aggression, maternal involvement was positively related to father involvement and self-regulation. In addition, father involvement was positively related to relational aggression and negative affect was positively related to frustration. Similarly, for girls displaying low physical aggression, frustration was positively related to negative affect. In addition, in the low physical aggression group, maternal involvement, negative affect, and frustration were negatively related to self-regulation and frustration was positively related to negative affect. For girls displaying high relational aggression, maternal involvement was positively related to father involvement and self-regulation. No other significant correlations were observed in this group. For girls displaying low relational aggression, frustration was positively related to negative affect.

Tests for mean differences indicate that among girls high in physical aggression, girls involved with social fathers reported more physical aggression \( (t(15) = -7.098, p = .013) \) than those involved with a biological father. Among girls high in relational aggression, girls involved with social fathers reported more physical aggression \( (t(15) = -3.023, p = .044) \) than girls involved with a biological father. This latter finding suggests that among girls displaying high rates of relational aggression those involved with social fathers are a greater risk for also displaying higher rates of physical aggression in comparison to girls involved with biological fathers. There were no significant mean
differences in negative affect, self-regulation, or father involvement between girls displaying higher or lower aggression.

Although the hypothesized model was not supported in either group, several significant main effects were observed. In the low physical aggression group, negative affect was significantly related to self-regulation \( (B = -0.288, SE_B = 0.133, \beta = -0.440, t(58) = -2.168, p = 0.041) \) and accounted for 24% of the variance when controlling for parenting variables. Self-regulation was significantly related to physical aggression \( (B = -1.599, SE_B = 0.588, \beta = -0.522, t(58) = -2.722, p = 0.014) \) when controlling for parenting variables and negative affect. In addition, negative affect was significantly related to physical aggression when controlling for other variables \( (B = -0.565, SE_B = 0.241, \beta = -0.560, t(58) = -2.340, p = 0.029) \) and accounted for 26% of the variance in physical aggression.

In the high physical aggression group, father involvement was significantly related to relational aggression \( (B = 0.711, SE_B = 0.275, \beta = 0.495, t(58) = 2.589, p = 0.015) \) and accounted for 12% of the variance when controlling for negative affect, maternal involvement, and self-regulation. No other significant relationships were observed in the high physical aggression group.

Similar to the findings for physical aggression, the hypothesized model was not supported in either the high or the low relational aggression groups. The only significant finding was that the interaction between father involvement and negative affect was significantly related to relational aggression for girls in the high relational aggression group \( (B = 0.746, SE_B = 0.306, \beta = 0.688, s_r^2 = 0.15, t(34) = 2.440, p = 0.021) \). This interaction accounted for 2% of the variance in relational aggression. Simple slope analyses (see Table 10) were significant at ±1 SD above and below the mean of negative affect. This
finding suggests that in the group of girls high in relational aggression, as negative affect increases, the direct relation between father involvement and relational aggression becomes stronger in the positive direction (see Figure 5). In other words, at high levels of negative affect, father involvement increases as relational aggression increases in a subset of girls high in relational aggression ($B = .751, p = .021$). Alternatively, at low levels of negative affect, father involvement decreases as relational aggression increases ($B = -.189, p = .021$).

Post-hoc analyses were also conducted to examine the impact of father involvement, frustration, and the interaction on aggression, while controlling for maternal involvement. In both the low and high physical aggression groups, the hypothesized model was not supported. However, several main effects were observed. In the low physical aggression group, maternal involvement was significantly related to self-regulation ($B = .227, SE_B = .107, \beta = .359, t(58) = 2.127, p = .042$) and frustration was significantly related to self-regulation ($B = -.182, SE_B = .081, \beta = -.364, t(58) = 2.260, p = .032$). These findings suggest that for girls low in physical aggression, greater maternal involvement predicts more self-regulation and greater frustration predicts less self-regulation. In addition, father involvement was significantly related to relational aggression in both the low physical aggression group ($B = .529, SE_B = .226, \beta = .410, t(58) = 2.340, p = .027$) and high physical aggression group ($B = .895, SE_B = .292, \beta = .625, t(58) = 3.064, p = .006$). No other significant relationships were observed in either physical aggression group.

Similar to the findings for physical aggression, the hypothesized model was not supported in either the high or the low relational aggression groups when using
frustration as a potential moderator. However, contrary to findings in the physical aggression groups, there were no significant main effects in either the low or high relational aggression groups.
Chapter IV: Discussion

The goal of the present study was to further conceptual and empirical understanding of the potential impact of fathers on the socioemotional development of African American girls living in urban, low-income communities. This work utilized an integrated framework of prominent social-cognitive theories of development to assess the complex interactions between fathering, temperament, self-regulation and aggression in a sample of early adolescent African American girls. Although the hypothesized model of mediated-moderation was not fully supported, this work provides intriguing, useful information regarding relations among the variables of interest. The hypothesized model posited that the interactive influence of father involvement and temperament would indirectly impact relational or physical aggression \textit{via} self-regulation. Specifically, it was expected that high levels of negative affect would weaken positive associations between father involvement and self-regulation and attenuate the protective effects of involvement on aggression. It was also expected that self-regulation would mediate the relationship between father involvement and aggression. No specific hypotheses were formulated as to whether self-regulation would mediate the association between father involvement and aggression to the same degree across girls of varying degrees of negative affect. To the present author’s knowledge, no studies have examined an integrated model of mediated-moderation of aggression among urban, African American early adolescent girls. Moreover, very little information exists regarding the impact of African American fathers on the development of African American early adolescent girls (Coley, 2001) and few studies of aggression have included girls (Kann & Hanna, 2000). Given that African American girls living in urban communities are at heightened risk for the development of
aggression (Grant et al., 2000), it is important to study potential pathways leading to aggression among this vulnerable group. Thus, the present study provides important, preliminary information about this understudied group which may inform future research endeavors.

Although the hypothesized model was unsupported with relational aggression as an outcome, greater father involvement predicted more relational aggression. This finding was surprising and unexpected but consistent with research showing relations between father involvement and externalizing problems (DeBell, 2008; Vogel, Bradley, Raikes, Boller, & Shears, 2006; Williams & Kelly, 2005). For example, Coley and Medeiros (2007) found that as adolescent delinquency increased, so too did father involvement. These authors concluded that fathers may increase their involvement when adolescents begin to display more behavioral problems. Thus, it is possible that fathers in the current sample increased their involvement in response to the higher levels of relational aggression displayed by their daughters.

Another possible reason why father involvement was positively related to relational aggression is that fathers may inadvertently (or intentionally) train their daughters to be verbally aggressive in an effort to help them be assertive and independent. That is, girls who are regularly involved with their fathers may learn verbally provocative communication strategies, through their interactions with their fathers, observation of their fathers’ behaviors, and participation in family interactions. For example, these girls may learn that teasing or “tough talk” protects against emotional vulnerability and promotes dominance in their interpersonal relationships. In addition, these girls may learn that verbal assertiveness is an important and valued family trait.
Indeed, studies have shown that modeling by maternal caregivers teach girls to assert themselves, manage anger, sustain friendships, and protect themselves from harm (Letendre, 2007). Similar to the ways that mothers model behaviors, fathers may also model assertive or aggressive behaviors for their daughters.

Moreover, because children in urban, low-income communities may be exposed to a host of acute and chronic stressors including residential instability, poor nutrition, exposure to family and neighborhood violence, and parental mental health or substance abuse issues (Buckner, Bassuk, Weinrub, & Brooks, 1999), aggression may be adaptive in dangerous, unpredictable environments (Wilkinson & Carr, 2008). Moreover, poor inner-city African-American parents may have different imperatives and familial practices designed to promote child survival in an often hostile, unrelenting environment. For example, Ogbu (1981) found that African-American parents from inner-city neighborhoods, expressed warmth in infancy, followed by an absence of warmth, inconsistent demands for obedience, and the use of physical discipline in the postinfancy period. Ogbu (1981) suggests that these strategies are not indicative of parent rejection or a lack of love for the child but rather reflect the necessity that early in life to be self-reliant, resourceful, and emotionally independent in an effort to survive in an environment that is often dangerous and unpredictable. Whilst preparing their children to survive the dangers and hardships of the “ghetto”, African-American parents may place greater emphasis on independence and self-reliance at an early age (Ogbu, 1981). Thus, it is also possible that father involvement was positively related to relational aggression because actively involved fathers in urban, low-income communities teach their
adolescent daughters proactive and reactive strategies for protecting and defending themselves from harm.

In particular, fathers may teach their girls assertive or aggressive strategies for communication to protect against unsolicited sexual advances by males in the community. Given that African American girls in urban low-income communities tend to enter puberty and develop sexually at a younger age (Hughes & Gore, 2007), fathers may be very concerned with their adolescent daughters’ sexual health and well-being. With regard to the male perspective on sexuality, fathers are likely to have a better understanding than mothers of the ways in which males may behave in a predatory or sexually aggressive manner toward young girls. Coincidentally, fathers may adopt a “no-nonsense” approach to parenting girls in an effort to discourage promiscuous or precocious sexual behaviors and girls’ victimization by others. Thus, fathers’ parenting behaviors may teach girls to be confident and assertive in their daily interactions with others (Peterson, 2007) as a means for self-protection or self-preservation.

This latter point is related to another possible reason for the positive relation between father involvement and relational aggression. Perhaps, what is deemed to be relationally aggressive by some cultural standards may actually be viewed as adaptive and assertive from other perspectives. That is, relational aggression may take on a different meaning in the cultural context of African American families. As such, the relation among father involvement and aggression may be interpreted differently when viewed through the lens of cultural context. In retrospect, more accurate or specific assessments of the constructs of interest among African American girls may have yielded different findings. For example, as suggested by Farrell, Kung, White, & Valois (2000),
one might first consider conducting focus groups in order to determine what constitutes father involvement and relational aggression among early adolescent African American girls. Parenting behaviors are different among urban, African American parents (Brody, Dorsey et al., 2002) and children living in low SES communities are more aggressive than children living in higher income communities (Coie, Dodge, 1998; Xie, Farmer, & Cairns, 2003). Therefore, associations between fathers’ behaviors and girls’ aggression are likely to be qualitatively different among African American fathers and daughters living in urban communities in comparison to fathers and daughters of different ethnicities and those living in other communities.

In addition, the relational aggression scale may have worked differently in the present sample for several reasons. First, the measure was validated in a sample of girls that was slightly older than girls in the present sample. Whereas, in Farrell et al.’s (2000) study, the mean age was 12.8, in the present study, the mean age was slightly lower (M_{age} = 11.27). It is possible that the relational aggression scale relates differently to other variables among younger girls. Second, Farrell et al. (2000) found that there were gender differences in relational aggression such that boys were more likely to report verbal aggression (i.e., insulting someone’s family, putting someone down) than girls. Alternatively, girls were more likely to use non-verbal relational forms of aggression (i.e., giving mean looks). Although, Farrell et al. (2000) found that relational and physical aggression represented the same underlying construct, this study also provided evidence that girls may be more likely to engage in certain forms of relational aggression (Crick & Grotpeter, 1995). Thus, it may be important to test associations between verbal and non-verbal forms relational aggression and other variables separately in studies of urban,
African American girls. In other words, it is possible that non-verbal and verbal forms of relational aggression relate in different ways to environmental factors (e.g., father involvement) and these relations’ may not be fully elucidated when measuring these two dimensions as one construct. Although the measure of relational aggression utilized in the present study was validated in an urban sample primarily consisting of African American youth, present findings suggest the importance of considering the subtle nuances and differences that may impact findings across samples and cultural contexts.

The hypothesized model was also unsupported for physical aggression. Contrary to expectations, father involvement was not related to physical aggression. This is surprising in light of several studies which have shown links between father involvement and negative behavioral outcomes, particularly among low-income and African American children (Mosley, & Thompson, 1995; Thomas, Farrell, & Barnes, 1996). For instance, Coley and Medieros (2007) found that greater father involvement predicted decreases in adolescent delinquency among African American youth over time. In particular, these researchers found that fathers increased their involvement as adolescents increased their engagement in delinquent behaviors. Similarly, Williams and Kelly (2005) found that father involvement explained a significant proportion of the unique variance in adolescent’s externalizing problems. In fact, these authors found that fathering accounted for a greater proportion of the variance in externalizing behaviors than mothering and that this difference was stronger for girls than boys. That is, father exerted more influence on girls’ externalizing behaviors than on similar behaviors in boys.
One possible reason for the present finding is that other aspects of fathering may be better predictors of aggression in girls than father involvement. For example, other variables including fathers’ psychological problems or father-child relationship factors have been linked to aggression in girls (Coley, 2003; Coley & Chase-Landsdale, 1999). Coley and Chase-Landsdale (1999) found that fathers’ emotional disengagement predicted worse behavioral problems for girls whose fathers were both emotionally alienated and physically absent. Similarly, Bjorkqvist and Osterman (1992) found that negative fathering behaviors (e.g., hitting and alcohol abuse) were the strongest predictors of physical aggression in girls.

Parenting styles such as authoritarian parenting or harsh parenting have also been identified as strong predictors of aggression in children (Pettit & Arsiwalla, 2008; Denham et al., 2000). For example, Chang, Schwartz, Dodge, and McBride-Chang (2003) found that fathers’ harsh parenting behaviors (e.g., yelling, hitting, coerciveness) were predictive of children’s aggressive behaviors in school. In general, the use of certain parenting practices including failure to model and reward non-aggressive interactions, the consistent use of harsh and coercive punishment to sanction negative behaviors, and lack of supervision have been associated with the development of aggression in children and adolescents (Chamberlain, 2003; Patterson, DeBaryshe, & Ramsey, 1989). In addition, at least one study (Loeber & Stouthamer-Loeber, 1986) found that fathers’ harsh parenting has a stronger effect on children than mothers’ harsh parenting. Moreover, Chang, Schwartz, Dodge, and McBride-Chang (2003) found that fathers’ harsh parenting had a stronger effect on children’s behavioral versus emotional outcomes. Notably, African American parents are more likely than European American parents to utilize authoritarian
parenting styles characterized by the use of harsh or strict disciplinary guidelines, corporal punishment, less responsiveness, and limited child autonomy (Deater-Deckard & Dodge, 1997). That is, harsh parenting practices such as spanking may be more normative among African Americans. In addition, research in this area has shown that harsh parenting behaviors may be less strongly related to the development of aggression among African Americans as compared to European Americans (Hill & Bush, 2001). At present, it is still heavily debated whether the association between harsh parenting and the development of aggression in children is the same among African American children as among European American children (Deater-Decker, Dodge, Bates, & Pettit, 1996). Thus, it is unclear if harsh parenting would be a better predictor of aggression than other parenting variables (e.g., father involvement) among samples of African American youth.

Father involvement, as a construct, may also be less relevant to aggression than authoritarian parenting behaviors characterized by high demandingness, high directiveness, and low-responsiveness. Authoritarian parenting behaviors of this kind have been associated with children’s negative outcomes including aggression (Bronte-Tinkew, Moore, & Carrano, 2006). For example, Bronte-Tinkew and colleagues found that authoritarian parenting style among fathers was associated with an increased risk of adolescent’s transition into risky behaviors, even after controlling for maternal parenting styles and other family and individual covariates. Notably, the effects of fathers’ authoritarian parenting on negative youth outcomes were buffered by a more positive father-child relationship in this study. This suggests the importance of assessing other parenting factors in addition to traditional parenting typologies. Thus, future studies examining the impact of fathers’ on girls’ aggression should focus on various dimensions.
of fathering behaviors such as emotional connectedness, psychological problems, substance abuse issues in addition to parenting styles. Moreover, examining a particular aspect of fathering and child outcomes in isolation may not be sufficient, as both relationship factors and behaviors appear to be important components of parenting that can influence children’s outcomes (Bronte-Tinkew et al., 2006). Most likely, a constellation of behaviors and relational factors constitutes the broad construct of “parenting” and predict children’s outcomes.

It is also possible that direct relations between father involvement and aggression were not observed because of other intervening paternal factors. Indeed, several studies have shown that fathers’ parenting is often mediated by other psychosocial factors (Harvey, Danforth, McKee, Ulaszek, & Friedman, 2003; Ramchandani & Pscyhogiou, 2009). For example, Harvey and colleagues found that high levels of inattention and impulsivity in fathers predicted lax parenting and over-involvement with the child. Given that the relation between father involvement and aggression did not occur as expected in the present study, it is possible that an unidentified, intervening variable was responsible for associations between father involvement and girls’ aggression. Thus, it would be important to investigate other father characteristics that might potentially mediate relations between involvement and child outcomes in future studies.

Similar to the finding that father involvement did not predict aggression, neither negative affect nor frustration was related to aggression. This finding is surprising in light of research suggesting strong associations between negative affect and externalizing problems (Eisenberg et al., 2001; Lengua, 2002; Morris et al., 2002). For example, Lengua found that negative emotionality characterized by irritability and fear predicted
children’s conduct problems (i.e., delinquency and aggression). Similarly, a number of other studies have also shown that “reactive” temperament described as impulsive, easily upset, and negativistic is associated with aggression and other externalizing problems (Eisenberg et al., 2001; Mun, Fitzgerald, Van Eye, Puttler, & Zucker, 2001).

One possible reason for this finding is that the measures used in the present study did not tap into the aspects of negative affect most strongly related to aggression. Indeed, several studies have provided evidence that specific aspects of negative affect are more likely to be associated with externalizing problems (such as aggression) than others (Nigg, 2006; Skilling, Quinsey, & Craig, 2001). For instance, Eisenberg and colleagues (2001) found that children with externalizing problems were more likely to display anger, impulsivity and irritability than those with internalizing problems. Similarly, Oldehinkel, Hartman, De Winter, Veenstra, and Ormel (2004) found that children with externalizing problems displayed particularly high levels of frustration but lower levels of fear in comparison to other children. In contrast, children with internalizing problems are more likely to display negative affect characterized by sadness and fear (Rothbart & Bates, 2006). Thus, associations between negative affect and aggression may not have been observed because a broad, rather than specific, measure of negative affect was utilized in the present study. That is, a more narrowly defined measure of affect may have been needed to highlight distinct relations involving negative affect and aggression. Notably, no studies to date have determined which aspects of negative affect best differentiate relational forms of aggression. However, there is preliminary evidence that relationally aggressive girls tend to respond to emotionally provocative situations with heightened
anger and distress in comparison to other children (Crick, 1995). Thus, the present study may have benefited from using specific measures of anger or distress.

The hypothesized model was also not supported because father involvement did not predict the mediator, self-regulation. This finding is inconsistent with previous research (Eiden, Edwards, & Leonard, 2004) which showed that fathering was related to effortful control in young children. Perhaps a similar relationship was not observed in the present study because the sample of children was older. That is, father involvement may be more important to the development of self-regulation in younger rather than older children. Another possibility is that other fathering behaviors are more important in the prediction of self-regulation than father involvement. For example, a number of studies have shown relations between self-regulation and different aspects of parenting including parental warmth, disciplinary strategies, or parental emotionality (Eisenberg et al., 2003; Olson et al., 1990).

It is also possible that hypothesized relations between father involvement and aggression were not observed because of the heterogeneity among girls’ identified father figures. For example, it may be important to differentiate fathers based on the temporal stability of their relationships with children, residency status, or other demographic variables (e.g., biological vs. social fathers). Vogel et al. (2006) found that children with stable, resident biological fathers showed higher levels of self-regulation than children who had nonresident fathers, no fathers, social fathers, or transient fathers. Although the sample size in the present study precludes testing the hypothesized model separately based on father demographics these types of analyses are warranted.
Another possibility is that, generally speaking, fathering may not be an important factor in the prediction of children’s self-regulation. Several studies investigating the joint influences of mothers and fathers have found a stronger association between mothering and self-regulation than between fathering and self-regulation (Brody, Stoneman, & Flor, 1995; Chang, Schwartz, Dodge, McBride-Chang, 2003). Indeed, when examined as a covariate in the hypothesized model, mother involvement uniquely predicted self-regulation. Thus, present findings provide additional support for the notion that mothering may be more important in the prediction of self-regulation than fathering.

In a similar vein, the hypothesized relations between father involvement and physical aggression may have been unsupported because fathering is less predictive of girls’ behavioral problems than mothers’ parenting. For example, there is evidence to suggest that mothers have a stronger effect on children’s emotional and behavioral outcomes than fathers and that fathering is more important in predicting cognitive ability (e.g., academic achievement, educational progress) rather than emotional and behavioral outcomes, particularly among younger children (Flouri, 2010; Furstenberg & Harris, 1993; Coley, 1998). Although this phenomenon has been observed primarily among samples of younger children, the present findings provide some evidence that mothering and fathering have a differential influence on outcomes in older children as well.

Although the hypothesized model was unsupported, as expected, lower self-regulation was linked to more physical and relational aggression. Consistent with previous research (Eisenberg et al., 2007; Eisenberg et al., 2000), children in the present study who reported lower self-regulation were more likely than others to exhibit physical aggression. Although very little work has examined the relation between self-regulation
and relational aggression, there is some evidence to suggest that relationally aggressive girls tend to have self-regulatory difficulties and a limited or inflexible repertoire of regulation strategies available for use (Conway, 2005; Sullivan, Helms, Kliewer, Goodman, 2010). The present finding adds to this literature by providing preliminary evidence of the link between self-regulation and relational forms of aggression. Given that self-regulation was negatively related to both physical and relational aggression in the present study, it would be important to determine how specific aspects of self-regulation differentiate relational and physical forms of aggression. In addition, if different pathways from self-regulation to physical and relational aggression do exist, it would be essential to distinguish interventions based on these differences.

As expected, negative affect moderated the relation between father involvement and physical aggression. This is consistent with studies showing that parenting has a different impact on behavioral outcomes among children prone to negative emotionality (Blackson, Tarter, & Mezzich, 1996; Eiden et al., 2004; Morris et al., 2002). Specifically, simple slopes analyses provided additional information about the nature of the relation between father involvement and aggression. These analyses revealed that among girls high in negative affect, father involvement increased as physical aggression increased. However, at low levels of negative affect, father involvement decreased as physical aggression increased. These findings suggest the presence of a vulnerable group of girls who may be at greatest risk for negative outcomes associated with increased negative emotionality and physical aggression. Moreover, these findings not only suggest a certain group of girls may be susceptible to temperamental difficulties and aggression, but also that, among this group of girls, fathers may increase their involvement in
response to the girls’ display of emotional and behavioral problems. In other words, fathers may attempt to intervene with a problem that has already begun to develop. This is consistent with findings by Coley and Medieros (2007) which showed that father involvement tends to increase as adolescent delinquency increases.

The hypothesis regarding the influence of fathers above and beyond the impact of mothers was not supported. Specifically, neither variable was linked to physical aggression and only father involvement predicted relational aggression. These findings are inconsistent with research showing significant associations between parenting and behavioral problems (Brody and Ge, 2001; Cleveland, Gibbons, Gerrard, Pomery, & Brody, 2005; Gadeyne, Ghesquiere, Onghena, 2004; Maccoby and Martin, 1983; Pettit, Bates, & Dodge (1997; Cowan, Cowan, Schulz & Heming, 1994). For example, Cowan and colleagues (1994) found that parenting variables explained 20% of aggressive behaviors and 52% of the variance in academic achievement. Alternatively, the present findings are consistent with studies attributing only a small proportion of the variance in children’s externalizing problems to parenting behaviors (Maccoby and Martin, 1983; Petit et al., 1997). For example, Petit and colleagues found that only 2-3% of the variance in child adjustment in a group of six-graders could be explained by parenting practices. Collectively, these inconsistencies suggest the need to further evaluate the impact of specific parenting behaviors on children’s negative outcomes.

The present study also provides preliminary information regarding the sociodemographics of African American girls living in urban, low-income communities. Consistent with previous research (DeBell, 2008; Conger et al., 2002; McCloyd, 1990), the present study found that more than half (51.4%) of girls in the sample lived in homes
headed by single mothers. In addition, in the present study, 80% of the girls endorsed their participation in the subsidized school lunch program, which typically serves as a proxy measure of low socioeconomic status in social science research. Thus, the present study provides support for the notion that a majority of African American children living in urban, low-income communities reside in single-parent homes headed by mothers and exist at or near the poverty line.

Findings from the present work are also consistent with research suggesting that a growing number of African American children reside in non-traditional families (Jarrett, et al., 2002; Jayakody & Kalil, 2002). For example, in the present study nearly 30% of girls in the sample resided with someone other than their biological mother including fathers only, fathers and other adults, adult relatives who were not their biological parents and non-related adult care-givers. Moreover, while the majority of girls in the sample identified their biological father as their father figure, nearly 30% of girls identified other men as their male care-givers. Persons identified as father figures included grandfathers, brothers, male relatives, and mother’s boyfriend or significant other. This is consistent with studies suggesting that social fathering is increasingly common in urban, African American communities (Coley, 2003; Coley & Medieros, 2007; Jarrett et al., 2002). Several studies have noted that the majority of social fathers (i.e., non-paternal father figures identified by children) were not extended relatives but rather were partners or boyfriends of children’s mothers (Coley, 1998). For example, Coley (1998) found that while 57% of the men in the sample were biological fathers, nearly 60% of the nonpaternal men were residential boyfriends or ex-husbands of the children’s mothers. In the present study, 26.3% of the girls identified a social father who was a “non-related
male father figure”. However, due to the nature of the questions in the present study, it is not possible to determine whether these girls were specifically referring to their mother’s current or past romantic partner or husband. This would be an important distinction to make in future research.

The present study also showed that, although the majority of the sample resided with their single mothers, most girls had some degree of contact with a biological or social father. This is consistent with findings from other studies which suggest that a large number of African American children living in single-mother-headed homes are involved with nonresidential biological or social fathers (Coley & Medeiros, 2007; DeBell, 2008; Hofferth, Pleck, Stueve, Bianchi, & Sayer, 2002). For example, Coley and Medeiros reported that nearly 45% of early adolescents living in several urban, low-income communities had regular contact with a father figure. Previous research has also shown that African American cultural traditions encourage fluid and nontraditional roles for adults which may increase the significance of social fathers for African American children (Billingsley, 1992).

Present findings also indicate that differences may exist among African American girls depending on residential status and their involvement with biological versus social fathers. For example, among girls involved with social fathers, those residing with only mothers reported more frustration than girls residing with both their mother and a social father. Consistent with this finding, previous research has shown that children involved with non-paternal or social fathers tend to have fewer behavioral problems than children living in other family arrangements (Coley, 1998). The present study also found that among girls involved with their biological father, girls living with both biological parents
displayed more relational aggression than girls residing with mothers only. This finding is inconsistent with research which found that children with involved resident or nonresident biological fathers showed higher levels of self-regulation and lower levels of aggression than children with unstable or transient father connections (Vogel, Bradley, Raikes, Boller, & Shears, 2006). As previously mentioned, this latter finding suggests the need to further explore relations between biological fathering and relational aggression among African American girls living in two-parent homes.

The present study also revealed that 25% of girls in the sample resided in two-parent homes. This is consistent with research showing similar rates among other samples of African American children (Jayakody & Kalil, 2002; Teachman, Tedrow, & Crowder, 2000). Notably, as previously noted, girls residing with both biological parents reported the most relational aggression. However, girls living with their biological mothers and a social father (e.g. step-father) demonstrated the highest self-regulation. This latter finding suggests the need to examine the unique dynamics of African American fathers and daughters living in these kinds of family arrangements. Given that information regarding the impact of nonpaternal fathers on girls’ outcomes is sparse, this preliminary information is noteworthy. Moreover, because maternal boyfriends or step-fathers are being either vilified or ignored in the literature (Coley, 1998), this finding provides some preliminary evidence of the positive impact of non-paternal fathers on the development of African American girls.

Post-hoc analyses were also conducted to determine whether differences existed among girls displaying varying levels of physical and relational aggression. These analyses revealed that the relations between father involvement and relational aggression
differed depending on level of negative affect in a small subset of girls high in relational aggression. Specifically, for girls displaying higher rates of relational aggression, at high levels of negative affect, the relations between father involvement and relational aggression was stronger. That is, relational aggression increased as father involvement increased, particularly among girls susceptible to high levels of negative emotionality. Given that these girls exhibited higher rates of relational aggression than others in the sample, this finding suggests the existence of a high-risk group of girls whose negative predispositions make them more susceptible to the influence of parenting behaviors and prone to relational aggression. This finding is consistent with research showing significant interactive effects of parenting and temperament on youth outcomes (Morris et al., 2002). Moreover, this vulnerable group of girls may be at greatest risk for a number of negative outcomes associated with negative affect and aggression including early sexual activity and risky sexual behaviors (Huizinga, Loeber, & Thornberry, 1993; Moffitt et al., 2001; Smith & Thomas, 2000). Thus, fathers may increase their involvement in response to the girls’ display of emotional and behavioral problems. In other words, fathers may attempt to intervene with a problem that has already begun to develop. This is consistent with findings by Coley and Medieros (2007) which showed that father involvement tends to increase as adolescent delinquency increases.

Results of the present study also revealed important differences among girls displaying higher rates of aggression in comparison to girls displaying less aggression. For example, within the group of girls displaying higher physical aggression, those involved with a social versus biological father, displayed significantly higher aggression than others in this group. Similarly, among girls higher in relational aggression, physical
aggression was also significantly higher among those girls involved with a social versus biological father. These findings are consistent with research suggesting that girls tend to exhibit less behavioral and emotional problems when actively involved with a biological versus social or transient father (Vogel, Bradley, Raikes, Boller, & Shears, 2006).

**Summary of Findings**

Findings from the present study provide partial support for the hypothesized model. In particular, this work provides evidence that differences exists between girls depending on residency and father-figure status and that parenting and child variables may contribute in different ways to aggression. Notably, self-regulation did not act as a mediator of relations between father involvement and aggression. As mentioned earlier, it is possible that a third, unidentified variable serves as a mediator of relations between father involvement and girls’ aggression. For example, other studies have demonstrated the influence of other factors including parental disciplinary strategies, family conflict, and child or parental emotionality in the prediction of emotional and behavioral problems (Lengua, 2008; Loukas & Roalson, 2006; Morris et al., 2002). Thus, future investigations of fathering and girls’ outcomes should consider the potential mediating (or moderating) effects of other psychosocial variables including individual father characteristics, paternal psychopathology, parenting styles, parent-child relationships factors, or other child characteristics.

It is important to note that some of the information presented above was gleaned from descriptive information rather than in-depth statistical analyses. However, this preliminary information is noteworthy because it provides information regarding differences among girls displaying varying rates of physical or relational aggression. In
addition, these analyses provided important preliminary information about father typologies (i.e., biological, social, residential, nonresidential) and differences related to residential status. Moreover, a number of the preliminary findings in this work are consistent with other research conducted among samples of African American children and fathers. Thus, the present study adds to the scant literature on African American fathers and daughters.

Finally, the present findings suggest the importance of examining the nature and quality of girls’ relationships with father-figures as well as the specific dynamics of these interactions. For example, Coley (2003) found that adolescent daughters reporting more contentious relationships with their fathers were more likely than others to have emotional and behavioral problems. Thus, future studies of father involvement should also assess the impact of characterological or psychological aspects of African American fathers on girls’ socioemotional development. Because fathers in poor, urban communities are likely to display different emotional and behavioral qualities than fathers in suburban, rural, or higher SES communities, their parenting behaviors are likely to be different as well (Lamb, 2000; Parke, 2002).

**Limitations of the Present Study**

Importantly, the present work demonstrated a relation between father involvement and aggression in girls. Moreover, father involvement was more strongly related (in a positive direction) to physical aggression and relational aggression in the context of high negative affect. This suggests that an influential relationship may exist between father involvement, negative affect, and aggression in a certain high-risk group of girls. However, there is the risk that results in smaller samples may be spurious due to sample
size and error rates (Aiken & West, 1991). Yet given that relations between father involvement and aggression were found in both the larger sample and smaller subset, it is likely that these are veritable relationships. Moreover, because the correlation between father involvement and relational aggression were moderately significant in the present study, it is likely that this relationship would also be observed in a sample of larger size. Notably, the small sample size may have also precluded the study’s ability to simultaneously detect mediation and moderation within the sample. Thus, the present work highlights the need for further assessment of links between father involvement and aggression in a larger sample of African-American girls.

Second, the current study relied on self-report measures of children’s perceptions of parenting, internal emotional states, and engagement in aggressive behaviors. Although each measure in the proposed study has been shown to be valid, there is potential for shared-method variance to affect the study’s findings. In other words, it is possible that relations among the independent variables and outcomes were overestimated due to response bias. In addition, it is possible that the girls underreported or overreported on their negative emotional experiences and their engagement in antisocial or aggressive behaviors (Borduin & Schaeffer, 1998). Moreover, for girls reporting high levels of negative emotionality, it is possible that their perceptions of their parents’ involvement were colored or “skewed” by their negative affectivity. Indeed, prior research has shown that children prone to negative emotionality (e.g., depression) may have negatively biased perceptions of their parents’ rearing behaviors (Stein et al., 2000). Thus, report bias cannot be ruled out completely as rationale for the present findings.
Although the aforementioned concerns are possible, research has also shown that children are more likely to self-report internalized negative emotional states such as anger, frustration, sadness, or anxiety which cannot be determined through parenting self-report (Wren, Bridge, & Birmaher, 2004). Moreover, many parents have little to no knowledge of the severity of their children’s negative emotional experiences, particularly among adolescent girls (Yang, Stanton, Li, Cottrel, Galbraith, Kaljee, 2007). Although parents are likely to recognize and respond to children’s overt emotional or behavioral problems (e.g., externalizing problems), the degree to which children experience strong, negative emotional states may be largely underestimated. Thus, the present study was based on the assumption that adolescent girls would be the most reliable reporters of their negative emotionality (e.g., temperament) and aggressive behaviors because parents and teachers may simply be unaware of these emotions and behaviors (Coley & Medeiros, 2007). In addition, because children’s own subjective experiences of parenting are more likely to predict their behaviors, the use of self-report measures of aggression and temperament was warranted. In fact, as revealed in a meta-analysis of studies examining parenting and delinquency (Hoeve et al., 2009), children’s reports on parenting, particularly negative parenting, consistently show larger effect sizes than reports from parents or other sources and correlate more strongly than parents’ or teachers’ reports with children’s behavioral outcomes (as reported by parents and teachers). Given that proposed study sought to explore African American girls’ perceptions of father involvement and provide a better understanding of their internal worlds and perceptions of the social-ecological context in which they live, the use of self-report measures was warranted.
Another limitation of the present study is that fathers were not directly studied. Although the present study relied on children’s reports of father involvement, future studies should actually include African American fathers. As the structure of African American families continues to change with declining marriage rates, more children living in poverty, and a growing percentage of children living with single mothers (Coley, 1998; Jayakody & Kalil, 2002; Tamis-LeMonda & Cabrera, 1999), research on African American fathers should be a critical focus of contemporary, community-based research. Therefore, researchers should make considerable efforts to recruit African American fathers into their studies. While the present study is informative, the inclusion of African American fathers would have contributed greatly to the study’s findings.

A final limitation of the present study is the use of correlation data. An objective of child research is to determine risk for later psychological impairment and to determine longitudinal pathways by which problems develop. As such, longitudinal research is a critical step in determining whether children’s aggressive behaviors are likely to lead to problems into adulthood. However, as DeBell (2008) asserts, “while cross-sectional studies cannot be used to establish temporal precedence, they can be used to examine statistical associations and highlight patterns for further study (DeBell, 2008, p. 433). Thus, the present study contributes to the literature because there is very little information regarding the impact of fathering on the development of aggression in adolescent African American girls. In fact, this work may be an important first step toward understanding the importance of fathers to the socioemotional development of an understudied, at-risk population. In particular, the use of correlational data in the present study suggests the existence of a high-risk group of African American girls.
Clinical Implications

Despite limitations, the present study adds to the extant literature examining relations between fathering and aggression among African American girls. In particular, this work suggests the existence of a high-risk group of girls vulnerable to negative affective states, the effects of parenting behaviors, and aggression. That is, for girls high in negative affect, father involvement increases as relational aggression increases. This suggests that girls with temperamental difficulties may be more susceptible to the influence of fathering and prone to displaying relational forms of aggression or that their relational aggression leads to more father involvement. In light of these findings, teachers and clinicians should make efforts to identify African American girls prone to experiencing peer and other interpersonal difficulties in school and clinical settings. Moreover, prevention and intervention efforts should focus on gaining a better understanding of girls’ psychological difficulties and how these difficulties influence their relationships with peers and are exacerbated or mitigated by girls’ interpersonal relationships with family members.

The present study also suggests that differences may exist depending on girls’ residency status and their involvement with social versus biological fathers. Interestingly, girls residing with a social father and a biological mother reported less frustration than girls living in single-mother homes. Similarly, girls living with both biological parents reported more relational aggression than girls living with mothers only. Although these findings are preliminary in nature and not well-understood, they highlight important aspects of the social-ecology of African-American girls’ lives and the ways in which girls’ demographic differences influence their outcomes. For example, the present
findings suggest that African American girls may benefit in distinct ways from the involvement of social versus biological fathers and that residential status is important to consider. Thus, clinicians and school personnel should seek to understand the qualitative and quantitative differences that exist between girls involved with social versus biological fathers as well differences that exist between girls living in varying family arrangements.

Additionally, findings from the present study suggest that traditional definitions of residential status and father involvement may not truly capture the extent to which African American fathers impact their daughter’s socioemotional development. For example, one of the realities for African American men is that they do not necessarily live with their biological children (Bellgrave & Allison, 2010). Community-based prevention and intervention efforts should be designed with an understanding of fathering outside of the traditional paradigms of “father involvement”. That is, urban community-based programs should be mindful of sociocultural factors related to father involvement among African American men including relations between mothers and fathers, disciplinary styles, interpersonal relationships with children, environmental demands unique to African American fathers, and psychological concerns among this group. These types of interventions would provide clinicians, teachers, and African American parents alike with a better understanding of the ways in which fathers’ behaviors and their unique experiences influence children’s outcomes. In addition, the information gained from these kinds of interventions could be utilized to create programs designed to increase active involvement among African American fathers in urban communities.
In sum, clinicians, teachers, and parents alike should be cognizant of the different ecological contexts in which African American girls live as well as the unique dynamics of girls’ interpersonal relationships with father figures. In addition, clinicians and teachers should make efforts to gain a better understanding of the broad diversity that exists among individual African American families living in urban communities. Given that the structure of African American families in urban communities continues to change due to economic and environmental constraints, clinicians and school personnel must begin to explore ideographic differences rather than assuming that African American families in poor, urban communities are more alike than different. In fact, not all African American girls living in poor, urban environments are exposed to the same environmental risk or protective factors or follow identical developmental trajectories. While preliminary in nature, findings from the present study highlight important differences existing among urban African American early adolescent girls. As such, the present study may suggest important avenues for future clinical intervention. Scholars have emphasized the importance of testing the universality of developmental models rather than assuming that one model fits all (Garcia Coll et al., 1996) and this is particularly relevant for the development of culturally valid interventions in poor, urban communities.

**Directions for Future Research and Conclusions**

The present study suggests the need to further examine relations between fathers and daughters in low-income African American communities. Moreover, the present findings suggest that there may be a subset of girls who may be particularly vulnerable to negative psychosocial outcomes. The early identification of subgroups of girls vulnerable to the development of temperamental difficulties and aggression is important. In this
regard, it would also be important to identify characteristics of fathers in urban, low-income communities that may foster the development of temperamental difficulties and aggression in young African American girls. Furthermore, given that families living in urban, low-income environments are more likely than others to experience high levels of conflict and dysfunction (Conger et al., 2002), future research should investigate relations between family dynamics and girls’ outcomes in these communities.

In an effort to gather comprehensive sociodemographic information about African American girls, future research should also incorporate more specific, detailed questions about girls’ female and male care-givers and their residential status. In addition, it may be important for researchers to investigate developmental changes including puberty, cognitive development, and behavioral trajectories associated with these variables. Indeed, research suggests that African American children are more likely to experience reoccurring disruptions in residential status and family structure and that these changes can be reliably linked to developmental changes as well as emotional and behavioral problems in African American youth (McCloyd, 1990). Furthermore, a very small percentage of girls in the sample resided only with their fathers, which suggests that African American families headed by single-fathers may be an important group to consider in future research. In addition, a significant number of girls identified their “brother” as being their primary male father-figure, which would indicate a need for research investigating the impact of care-giving by siblings on the development of African American girls.

Finally, to better understand the socialization and parenting goals of African-American families, we must always consider the sociocultural context in which they
occur (Randolph & Koblinsky, 2003). Given that American society is socially and economically stratified, with differential access to the benefits of economic opportunity and resources, the parenting practices of African-American families and child development must not be taken out of context (Taylor & Wang, 1997). For example, different ecological demands dictate the choice of child-rearing practices or techniques utilized by African American parents as well as the skills and behaviors acquired by African American children (Taylor & Wang, 1997). In the past, researchers have suggested the utility of combining quantitative and qualitative collaborations (e.g., focus groups with parents and researchers) to help identify important and influential dimensions of parenting behaviors in diverse racial and ethnic groups (Gonzales, Hiraga, & Cauce, 1998). Present findings provide further rationale for these types of explorations in the creation of school- and community-based interventions targeting at-risk African American girls.

In sum, the present findings suggest that there are complex, dynamic interactions between fathers and daughters that have yet to be explored. This work provides important preliminary information regarding the sociodemographic context of African American girls and the influence of fathering on the development of aggression in African American girls. Given the dearth of research on this topic, the present study may be viewed as a noteworthy addition which may inform future investigations of young African American girls and fathers living in poor, urban communities.
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Appendix

Please answer each question by filling in the correct circle on your answer sheet. Choose only one response for each question. If you are confused about any question, please raise your hand for help.

What is your gender?
0. male
1. female

How old are you?
For example, if you are 10 years old, you should fill in the circle in the first row that contains the "1". Then you should fill in the circle in the 2nd row that contains a "0". Please raise your hand if you need help.

What is your grade level?
1. 4th
2. 5th
3. 6th

What is your ethnic origin or descent? If you are of mixed ethnicity, choose the group that you identify with the most.
1. White, European American
2. African American, Black
3. Hispanic/Latino
4. Asian, Pacific Islander or Middle Eastern
5. American Indian or Native American
6. Mixed or biracial

Which adults do you live with most of the time?
1. Mother and father
2. Mother only
3. Father only
4. Mother and other adults
5. Father and other adults
6. Adult relatives – but not mother or father
7. I live with adults who are not my relatives

Do you receive free or reduced lunch?
0. No
1. Yes
Positive and Negative Affect Schedule for Children- Negative Affect Subscale

*These questions are about how you feel. For each sentence that you read, circle the answer that best tells how true that sentence is about how you usually feel. Remember, there are no right or wrong answers, just circle what you think describes you best.

How much have you felt this way during the past few weeks?

1=Very slightly or not at all  2=A little  3=Moderately  4=Quite a bit  5=Extremely

1. Sad ..........................................................1 2 3 4 5
2. Frightened ..................................................1 2 3 4 5
3. Ashamed ....................................................1 2 3 4 5
4. Upset ..........................................................1 2 3 4 5
5. Nervous ......................................................1 2 3 4 5
6. Guilty ..........................................................1 2 3 4 5
7. Scared ..........................................................1 2 3 4 5
8. Miserable .....................................................1 2 3 4 5
9. Jittery ..........................................................1 2 3 4 5
10. Afraid ........................................................1 2 3 4 5
11. Lonely ..........................................................1 2 3 4 5
12. Mad ............................................................1 2 3 4 5
13. Disgusted ....................................................1 2 3 4 5
14. Blue ............................................................1 2 3 4 5
15. Gloomy .......................................................1 2 3 4 5

Early Adolescent Temperament Questionnaire-Short-Form-Frustration/Anger Subscale

*These questions are about how you behave or feel. For each sentence that you read, circle the answer that best tells how true that sentence is about how you usually behave or feel. Remember, there are no right or wrong answers, just circle what you think describes you best.

How much have you felt this way during the past few weeks?
1=Almost always not true   2=Most times not true  3=Sometimes true or not true
4=Usually true  5=Almost always true

16. It bothers me when I try to make a phone call and the line is busy ..................1 2 3 4 5
17. I get very upset if I want to do something and my parents won’t let me
18. I get irritated when I have to stop doing something I like ...............................1 2 3 4 5
19. It really annoys me to wait in long lines ........................................................1 2 3 4 5
20. I get very frustrated when I make a mistake in my school work ......................1 2 3 4 5
21. It frustrates me if people interrupt me when I’m talking ...............................1 2 3 4 5
22. I get upset if I’m not able to do a task really well ...........................................1 2 3 4 5

Child Report of Parenting Behaviors Inventory- Parental Involvement Subscale
(Mother)-Youth Report

*The next questions are about your mother or female caregiver. If your mother or female caregiver does not live with you, please answer about an important female in your life. Indicate who you are talking about using question #37 and for choice 4 and 5 write who that person is next to the number:

23. For the next questions, I am talking about
   1. My mother
   2. My grandmother
   3. My sister
   4. Another adult female relative not mentioned above (like an aunt, cousin, etc.)
   5. Another adult female who is not related to you

Choose the response that best describes how often the following occurred in the last 3 months.

1=Almost Never  2=Once in a while  3=Sometimes  4=A lot of the time  5=Almost always

24. My mother went to my school/community events ........................................... 1 2 3 4 5
25. My mother spent time with me or did things with me alone ............................1 2 3 4 5
26. My mother talked with teachers to find out how I was doing in school ..........1 2 3 4 5
27. My mother helped out with school/community activities that I was involved in .............................................................................................................1 2 3 4 5
28. My mother worked with me on my homework/projects ...............................1 2 3 4 5
29. My mother made sure I did my homework .................................................... 1 2 3 4 5
30. My mother found out about programs that could help me ............................. 1 2 3 4 5
31. My mother helped me get involved in programs/lessons .............................. 1 2 3 4 5
32. My mother tried to find out from me how things were going ....................... 1 2 3 4 5

**Child Report of Parenting Behavior Inventory-Parent Involvement Subscale**

*(Father)- Youth Report*

*The next questions are about your father or male caregiver. If your father or male
caregiver does not live with you, please answer about an important male in your life.*

*Indicate who you are talking about using question #32 and for choice 4 and 5 write who
that person is next to the number:*

33. For the next questions, I am talking about

1. My father
2. My grandfather
3. My brother
4. Another adult male relative not mentioned above (like an uncle, cousin, etc.)
5. Another adult male who is not related to you (like’s mom’s boyfriend, my
step-father)

*Choose the response that best describes how often the following occurred in the last 3
months.*

1=Almost Never 2=Once in a while 3=Sometimes 4=A lot of the time 5=Almost always

34. My father went to my school/community events .......................................... 1 2 3 4 5
35. My father spent time with me or did things with me alone ........................... 1 2 3 4 5
36. My father talked with teachers to find out how I was doing in school ......... 1 2 3 4 5
37. My father helped out with school/community activities that I was
involved in ........................................................................................................... 1 2 3 4 5
38. My father worked with me on my homework/projects .................................. 1 2 3 4 5
39. My father made sure I did my homework ...................................................... 1 2 3 4 5
40. My father found out about programs that could help me ............................... 1 2 3 4 5
41. My father helped me get involved in programs/lessons ............................... 1 2 3 4 5
42. My father tried to find out from me how things were going ......................... 1 2 3 4 5
Early Adolescent Temperament Questionnaire-Short-Form-Effortful Control Subscale

*These questions are about how you behave or feel. For each sentence that you read, circle the answer that best tells how true that sentence is about how you usually behave or feel. Remember, there are no right or wrong answers, just circle what you think describes you best.

How much have you felt this way during the past few weeks?

1=Almost always not true   2=Most times not true   3=Sometimes true or not true
4=Usually true   5=Almost always true

43. It's hard for me not to open presents before I’m supposed to .....................1 2 3 4 5
44. When someone tells me to stop doing something, it is easy for me to stop ..1 2 3 4 5
45. The more I try to stop myself from doing something I shouldn't, the more likely I am to do it .................................................................1 2 3 4 5
46. It’s easy for me to keep a secret......................................................................1 2 3 4 5
47. I can stick with my plans and goals ..............................................................1 2 3 4 5
48. It is easy for me to really concentrate on homework problems..................1 2 3 4 5
49. I find it hard to shift gears when I go from one class to another at school....1 2 3 4 5
50. When trying to study, I have difficulty tuning out background noise and concentrating.........................................................................................................1 2 3 4 5
51. I am good at keeping track of several different things that are happening around me .................................................................................................................................................................1 2 3 4 5
52. I pay close attention when someone tells me how to do something ..........1 2 3 4 5
53. I tend to get in the middle of one thing, then go off and do something else..1 2 3 4 5
54. It is easy for me to really concentrate on homework problems................1 2 3 4 5
55. I something fun for awhile before starting my homework, even when I am not supposed to........................................................................................................1 2 3 4 5
56. If I have a hard assignment to do, I get started right away.......................1 2 3 4 5
57. I finish my homework before the due date ......................................................1 2 3 4 5
58. I put off working on projects until right before they're due......................1 2 3 4 5
### Problem Behaviors Scale- Physical and Non-physical Aggression Subscales

*The following questions are about certain activities or behaviors that you may or may not have been involved in during your life. For each item, please choose a response that indicates approximately how many times, if ever, you have done the activity or behavior during the past 30 days.

0 = never  1 = 1 time  2 = 2 times  3 = 3 times  4 = 4 times  5 = 5 times  6 = 6 times  7 = 7 times  8 = 8 times  9 = 9 or more times

<table>
<thead>
<tr>
<th>Item</th>
<th>Question</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>59.</td>
<td>You were in a fight in which someone was hit</td>
<td>0 1 2 3 4 5</td>
</tr>
<tr>
<td>60.</td>
<td>You put down someone</td>
<td>0 1 2 3 4 5</td>
</tr>
<tr>
<td>61.</td>
<td>You threatened to hit another kid</td>
<td>0 1 2 3 4 5</td>
</tr>
<tr>
<td>62.</td>
<td>You spread a rumor</td>
<td>0 1 2 3 4 5</td>
</tr>
<tr>
<td>63.</td>
<td>You threatened a teacher</td>
<td>0 1 2 3 4 5</td>
</tr>
<tr>
<td>64.</td>
<td>You picked on someone</td>
<td>0 1 2 3 4 5</td>
</tr>
<tr>
<td>65.</td>
<td>You threatened someone with a weapon</td>
<td>0 1 2 3 4 5</td>
</tr>
<tr>
<td>66.</td>
<td>You excluded someone</td>
<td>0 1 2 3 4 5</td>
</tr>
<tr>
<td>67.</td>
<td>You shoved or pushed another kid</td>
<td>0 1 2 3 4 5</td>
</tr>
<tr>
<td>68.</td>
<td>You insulted someone’s family</td>
<td>0 1 2 3 4 5</td>
</tr>
<tr>
<td>69.</td>
<td>You hit or slapped another kid</td>
<td>0 1 2 3 4 5</td>
</tr>
<tr>
<td>70.</td>
<td>You gave mean looks</td>
<td>0 1 2 3 4 5</td>
</tr>
<tr>
<td>71.</td>
<td>You threw something at someone</td>
<td>0 1 2 3 4 5</td>
</tr>
<tr>
<td>72.</td>
<td>You started a fight between others</td>
<td>0 1 2 3 4 5</td>
</tr>
</tbody>
</table>
Footnote

1 According to (Cohen & Cohen, 1988), classic suppression is when a third variable (Z) increases the correlation between a variable (X) and a dependent variable (Y) even though Z is statistically unrelated to Y. In this case, the presence of Z suppresses what is typically error variance in X, thereby increasing its relation to Y. Generally, speaking this suggests that having Z in the equation, increases the amount of variance accounted for by the model ($R^2$). Finding suppression can indicate that there is “noise” or variance in X that is correlated with Z but not Y. Thus, including Z in the model can increase X as Z “suppresses” this noise, thereby making X seem like a better predictor of Y when in the presence of Z (Howell, 2001). In the present study, this suggests that there may be variance shared by mother (X) and father (Z) involvement which is, in fact, not correlated with relational aggression. Thus, in the presence of mother involvement, the relationship between father involvement and relational aggression increases.
Table 1

Correlations, Means, and Standard Deviations for All Study Variables for Early Adolescent African American girls (n=58)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Maternal Involvement</td>
<td>1.00</td>
<td>.36**</td>
<td>-.17</td>
<td>.32*</td>
<td>-.11</td>
<td>.06</td>
<td>-.02</td>
</tr>
<tr>
<td>2. Father Involvement</td>
<td>.36**</td>
<td>1.00</td>
<td>-.05</td>
<td>.05</td>
<td>-.18</td>
<td>-.01</td>
<td>.30*</td>
</tr>
<tr>
<td>3. Negative Affect</td>
<td>-.17</td>
<td>-.05</td>
<td>1.00</td>
<td>-.29*</td>
<td>.36**</td>
<td>.03</td>
<td>.04</td>
</tr>
<tr>
<td>4. Self-regulation</td>
<td>.32*</td>
<td>.05</td>
<td>-.29*</td>
<td>1.00</td>
<td>-.33*</td>
<td>-.41**</td>
<td>-.40**</td>
</tr>
<tr>
<td>5. Frustration</td>
<td>-.11</td>
<td>-.19</td>
<td>.36**</td>
<td>-.33*</td>
<td>1.00</td>
<td>.16</td>
<td>.18</td>
</tr>
<tr>
<td>6. Physical Aggression</td>
<td>.06</td>
<td>-.01</td>
<td>.03</td>
<td>-.41**</td>
<td>.16</td>
<td>1.00</td>
<td>.76**</td>
</tr>
<tr>
<td>7. Relational Aggression</td>
<td>-.02</td>
<td>.30*</td>
<td>.04</td>
<td>-.41**</td>
<td>.18</td>
<td>.76**</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Mean

|     | 3.99 | 3.10 | 2.05 | 3.48 | 2.27 | 2.70 | 3.02 |

SD

|     | .85  | .98  | .84  | .42  | .84  | 1.02 | .97  |

*p < .05. **p < .01. ***p < .001
<table>
<thead>
<tr>
<th>Residency Status</th>
<th>Father Involvement</th>
<th>Negative Affect</th>
<th>Self-regulation</th>
<th>Frustration</th>
<th>Physical Aggression</th>
<th>Relational Aggression</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological Fathers (n = 37)</td>
<td>3.20 (1.19)</td>
<td>1.94 (.782)</td>
<td>3.48 (.429)</td>
<td>2.25 (.855)</td>
<td>2.54 (1.79)</td>
<td>3.03 (2.18)</td>
</tr>
<tr>
<td>Mother and Father</td>
<td>3.89 (1.06)</td>
<td>2.25 (.909)</td>
<td>3.42 (.480)</td>
<td>2.07 (.754)</td>
<td>2.81 (2.11)</td>
<td>4.28 (1.17)</td>
</tr>
<tr>
<td>Mother only</td>
<td>2.96 (1.06)</td>
<td>1.68 (.615)</td>
<td>3.46 (.394)</td>
<td>2.52 (.908)</td>
<td>2.54 (1.60)</td>
<td>2.51 (1.46)</td>
</tr>
<tr>
<td>Mother and other adults(^a)</td>
<td>1.54</td>
<td>2.71</td>
<td>1.85</td>
<td>1.50</td>
<td>2.03</td>
<td>1.96</td>
</tr>
</tbody>
</table>

Social Fathers (n= 21)  
<table>
<thead>
<tr>
<th>Father Involvement</th>
<th>Negative Affect</th>
<th>Self-regulation</th>
<th>Frustration</th>
<th>Physical Aggression</th>
<th>Relational Aggression</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother and Father</td>
<td>3.67 (.636)</td>
<td>1.90 (.796)</td>
<td>3.56 (.430)</td>
<td>1.58 (.144)*</td>
<td>2.52 (1.86)</td>
</tr>
<tr>
<td>Mother only</td>
<td>2.85 (1.51)</td>
<td>1.89 (.710)</td>
<td>3.54 (.530)</td>
<td>2.50 (1.17)</td>
<td>2.76 (2.00)</td>
</tr>
<tr>
<td>Mother and other adults</td>
<td>2.64 (1.48)</td>
<td>2.57 (1.07)</td>
<td>3.36 (.311)</td>
<td>2.45 (1.31)</td>
<td>2.87 (1.40)</td>
</tr>
</tbody>
</table>

*Note.* Girl’s residential status is separated by contact with biological versus social father in the table. Social fathers refer to “grandfathers, brothers, uncles, other male relatives, or non-related male adult figures” with whom girls are regularly involved. Non-residential versus residential father status can be conferred from residency status in each group. Overall means and standard deviations for study variables for the two separate groups (regardless of residency status) displayed in bold. Standard deviations are in parentheses. \(^a\)Among girls involved with a biological father, n = 1 in the residency status group “mother and other adults”. Therefore, there is no standard deviation for this group.
Table 3

Unstandardized and Standardized Regression Coefficients, Standard Errors, t-values, and Part Correlations (n = 58)

<table>
<thead>
<tr>
<th>Path</th>
<th>Estimate</th>
<th>SE</th>
<th>β</th>
<th>t</th>
<th>sr²</th>
</tr>
</thead>
<tbody>
<tr>
<td>MI → Physical Aggression</td>
<td>-0.160</td>
<td>0.287</td>
<td>0.076</td>
<td>0.559</td>
<td>0.005</td>
</tr>
<tr>
<td>FI → Physical Aggression</td>
<td>MI</td>
<td>-0.061</td>
<td>0.211</td>
<td>-0.042</td>
<td>-0.290</td>
</tr>
<tr>
<td>NA → Physical Aggression MI</td>
<td>0.128</td>
<td>0.308</td>
<td>0.059</td>
<td>0.414</td>
<td>0.003</td>
</tr>
<tr>
<td>FI x NA → Physical Aggression MI</td>
<td>0.545†</td>
<td>0.275</td>
<td>0.291</td>
<td>1.983</td>
<td>0.070</td>
</tr>
<tr>
<td>SR → Physical Aggression MI FI NA</td>
<td>-2.166***</td>
<td>0.567</td>
<td>-0.506</td>
<td>-3.820</td>
<td>0.210</td>
</tr>
<tr>
<td>FI → Physical Aggression MI NA SR</td>
<td>-0.096</td>
<td>0.191</td>
<td>-0.066</td>
<td>-0.501</td>
<td>0.005</td>
</tr>
<tr>
<td>MI → Self-regulation</td>
<td>0.159*</td>
<td>0.064</td>
<td>0.321</td>
<td>2.487</td>
<td>0.060</td>
</tr>
<tr>
<td>FI → Self-regulation MI</td>
<td>0.027</td>
<td>0.047</td>
<td>-0.078</td>
<td>-0.562</td>
<td>0.010</td>
</tr>
<tr>
<td>NA → Self-regulation MI</td>
<td>-0.117</td>
<td>0.064</td>
<td>-0.234</td>
<td>-1.835</td>
<td>0.040</td>
</tr>
<tr>
<td>FI x NA → Self-regulation MI</td>
<td>-0.052</td>
<td>0.062</td>
<td>-0.118</td>
<td>-0.844</td>
<td>0.010</td>
</tr>
<tr>
<td>MI → Relational Aggression</td>
<td>-0.052</td>
<td>0.325</td>
<td>-0.022</td>
<td>-0.161</td>
<td>0.004</td>
</tr>
<tr>
<td>FI → Relational Aggression MI</td>
<td>0.566*</td>
<td>0.228</td>
<td>0.346</td>
<td>2.482</td>
<td>0.100</td>
</tr>
<tr>
<td>NA → Relational Aggression MI</td>
<td>0.039</td>
<td>0.333</td>
<td>0.016</td>
<td>0.117</td>
<td>0.003</td>
</tr>
<tr>
<td>FI x NA → Relational Aggression MI</td>
<td>0.361</td>
<td>0.304</td>
<td>0.170</td>
<td>1.187</td>
<td>0.024</td>
</tr>
<tr>
<td>SR → Relational Aggression MI FI NA</td>
<td>-2.197***</td>
<td>0.062</td>
<td>-0.447</td>
<td>-3.494</td>
<td>0.160</td>
</tr>
<tr>
<td>FI → Relational Aggression MI NA SR</td>
<td>-0.543*</td>
<td>0.212</td>
<td>0.325</td>
<td>2.562</td>
<td>0.090</td>
</tr>
</tbody>
</table>

Note. MI = Mother Involvement; FI = Father Involvement, NA = Negative Affect; FI x NA = is the abbreviation for “father involvement by negative affect interaction”. The bars in the first column indicate that the effects of the variables following the bars have been partialled out. Regression coefficients, their standard errors, beta weights, and sr² are reported in the table.

p<.10. *p<.05. **p<.01. ***p<.001.
Table 4
Unstandardized and Standardized Regression Coefficients, Standard Errors, t-values, and Part
Correlations using Frustration (n = 58)

<table>
<thead>
<tr>
<th>Path</th>
<th>Estimate</th>
<th>SE</th>
<th>β</th>
<th>t</th>
<th>sr²</th>
</tr>
</thead>
<tbody>
<tr>
<td>MI → Physical Aggression</td>
<td>-0.160</td>
<td>0.287</td>
<td>0.076</td>
<td>0.559</td>
<td>0.005</td>
</tr>
<tr>
<td>FI → Physical Aggression</td>
<td>MI</td>
<td>-0.061</td>
<td>0.211</td>
<td>-0.042</td>
<td>-0.290</td>
</tr>
<tr>
<td>FR → Physical Aggression</td>
<td>MI</td>
<td>0.402</td>
<td>0.267</td>
<td>-0.211</td>
<td>-1.506</td>
</tr>
<tr>
<td>FI x FR → Physical Aggression</td>
<td>MI</td>
<td>0.155</td>
<td>-0.21</td>
<td>-0.102</td>
<td>-0.744</td>
</tr>
<tr>
<td>SR → Physical Aggression</td>
<td>MI FI FR</td>
<td>-2.022***</td>
<td>0.579</td>
<td>-0.473</td>
<td>-3.494</td>
</tr>
<tr>
<td>FI → Physical Aggression</td>
<td>MI FR SR</td>
<td>-0.124</td>
<td>0.195</td>
<td>-0.085</td>
<td>-0.530</td>
</tr>
<tr>
<td>MI → Self-regulation</td>
<td>0.159*</td>
<td>0.064</td>
<td>0.321</td>
<td>2.487</td>
<td>0.103</td>
</tr>
<tr>
<td>FI → Self-regulation</td>
<td>MI</td>
<td>-0.027</td>
<td>0.047</td>
<td>0.078</td>
<td>-0.562</td>
</tr>
<tr>
<td>FR → Self-regulation</td>
<td>MI</td>
<td>-0.136*</td>
<td>0.058</td>
<td>0.303</td>
<td>2.347</td>
</tr>
<tr>
<td>FI x FR → Self-regulation</td>
<td>MI</td>
<td>0.034</td>
<td>0.045</td>
<td>0.095</td>
<td>0.748</td>
</tr>
<tr>
<td>MI → Relational Aggression</td>
<td>0.014</td>
<td>0.326</td>
<td>0.006</td>
<td>0.043</td>
<td>0.000</td>
</tr>
<tr>
<td>FI → Relational Aggression</td>
<td>MI</td>
<td>0.546*</td>
<td>0.228</td>
<td>0.346</td>
<td>2.482</td>
</tr>
<tr>
<td>FR → Relational Aggression</td>
<td>MI</td>
<td>0.298</td>
<td>0.291</td>
<td>-0.138</td>
<td>-1.025</td>
</tr>
<tr>
<td>FI x FR → Relational Aggression</td>
<td>MI</td>
<td>0.106</td>
<td>0.22</td>
<td>-0.062</td>
<td>-0.465</td>
</tr>
<tr>
<td>SR → Relational Aggression</td>
<td>MI FI FR</td>
<td>-2.093**</td>
<td>0.645</td>
<td>-0.426</td>
<td>-3.246</td>
</tr>
<tr>
<td>FI → Relational Aggression</td>
<td>MI FR SR</td>
<td>0.530*</td>
<td>0.218</td>
<td>0.317</td>
<td>2.435</td>
</tr>
</tbody>
</table>

Note. MI = Mother Involvement; FI = Father Involvement, FR = Frustration; FI x FR = is the abbreviation for “father involvement by frustration interaction”. The bars in the first column indicate that the effects of variables following the bar have been partialed out. Regression coefficients, their standard errors, beta weights, and sr² are reported in the table.

†p<.10. *p<.05. **p<.01. ***p<.001.
Table 5

Simple Slope Analysis of Physical Aggression Regressed on Father Involvement at Levels of Negative Affect for African American Girls (n=58)

<table>
<thead>
<tr>
<th>Predictors</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>sr²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involvement at Low Negative Affect</td>
<td>-.470</td>
<td>.291</td>
<td>-.322</td>
<td>.213</td>
</tr>
<tr>
<td>Involvement at Average Negative Affect</td>
<td>.015</td>
<td>.214</td>
<td>.010</td>
<td>.009</td>
</tr>
<tr>
<td>Involvement at High Negative Affect</td>
<td>.453</td>
<td>.330</td>
<td>.311</td>
<td>.181</td>
</tr>
</tbody>
</table>

Note. Average, low, and high levels of negative affect refer to the mean, and one standard deviation below and above the mean, respectively.

*p < .05 ** p < .01 *** p < .001.
Table 6

Intercorrelations for All Study Variables for Early Adolescent African American Girls Grouped by High (n=30) and Low (n=26) Physical Aggression

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Maternal Involvement</td>
<td>1.00</td>
<td>.40**</td>
<td>.04</td>
<td>.40*</td>
<td>-.08</td>
<td>.13</td>
<td>.03</td>
</tr>
<tr>
<td>2. Father Involvement</td>
<td>.31</td>
<td>1.00</td>
<td>.20</td>
<td>.28</td>
<td>-.26</td>
<td>-.03</td>
<td>.43*</td>
</tr>
<tr>
<td>3. Negative Affect</td>
<td>-.54**</td>
<td>-.18</td>
<td>1.00</td>
<td>.12</td>
<td>.23*</td>
<td>.16*</td>
<td>-.10</td>
</tr>
<tr>
<td>4. Self-regulation</td>
<td>.37</td>
<td>-.11</td>
<td>-.51*</td>
<td>1.00</td>
<td>-.13</td>
<td>.06</td>
<td>.01</td>
</tr>
<tr>
<td>5. Frustration</td>
<td>-.14</td>
<td>-.10</td>
<td>.49**</td>
<td>-.44*</td>
<td>1.00</td>
<td>.04</td>
<td>.03</td>
</tr>
<tr>
<td>6. Physical Aggression</td>
<td>.10</td>
<td>.07</td>
<td>-.30</td>
<td>-.20</td>
<td>.28</td>
<td>1.00</td>
<td>.55*</td>
</tr>
<tr>
<td>7. Relational Aggression</td>
<td>-.12</td>
<td>.35</td>
<td>-.10</td>
<td>-.38</td>
<td>.32</td>
<td>.58**</td>
<td>1.00</td>
</tr>
</tbody>
</table>

*Note. Scores above and below the main diagonal refer to high and low physical aggression, respectively.

*p < .05. **p < .01. ***p < .001
Table 7

Intercorrelations for All Study Variables for Early Adolescent African American Girls Grouped by High (n= 33) and Low (n= 22) Relational Aggression

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2 **</th>
<th>3</th>
<th>4 *</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Maternal Involvement</td>
<td>1.00</td>
<td>.388**</td>
<td>-.111</td>
<td>.401*</td>
<td>-.001</td>
<td>.107</td>
<td>.109</td>
</tr>
<tr>
<td>2. Father Involvement</td>
<td>-.286</td>
<td>.131</td>
<td>1.00</td>
<td>-.248</td>
<td>.189</td>
<td>.152</td>
<td>.065</td>
</tr>
<tr>
<td>3. Negative Affect</td>
<td>.255</td>
<td>.079</td>
<td>-.389</td>
<td>1.00</td>
<td>-.165</td>
<td>-.135</td>
<td>-.172</td>
</tr>
<tr>
<td>4. Self-regulation</td>
<td>-.117</td>
<td>-.173</td>
<td>.585**</td>
<td>-.343</td>
<td>1.00</td>
<td>.012</td>
<td>.050</td>
</tr>
<tr>
<td>5. Frustration</td>
<td>.135</td>
<td>-.270</td>
<td>-.160</td>
<td>-.401</td>
<td>.034</td>
<td>1.00</td>
<td>.587*</td>
</tr>
<tr>
<td>6. Physical Aggression</td>
<td>-.251</td>
<td>-.051</td>
<td>.093</td>
<td>-.386</td>
<td>.041</td>
<td>.565**</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Note. Scores above and below the main diagonal refer to high and low physical aggression, respectively.

*p < .05. **p < .01. ***p < .001
**Table 8**

Means and Standard Deviations for Study Variables Grouped by High (n= 30) and Low (n= 26) Physical Aggression

<table>
<thead>
<tr>
<th>Study Variables</th>
<th>Low Physical Aggression</th>
<th>High Physical Aggression</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>1) Mother Involvement</td>
<td>3.97</td>
<td>.744</td>
</tr>
<tr>
<td>2) Father Involvement</td>
<td>3.20</td>
<td>1.07</td>
</tr>
<tr>
<td>3) Self-regulation</td>
<td>3.62</td>
<td>.469</td>
</tr>
<tr>
<td>4) Negative Affect</td>
<td>1.99</td>
<td>.765</td>
</tr>
<tr>
<td>5) Frustration</td>
<td>2.35</td>
<td>.936</td>
</tr>
<tr>
<td>4) Physical Aggression</td>
<td>1.31</td>
<td>.912</td>
</tr>
<tr>
<td>5) Relational Aggression</td>
<td>1.94</td>
<td>.517</td>
</tr>
</tbody>
</table>
Table 9

Means and Standard Deviations for Study Variables Grouped by High (n= 33) and Low (n= 22) Relational Aggression

<table>
<thead>
<tr>
<th>Study Variables</th>
<th>Low Relational Aggression</th>
<th>High Relational Aggression</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>1) Mother Involvement</td>
<td>3.87</td>
<td>.744</td>
</tr>
<tr>
<td>2) Father Involvement</td>
<td>2.82</td>
<td>.926</td>
</tr>
<tr>
<td>3) Self-regulation</td>
<td>3.62</td>
<td>.441</td>
</tr>
<tr>
<td>4) Negative Affect</td>
<td>2.08</td>
<td>.805</td>
</tr>
<tr>
<td>5) Frustration</td>
<td>2.45</td>
<td>.659</td>
</tr>
<tr>
<td>4) Physical Aggression</td>
<td>1.47</td>
<td>1.32</td>
</tr>
<tr>
<td>5) Relational Aggression</td>
<td>1.33</td>
<td>.901</td>
</tr>
</tbody>
</table>
Table 10

Simple Slope Analysis of Relational Aggression Regressed on Father Involvement at Levels of Negative Affect for African American Girls High in Relational Aggression (n=35)

<table>
<thead>
<tr>
<th>Predictors</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>sr²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involvement at Low Negative Affect</td>
<td>-0.253</td>
<td>0.336</td>
<td>-0.189</td>
<td>0.01</td>
</tr>
<tr>
<td>Involvement at Average Negative Affect</td>
<td>0.376</td>
<td>0.234</td>
<td>0.281</td>
<td>0.06</td>
</tr>
<tr>
<td>Involvement at High Negative Affect</td>
<td>0.987</td>
<td>0.359</td>
<td>0.751</td>
<td>0.20</td>
</tr>
</tbody>
</table>

*Note. Average, low, and high levels of negative affect refer to the mean, and one standard deviation below and above the mean, respectively

*p < .05  ** p < .01  *** p < .001.
Figure 1. Hypothetical mediated-moderation model of the relations between father involvement, temperament, self-regulation, and relational or physical aggression among African American early adolescent girls.
Figure 2. Mediated moderation model of the relation between parenting behaviors and aggression for early adolescent African American girls. Unstandardized regression coefficients for physical aggression are located above those for relational aggression. Standard errors are in parentheses.

†<.10. *p < .05. **p < .01. ***p < .001.
Figure 3. Mediated moderation model of the relation between parenting behaviors and aggression using frustration as a measure of negative affect. Unstandardized regression coefficients for physical aggression are located above those for relational aggression. Standard errors are in parentheses.

\[ <.10. *p < .05. **p < .01. ***p < .001. \]
Figure 4. The relation between physical aggression and father involvement at levels of negative affect for early adolescent African American girls.
Figure 5. The relation between relational aggression and father involvement at levels of negative affect for early adolescent African American high in relational aggression.