Risk & Resilience among African American Single Mother Families: A Closer Look at Parenting & Adolescent Outcomes

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ABSTRACT

CARLYE YATES KINCAID: Risk & Resilience among African American Single Mother Families: A Closer Look at Parenting & Adolescent Outcomes
(Under the direction of Deborah Jones, Ph.D.)

African American adolescents from single-mother homes are at heightened risk for maladjustment and problem behaviors; however, many African American adolescents from single mother homes display positive youth development despite elevated risk. Using an ecological resiliency perspective, the current study examined protective factors associated with positive youth development among 193 African American single mother families. Cross-sectional findings revealed that higher levels of maternal behavioral control and lower levels of maternal psychological control were associated with fewer problem behaviors among youth, and that lower levels of maternal psychological control and higher levels of youth self-esteem were associated with fewer internalizing difficulties. Furthermore, gender moderated the relationship between parenting behaviors and problem behaviors among youth. Although the cross-sectional findings were not replicated in longitudinal analyses, positive ethnic identity at Time 1 was associated with fewer internalizing difficulties at Time 2. Implications of findings and directions for future research are discussed.

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CHAPTER 1

Overview of the Study

Recent census data indicates that nearly half of African American adolescents are being raised in single mother households (United States Census, 2010). Although African American adolescents from single mother households are at increased risk for negative outcomes relative to youth from other racial groups and youth from intact homes, many African American adolescents raised in single mother families evidence positive outcomes nonetheless (e.g., fewer psychosocial difficulties, fewer problem behaviors; Brody & Flor, 1998; Jessor, 1993; Kim and Brody, 2005). While traditional methods focused on a problem-focused paradigm in order to understand youth development, an ecological resiliency framework offers a unique opportunity to focus the identification of strengths and protective factors across multiple spheres of influence (Short & Russell-Mayhew, 2009), yielding information about positive youth development in spite of elevated risk (Benson, 1997; Fergus & Zimmerman, 2005; Scales, Benson, & Mannes, 2006). Bronfenbrenner's (1979) ecological framework emphasizes the various spheres that influence adolescents (e.g., families, non-parental adults, neighborhoods), highlighting the many environmental contexts that play a part in shaping youth development. In order to enable a greater number of adolescents to achieve positive outcomes, understanding salient protective factors across contexts is a critical component for promoting positive youth development among African American adolescents. Accordingly, an ecological risk/protection contextual framework is

useful in organizing research on African American families because it allows investigators to study adolescent development by integrating components of ecological theory and resiliency perspectives (Murry et al., 2001).

For the purposes of this study, resilience is defined as positive adaptation in the context of risk exposure (Fergus & Zimmerman, 2005; Luthar, Cicchetti, & Becker, 2000). In this study, African American youth from single mother homes are conceptualized as an inherently at-risk population given the many stressors with which single mother-headed families must contend (for reviews, see Murry, Bynum, Brody, Willert, & Stephens, 2001; Jones, Zalot, Foster, Sterrett, & Chester, 2007). African American adolescents living in single mother homes are at risk for a variety of problem behaviors, including risky sexual behavior (Mulatu, Leonard, Godette, & Fulmore, 2008; Coley, Votruba-Drzal, & Schindler, 2009; Smith, Buzi, & Weinman, 2002), substance use (Griffin, Botvin, Scheier, Diaz & Miller, 2000), and delinquency (Cookston, 1999; McLoyd, 1990), as well as higher levels of psychosocial adjustment difficulties (e.g. internalizing & externalizing difficulties; Barrett & Turner, 2005; Lipman, Boyle, Dooley, & Offord, 2002; McLoyd, Jayaratne, Ceballo, & Borquez, 1994; O'Connor, Dunn, Jenkins, Pickering, & Rasbash, 2001; Simons, Chen, Simons, Brody, & Cutrona, 2006).

Whereas risk factors are defined as variables that increase the likelihood of a negative outcome, protective factors are variables that alter the trajectory from risk exposure to negative outcomes (Luthar et al., 2000). This study will focus on protective factors at the individual and family level, the two levels most proximal to the child (Bronfenbrenner & Morris, 1998; Luthar et al., 2000). Furthermore, given that several theoretical models have been proposed for understanding the relationship between risk and resiliency, a

compensatory model of resiliency is specified as the model of choice for this particular study. The compensatory model of resiliency focuses on factors that individual African American youth possess that counter negative outcomes and asserts that the resilient factors are associated with more positive outcomes across all levels of risk among youth from African American single mother homes (Zimmerman, Bingenheimer, & Notaro, 2002).

The proposed study will examine protective factors contributing to positive youth development (e.g., defined in this study as fewer problem behaviors/psychosocial adjustment difficulties) among African American adolescents from single parent homes via three primary aims: 1) to examine a more integrative model of positive parenting practices among African American single mothers (e.g., including warmth, monitoring, *and* psychological control in one model), 2) to examine the impact of positive relationships with coparents (conceptualized as adults who help in raising adolescents; Jones & Lindahl, 2011; Jones & Forehand, 2003; Jones, Shaffer, Forehand, Brody, & Armistead, 2003; Sterrett, Jones, & Kincaid, 2009), and 3) to examine the contribution of adolescent individual assets, including personal self-esteem, positive ethnic identity, and religiosity.

CHAPTER 2

Background

Unique Vulnerabilities of Adolescence

Adolescence is inherently conceptualized as a risky period of development (Steinberg, 2008; Somerville, Jones, & Casey, 2010). Extant neurobiological theories suggest that the developing adolescent is more vulnerable to problem behavior (e.g., risky sexual behavior, substance use, delinquency, aggression) as a result of a "functionally imbalanced pattern of neural activity that may be related to behavioral deficits in successfully inhibiting emotional responses" (Somerville e al., 2010). The accelerated development of the socio-emotional network leads to a heightened responsiveness to emotional cues (e.g., sexual attraction, substance use, peer pressure to become involved in risky or deviant behavior), although the capacity to engage in cognitive and emotional regulation is still relatively immature (Somerville et al., 2010). In fact, this "executive control center," the area of the brain responsible for decision-making, reasoning, and planning, does not reach full maturation until early adulthood. As a result, the youth cognitive control network is less effective at imposing regulatory control over impulsive and risky behaviors (Steinberg, 2008). Given this neurobiological propensity for risk-taking behavior, adolescents are at greater risk for a variety of problem behaviors (e.g., sexual risk behavior, substance use, delinquency).

Co-morbidity of problem behaviors. Across ethnicities, there is a consistent association of adolescent involvement in problem behaviors (e.g., sexual risk behavior,

substance use, and delinquency (Ary et al., 1999; Culhane et al., 2009; Jessor et al., 2003; National Youth Violence Prevention Resource Center, 2003). Jessor & Jessor (1977) originally proposed the Problem Behavior Theory to explain this co-morbidity of problem behaviors among adolescents, proposing that adolescents engage in these behaviors for a variety of reasons (e.g., lack of identification with social conventions, learned ways of coping, and/or maladaptive strategy meet developmental needs for autonomy and independence). Common etiology is thought to yield problem behavior (Donovan & Jessor, 1985), and longitudinal work has found that all three problem behaviors are positively correlated with one another (Brookmeyer & Henrich, 2009; Stueve & O'Donnell, 2005). Furthermore, similar risk and protective factors are associated with these multiple problem outcomes across gender, age, socioeconomic status, and ethnicity (Costa, Jessor, & Turbin, 1999; Jessor, Turbin, & Costa, 1998a, 1998b; Jessor, Van Den Bos, Vanderryn, Costa, & Turbin, 1995).

The inter-correlation of problem behaviors has been consistently found across other empirical studies, as well, including correlational, longitudinal, and factor analytic work. For example, Duncan, Stryker, and Duncan (1999) found that when adolescents endorse higher levels of one problem behavior (e.g., substances, sexual behavior), they are at higher risk for high levels of the other behavior, as well. Of substances used among adolescents, alcohol is most widely available to adolescents and, in turn, has been found to be most strongly predictive of sexual risk behavior, as well (Brookmeyer & Henrich, 2009; Kotchick, Shaffer, Forehand, & Miller, 2001; Levy, Sherritt, Gabrielli, Shrier, & Knight, 2009; Zimmer-Gembeck & Helfand, 2008). Additionally, much evidence suggests that alcohol use is also correlated with delinquency during adolescence (Chassin, Pitts, & Prost, 2002; Windle,

2000). Furthermore, multiple factor analytic studies have demonstrated that these problem behaviors are tied to an underlying single factor (see Ary et al., 1999; Culhane & Taussig, 2009; Farrell, Danish, & Howard, 1992; Jessor & Donovan, 1985). Of particular relevance to this study, Farrell and colleagues (1992) found that a single factor explained between 50-67% of the variance in measures of substance use, sexual behavior, and delinquency among a sample of predominantly African American adolescents. Thus, the current study will examine these main problem behaviors (e.g., substance use, sexual behavior, and delinquency) within one integrative model.

Risks among African American Adolescents

Sexual risk behavior. According to the national survey which monitors priority health risk behaviors among adolescents in grades 9 to12 (the Youth Risk Behavior Surveillance Survey, YRBSS), African American adolescents are engaging in the highest level of sexual risk behavior relative to their Latino or White counterparts (CDC, 2010). For example, although approximately one half of White (49%) and Latino adolescents (42%) report having ever had sexual intercourse, approximately two thirds (65%) of African American adolescents report having had sexual intercourse. Additionally, African American adolescents (15%) were two times more likely than Latino adolescents (7%) and five times more likely than White (3%) adolescents to have had sexual intercourse prior to age 13, an age often used to define "early" intercourse. African American adolescents reported similarly elevated patterns of sexual risk behavior in regard to having had more than four sexual partners in adolescence (CDC, 2010).

African American adolescents are disproportionately affected by the negative consequences of sexual risk behavior, as well, including overrepresentation in the prevalence

of human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS), other sexually transmitted diseases (STDs), and unplanned pregnancy (CDC, 2010). For example, African American adults and adolescents account for 51% of all new HIV diagnoses cases in the United States, although they comprise 13% of the U.S. population (CDC, 2007a). Racial disparities in HIV diagnoses are particularly severe among young people, as well; among youth aged 13-24, African Americans accounted for 61% of the diagnoses (CDC, 2007b). Additionally, rates for STDs such as chlamydia, gonorrhea, and syphilis were highest among African American youth across all age groups (CDC, 2009). Lastly, African American ages 15-19 have the second highest rate of unplanned pregnancy, following Hispanic youth (Martin et al., 2009).

Substance use. In regard to alcohol and substance use, African Americans adolescents are typically *less* likely to engage in these problem behaviors related to their White and Latino counterparts (CDC, 2010); however, the consequences of use are worse for African American adolescents (e.g., increased involvement with the criminal justice system, school dropout, and engagement in risky sexual behavior; Belenko, Sprott, & Peterson, 2004; Pavkov, McGovern, & Geffner, 1993; Perkins, Luster, Villarruel, & Small, 1998). Furthermore, African American adolescents report that they are more likely to use substances in order to enhance sexual experiences, a pattern that likely accounts at least in part for the elevated consequences of sexual behavior among African American youth (Mulatu et al., 2008). Alcohol use increases adolescent vulnerability to sexual risk-taking behavior via impaired judgment and reduced inhibition (Mandura, Murray, & Bangi, 2003), and greatly increases the likelihood that African American adolescents engage in sexual activity (Perkins et al., 1998).

Delinquency & externalizing problems. The results of the national 2009 Youth Risk Behavior Survey and other delinquency statistics also indicated that African American adolescents are at heightened risk for delinquency and externalizing problems, including aggression and conduct problems (CDC, 2010; Elliott, Huizinga, & Menard 1989; Tittle & Paternoster, 2000). Among African American adolescents across the United States, 41% reported having been in more than one physical fight over the past 12 months, versus 36% of Hispanic adolescents and 29% of Caucasian students; furthermore, 15% of African American adolescents reported purposefully hitting their boyfriend or girlfriend, versus 12% of Hispanic adolescents and 8% of Caucasian adolescents (CDC, 2010). According to the most recent U.S. Bureau of Justice report (2005), African Americans are also overrepresented in the reports of criminal incidents, including higher rates of offending and victimization.

Theoretical perspectives on the development of delinquent behavior propose economic hardship, perceptions of limited opportunity, and negative labeling as predictors of delinquent behavior (Elliott, Ageton, & Canter, 1979); all too often, each of these stressors are realities for African American adolescents. The severe ramifications of externalizing behaviors, including but not limited to juvenile detention, long-term incarceration, and fatality (Loeber & Farrington, 2000), bring delinquent and externalizing behaviors to the forefront of prevention and intervention research among adolescents, emphasizing the need for research which sheds light on risk and protective factors among African American adolescents.

Although the overlap of substance use, sexual behavior, and delinquency has been empirically supported, the precise nature of their relations and their developmental pathways

warrant further empirical attention (Allen, Leadbeater, & Aber, 1994; Willoughby, Chalmers, & Busseri, 2004), particularly among understudied populations.

Elevated Risk among African American Single Mother Families

African American youth from single parent homes are at an even greater risk for problem problem behaviors and psychosocial adjustment difficulties (Barrett & Turner, 2005; O'Connor et al., 2001; Simons et al., 2006). The stressors associated with single motherhood are linked with more compromised parenting behaviors and, in turn, increased psychosocial adjustment problems (see Murry et al., 2001 for a review). Specifically, compromises in parent well-being and parenting practices have been found to contribute to negative outcomes among adolescents raised in single parent homes (Anderson, 2008; for a review, see Jones et al., 2007). Given that African American adolescents from single parent homes are overrepresented in the statistics, it is particularly important to understand the protective mechanisms that may be at work for this at-risk population. Consistent with a resiliency framework, several studies of single parent families have demonstrated that positive parenting practices are associated with positive youth development, despite the risks associated with single parent status (Jones et al., 2007; Jones, Forehand, Brody, & Armistead, 2002, Kim & Brody, 2005). The family context, therefore, is a purported as a central area of focus in understanding resiliency among African American adolescents from single mother homes within the current study.

Positive Parenting: Implications for Psychosocial Adjustment and Problem Behavior

Bronfenbrenner's (1979) ecological systems theory places parents within the innermost circle of influence in regard to child and adolescent development, designating the parent as a more proximal force than other environmental contexts (e.g., schools,

neighborhoods, etc); thus, parenting is considered a critical protective factor for developing African American adolescents. Parents exert influence on the child's development directly via shared genetics, parenting style, and parenting behaviors and, indirectly, as a filter and interpreter of more distal forces. Across families of various ethnicities and compositions, positive parenting practices (e.g., high levels of behavioral control & warmth, *and* low levels of psychological control) have consistently been found to be associated with the most optimal child outcomes (e.g., Jones et al., 2002; Lamborn, Mounts, Steinberg, & Dornbusch, 1991; Steinberg, Darling, Fletcher, Brown, & Dornbusch, 1995; Windle et al., 2010).

Parenting practices that are considered optimal for healthy adolescent development are typically categorized within the authoritative parenting style (Baumrind, 1967) in the broad parenting literature, and labeled as positive parenting in more recent empirical work among under-served populations (e.g., Jones et al., 2002; Kim & Brody, 2005). The foundation for the positive parenting literature, built upon Baumrind's (1966) original conceptualization of optimal parenting practices, has primarily focused on the protective effect of behavioral control (e.g., monitoring and direction of youth activities) and warmth/support (e.g., the relationship quality between parents and their children); Accordingly, the majority of parenting research has centered on these two domains of parenting, which will be discussed below in relation to psychosocial adjustment and problem behavior.

Behavioral control. Behavioral control is the construct most commonly examined in the study of youth problem behavior and externalizing difficulties. Parental monitoring, one aspect of behavioral control, typically includes knowledge of youth whereabouts and/or oversight of activities (Dishion & McMahon, 1998). Although originally conceived of as

active strategies to track children's activities and whereabouts, Stattin and Kerr (2000) were the first to suggest that that the critical ingredient of monitoring may be parental knowledge of the child's whereabouts and activities, regardless of how the parent obtains this information (Bean, Barber, & Crane, 2006; Kerr & Stattin, 2000; Miller, Forehand, & Kotchick, 1999; Tolou-Shams, Paikoff, McKirnan, & Holmbec, 2007). The association between higher levels of parental knowledge about children's whereabouts (e.g., monitoring) and lower levels of adolescent problem behavior has been well-documented in the literature, including diverse socioeconomic and ethnic groups (Windle et al., 2010).

In some cases, monitoring reduces problem behavior by restricting adolescent opportunities to engage in these behaviors, limiting time with risky peers, and affecting their perceptions and intentions for engaging in these behaviors (Freisthler, Byrnes, & Gruenewald, 2009). In other cases, monitoring may also be an indicator of the quality and content of communication between parents and their children about adolescent behaviors (Stattin & Kerr, 2000). Specifically, monitoring has been associated with lower levels of delinquency (Ary et al., 1999; Forehand, Miller, Dutra, & Chance, 1997; Graber, Nichols, Lynne, Brooks-Gunn, & Botvin, 2006), lower levels of substance use (Freisthler et al., 2009; Latendresse et al., 2008) and less risky sexual behavior (Li, Feigelman, & Stanton, 2000; Rai et al., 2003; for reviews, see Zimmer-Gembeck & Helfand, 2008; Kotchick et al., 2001).

Warmth/support. Parental warmth/support, the parallel pillar of behavioral control within traditionally-defined authoritative/positive parenting style, has been purported as an equally vital component of positive child development (Baurmind, 1968; Shaffer, 1965; Steinberg, 1990); however, in comparison to behavioral control, warmth/support has been included far less often in studies of adolescent problem behavior. In a review of factors

contributing to resiliency among children and adolescents, however, Masten and Coatsworth (1998) reported that warmth is an essential ingredient for positive youth development. In the studies that have examined the impact of warmth/support on adolescent outcomes, however, parental warmth/support has been linked to decreases in externalizing/aggression (Aspy et al., 2009; Jones et al., 2008), substance use (Hops et al., 1999; Nash et al., 2005; White et al., 2000) and risky sexual behavior (Kotchick et al., 2001; Fletcher et al., 2004).

Parenting characterized by lower levels of warmth/support is shown to increase the child's vulnerability to internalizing difficulties (e.g., Burge & Hammen, 1991; Ge, Conger, Lorenz, & Simons, 1994; Jones et al., 2002), whereas the presence of parental warmth/support, is purported to engender psychological well-being, confidence, and self-efficacy, thus facilitating healthy adolescent development (Barber, Maugahn, Olsen, & Thomas, 2002; Gray & Steinberg, 1999; O'Donnell, Schwab-Stone, & Muyeed, 2002). Among African American adolescents, parental support has been found to be associated with higher levels of self-esteem (Bean, Bush, McKenry, & Wilson, 2003) and lower levels of depression (Bean et al., 2006; Mounts, 2004; Zimmerman, Ramirez-Valles, Zapert, & Maton, 2000). Galambos, Barker, and Almeida (2003) found that parental support explained the largest amount of variance in adolescent internalizing when compared to other parenting practices (e.g., parental control).

The understudied parenting construct: psychological control. A third component of the parenting equation, the amount of personal autonomy granted by the parent (e.g., low levels of psychological control), has taken a backseat in the majority of the parenting literature to date, but extant studies display that this construct has major implications for youth outcomes. In addition to the concept of "behavioral control" (e.g., monitoring a child's

behavior, disciplining), a form of parental control which is broadly associated with positive youth development, Baumrind's (1966) seminal parenting work also warned against this concept of "psychological control," a parenting practice which adversely affects the child's development of personal autonomy and independence. Whereas behavioral control is typically defined as the regulation of child's behavior through consistent and firm discipline, psychological control is a parenting behavior characterized by love withdrawal, guilt induction, and criticism (Schaeffer, 1965; Barber, 1996) and is often used to maintain parental authority at the expense of the child's emotional security. Rather than shaping appropriate external behaviors, psychological control interferes with the adolescent's thoughts and feelings via manipulation of the parent-child relationship, and can inhibit the development of psychological autonomy.

Although behavioral control and psychological control were conceptually and empirically distinguished in the early parenting literature and factor analytic studies (Baumrind, 1966; Shaefer, 1965), psychological control has traditionally received far less attention than behavioral control in the parenting literature, and has only recently begun to receive more attention in the empirical studies of parenting among adolescents (e.g., a PsycInfo search of the past 50 years of parenting literature in the United States yielded approximately 40 studies including psychological control versus 150 studies including behavioral control). Whereas higher levels of behavioral control are consistently associated with positive outcomes for adolescents across ethnicities, lower levels of psychological control are found to be more protective for these youth. Conversely, high levels of psychological control have been linked to higher levels of sexual risk behavior (Kincaid, Jones, Cuellar, & Gonzalez, 2011; Miller et al., 1997; Rodgers, 1999); higher levels of

externalizing/delinquency (Eccles, Early, Frasier, Belansky, & McCarthy, 1997; Grey & Steinberg, 1999; Herman, Dornbusch, Herron, & Herting, 1997; Kuppens, Grietens, Onghena, & Michiels, 2009; Pettit, Laird, Dodge, Bates, & Criss, 2001; Rogers, Buchanan, & Winchel, 2003), and higher levels of internalizing (Barber, Olsen, & Shagle, 1994; Bean et al., 2006; Eccles et al., 1997; Garber, Robinson, & Valentiner, 1997; Herman et al., 1997). Rather than regulating the behaviors of the youth in a prosocial manner, the intrusive and emotionally-manipulative nature of psychological control appears to have only adverse effects for adolescents. In contrast, greater autonomy was associated with higher self-esteem, fewer depressive symptoms, and less delinquent behavior among a sample of African American adolescents from the National Longitudinal Study of Adolescent Health (Bynum, Smith, & Kotchick, 2006).

Although psychological control may represent parental effort to gain control over their adolescents' gravitation toward greater autonomy and independence, the empirical data suggests that psychological control appears only to back-fire as a parenting strategy—subsequently resulting in problem behavior and psychosocial maladjustment. By attempting to "reign in" adolescents via the manipulation of emotional and psychological boundaries, parents may in fact be fundamentally damaging the parent-child relationship which enables effective parenting and subsequent prosocial development. Intrusiveness, demandingness, and hostility, as well as emotional manipulation and constraining the child's communication, are conceptualized as toxic components of psychological control which hinder healthy adolescent development (Barber & Harmon, 2002). Due to the high value and emphasis on the development of autonomy during this developmental stage (Erikson, 1968),

psychological control may be a particularly salient parenting behavior to consider when studying adolescent outcomes.

Galambos and Ehrenberg (1997) suggested that adolescence is a particularly sensitive period for parents and adolescent children because parents must learn to a) facilitate appropriate levels of autonomy in their children, b) relax some control while providing appropriate boundaries and guidelines, and c) remain supportive during a demanding transition. To this point, Steinberg and colleagues (1990) established a new theoretical and empirical paradigm that delineated *three* essential ingredients for authoritative/positive parenting: high levels parental warmth, high levels of behavioral supervision, and low levels of psychological control. Psychological forms of control adversely affect adolescent development by impeding the development of autonomy and self-regulation (Steinberg, 1990). In contrast, optimal parenting encourages a child's expression of opinions, mutual parent-child communication, and youth autonomous expression of individuality with the aim of recognizing the child's individual interests and affirming the child's qualities (Baumrind, 1978; Steinberg, 1990). Thus, the important role of autonomy in the developmental tasks of adolescence warrants the inclusion of the psychological control construct in the integrative model of parenting for studies of adolescent development.

Psychological control & African American families. Although psychological control has received increasing attention in the parenting literature over the past decade, few studies have been conducted among African American adolescents, and even fewer studies include an integrative model of parenting behaviors. Among the few studies that have examined psychological control in context of other central parenting behaviors (e.g., monitoring or warmth), psychological control has been consistently linked with internalizing,

externalizing, and increased risk behavior among African American adolescents, above and beyond the contributions of monitoring and warmth/support (Bean et al., 2006; Kincaid et al., 2011; Mandara & Pike, 2008). Accordingly, the lack of empirical data for African American families warrants further investigation of an integrative model among predominantly African American families. This study is designed to look at how each parent behavior is related to the youth problem behaviors and internalizing difficulties among African American single parent families.

In the literature examining parenting across ethnicities, two main models have received attention: the cultural values and ethnic equivalence models of parenting (Lamborn & Felbab, 2003). Cultural-values models indicate that parenting behaviors are differentially related to adolescent outcomes due to differences within the family's ecological context. Some research aligning with the cultural values model of parenting has suggested that a more ''authoritarian'' or ''harsh'' parenting style may be less detrimental among African American than European American youth (e.g., Deater-Deckard & Dodge, 1997; Deater-Deckard, Dodge, Bates, & Pettit, 1996). For example, "no-nonsense parenting" (e.g., characterized by high levels of support and high levels of control) is thought to be a deterrent for antisocial behavior among youth from single parent African American families by conveying to the child that the parent is vigilant and concerned for the child's welfare (Brody & Flor, 1998, p. 805).

Although some aspects of parent-child socialization may differ based on sociodemographic factors that are often confounded with ethnic minority or single parent status, there is also considerable empirical support to suggest similarities cross cultural and ethnic lines.

The ethnic equivalence model, as the name suggests, emphasizes the commonality of parent-child socialization experiences and suggest that parenting behaviors are similarly related to adolescent outcomes across ethnicity. The preponderance of empirical evidence suggests that an authoritative or positive parenting style is associated with the most optimal outcomes for children, regardless of ethnic/racial background or socioeconomic status (e.g., Amato & Fowler, 2002; Barnes, Farrell, & Banerjee, 1994; Bean et al., 2006; McLoyd, 1998). This study will provide additional empirical evidence to test the function of warmth, monitoring, and psychological control among a sample of African American mothers and adolescents.

Psychological control & vulnerabilities of single parenthood. In contrast to dual-parent households, single parent mothers may be particularly vulnerable to the use of psychological control for a variety of reasons. For example, single parents must often contend with the strain of greater role responsibility and daily stressors (e.g., assuming the roles and parenting work typically shared by two parents), and other risk factors associated with single parenthood (e.g., depression, anxiety; Murry et al., 2001) that may impede the quality of parenting. Second, single mothers may experience less interpersonal power within the parent-child relationship; in the literature on psychologically controlling parenting, for example, a lack of support and interpersonal power has been indicated as a potential predictor of psychological control as a parenting strategy (Walling, Mills, & Freeman, 2007). Among single parents who may experience a lack of interpersonal power, psychological parenting strategies may represent attempts to compensate for a lack of control, particularly if other parenting efforts do not yield expected results (e.g., impaired parental monitoring as a result of single parent status; Murry et al., 2001). Third, single parents may be more prone to psychological control when traditional fallbacks (e.g., support of a coparent) are absent. For

African American adolescents of single parents who lack the potential protection of an involved second parent, however, it is possible that psychological control may have an increased negative impact on psychosocial adjustment and problem behavior (Kincaid et al., 2011). In the current study, the links between the specific parenting behaviors of interest (e.g., behavioral control, warmth, and psychological control) will be explored in connection with the outcomes of interest (e.g., psychosocial adjustment and health behaviors), as well as the potentially protective factor of a positive youth-coparent relationship (discussed below).

The Role of Coparents in African American Adolescent Resiliency

Another protective family-level characteristic often found in African American single mother families is the presence of a nonmarital coparent, defined as an adult, regardless of formal relation to the child (e.g., grandmother, aunt, biological father), who plays a significant role in childrearing (e.g., Forehand & Jones, 2003; Jones et al., 2003; also see Jones et al., 2007 for a review). The majority of single mother-headed families rely, at least to some extent, on nonmarital coparents (e.g., Jones et al., 2003; McAdoo & McAdoo, 2002). African American families are rooted in multigenerational family systems in which parenting is viewed as a communal task, with mothers relying on extended family and neighborhood networks to share child-rearing tasks (for a review, see Forehand & Kotchick, 1996; Jones & Lindahl, in press).

In their study of African American single mothers, Jones and colleagues (2003) found that 97% of the mothers identified one other person who was significantly involved in assisting her in child-rearing, such as the grandmother, aunt, or adult sister of the child. Research to date suggests that the coparent relationship is an important predictor of both parenting and child adjustment (Jones et al., 2003, Jones et al., 2007, Shook, Jones,

Forehand, Dorsey, & Brody, 2010). However, most research on African American single mothers' nonmarital coparents has focused on either 1) the coparent-parent relationship's impact on family functioning (Forehand & Jones, 2003; Jones et al., 2005; Jones et al., 2003; Shook et al., 2010) or 2) the impact of the youth-coparent relationship quality (i.e., coparent warmth) on youth psychosocial adjustment and self-esteem (Sterrett et al., 2009; Sterrett, 2010). However, the extant body of research on coparents has yet to explore the role of coparent warmth in the context of a more integrative range of parenting behaviors (e.g., warmth, behavioral control, and psychological control), youth internalizing, *and* youth problem behaviors (e.g., alcohol use, sexual risk behavior, delinquency, and aggression/conduct problems).

Adolescents who have a positive relationship with another supportive adult (e.g., a nonmarital coparent) may exhibit fewer internalizing difficulties as a result of the coparent's provision of positive interpersonal interactions, affirmation of the child's qualities, and emotional support for coping. A positive youth-coparent relationship, for example, has the potential to enhance the social, emotion regulation and cognitive skills which facilitate positive youth development (Rhodes, Spencer, Keller, Liang, & Noam, 2006). Furthermore, a positive youth-coparent relationship may buffer against African American adolescent involvement in problem behavior (e.g., sexual risk behavior, alcohol use, delinquency) via some of the some aforementioned pathways (e.g., providing social support and a connection with a trusted adult for emotional coping), as well as the provision of a healthy relationship schema (Ainsworth, 1978) and alternative prosocial involvement (e.g., shared activities, positive relationship interactions) to deter deviant behaviors. A positive youth-coparent relationship, for example, may provide a basis for comparison that aids in the formation of a

more adaptive self-identity (Swann & Brown, 1990) that is less vulnerable to involvement in problem behavior. Furthermore, in a similar way that positive parenting is hypothesized to impacts adolescents' future relationships (Ainsworth, 1978; Kincaid et al., 2011), a positive youth-coparent relationship may provide another example of a healthy relationship which can shape an adolescents' expectations and standards for future relationships (i.e., deterring maladaptive relationship patterns, which are often associated with increased sexual risk behavior; Foshee et al., 2009). In summary, the current study will examine whether the youth-coparent relationship (i.e., is a protective factor for African American adolescents from single parent homes, given their higher risk for maladjustment and problem behavior. The youth-coparent relationship is hypothesized directly contribute to positive youth development (e.g., psychosocial adjustment, problem behaviors).

Individual Assets: Reducing Problem Behaviors and Psychosocial Difficulties

In addition to the aforementioned family-level protective factors which are external to the adolescent (positive parenting & a positive youth-coparent relationship), this study will also examine adolescent assets – or protective factors that reside within the individual (e.g., see the Developmental Assets Model, Benson, 1997; Beauvais & Oetting, 1999; Fergus & Zimmerman, 2005). The current study proposes that protective factors for adolescents also consist of the intrinsic strengths of an individual within the context of the environmental influence of family. Accordingly, this study aims to incorporate external resources (the aforementioned family context) as well as internal adolescent assets. Specifically, personal self-esteem, positive ethnic identity, and religiosity are each posited as protective factors within the literature, albeit with varying empirical support. In order to extend the empirical data connecting individual assets and positive outcomes among African American

adolescents from single parent homes, this study will examine the protective role of personal self-esteem, positive ethnic identity, and religiosity in regard to problem behavior and psychosocial adjustment.

Self esteem. Personal self-esteem typically includes one's beliefs, opinions, attitudes, values, and feelings about oneself (Rosenberg & Simmons, 1971). Adolescents who have high self-esteem and view themselves positively affirm their strengths while acknowledging their weaknesses, allowing an adaptive approach to life challenges (Doswell, Millor, Thompson, & Braxter, 1998). Similarly, resilient youth have been conceptualized as having a strong sense of self which enables them to view obstacles (such as those encountered by youth in single parent homes) as challenges which they have the skills to manage, as opposed to viewing themselves as incapable of coping (Short & Russell-Mayhew, 2009). Resilient youth are aware of their weaknesses, but are also able to identify their individual strengths (Brooks & Goldstein, 2001).

Despite the theoretical rationale for examining self-esteem as a predictor of positive youth outcomes among adolescents (Byrne & Mazanov, 2001; Short & Russell-Mayhew, 2009, Zimmerman, 1997), fewer studies to date have examined the link between self-esteem, problem behavior, and psychosocial adjustment among African American adolescents. Of note, some data from a longitudinal study of a nationally representative sample of adolescents (the National Education Longitudinal Survey) indicated that African Americans adolescents as an ethnic group tend to endorse higher self-esteem than their White or Latino peers (Birndorf, Ryan, Auinger, & Aten, 2005). However, as mentioned above, African American youth also have higher levels of problem behavior and maladjustment in comparison to their White and Latino peers.

Among the studies that have examined the links among self-esteem and problem behaviors among ethnic minority adolescents, the findings indicate that lower levels of self-esteem are associated with increased substance use and sexual risk taking behavior (e.g., Carvajal, Evans, Nash, & Getz, 2002; Carvajal et al., 1999; Shrier, Harris, Sternberg, & Beardslee, 2001; Wills et al., 2007), delinquency (Donnellan, Trzesniewski, Robins, Moffitt, & Caspi, 2005; Parker, Morton, Lingefelt, & Johnson, 2005) and psychosocial difficulties (Repetto, Caldwell, & Zimmerman, 2004). In the current study, higher self-esteem is similarly hypothesized to act as an intrinsic protective factor for African American adolescents in relation to psychosocial adjustment and problem behaviors. Furthermore, this study is unique in its ability to examine within-group variability in self-esteem among African American youth as a predictor of positive youth development (e.g., fewer adjustment difficulties and problem behavior), versus between-group variability with other ethnic groups.

The adolescent's development of personal self-esteem is often accomplished by forming a self-image through social interactions and cognitive self-appraisals (Doswell et al., 1998). Although the family certainly influences the developing adolescent's sense of self (Bronfenbrenner, 1979, Cummings et al., 2000), the cognitive appraisals which an adolescent makes are also attributable to an individual process in which the child deems himself to be "good or bad," "worthy or unworthy" (Doswell et al., 1998). Adolescents who make negative appraisals of their self-worth are vulnerable to low self-esteem, a risk factor for psychosocial maladjustment (Hammen & Rudolph, p. 251, in Mash & Barkley, 2003), and problem behaviors resulting from the combination of low self-worth and poor coping strategies (Doswell et al., 1998). Adolescents with low self-esteem may become depressed

or angry, or they may react to pressures to conform (Pipher, 1994, p. 43). Adolescents who conform may be more vulnerable to engage in substance use, delinquency, and/or risky sex as a means of gaining approval and a sense of identity.

Positive ethnic identity. The acquisition and maintenance of self esteem in adolescence is a challenging task in general, and may be more complex for youths in ethnic minority populations who confront unique stressors related to potential discriminatory treatment as a result of their minority status (Wills et al., 2007). For African American adolescents, developing a positive ethnic identity is posited to be a part of general esteem processes (Harter, 1999), and studies with minority adolescents have shown correlations between ethnic identity indices and measures of generalized self-regard (Phinney, Cantu, & Kurtz, 1997; Rowley, Sellers, Chavous, & Smith, 1998). Theorists suggest that ethnic identity involves perceiving one's ethnic group in positive terms, as well as perceiving that group membership is a central part of one's self-image and feeling close to other group members (Smith & Brookins, 1997; Williams, Spencer, & Jackson, 1999).

A growing body of literature has evaluated the protective qualities of ethnic identity within the risk and resiliency framework (e.g., see Greig, 2003). Early research identified positive ethnic identity as a protective factor against depressive and anxious symptoms (e.g., internalizing, Arroyo & Zigler, 1995; Roberts et al., 1999; & Rotheram-Borus, 1989) as well as externalizing behaviors (Arbona, Jackson, McCoy, & Blakely, 1999) among African American adolescents. More recent studies confirm the protective role of ethnic identity, as well, indicating that a positive ethnic identity is associated with positive psychosocial adjustment for African American adolescents (Street, Harris-Britt, & Walker-Barnes, 2009), fewer externalizing and delinquent behaviors (Wong, Eccles, & Sameroff, 2003), as well as

less substance use and less sexual risk behavior (Wills et al., 2007). In this study, a positive ethnic identity will be studied as a protective factor for problem behavior and psychosocial adjustment.

Religiosity. Religiosity is also posited as protective factor for adolescents across ethnicity, and may be a particularly salient individual asset for adolescents within this sample given higher rates of religiosity among African American adolescents (Donahue, 1995). Many adolescents use religion to find direction and meaning in their lives (Smith & Denton, 2005). Religion may guide youth by providing a moral code and sense of purpose as youth mature, contributing to the internalization of ideals that facilitate moral reasoning and decision-making (King, 2003; Smith & Denton, 2005). Furthermore, adolescents may rely on their faith from religion to cope with hardship as religion promotes beliefs and practices that may help youth make sense of losses or life challenges (Milot & Ludden, 2009), as may be the case for adolescents from single parent homes. Religion may also serve to facilitate positive youth development by providing mentorship, support, and social and cultural capital as adolescents undergo transitions and challenges. In a nationally representative longitudinal study of adolescents in the United States, religiosity was associated with better psychosocial adjustment, less delinquency, less substance use, and lower incidence of early sexual initiation (Donahue, 1995; Donahue & Benson, 1995). Although empirical data suggests a strong link between religiosity and problem behavior, less evidence supports the association between religiosity and psychosocial adjustment. A review of the empirical findings and implications for the current study hypotheses will be discussed.

Psychosocial adjustment. Although Donahue's longitudinal work and some other studies posit a link between religiosity and positive psychosocial adjustment (Donelson,

1999; Ellison, 1991; Milam, Ritt-Olson, & Unger, 2004), other studies have found a lack of association between religiosity and positive adjustment (Benson, Donahue, & Erikson, 1989; Markstrom, 1999; Milot & Ludden, 2009). In fact, a previous analysis of data from the current sample found associations between higher levels religiosity and higher levels of internalizing (Johnson, 2008). Although several aspects of positive development are associated with adolescent religiosity, such as identity formation, social competence, and moral reasoning (King, 2003; Smith & Denton, 2005), it is possible that the protective effects of religiosity do not buffer against psychosocial adjustment problems (e.g., depression, anxiety), but religion may serve instead as an outlet or coping mechanism for adolescents during hardship or times of crisis. Thus, during times where adolescents experience higher levels of psychosocial adjustment problems, higher religiosity may be exhibited as a means of coping with emotional difficulties. In studies that have examined the impact of both parenting and religiosity, however, parenting has been strongly linked to adolescent well-being (Milot & Ludden, 1999; Wentzel, 1998). In the current study, therefore, parenting is predicted to be a more robust predictor of adolescent psychosocial adjustment.

Problem behavior. In contrast, an abundance of empirical data indicates that religiosity is protective against substance use involvement and problem behaviors (e.g., delinquency, sexual risk behavior) among adolescents across ethnicities (Aspy, 2009; Kerestes et al., 2004; Steinman & Zimmerman, 2004; Zimmerman & Maton, 1992). From a theoretical and conceptual standpoint, involvement in religious activities has the effect of occupying an adolescent's time and decreasing their exposure to problem behavior settings as well as the more complex effect of providing a moral framework in which problem behaviors (e.g., delinquency, conduct problems, and sexual risk behavior) are viewed as unacceptable,

or inconsistent with the prosocial values often emphasized within the religious context (Milot & Ludden, 2009). Adolescents high in religious identity often have a higher sense of personal meaning and social responsibility (King & Furrow, 2004), a deterrent for involvement in problem behavior. Along these lines, Hirschi's (1969) social control theory states that connections to conventional institutions with prosocial value systems (e.g., places of faith) can inhibit deviant behavior.

Higher levels of religiosity are associated with less substance use (King & Furrow, 2004; Milot & Ludden, 2009; Pirkle & Richter, 2006). Milot and Ludden (2009) found that adolescents who reported higher levels of importance of religion reported lower alcohol use even after parenting variables were accounted for, indicating an independent effect of adolescent religiosity on substance use. When adolescent's importance of religion was accounted for in predicting alcohol use, the effects of religious attendance were no longer significant. These findings suggest that simply attending religious services does not necessarily affect adolescent's problem behavior, it is how important they view their religious experience that has the most profound impact on deterring substance use. This is consistent with Wallace & William's (1997) findings from a national U.S. panel in which adolescents who viewed religion as more important were less likely to use substances. The importance that adolescents place on religion may enable them to translate these experiences and value systems into prosocial behavior and decision making that facilitates positive development (Milot & Ludden, 2009). The same logic connecting higher religiosity with lower substance use can be also applied for the way that religiosity impacts delinquent behavior (Regenerus & Elder, 2003). Empirical data also supports the link between higher

levels of religiosity and lower levels of delinquency among adolescents across ethnicity (Donahue, 1995; McKnight & Loper, 2002; Regnerus, 2003; Regnerus & Elder, 2003).

Although several studies have indicated an association between higher levels of religiosity and lower levels of sexual risk behavior among adolescents (for reviews, see Rostosky, Wilcox, Wright, & Randall, 2004; Whitehead, Wilcox, Rostosky, Randall, & Wright, 2001), a perplexing phenomenon complicates the study of the religion-sexual risk connection among African Americans (Steinman & Zimmerman, 2004). Although African American adolescents report higher levels of religiosity than peers from other ethnic groups (Donahue, 1995; Johnston et al., 1999) and are less likely to smoke cigarettes or drink alcohol (Johnston, O'Malley, & Bachman, 2001), they also engage in sexual intercourse more often and suffer more consequences associated with sexual risk behavior (e.g., STDS, HIV, unplanned pregnancy, CDC, 2010; Johnston et al., 2001). Competing hypotheses are offered by Steinman & Zimmerman (2004) to explain this disconnect. One hypothesis is that religious activity will limit the development of certain problem behaviors in the African American population (e.g., alcohol use), but not others (e.g., sexual risk behavior). The competing hypothesis, however, suggests that the religiosity is likely to be associated with less sexual risk behavior among African Americans if their religious institutions explicitly prohibit the risk behaviors (e.g., alcohol, sex); for example, if alcohol and premarital sexual activity are explicitly discouraged within a religious context, these messages may be internalized and deter sexual activity and alcohol use among African American adolescents.

Consistent with the first hypothesis suggesting that religiosity is not associated with sexual risk behavior for African American adolescents, one study found that religiosity was not associated with delayed sexual debut among African American adolescents (although it

was for Caucasian, Asian, and Hispanic adolescents; Bearman & Bruckner, 2001). In support of the competing hypothesis, however, several studies have found religiosity to be a protective factor for sexual risk behavior among African American adolescents. In their sample of African American adolescents, Steinman & Zimmerman (2004) found a strong association between religiosity and less sexual intercourse. Similarly, in a longitudinal study of individual assets among an ethnically-diverse group of adolescents, Aspy and colleagues (2009) found that adolescent religion was a consistent predictor of delayed sexual debut across age, race and ethnicity. A longitudinal study by Hardy & Raffaelli (2003) also found that religiosity had a direct, unidirectional impact on delayed sexual intercourse and did not vary by ethnicity or gender. Other studies including African American adolescents have also demonstrated religiosity to be protective against sexual risk behavior, as well (Francis, 2006; Holder, Durant, Daniel, Obeidallah, & Goodman, 2000; Miller & Gur, 2002).

Although most of the studies that do examine religiosity among African American adolescents found religiosity to be negatively associated with sexual risk behavior, there is a paucity of research examining the link between religiosity and sexual risk behavior among ethnic minority adolescents (for a review, see Rostosky et al., 2004). According to the review by Rostosky et al. (2004), gender is also suggested as an important variable to consider in examining religiosity as a protective factor. Rostosky et al. (2004) found that adolescent religiosity is associated with less sexual risk behavior among Caucasian and African American females, but the findings for adolescent males are mixed. The dearth of research for African American adolescents warrants additional study of religiosity among male and female African American adolescents, particularly in light of the higher rates of

sexual risk behavior and associated negative consequences (e.g., STDS, HIV, unplanned pregnancy) among African American adolescents (CDC, 2010).

Study Hypotheses

Hypotheses Related to Aim 1: Examining an Integrative Model of Parenting in Association with Adolescent Outcomes. For the first aim, parenting was examined as a dynamic system of influence by simultaneously considering the unique contributions of multiple dimensions of parenting (e.g., behavioral control, warmth, and psychological control). From a behavioral family systems perspective (Bronfenbrenner, 1979; Robin & Foster, 1989; Scott, 1990), parenting influences are best understood in combination, rather than in isolation. As originally outlined by Galambos et al. (2003), there were several reasons to examine an inclusive model of the three focal parenting dimensions. First, studies that have examined multiple parenting dimensions reveal interesting differential associations, as detailed above (Barber, 1997). Second, consideration of the three primary parenting dimensions simultaneously will allowed for the examination and description of multicollinearity between the parenting behaviors. Although maternal support, psychological control, and behavioral control have been examined simultaneously among a few Caucasian samples (see Eccles et al., 1997; Galambos et al, 2003; Gray & Steinberg, 1999; Herman et al., 1997), this is to the author's knowledge the first study that was designed to include a integrative model of all three parenting dimensions in the study of African American youth from single parent homes.

1. Consistent with the extant body of literature, it was predicted that positive parenting practices (e.g., higher levels of behavioral control, higher levels of warmth, and lower levels of psychological control) would be associated with

fewer internalizing difficulties (depression, anxiety, hopelessness), as well as fewer adolescent problem behaviors (e.g., sexual risk behavior, substance use, delinquency) among African American adolescents from single mother homes.

Hypotheses Related to Aim 2: The Role of the Youth-Coparent Relationship. Secondly, the importance of the relationships African American youth have with the individuals identified by their single mothers as playing a significant role in child-rearing (i.e., nonmarital coparents) has received little empirical attention (see Sterrett et al., 2009, for an exception). As most African American single mothers identify a nonmarital coparent (Jones et al., 2003, McAdoo & McAdoo, 2002), coparent warmth was accordingly examined in combination with maternal parenting practices among African American single parent families.

1. It was hypothesized that African American youth from single parent homes who have a positive relationship with their coparent would exhibit fewer internalizing difficulties (depression, anxiety, hopelessness) and fewer problem behaviors (e.g., sexual risk behavior, substance use, delinquency).

Hypotheses Related to Aim 3: Examining Individual Adolescent Assets in Association with Adolescent Outcomes. Third, it was considered important to understand individual assets that contribute to positive youth development (e.g., fewer psychosocial adjustment issues and less problem behavior).

1. It was hypothesized that higher self esteem would be associated with lower levels of internalizing and problem behaviors.
2. Second, it was hypothesized that higher levels of positive ethnic identity would be associated with lower levels of internalizing and problem behaviors.

3. Third, it was hypothesized that higher levels of religiosity would be associated with fewer problem behaviors.

Exploratory Hypothesis:

A recent review of the literature on parenting and sexual risk behavior suggested that monitoring may be more protective against sexual risk behavior for male versus female adolescents, whereas the amount of parental warmth and emotional connection experienced within the parent-child relationship appears to be an especially salient factor for adolescent girls (Kincaid, Jones, McKee, & Sterrett, *under review*). Similarly, Roche, Ahmed & Blum (2008) found longitudinal evidence that close parent-adolescent relationships are more protective for females in regard to problem behavior (e.g., sexual risk behavior, drinking), whereas parental behavioral control was more predictive of fewer problem behaviors for males. These findings, along with a host of other research examining unique contributions of gender, supported further research on gender as an important mechanism for understanding adolescent development.

1. It was hypothesized that gender would moderate the associations between multiple protective factors (parenting variables, individual adolescent strengths) and outcomes (e.g., internalizing, problem behavior).

CHAPTER 3

Method

Overview

Data for the current study was drawn from the first and second assessment of the African American Families and Children Together (AAFACT) Project. AAFACT was a longitudinal study designed to examine the role of extended family members in the health and well-being of African American youth from single mother homes. African American single mother-headed families with an 11 to 16-year-old youth were recruited from counties across central North Carolina. Recruitment was conducted through community agencies (e.g., health departments, YMCAs, churches), public events (e.g., health fairs), local advertisements (e.g., university-wide informational emails, bus displays, brochures), and word-of-mouth (e.g., participants telling other families about the project).

Participants

The current study incorporated data from 193 African American mother-child dyads that participated in the first and second assessments of AAFACT. Demographics for the 193 families at Assessment 1 indicate that the mean age for participating youth was 13.55 years (*SD* = 1.45; 56% girls). On average, mothers were 39.04 (*S.D.* = 7.19) years of age (Range = 26 – 64 years); approximately half (52%) completed some college/vocational school after high school/GED; the majority (83.5%) were employed; and household incomes were an average of $39,949/year (*SD* = $19,202). At Time 2, which occurred up to two years after

Time 1, approximately half of the sample was retained (105 mothers, 94 adolescents). The primary reason for attrition was that participants moved and provided no documentation of change of address. The mean age for the adolescents was 15.54 (*SD* = 1.56; 56% girls). On average, mothers were 40.32 (*S.D.* = 6.09) years of age (Range = 29 – 55 years); the majority (86%) completed some college/vocational school after high school/GED; the majority (85%) were employed; and the average household income was $39,772/year (*SD* = $20,267).

Missing Data

Overall, analysis revealed that there was missing data for a small percentage of the participants (*n* = 19). For the measures of parenting behavior, youth psychosocial adjustment, and youth assets, youth who reported on less than half of the items in the measure or who did not complete the measure were dropped from the current analysis (*n* = 4). For the risk behavior outcome variables, some youth either chose the "refuse to answer" option or skipped the items entirely. For the items that asked youth about their alcohol use, nine youth were missing data (three were missing data altogether, and six chose the "refuse to answer" response choice). For data on sexual intercourse, 13 youth were missing data (four were missing data altogether, and nine chose the "refuse to answer" response choice). For the Time 1 analyses, 175 youth had sufficient data coverage for the structural equation models.

Analyses were conducted to examine whether participants who did not complete data on the outcome variables differed significantly on demographic and major study variables from those who did complete all data. For those who did not complete data for parenting behaviors and youth psychosocial adjustment (*n* = 4), no significant differences emerged. Among youth who did not complete data for risk behavior (*n* = 19), the only significant

difference that emerged was maternal age. On average, youth who did not complete risk behavior data (e.g., indicated "refuse to answer" or skipped) had younger mothers (M = 34 years, SD = 4.89) than youth who did complete data on their risk behavior (M = 38 years, SD = 6.69). In addition, there was a trend for youth who did not complete risk behavior data (M = 13, SD = 1.85) to be younger than those who did have complete risk behavior data (M = 14, SD = 1.56).

For Time 2 analyses, 94 families had sufficient data for the analyses. Analyses comparing youth with data at Time 2 to the youth without data at Time 2 revealed no significant differences between the two groups on the demographic variables of interest (e.g., gender, age, income, maternal education). In regard to primary study variables, comparisons between youth with data at Time 2 and those without data at Time 2 revealed that the only significant differences were for youth report of maternal monitoring ($p < .05$), delinquency ($p < .05$), and alcohol use ($p < .01$). In comparison to youth who participated in Time 2, youth who were not retained at Time 2 reported lower levels of monitoring at Time 1, higher levels of delinquency, and higher levels of alcohol use.

Procedure

Assessment 1. Given the sensitive nature of many of the project questions, the research team believed it was important to establish personal relationships with the participating families. Therefore, Assessment 1 interviews were conducted either at a conveniently-located community site or in the family's place of residence, depending on the individual needs of each family. In addition, child care was provided on an as-needed basis. During each interview, informed consent was obtained from the mother for her and the

youth's participation, and the youth gave assent for participation. In order to maximize the confidentiality of the interviews and to reduce the potential for biased responses, data from each family member was separately collected on laptop computers using Audio Computer-Assisted Self-Interviewing (ACASI) software, and participants' answers are linked to an assigned number rather than to any form of identity. Respondents listened through earphones to pre-recorded questions and personally recorded their answers via the computer mouse and keyboard. This approach helped to reduce the potential for interviewer influence, minimized the error that can result from varying literacy levels in the sample, and maximized confidentiality of the home or community interviews. The mother and youth self-report questionnaires assessed a variety of psychosocial variables, including the constructs of study in the current project. The interviews took approximately 60 to 90 minutes for mother-child dyads to complete. Mother-child dyads were compensated $25 for their participation ($15 for mothers and $10 for youth).

Assessment 2. Given that relationships had been established with families, that families had experience with the sensitive nature of the questionnaires, and that there was no evidence of difficulties with literacy at Assessment 1, families were given the following options for participating at Assessment 2 in completing questionnaires (i.e., the same questionnaires administered at the first Assessment): a) Home visit to complete questionnaires, b) Questionnaires sent and returned by mail, or c) Questionnaires sent by mail, but collected by a staff member at the family's home once completed. Each member of the family who participated was compensated $15; in addition, participants were entered into a monthly drawing for $50.

Measures

Demographic Information. Mothers completed a demographic measure where they provided information about themselves (e.g., maternal age, education), their children (e.g., child age), and their families (e.g., physical address, family income). Basic demographic information was also obtained from youth. Youth were asked to report on their gender, age, and current grade level in school. For students not currently enrolled, they were asked to report on the highest grade completed. Data was collected at Assessment 1 and Assessment 2.

Independent Variables

Maternal warmth/support. Self-reports from the adolescent on the short form of the *Interaction Behavior Questionnaire* (IBQ; Prinz, Foster, Kent, & O'Leary, 1979) were used to assess warmth and support in the mother-child relationship. This form consists of the 20 items that have the highest phi coefficients and the highest item-to-total correlations with the 75 items in the original IBQ. The short form correlates .96 with the longer version. Sample items, which may be endorsed as *True* or *False*, include, "You enjoy spending time with your mother," and "You think your mother and you get along very well" (see Appendix A for complete list of items). Scores can range from 0 to 20, with higher scores indicating greater warmth and support in the mother-child relationship. In addition to being discussed as a measure of warmth in the child-parent relationship or of relationship quality, the IBQ has also been discussed in previous research as measuring parent-child interaction and communication-conflict behavior/ positive communication (Klein & Forehand, 1997; Steele, Nesbitt-Daly, Daniel, & Forehand, 2005; Wade, Wolfe, Brown, & Pestian, 2005). Prinz and

colleagues (1979) and Robin and Weiss (1980) have reported adequate internal consistency and discriminant validity. The alpha for the current sample is 0.87 for mothers and 0.78 for adolescents.

Measures of Behavioral Control: Maternal Monitoring and Maternal Knowledge.

Monitoring. Two domains of behavioral control, maternal monitoring and parental knowledge, were used. For the first indicator, monitoring was assessed using adolescent and mother-report on the *Monitoring Measure* developed by Stattin and Kerr (2000). Nine items assessed parental awareness of the adolescent's whereabouts, activities, and relationships (Dishion & McMahon, 1998). The items were rated on a 5-point scale: *0* (Not at All), *1* (Rarely), *2* (Some of the time), *3* (Most of the time), and *4* (Always). Sample items asked mothers how much they knew about "Who this child has as friends during his or her free time," "When this child has an exam or assignment due at school," and "What this child does during his or her free time" (see Appendix B for complete list of items). This measure has demonstrated acceptable reliability data in prior research as well as good test-retest correlations (Kerr & Stattin, 2000; Stattin & Kerr, 2000). Higher scores indicated more maternal monitoring. For the current sample, the alpha for the youth-report version of the measure was 0.82; for the mother-report measure, the alpha was 0.81.

Maternal Knowledge. For the second domain of behavioral control, parental knowledge, mothers and adolescents indicated the sources of the mothers' knowledge about the adolescents' daily activities using the *Parental Knowledge Scale* (PKS; Stattin & Kerr, 2000). Fifteen items are rated on a 5-point scale: *0* (Not at All), *1* (Rarely), *2* (Some of the time), *3* (Most of the time), and *4* (Always). Three potential sources of information about adolescents' whereabouts were included in the measure: *child disclosure, mother solicitation,*

and *mother control*; five items were used to measure each of the three constructs. Sample items measuring *child disclosure* included "Do you talk at home about how you are doing in the different subjects in school?" and "Do you hide a lot from your parents about what you do during nights and weekends?" Items focused on *mother* included "How often do your parents talk with your friends when they come to your home?" and "During the past month, how often have your parents started a conversation with you about your free time?" *Mother* control was measured with items such as "Do you need to ask your mother before you can decide with your friends what you will do on a Saturday evening?" and "Does your mother always require that you tell them where you are at night, who you are with, and what you do together?" (See Appendix C for a complete list of items.) Previous research demonstrated acceptable reliability (Cronbach's alpha of .82 for parents' reports and .85 for children's reports) as well as good 2-month test-retest correlations of .83 (Stattin & Kerr, 2000). The alpha for the current study was .80 for adolescents, and 0.65 for mothers.

Psychological control. Psychological Control was assessed using youth-report on the 8-item *Psychological Control Scale* (Barber, 1996), adapted from Schaefer's original CRPBI (1965). This scale assessed the extent of the parent's psychological control over the youth, taking into account the parents' practice of constraining the youth's verbal expression (e.g., "My mother finishes my sentences whenever I talk"), invalidating the youth's feelings (e.g., "My mother would like to be able to tell me how to feel or think about things all the time"), and directing personal attack toward the youth (e.g., "My mother brings up my past mistakes when she criticizes me") (See Appendix D for complete scale). Youth were asked to decide how much the statements are like their mother, using a 3-point scale (0 = *Not at all like him or her*, 1 = *somewhat like him or her*, 2 = *A lot like him or her).* Barber (1996) reported

Cronbach's alphas ranging from .72 to .86. The alpha for the current sample was 0.76 (youth-report).

Coparent Warmth. Adolescents also completed the IBQ in regards to their relationship with their coparent (see Appendix E), and their scores were used as a measure of coparent warmth/youth-coparent relationship quality. To confirm that adolescents responded about the same individual that the mother identified as the coparent, each adolescent was asked to identify the coparent they were referring to using first and last initials. The alpha for the coparent version of IBQ in the current sample was .91.

Adolescent self-esteem. A revised version of the *Rosenberg Self-Esteem Scale* (Rosenberg, 1965) was used to measure adolescents' self-esteem. Youth answered ten items rated on a 4-point Likert-type scale, (e.g., "At times, I think I am no good at all," "I wish I could have more respect for myself"). The scale ranges from *strongly disagree* (1) to *disagree* (2) to *agree* (3) to *strongly agree* (4). For a complete list of items, see Appendix F. Possible scores range from 10 to 40, with 40 indicating the highest level of self-esteem. Previous research has demonstrated acceptable reliability and a Cronbach's alpha of .83 for the Rosenberg Self-Esteem Scale (Connor, Poyrazli, & Ferrer-Wreder, 2004). An alpha of 0.75 was obtained for the current sample.

Ethnic identity. The *Multigroup Ethnic Identity Measure* (MEIM; Phinney, 1992) was used to measure ethnic identity. Adolescents in the current study complete this 13-item scale to assess how they feel about or react to their African American ethnicity. Response format for the MEIM is 4-point Likert-type with responses ranging from 1 "strongly disagree" to 4 "strongly agree" (see Appendix G for a complete list of items). The *MEIM* uses a sum total to assess overall ethnic identity but also includes the following subscales:

Ethnic identity, Affirmation and belonging, Ethnic identity achievement, Ethnic behaviors and practices, Ethnicity, Other-group orientation, and Self-identification. The current study assessed overall ethnic identity using a sum total score. Sample items for the *MEIM* included "I have a strong sense of belonging to my own ethnic group" and "I feel good about my cultural or ethnic background". The *MEIM* has demonstrated validity and reliability (with alphas above .80) within African American adolescent populations similar to that of the current study (Simons et al., 2002). The alpha for the current study was 0.89.

Adolescent religiosity. Level of religiosity for adolescent is measured using a 10-item *Religiosity Scale* taken from the Ball, Armistead & Austin (2003) study of religiosity among adolescents. The scale has a Likert-type response format with items reflecting both the degree of religious beliefs (i.e., How important do you think it is for teens to attend religious services?) and frequency of religious behaviors (i.e., How often do you pray?). See Appendix H for a complete list of items. Results from factor analysis indicated adequate validity and reliability. Internal consistency for this scale in past research has yielded an alpha of 0.71 (Ball, Armistead & Austin, 2003). The alpha for the current study was 0.78 for adolescents.

Dependent Variables

Child behavior checklist-youth self-report. Youth internalizing difficulties were assessed using the *Youth Self Report* version of the *Child Behavior Checklist* (Achenbach, 1991). The *Anxious/Depressed*, *Withdrawn*, and *Somatic Complaints* subscales from the *Youth Self Report* (*YSR*; Achenbach, 1991) were used to measure youth internalizing symptoms (see Appendix I for complete set of items). Item 91 of this subscale ("I think about killing myself") was omitted at the request of the IRB. For each item, youth use a 3-

point Likert-type scale to rate how well the item describes them during the past 6 months (0 = *not true*, 1 = *somewhat true*, or 2 = *very true*). A high degree of validity for the anxious/depressed scale in predicting youth internalizing symptoms has been demonstrated (Ivarsson, Gillberg, Arvidsson & Broberg, 2002; Rey & Morris-Yates, 1992). Additionally, internal consistency has been demonstrated repeatedly with alphas greater than .70 (Broberg, et. al., 2001). The internalizing subscale of the *YSR* had an alpha coefficient of 0.87 for the current sample.

Hopelessness. Youth internalizing difficulties were also assessed using the *Beck Hopelessness Scale*, a 20-item self-report measure consisting of true-false statements that were intended to measure the adolescents' level of pessimism or negativity about the future (e.g., 0 = *True* and 1 = *False*). Adolescents completed a slightly shortened version of the adult measure with wording adapted to be more age-appropriate. The *BHS* version administered to adolescents did not include true-false statements "My future seems dark to me," "My past experiences have prepared me well for the future," and "I have great faith in the future" (see Appendix J for a complete list of items). Previous research reported internal consistency showing alpha coefficients between .87 and .93, indicating high levels of reliability (Beck & Steer, 1993). Beck, Weissman, Lester and Trexler (1974) also reported good levels of concurrent and predictive validity. The alpha for the current sample was 0.72.

Externalizing: Aggression and conduct problems. Youth-reported aggression and rule-breaking were examined using 30 items across the aggression and rule-breaking subscales of the *Youth Self-Report (YSR)* form of the *Child Behavior Checklist* (CBCL; Achenbach, 1991). The items are rated on a 3-point scale: 0 = *not true*, 1 = *sometimes* or *somewhat true*, and 2 = *very true* or *often true*. Higher scores indicate more

aggression/conduct problems, respectively. These subscales, selected because they assess the types of aggression and conduct problems typically displayed by children in the age range included in this study, have acceptable reliability and validity data (Achenbach, 1991). Prior research has demonstrated that the *YSR* is a reliable instrument for African American samples in the current age range (e.g., Forehand, Jones, Brody, & Armistead, 2002; Jones et al., 2002; Zalot, Jones, Forehand, & Brody, 2007). The alpha for youth-reported externalizing problems (e.g., aggression and conduct problems) in the current sample was 0.86.

Delinquency. In order to examine a broader array of delinquent behaviors, the current study utilized the *Self-Reported Delinquency Instrument* (SRD; Elliott, Huizinga, & Ageton, 1985). The measure consists of 29 items that examine the adolescent's engagement in a range of delinquent activity, including minor and major acts of delinquency as well as the frequency of substance use (see Appendix K for a complete list). Adolescents reported on the number of times he or she has engaged in an activity during the last six months. The *SRD* has been utilized in studies involving African American youth (Lynam et al., 2000), and prior research indicated test-retest reliabilities ranging from .75 to .98, internal consistency estimates ranging from .65 to .92, and criterion correlations of approximately .50 between self-report and police or parent data (Elliott et al., 1985). For the current sample, the coefficient alpha is .83 for the *SRD* total scale, .82 for the *Delinquency* subscale, and .91 for the *Drug Use* subscale.

Sexual risk behavior and alcohol use. Adolescent sexual risk behavior and alcohol use were examined using items from the *Youth Risk Behavior Surveillance System Questionnaire*, a health survey first implemented by the CDC in 1989 to monitor priority health-risk behaviors among youth and young adults (Kann, 2001). Youth were informed

that all of their responses were confidential and would not be shared with their mother participating in the study. Sexual risk behavior questions asked about vaginal intercourse, anal intercourse, and oral sex. Youth reported on their level of involvement in sexual risk behavior by answering questions pertaining to their initial age of involvement (i.e., "How old were you when you had sexual intercourse, including vaginal, anal, or oral, for the first time?"), the frequency and amount of involvement during the past 30 days, as well as the frequency and amount of involvement during their lifetime (i.e., "During your lifetime, with how many partners have you had sexual intercourse?"). Youth also reported on the level of protection they engaged in during sexual behavior (i.e., "Of the times you have had sexual intercourse, during the past 30 days, how often have you and your partner used a condom?").

In addition to sexual behavior, youth reported on alcohol use. Similar to the domains of sexual risk behavior, youth reports were obtained for their age of initiation for alcohol use, frequency of alcohol use, and quantity of alcohol use (i.e., "During the past 30 days, on how many days did you have 5 or more drinks in a row, that is, within a couple of hours?"). See Appendix L for a complete list of items. The *Youth Risk Behavior Survey* has been widely used and the items used in our study have demonstrated acceptable reliability in previous research (Brener, Kann, McManus, Kinchen, Sundberg, & Ross, 2002). Alphas were not calculated due to the categorical nature of the *YRBSS*. For the purposes of this study, an index of risk behaviors were created for sexual risk behavior and alcohol use (i.e., youth with higher frequencies of sexual intercourse, more numbers of partners, less frequency of condom use, etc were categorized as higher risk; similarly, youth with higher frequencies of alcohol use, binges, etc were categorized as higher risk).

CHAPTER 4

Results

Overview of Analyses

Following initial examination of descriptive data, structural equation modeling (SEM) was used to examine hypothesized relations. As reviewed by Byrne (2001) and Hoyle (1995), SEM offers several multivariate features of relevance to the proposed study, including the following: 1) a confirmatory approach to data analysis, 2) a unified framework of simultaneous sets of regression equations across multiple relations, 3) a measurement model which provides explicit estimates of error variance parameters, and 4) a method of testing whether inferences about causation are consistent with the data.

Evaluating overall model fit. Model fit was evaluated using five fit indices. First, the chi-square statistic was used to test the null hypothesis that that the difference between the observed covariance matrix and the covariance matrix implied by the model is zero (i.e., a non-significant chi-square statistic indicates good model fit). Because the chi-square test of absolute model fit is sensitive to both sample size and non-normality in the distribution of variables (Bryne, 2001), other fit indices were also examined. The Tucker Lewis Index (TLI) or non-normative fit index (NNFI) was used (i.e., a TLI index larger than 0.95 was considered a good-fitting model). Additionally, the Standardized Root Mean Square Residual (SRMR) was used as a measure of the standardized difference between the observed covariance and the predicted covariance (i.e., a value of less than 0.08 is considered a good fit). Based on the recommendations for small sample sizes put forth by Bentler (1990), the Comparative Fit Index (CFI) was also examined; Hu and Bentler (1999) recommend that a CFI value equal to or greater than .95 is representative of a well-fitting

model. Lastly, the Root Mean Square Error of Approximation (RMSEA) was examined as the final fit index; MacCallum, Browne, and Sugawara (1996) have suggested that RMSEA values between .08 and .10 indicate mediocre fit and those greater than .10 indicates poor fit. Values between .05 and .06 or lower have been recommended as indicating good model fit (Browne & Cudeck, 1993; Hu & Bentler, 1999).

Evaluation of the measurement model. Factor analytic measurement models were estimated prior to estimating the structural models to ensure that all indicators were statistically reliable representations of the latent constructs under investigation. This produced factor loadings of all observed variables (indicators) on their respective latent constructs.

Evaluation of the structural model. Family variables (e.g., maternal warmth, behavioral control, psychological control; coparent warmth) and individual variables (e.g., adolescent self-esteem, ethnic identity, and religiosity) were included as predictors and were allowed to covary; youth internalizing and problem behavior were included as predicted outcomes. Separate sets of models were tested for internalizing and problem behaviors (N = 175 at Time 1, N = 94 at Time 2).

Testing Moderating Effects.

It was hypothesized that gender would moderate the association between the protective factors (e.g., predictors) and adolescent outcomes. In order to test moderation, the first step involved developing a model in which the causal paths were estimated separately for both groups (e.g., males and females) and these paths were free to vary. In the second step, separate models were developed, but the causal paths of interest were constrained to be equal. To determine moderation, the models were compared to see if the unconstrained

model demonstrated better fit than the constrained model. The significance of the difference between the constrained and unconstrained model was tested by calculating the difference in the model fit statistics (e.g., a statistically significant chi-square test indicates significant moderation).

Review of Analyses for Time 1 and Time 2.

For each model (e.g., the respective internalizing and the problem behavior models), the analytic steps were as follows: first, preliminary analyses were conducted to provide descriptive statistics and correlations for the major study variables; second, factor analytic measurement models were constructed to examine the statistical reliability of the hypothesized latent variables (e.g., internalizing, problem behavior, and maternal behavioral control); third, the measurement models were tested for gender invariance; fourth, structural models were used to test study hypotheses. Lastly, the moderating role of gender was examined by comparing constrained and unconstrained models for both groups (e.g., males and females) to examine structural invariance in regard to gender. At Time 2, the following analytic steps were conducted: a) confirmatory factor analyses were repeated to examine the fit of the constructs at the second time point, and b) structural models including Time 1 predictors and Time 2 outcomes were examined to test for any longitudinal effects, after controlling for T1 values. Given the reduction in sample size at Time 2 ($N = 94$), the models were not re-run for cross-sectional findings at Time 2 or for measurement or structural invariance at Time 2.

Preliminary Analyses

Means, standard deviations, ranges, and percentages for major study variables are presented in Table 1. Table 2 shows correlations among major study variables at Time 1, and Table 3 shows correlations between predictor variables at Time 1 and outcome variables at Time 2. Consistent with the hypotheses of the study, higher levels of warmth were associated with lower levels of all problem behavior indicators (delinquency $r = -0.21$, $p < .01$; aggressive behavior, $r = -0.24$, $p < .01$; rule-breaking, $r = -0.22$, $p < .01$; $r = -0.17$, $p < .05$; sexual behavior, $r = -0.21$, $p < .01$) and three out of four internalizing indicators at Time 1 (anxiety/depression, $r = -0.16$, $p < .05$; somatic complaints, $r = -0.16$, $p < .05$; hopelessness, $r = -0.28$, $p < .01$), with the exception of the withdrawal/depression subscale, which was not associated with warmth ($r = -0.05$, *n.s.*). Higher levels of maternal warmth at Time 1 were also associated with less rule-breaking and less sexual risk behavior at Time 2 (rule-breaking, $r = -0.25$, $p < .05$; sexual risk behavior, $r = -0.25$, $p < .05$).

Consistent with the hypothesized associations, higher levels of coparent warmth at Time 1 was associated with lower levels of Time 2 sexual risk behavior ($r = -0.24$, $p < .05$) and lower levels of Time 2 hopelessness ($r = -0.21$, $p < .05$). In regard to youth assets, higher levels of self-esteem at Time 1 were associated with less Time 1 aggressive behavior ($r = -0.25$, $p < .01$), less Time 1 rule-breaking behavior ($r = -0.19$, $p < .05$), and less Time 1 sexual risk behavior ($r = -0.16$, $p < .05$), as well as lower levels of Time 2 delinquency ($r = -0.22$, $p < .05$) and Time 2 internalizing symptoms (anxiety/depression, $r = -0.27$, $p < .05$; withdrawal/depression, $r = -0.35$, $p < .01$; somatic complaints, $r = -0.28$, $p < .05$; hopelessness $r = -0.23$, $p < .05$).

Furthermore, consistent with hypothesized associations, preliminary correlations also indicated that higher levels of Time 1 positive ethnic identity were associated with lower

levels of all Time 1 measures of internalizing (anxiety/depression, $r = -0.22$, $p < .01$; withdrawal/depression, $r = -0.15$, $p < .05$; somatic complaints, $r = -0.16$, $p < .05$; hopelessness, $r = -0.33$, $p < .01$) as well as lower levels of Time 1 problem behavior measures (delinquency, $r = -0.20$, $p < .01$; aggression, $r = -0.28$, $p < .01$; rule-breaking, $r = -0.27$, $p < .01$; alcohol use, $r = -0.18$, $p < .05$; sexual behavior, $r = -0.22$, $p < .01$). Higher levels of Time 1 positive ethnic identity were also correlated with lower levels of Time 2 delinquency ($r = -0.28$, $p < .01$) and lower levels of Time 2 rule-breaking ($r = -0.30$, $p < .01$), as well as lower levels of all internalizing symptoms at Time 2 (anxiety/depression, $r = -0.25$, $p < .01$; withdrawal/depression, $r = -0.32$, $p < .01$; somatic complaints, $r = -0.27$, $p < .05$; $r = -0.33$, $p < .01$).

Additional results consistent with hypotheses indicated that higher levels of religiosity at Time 1 were associated with lower levels of all problem behavior outcomes at Time 1 (delinquency, $r = -0.23$, $p < .01$; aggression, $r = -0.20$, $p < .01$; rule-breaking, $r = -0.29$, $p < .01$; alcohol use, $r = -0.23$, $p < .01$; sexual behavior, $r = -0.38$, $p < .01$), as well as lower levels of Time 2 delinquency ($r = -0.29$, $p < .01$), Time 2 sexual risk behavior ($r = -0.37$, $p < .01$), and Time 2 hopelessness ($r = -0.27$, $p < .05$).

Confirmatory Factor Analyses at Time 1

Internalizing Construct at Time 1. To estimate the factor structure and relationships for each of the latent variables, confirmatory factor analyses were conducted for the total sample ($N = 175$). As detailed in the Methods section, internalizing was indexed by anxious/depressed symptoms, withdrawn/depressed symptoms, and somatic complaints and hopelessness, with respective loadings of 0.88, 0.79, 0.73, and 0.44. The factor metric for the internalizing latent variable was determined by setting one of the indicators,

anxious/depressed symptoms, to 1.0. Table 4 reports the factor loadings of the hypothesized factor structure for internalizing symptoms for the total sample. All factor loadings were significant ($p < .001$). Fit indices for the CFA model were excellent, as well: χ^2 (2) = 3.02, p = .22; CFI = 1.00; TLI = .99; RMSEA = .05; SRMR = .02.

Problem Behavior Construct at Time 1. Problem behavior was indexed by youth delinquency (0.83), rule-breaking (0.82), aggression (0.56), sexual behavior (0.66), and substance use (0.50). The factor metric for the problem behavior latent variable was determined by setting one of the indicators, delinquency, to 1.0. Table 4 also reports summary statistics of the measured variables and the factor loadings of the hypothesized factor structure for problem behavior. All factor loadings were significant ($p < .001$). Fit indices for the CFA model were excellent, as well: χ^2 (3) = 4.03, p = .26; CFI = 1.00; TLI = .99; RMSEA = .04; SRMR = .02.

Behavioral Control at Time 1. An initial confirmatory factor analysis was performed for a measurement model of maternal behavioral control that included maternal report of knowledge, maternal report of monitoring, youth report of maternal knowledge, and youth report of maternal monitoring. Although all factor loadings were significant (see Table 4), the fit of the measurement model was very poor (χ^2 (2) = 75.05, p = .00; CFI = 0.75; TLI = 0.26; RMSEA = .43; SRMR = .14) and thus contraindicated the use of this latent construct measurement model within the overall structural model. Although models with poor fit indices are typically not explicated, the results are discussed for the purposes of this dissertation study.

To further explicate these findings, an exploratory factor analyses was performed in SPSS for the four behavioral control variables. Principal component extraction and promax rotation with Kaiser normalization was used to discern the existence of any thematic patterns in the data. Two factors emerged: Factor 1 (eigenvalue of 2.34, accounting for 58.55% of the total variance), on which the two mother-reported variables both loaded at 0.95 (e.g., mother-report measure of maternal monitoring and the mother-report measure of maternal knowledge). For Factor 2 (eigenvalue of 1.11, accounting for 27.80% of the total variance), youth-reported measures loaded at 0.90 and 0.91. Accordingly, behavioral control was better explained as two separate factors- one factor being maternal report of behavioral control and another being youth report of behavioral control, rather than a combined latent construct. Given these findings, a measurement model of a latent behavioral control construct including both mother and youth report was precluded. Given the higher reliability of the youth-reported behavioral control measures (Cronbach's alpha of 0.80 and 0.82) in contrast to the mother-reported measures (Cronbach's alpha of 0.65 and 0.81), youth report of behavioral control was used in the structural models, combining the variables for youth-reported maternal knowledge and youth-reported maternal monitoring.

Measurement Invariance for Internalizing and Problem Behavior Constructs at Time 1.

The measurement models for internalizing and problem behavior were also tested for measurement invariance for boys and girls. To test for measurement invariance, unconstrained and constrained measurement models were compared in order to determine whether gender invariance was present (e.g., different indicators for boys and girls). For the internalizing construct, findings revealed no significant differences for boys and girls. For the internalizing model, chi square differences revealed that the gender-specific model was

not significantly different than the gender-constrained model ($\chi^2_{diff} = 1.43$, $df_{diff} = 4$, p = 0.84). Thus, the indicators loaded similarly for boys and girls in regard to internalizing.

For the problem behavior measurement model, chi square differences revealed that the gender-specific model was significantly different than the gender-constrained model ($\chi^2_{diff} = 33.21$, $df_{diff} = 5$, $p < .001$). Thus, problem behavior loaded differently among boys and girls. For girls, delinquency and sexual risk behavior were the indicators that loaded most heavily on the latent problem behavior, with respective loadings at 0.79 and 0.70. For boys, rule-breaking (0.97) and delinquency (0.80) were the indicators that loaded most heavily on the latent construct (see Table 4). In subsequent structural equation modeling analyses, gender was tested as a moderator to further examine whether the overall models were significantly different among boys and girls.

Confirmatory Factor Analyses at Time 2

Internalizing Construct at Time 2. Confirmatory factor analyses were also conducted for the sample that was retained at Time 2 ($N = 94$). Similar to Time 1, all factor loadings for the internalizing construct were significant ($p < .001$; see Table 4). Similar to Time 1, the factor metric for the internalizing latent variable was determined by setting one of the indicators, anxious/depressed symptoms, to 1.0. Fit indices for the CFA model at Time 2 were excellent, as well: c^2 (2) = 0.53, $p = .77$; CFI = 1.00; TLI = 1.02; RMSEA = .00; SRMR = .01.

Problem Behavior Construct at Time 2. In contrast to Time 1, fewer indicator variables were significantly associated with the latent problem behavior construct (e.g., at Time 2, youth report of rule-breaking was not significantly associated with problem

behavior). Factor loadings were significant for delinquency, aggression, alcohol use, and sexual behavior ($p < .001$). Similar to Time 1, the factor metric for the problem behavior latent variable was determined by setting one of the indicators, delinquency, to 1.0. While SRMR and CFI values were acceptable (SMR = 0.06, CFI = 0.93), other fit indices fell outside of acceptable ranges, including significant χ^2 values (χ^2 (2) = 7.90, p = .02; TLI = .78; RMSEA = .17). Given the reduced sample size at Time 2, measurement invariance among boys and girls was not tested for these measurement models.

Time 1 Cross-Sectional Structural Equation Models

Inclusion of demographic controls. Given that bivariate analyses revealed significant correlations between demographic and major study variables at Time 1 (see Table 2), additional structural models were tested to determine whether the relations among the latent variables would be altered with the inclusion of these demographic variables. Maternal age was significantly associated with youth internalizing, $\beta = -0.14$, $p < 0.05$; household income, $\beta = 0.01$, $p < 0.001$, and mother education level, $\beta = -0.19$, $p < 0.05$ were significantly associated with problem behavior and were thus included in the respective models.

Internalizing. In the initial model testing direct associations between the predictor variables and youth outcomes, the exogenous variables were allowed to covary and included the following: maternal warmth, maternal behavioral control, maternal psychological control, coparent warmth, youth self-esteem, youth religiosity, and youth ethnic identity. Internalizing symptoms, the latent constructs detailed above, was entered as endogenous outcome variable (see Figure 2). Paths were trimmed gradually following the recommendations of MacCallum (1986) in which the most minimal non-significant paths and

correlations are dropped sequentially until none remain in the model. In the more parsimonious model where non-significant paths were trimmed from the original model, the following were associated with youth internalizing problems: maternal age, maternal psychological control, and youth self-esteem. Although the chi square statistic was significant (χ^2 (14) = 36.83, $p < .001$), other fit indices were acceptable: CFI = 0.94; TLI = .92; RMSEA = .09; SRMR = .06. The final structural equation model after model trimming is presented in Figure 3. Notably, lower levels of maternal psychological control were associated with fewer internalizing symptoms among youth in the sample, $\beta = 0.34$, $p < 0.001$. Additionally, higher levels of self-esteem were associated with fewer internalizing problems, $\beta = -0.46$, $p < 0.001$. In regard to the influence of demographic variables, older mothers had youth who reported more internalizing problems, $\beta = -0.14$, $p < 0.05$.

Problem Behavior. Similar steps were followed for the problem behavior model. The full model with non-significant and significant paths is presented in Figure 4, and the final structural equation model after model trimming is presented in Figure 5. In the more parsimonious model where non-significant paths were trimmed, maternal behavioral control and maternal psychological control were associated with youth problem behavior, as well as maternal education and household income. Fit indices were poor: χ^2 (32) = 108.10, $p < .001$; CFI = 0.85; TLI = .80; RMSEA = .11; SRMR = .10.

Notably, higher levels of behavioral control and lower levels of maternal psychological control were associated with fewer problem behaviors among youth in the sample. In regard to the influence of demographic variables, mothers with higher levels of education and lower income levels had youth who reported fewer problem behaviors.

Testing for Structural Invariance: Examining the Moderating Role of Gender.

To determine whether youth gender moderated the relationships in the full models (e.g., the model for internalizing and the model for problem behavior), procedures were employed to test whether paths in the model were significantly different across groups (boys versus girls). These procedures compare a model in which paths are allowed to vary freely across groups to a constrained model in which the paths are constrained to be equal across groups. First, the causal paths were estimated separately for both groups (e.g., boys and girls) and the paths were free to vary. Next, a series of models in which each path was constrained to equality across gender was fit and compared against the base model.

Internalizing. For the internalizing model, chi square differences revealed that the gender-specific model was not significantly different than the gender-constrained model ($\chi^2_{diff} = 8.91$, $df_{diff} = 5$, $p = 0.12$). Thus, the strength of the relation between the predictor variables and the outcome variables do not appear to differ significantly for boys and girls in this sample.

Problem Behavior Invariance. To examine gender as a potential moderator of the relationship between the predictor variables and youth problem behavior, the first model was unconstrained (e.g., causal paths were estimated separately for boys and girls). The paths for boys and girls are presented in Figures 6 and 7. In the initial unconstrained model, maternal psychological control was associated with girls' problem behavior, $\beta = 0.34$, $p < .01$, but not boys, $\beta = 0.08$, $p = 0.37$. Additionally, maternal education and household income were each significantly associated with boys' problem behavior, $\beta = -0.26$, $p < .01$; $\beta = 0.43$, $p < .001$, but not for girls, $\beta = -0.12$, $p = 0.30$; $\beta = -0.01$, $p = 0.96$.

Maternal behavioral control was associated with problem behavior for both boys and girls, though there was a stronger association between maternal behavioral control and problem behavior for boys, $\beta = -0.64$, $p < .001$, than girls, $\beta = -0.52$, $p < .001$. In order to determine whether the boys' and girls' correlations were significantly different, a model was run in which the causal path for maternal behavioral control was constrained (e.g., set at equal) across boys and girls. The test for chi square difference between the unconstrained and constrained model revealed that the models were not significantly different ($\chi^2_{diff} = 1.30$, $df_{diff} = 1$, $p = 0.25$); thus, the causal paths for maternal behavioral control were not significantly different for boys and girls.

In summary, maternal psychological control was significantly associated with girls' problem behavior only, whereas maternal behavioral control is associated with problem behavior among both boys and girls. Lastly, there was a marginally significant positive correlation between maternal warmth and boys' problem behavior, $\beta = -0.18$, $p = 0.06$, and a marginally significant correlation between coparent warmth and boys' problem behavior, $\beta = 0.18$, $p = 0.08$. For girls, psychological control is significantly associated with problem behavior, $\beta = 0.28$, $p < .01$, whereas the association is non-significant for boys, $\beta = 0.03$, $p = .80$.

Longitudinal Structural Equation Models

Problem Behavior. A longitudinal model was also tested in which the Time 1 demographic variables, parenting variables, youth assets, and coparent warmth and Time 1 problem behavior values were entered as predictors of Time 2 problem behavior (see Figure 8). Although none of the aforementioned variables were significantly related to Time 2

problem behavior, youth-reported Time 1 problem behavior was a significant predictor of Time 2 problem behavior, $\beta = 0.97$, $p < .001$. The relationship between maternal behavioral control at Time 1 and problem behavior at Time 2 was marginally significant, $\beta = 0.35$, $p = 0.09$, as well as the relationship between household income at Time 1 and problem behavior at Time 2, $\beta = -0.18$, $p = 0.08$. These marginal findings demonstrate a trend for lower levels of maternal behavioral control and higher household income at Time 1 to be associated with fewer problem behaviors at Time 2. The model fit for the longitudinal model, however, was poor χ^2 (135) = 366.19, $p < .001$; CFI = 0.73; TLI = 0.64; RMSEA = .10; SRMR = .09.

For internalizing symptoms, higher levels of positive ethic identity at Time 1 were associated with fewer internalizing problems at Time 2, $\beta = -0.62$, $p < .05$ (see Figure 9). Similar to the pattern with problem behavior, Time 1 internalizing symptoms were also associated with Time 2 internalizing symptoms, $\beta = 0.72$, $p < .001$. No demographic variables at T1 were predictors of internalizing symptoms at Time 2. Although the chi-square was significant χ^2 (85) = 152.14, $p < .001$, other fit indices for the longitudinal model for internalizing were mediocre: CFI = 0.88; TLI = 0.85; RMSEA = .07; SRMR = .07.

CHAPTER 5

Discussion

The study examined the protective role of parenting behavior (e.g. maternal warmth, behavioral control, and psychological control), coparent warmth, and youth assets (self-esteem, religiosity, positive ethic identity) in association with youth internalizing problems and youth problem behavior among a sample of African American single-mother families. Cross-sectional findings indicated that higher levels of maternal behavioral control and lower levels of maternal psychological control were associated with fewer problem behaviors among youth, and that lower levels of maternal psychological control and higher levels of youth self-esteem were associated with fewer internalizing difficulties. Furthermore, gender appeared to moderate the relationship between parenting behaviors and problem behaviors among youth. Whereas higher levels of maternal behavioral control were associated with fewer problem behaviors among youth at Time 1, this relationship was stronger for boys. Psychological control, on the other hand, was only significant for girls: lower levels of maternal psychological control were associated with fewer problem behaviors among girls. In regards to findings from the longitudinal models, positive ethnic identity at Time 1 among youth was associated with fewer internalizing difficulties at Time 2.

Although not the primary focus of the study, it is noteworthy that preliminary analyses of associations between sociodemographic variables and primary study variables revealed significant associations between maternal age, youth age, and youth outcomes. Although not significant in the SEM model, bivariate analyses indicated that older youth in this sample reported more aggression and rule-breaking behavior and also reported a higher level of risk behavior (see Table 2). As youth mature both physically and cognitively, some risk taking

behavior is developmentally normative for individuals in this age range and is to be expected (Ingra & Irwin, 1996; Jessor & Jessor, 1977; Baumrind, 1987). Furthermore, maternal age was inversely associated with youth internalizing problems in the cross-sectional analyses. Mothers who were older tended to have children who reported lower levels of internalizing, whereas mothers who were younger tended to have children who reported more internalizing. Among younger single mothers, parenting may be compromised due to a lack of experience or fewer resources to allot to parenting their youth.

In addition to age, other demographic variables were significantly associated with the outcomes of interest, as well; in particular, maternal education and maternal income were associated with problem behavior at the bivariate level and when included in the cross-sectional SEM analyses. Mothers with higher education levels had youth who reported fewer problem behaviors. It is possible that the more highly-educated mothers shared more information with their youth about the consequences of rule-breaking/delinquency, substance use, and sexual behavior (e.g., incarceration, substance addition, STDs, HIV/AIDS). The finding that higher levels of household income are associated with higher levels of problem behavior was a surprising find at first glance; however, this finding is consistent with the burgeoning literature on externalizing behavior among higher-income youth (Luthar, 2003; Luthar & Latendresse, 2005; Racz, McMahon, & Luthar, 2011). Whereas most research on problem behavior has been conducted among youth from low-income or middle-class environments as these youth have been presumed to be most vulnerable to problem behavior (e.g., Farrell et al., 2000; Li et al., 2000; Zalot et al., 2007), recent research suggests that youth in higher-income families may be at risk for developing many of the same externalizing problems, as well (Luthar, 2003; Luthar & Latendresse, 2005). One study by

Luthar and D'Avanzo (1999) found that higher-income youth reported as many externalizing problems as low-income youth in both suburban and inner-city settings, and a recent study by Racz and colleagues (2011) found high rates of problem behavior among a larger sample of higher-income youth, as well. Additionally, it is possible that some youth in families of higher socioeconomic status have moved into neighborhoods other than the neighborhoods that mothers originally grew up in; thus, there may be a lack of access to collective socialization efforts that may be bolstered by more traditional patterns of multiple generations of African American family members living within close proximity, if not under the same roof. Families who have moved out of their former neighborhoods may leave behind a network of extended family or community that offer collective socialization and "group monitoring" that is potentially less available in the new neighborhoods.

Positive Parenting. Findings partially supported the first hypothesis. The first hypothesis posed that positive parenting practices (e.g., higher levels of behavioral control, higher levels of warmth, and lower levels of psychological control) would be protective for African American adolescents from single parent homes, as evidenced by fewer problem behaviors and fewer internalizing difficulties. Consistent with the literature, higher levels of maternal behavioral control (e.g., monitoring, knowledge of youth whereabouts) were cross-sectionally associated with lower levels of problem behavior (Ary et al., 1999; Forehand et al., 1997; Freisthler et al., 2009; Graber et al., 2006; Latendresse et al., 2008; Li et al., 2000). Although less-often studied in the literature, maternal psychological control was also a significant predictor in the model. Consistent with the extant literature, youth who reported lower levels of psychological control also reported fewer problem behaviors (e.g., Kincaid et al., 2011; Kuppens et al., 2009; Petit et al., 2001).

In regard to internalizing difficulties, lower levels of psychological control were associated with lower levels of internalizing among youth in this sample. There is strong support in the literature for the association between psychological control and internalizing problems (Barber et al., 1994; Bean et al., 2006; Eccles et al., 1997; Garber et al., 1997; Herman et al., 1997); however, the majority of studies have examined this link among predominantly White youth, with a few exceptions (Kincaid et al., 2011; Mandara & Pikes, 2008). The results of this study extend and replicate the findings linking psychological control and internalizing among youth, and suggest that lower levels of psychological control are associated with more beneficial outcomes among youth from African American single mother homes. These findings support the large body of literature that emphasizes the central role of the parent in shaping positive youth development. Among African American youth in this sample, higher levels of behavioral control and lower levels of psychological control were associated with the best outcomes for youth from single mother homes.

Although maternal warmth was significantly associated with lower levels of all problem behaviors and most internalizing difficulties at the bivariate level (see Table 2), maternal warmth was not significantly associated with problem behavior or internalizing difficulties within the structural equation model. Although this may be partially due to the differences in examining the association between warmth and a composite of behaviors (i.e., a single latent construct) versus separate indicators of problem behavior and internalizing, it is also possible that other predictors in the model better explained the variations in internalizing and problem behaviors when examined simultaneously within one comprehensive model.

Although there is a considerable amount of support for warmth as an essential component of "positive parenting" for youth regardless of ethnic/racial background or socioeconomic

status (Amato & Fowler, 2002; Bean et al., 2006; McLoyd, 1998), the absence of a significant association between maternal warmth and youth outcomes in this study warrants further examination of the cultural meaning and relevance of parental warmth as a construct among African American youth. Jackson-Newsom, Buchanan, & McDonald (2008) found that perceived parental warmth is differentially related to a breadth of parenting practices and philosophies among African American as compared to European American youth. Perceived parental warmth or acceptance is maintained an important predictor of youth outcomes across ethnic groups (Rohner, 2004), but expressions of warmth may vary among different ethnic groups. Jackson-Newsom and colleagues (2008) suggest that differences in the prevalence of norms and subtle differences in expression, communication, or delivery of maternal warmth (e.g., Gonzales, Cauce, & Mason, 1996) might result in different constellations of practices and warmth across ethnic groups. Further work is warranted to clarify potential cultural differences in the measurement and assessment of maternal warmth among different cultural groups; it is possible that these differences may have confounded the results of this study.

Moderating Role of Gender

The findings supported the hypothesis that gender would moderate associations between parenting and youth outcomes. Although the associations between the predictor variables and outcome variables operated similarly for boys and girls in regard to internalizing symptoms, gender did moderate the association between parenting variables and youth problem behavior. Behavioral control emerged as an important protective factor for both boys and girls, although this relationship was stronger for boys. Lower levels of psychological control, however, were only protective for girls in deterring problem behavior. These findings are consistent with a recent review examining the link between parenting

practices and adolescent sexual behavior, which found that behavioral control may be more protective against sexual risk behavior for male versus female adolescents, whereas lower levels of psychological control are protective for adolescent girls (Kincaid, Jones, McKee, & Sterrett, *under review*). The findings are consistent with a burgeoning literature that suggests resilience-promoting socialization processes and child-rearing environments may differ for boys and girls (Mash & Barkley, 2003).

Bronfenbrenner (1961, 1966) was among the first to suggest that parenting behaviors, including parental affection and tenable authority, may have differential effects on boys and girls. Furthermore, Hops (1995) suggested that "the pathways from childhood to adolescence and adult pathology are age and gender specific and these differences may be the result of different social contexts that nurture the development of health or pathology for female and male individuals." In another literature review examining the role of gender in moderating the link between parenting and adolescent alcohol use, gender moderated the association between parenting and adolescent alcohol use, as well. Although previous research linked behavioral control to substance use among boys and girls (Schinke, Fang & Cole, 2008; Webb, Bray, Getz, & Adams, 2002), some evidence suggests that behavioral control influences boys' alcohol use *more strongly* than girls (Barnes, Reifman, Farrell, & Dintcheff, 2000), a similar pattern to the link between behavioral control and problem behavior in the current study. There are several hypothesized theoretical explanations that are offered for the role of monitoring as a particularly salient factor for male adolescents. From a social learning perspective, boys tend to place more value on authority and control (Feldman, Turner, & Araujo, 1999; Maccoby, 1990); thus, parenting processes involving skillful

behavioral control strategies (e.g., supervision, rule-setting) may have more of an impact on male youth.

Additionally, previous studies have also found that lower psychological control is a more robust deterrent of problem behavior among girls. Among a sample of European American and African American youth, Miller and colleagues (1997) found that lower levels of maternal psychological control (e.g., love withdrawal) were associated with a later age of sexual initiation for girls. Rodgers (1999) also found that lower levels of psychological control to be significantly associated with lower levels of sexual risk behavior among a sample of European American youth, and suggested that lower levels of psychological control facilitate adolescent development of psychological and moral maturity that is linked with fewer problem behaviors. The current study extends previous findings about the moderating role of gender, which were specific to sexual behavior and alcohol use, to the broader constellation of problem behaviors (e.g., delinquency, substance use, and broader externalizing behaviors such as rule-breaking and aggression). In this way, the current study demonstrates that gender moderates the association between behavioral and psychological control similarly for a range of problem behaviors.

Coparent Warmth. The findings from the current study did not support the hypothesis that African American youth from single parent homes who have a positive relationship with their coparent exhibit fewer internalizing difficulties and problem behaviors. There are several factors that may explain the lack of association between coparent warmth and youth outcomes in the present study. It is possible that the robustness of the other predictors, particularly maternal parenting which is often a strong predictor of youth outcomes, suppressed power to find the significant associations (Schacht, Cummings,

& Davies, 2009). It could also be the case that a mother's parenting is the main personal relationship with an adult that impacts youth outcomes, and that coparents mainly influence youth indirectly through impact on their mothers (Jones et al., 2003). In the same vein, the youth-coparent relationship is potentially another outcome of maternal parenting, as mothers may serve as the "gatekeepers" and facilitate certain relationships with adults and limit the interactions that their adolescents have with other adults (Nelson, 2006).

Furthermore, in a different sample of single mother families, Sterrett, Jones, and Kincaid (2009) found that youth-coparent relationship quality (i.e., coparent warmth) was not directly associated with youth externalizing or internalizing, but rather that youth-coparent relationship quality was indirectly related to youth outcomes by interacting with maternal positive parenting. More specifically, youth-coparent relationship quality moderated the association between positive parenting and internalizing symptoms such that the association between higher levels of positive parenting and lower levels of internalizing was stronger at higher levels of youth-coparent relationship quality. Sterrett and colleagues' work (2009) suggests that coparents may contribute to the overall positivity of the family environment in an indirect fashion, which may allow mothers to be more effective in promoting healthy development among their adolescents. Future work with single parent families might include an examination of the moderating effect of youth-coparent relationship quality, rather than testing a direct association.

Furthermore, although the current study did not examine differential outcomes related to the residency of the coparent (e.g., in-home versus living apart from the single parent household), data from the non-resident father literature suggests that it is the quality of interactions with coparents that has consistently been found to be associated with youth

adjustment, whereas a link with contact frequency has been found inconsistently (see Amato & Gilbreth, 1999; Whiteside & Becker, 2000 for meta-analyses). The non-resident father literature suggests that frequent contact may be a necessary, but not sufficient, condition for strong bonds between children and coparents, but that contact frequency is not the best proxy for relationship quality. Future work might examine other potential moderators of the association, such as a) longevity of the coparent's involvement in the child's life (including early attachment), b) residency of the coparent (e.g., residing with the child or separately), c) family member vs. non-family member status, c) levels of involvement (e.g., more of a parent figure or friend figure), and d) provision of different types of support (e.g., tangible aid, emotional support, informational support, etc). Furthermore, given the wide range of the types of adults who serve as coparents (e.g., grandparents, uncles, older siblings, family friends, neighbors), it will also be important for future work to examine the ways in which these different types of adults may serve different roles in positive youth development.

Self-Esteem. Results partially supported the hypothesis that higher levels of self-esteem would be associated with lower levels of internalizing and problem behaviors. Consistent with the extant literature, higher levels of self-esteem were associated with lower levels of internalizing cross-sectionally (Repetto, Caldwell, & Zimmerman, 2004; Short & Russell-Mayhew, 2009; Zimmerman, 1997). In the current study of African American youth from single mother homes, "risk" was conceptualized as being inherently present in the ecological context of single parent homes due to decreased resources, compromised parenting, etc. The finding that higher levels of positive self-esteem are associated with fewer negative outcomes (e.g., depression) among this sample of African American youth from single mother homes is consistent with the literature examining self-esteem as a

protective factor in studies of risk, resilience, and internalizing difficulties. For example, Prelow, Weaver, and Swenson (2006) found that self-esteem was a mediator between ecological risk (stressful life events, neighborhood disadvantage) and depressive symptoms among both African American and European American youth. Given that one of the adjustment problems that youth are likely to experience as ecological risk increases is the onset of depressive symptoms (Forehand et al., 1998; Loukas & Prelow, 2004), it is particularly important to know the individual-level variables that are protective in order to target mechanisms of change for prevention and intervention planning among vulnerable youth (e.g., youth from single mother homes).

Additionally, although youth self-esteem was not associated with problem behavior in the structural equation model, it was cross-sectionally associated with less rule-breaking, less sexual risk behavior, and less aggressive behavior at the bivariate level, which are consistent with the trends in the broader literature that support an association between higher levels of self-esteem and lower levels of problem behavior (Carvajal et al., 2002; Donnellan et al., 2005; Parker et al., 2005; Shrier et al., 2001; Wills et al., 2007). In line with these findings, higher levels of youth self-esteem at Time 1 were also longitudinally associated with lower levels of delinquency at Time 2 at the bivariate level.

Interestingly, alcohol use was not associated with youth self-esteem. Theories within the alcohol use literature provide possible explanations for the lack of association. Scheier, Botvin, Griffin, and Diaz (2000), for example, conducted latent growth analyses to test dynamic relations between self-esteem and alcohol use among adolescents across four time points, finding that high levels of self-esteem foster more increases in alcohol use over time compared to low initial levels of self-esteem. Given that the adolescent's development of

self-esteem is often accomplished through social interactions and self-appraisals (Doswell et al., 1998), it is possible that certain aspects of positive feelings of self-worth are reinforced when adolescents engage in normative pressures to use alcohol with their peers. It is possible that the same processes may be at work for the youth in the sample, but were not captured within the two time points of data collection. In order to shed light on these dynamic developmental processes, additional longitudinal work is needed to tease apart the complex associations between self-esteem and problem behavior among adolescents.

Ethnic Identity. Findings partially supported the hypothesis that higher levels of positive ethnic identity would be associated with lower levels of internalizing and problem behavior. At the bivariate level, higher levels of positive ethnic identity were associated with lower levels of all problem behaviors (e.g., sexual behavior, alcohol use, externalizing, etc) and lower levels of all internalizing indicators (e.g., anxiety, depression, hopelessness, etc). However, when entered in the full structural equation model for Time 1 analyses, the associations were no longer significant. At Time 1, other predictors in the model appeared to better account for variations in problem behavior and internalizing difficulties among youth in the sample.

Longitudinally, higher levels of positive ethnic identity at Time 1 were associated with lower levels of delinquency and aggressive behavior at Time 2, but there was a lack of a significant association for the problem behavior in the full structural equation model. However, in support of the study hypotheses, higher levels positive ethnic identity at Time 1 were associated with lower levels of internalizing at Time 2 within the structural equation model. This finding suggests that the relationship between positive ethic identity and youth psychosocial adjustment may change over time. The concept of ethnic identity as an

evolving construct is consistent with well-established models of racial and ethnic identity development, which state that various stages of racial and ethnic identity development may be more or less protective for individuals at different stages in the process (Cross, 1991). The process of ethnic identity exploration, for example, has been found to put individuals at risk of greater psychological vulnerability (e.g., internalizing problems) as this exploration raises both the salience of ethnicity and an awareness about in-group and out-group distinctions (Cross, 1991; Phinney, 1991); individuals in other stages of ethnic identity and development, however, may not experience such psychological vulnerabilities after moving into a different stage of committed ethnic identity (Greene, Way, & Pahl, 2006). As African American adolescents in our sample matured, they may have moved through different stages of ethic identity development that did not provide compensatory protective effects until the second time point of data collection. Whereas youth may have been more attuned to discriminatory experiences and realities at Time 1 and may have been in earlier stages of active exploration of ethnic identity at Time 1, these youth may also have continued to developed a more resound sense of positive ethnic identity that was protective later on. To further understand the protective mechanisms at work, future studies will benefit from the inclusion of measures that examine the ecological context of the adolescents in order to elucidate their exposure of racism and discrimination (Greene et al., 2006), thus better understanding the role and salience of protective factors such as positive ethnic identity.

Religiosity. At the bivariate level, higher levels of religiosity were cross-sectionally and longitudinally associated with lower levels of all problem behavior indices, consistent with the directionality of associations found in many studies of adolescent religiosity and problem behavior to date (Aspy, 2009; Kerestes et al., 2004; Steinman & Zimmerman, 2004).

Within the larger structural equation model, however, the association was no longer significant. There are several reasons that this is the case. A couple of possibilities for the lack of a significant association in the structural equation model are 1) that other predictors in the model (e.g., parenting, other youth assets) better explain the variations in problem behaviors when examined simultaneously, or 2) that there is an indirect rather than direct association between youth religiosity and problem behavior. In regard to the impact of parenting on adolescent religiosity, for example, research has found that parental expectations and standards shape an adolescent's decisions to attend religious services, and that parents are directly influential in the values and behaviors of their children (Grusec & Kuczynski, 1997; Potvin & Lee, 1982). To some extent, adolescent religiosity may be more of a function of parental values and practices of religious attendance that, in turn, impacts youth problem behaviors. At this developmental stage, an independent moral framework or set of guiding principles may not have been fully internalized by the adolescent in terms of making decisions about engaging in sexual behavior, substance use, delinquency, etc.

Additionally, the link between religiosity and fewer problem behaviors has been shown to be less robust among African American adolescents than for other ethnic groups (Steinman & Zimmerman, 2004). Although African American youth report higher religiosity than peers from other ethnic groups (Donahue, 1995; Johnston et al., 1999) and are less likely to use substances (Johnston, O'Malley, & Bachman, 2001), they also report higher levels of sexual risk behavior and suffer more consequences associated with sexual risk behavior (e.g., STDs, HIV; CDC, 2010; Johnston et al., 2001). This disconnect suggests that there are likely other factors that need to be examined in order to delineate the ways in which religiosity might be protective. In line with Steinman and Zimmerman's (2004) hypothesis that more

explicit messages from religious institutions that discourage problem behavior will result in fewer problem behaviors among African American youth, future work should assess the impact of the content and frequency of these explicit messages from religious institutions (e.g., messages discouraging sexual risk behavior) in connection with youth problem behavior, as well as the content and frequency of messages from parents (related to point above about the role of parenting in shaping religiosity among adolescents).

Additionally, the measure of religiosity utilized in this study did not assess the content of messages received through religious groups regarding problem behavior. In the extant literature, one of the reasons that religiosity has been posited as a protective factor is due to the fact that religious involvement may be associated with youth spending time in more prosocial activities that occupy adolescents' time and decrease exposure to problem behavior settings. The current measure did not assess the amount of time spent in prosocial activities apart from services and reading religious material; thus, this hypothesis warrants further research. In future studies, it would also be beneficial to include more questions about the amount of time youth spend in other prosocial activities (e.g., volunteering, church choir, bible studies, etc).

Limitations

The findings of the current study must be considered in light of the limitations. First, the current study examined a unidirectional association between predictors (e.g., parenting, youth assets) and youth outcomes (e.g., problem behavior, internalizing) and thus did not examine the potential transactional nature between the primary study variables. There is widespread acknowledgement that youth impacts parenting behavior, for example, and that there is a dynamic and reciprocal pattern characterizing the complex nature of the parent-

child relationship (Bell, 1968; Coley et al., 2009; Sameroff, 1975). Future work should examine the possibility that higher rates of problem behavior, for example, prompt parents to rely on psychologically controlling parenting strategies, or that higher levels of internalizing may be associated with increased parental warmth as a potential parental effort to compensate for youth psychosocial adjustment difficulties. Second, the study relied on only one method: self-report data from mothers and adolescents. Findings should be replicated with data from multiple reporters (e.g., coparents) who can report on youth behavior and assets, coparent warmth, and maternal parenting.

Third, this study did not examine variations in relationships between predictors and youth outcomes among specific age groups (e.g., early, middle, or late adolescence). Although youth age was not a significant predictor of problem behavior within the structural equation model and was thus dropped from the final model, youth age was significantly associated with rule-breaking, delinquency, alcohol use, and sexual behavior at the bivariate level (see Table 1). Furthermore, other work has suggested that youth age is an important variable to consider as older youth have consistently been shown to engage in higher levels of risk behavior (Zimmer-Gembeck & Helfand, 2008). To further argue the need for future work examining differences in predictors of positive youth development among different age groups (e.g., early, middle or late adolescence), parental behavioral control has been found to decrease as adolescents gain more autonomy in their older years and further expand their social worlds to include time spent outside the home with peers and engaged in extracurricular and work activities (Baptiste, Toulou-Shams, Miller, McBride, & Paikoff, 2007; Mandara, Murray, & Bangi, 2003). Given that higher levels of parental behavioral control are associated with fewer problem behaviors, a trend for parents to decrease

behavioral control for older adolescents begs the question as to what other factors may emerge as more salient protective factors for older adolescents. It will be important for future work to examine age differences in more detail.

Fourth, problem behavior remains a difficult construct to assess due to the sensitive nature of many of the questions (e.g., particularly related to sexual behavior). Consistent with prior work (Percy, McAlister, Higgins, McCrystal & Thorton, 2005; Bauman & Ennett, 1994), a small portion of youth in the sample did not report their risk behavior, likely due to social desirability (Richman, Kiesler, Weisband, & Drasgow, 1999) or underreporting. Underreporting may be higher among respondents for whom disclosure may have a higher social cost (e.g., youth from minority groups; Fendrich & Vaughn, 1994). Given the significant consequences associated with sexual risk behavior, substance use, and delinquency, there is a great need for improvements in the measurement of risk behavior. It may be beneficial for future studies to collect data on problem behavior from adolescents' peers as collateral report, as peers may have more knowledge about the target adolescent's involvement in problem behaviors.

Fifth, the current study did not examine potential moderators of the youth-coparent relationship that may have influenced the association between the relationship quality and youth outcomes (e.g., internalizing, problem behavior). The coparents identified in this study were individuals whom the mother identified as being the second most important person in helping to care for the target adolescent, and there was considerable variation in other adults who were identified as coparents. The individuals identified by mothers most frequently were their mothers (38%), friends (26%), and sisters (13%), although others were also identified in smaller numbers (e.g., uncles, older siblings, biological fathers, adult friends,

etc). Due to power limitations, the current study could not examine differences among each category. Future work is warranted in order to examine whether differences in the youth-coparent relationship among different types of coparents yields differential outcomes for youth. For example, potential moderators of the youth-coparent relationship to examine in the future might include stability of the coparent figure (e.g., number of years that the individual has been a constant support, or the degree to which the coparent is perceived as a reliable and supportive figure by the adolescent), residency of the coparent (e.g., whether or not the coparent lives with the adolescent and thus may be able to exert more influence and/or provide more parenting and guidance), and/or other coparent characteristics that may influence the relationship with an adolescent (e.g., coparent age, gender, mental health status, etc).

Strengths

Several strengths of this study also merit attention. Despite the fact that a growing percentage (56%) of African American youth are being raised in single parent households (U.S. Census Bureau, 2005), African American children and families are underrepresented in the literature on parenting and youth outcomes. In addition, the current study is distinctive in its examination of a more socioeconomically representative group of African American single mother families than is traditionally examined in the literature (Jones, Zalot, Foster, Sterrett & Chester, 2007). Third, consistent with a call to disentangle ethnicity from contextual influences in parenting (see Pinderhughes & Lee, 2008, for an introduction to a special issue), the current study also sheds light on an understudied parenting construct (psychological control) and how this parenting construct operates within African American single mother-child dyads. Fourth, in contrast to the literatures on alcohol use, risky sexual

behavior, and delinquency which have evolved relatively separately, the current study examines the combination of problem behaviors (e.g., alcohol use, sexual intercourse, delinquency, rule-breaking, and aggression) that place youth at higher risk for health consequences (HIV and other STDS, unplanned pregnancy), involvement with the juvenile justice system, etc. The findings on problem behavior among youth in this sample also support the single-factor theory for problem behavior, providing support for Jessor and Jessor's (1977) original Problem Behavior Theory, which posits that youth externalizing behaviors (e.g., substance use, sexual behavior, delinquency) are all manifestations of an underlying syndrome. Though the Problem Behavior Theory has been tested multiple times and a single factor has emerged in numerous studies (Ary et al., 1999; Culhane & Taussig, 2009; Jessor et al., 2003), this is the first study to the author's knowledge to replicate the findings among a sample comprised entirely of single mother families. Fifth, multiple internalizing symptoms were also demonstrated to load on a single underlying factor in the confirmatory factor analysis for internalizing difficulties among youth in this sample. The single internalizing factor (comprised of three subscales the Child Behavior Checklist (CBCL) and items from the Beck Hopelessness Scale) includes a diversified yet coherent measure of internalizing symptoms among African American youth.

Sixth, the study offers further support for the well-established relationship between psychological control and psychosocial adjustment problems, a relationship which has previously been examined in primarily European American samples (see Barber, 2002 for a review). The growing literature on the association between psychological control and youth psychosocial adjustment among both European American and now African American families suggests that the construct is worthy of further attention in both clinical and research

settings. Lastly, the study examined multiple levels of protective factors; in addition to parenting practices, this study contributed the growing literature that provides support for looking at individual assets as protective factors for African American youth. In this study, self-esteem and ethnic identity were both found to be significantly associated with fewer internalizing difficulties among African American youth from single mother homes. These findings have the potential to serve in the planning of future intervention and prevention programs to facilitate healthy psychosocial adjustment among vulnerable youth from single parent families.

Conclusions and Implications

Although African American youth from single mother homes are at increased risk for psychosocial adjustment difficulties and problem behaviors, there are many adolescents who continue to thrive despite elevated risk. The purpose of this study was use an ecological resiliency framework to identify family and individual-level protective factors at work among resilient youth in this sample. Positive parenting practices that were linked to the most beneficial outcomes included behavioral control and lower levels of psychological control. Furthermore, gender moderated this association for problem behavior; girls who reported lower levels of psychological control reported fewer problem behaviors. Behavioral control was protective for both boys and girls, but was stronger for boys in the sample. Future parenting interventions would benefit from including psychological control as a target of intervention for both externalizing *and* internalizing symptoms. Furthermore, the results support movement toward gender-specific parenting interventions to reduce problem behaviors among male and female adolescents by emphasizing behavioral control and decreasing parental reliance on psychological control among female youth, in particular.

Further work is needed to elucidate the potential cultural differences in the expression and perception of maternal warmth, as well as increasing sensitivity to racial/ethnic differences by exploring alternate parenting typologies and paradigms. Specifically, future studies should consider latent class analysis in order to elucidate potentially unique parenting practices and styles among ethnic minority families. Furthermore, this study provides support for two individual-level targets of intervention among African American youth (self-esteem and positive ethnic identity). Lastly, the current study provides ideas and directions for researchers to broaden the contextual scope in order to include coparents as significant individuals involved in parenting African American youth from single mother homes.

Table 1. Sample Characteristics and Demographics (n = 175 at Time 1, n = 98 at Time 2)

Youth Demographics	**Statistic**	
Age (years)	13.39 (1.59)	
Female Gender (%)	54.9	
Male Gender (%)	45.1	
Mother Demographics		
Age (years)	38.05 (6.67)	
Annual Household Income	29733.96 (17456.49)	
Mother Marital Status		
Never Married (%)	50.8	
Formerly Married (%)	49.2	
Mother Education Level		
HS Diploma or less (%)	14.4	
some college /vocational school (%)	51	
college degree (%)	20.1	
graduate degree or higher (%)	14.4	
Time 1 Major Study Variables	**M (SD)**	**Range**
Psychological Control	3.81 (3.1)	0-8
Maternal Monitoring	26.14 (7.41)	4-36
Maternal Knowledge	41.72 (10.66)	8-60
Maternal Warmth	16.72 (4.78)	1-34
Coparent Relationship Quality	18.35 (5.24)	1-40
Youth Self Esteem	32.84 (4.56)	16-40
Youth Ethnic Identity	35.92 (7.67)	13-50
Youth Religiosity	22.66 (5.51)	8-32
Delinquency	4.09 (6.69)	0-46
Aggressive Behavior	6.79 (4.64)	0-22
Rule Breaking	4.03 (3.53)	0-17
Alcohol Use	1.54 (3.62)	0-22
Sexual Behavior	4.09 (7.60)	0-31
Anxious/Depressed Symptoms	4.2 (3.55)	0-17
Withdrawn/Depressed Symptoms	3.07 (2.55)	0-11
Somatic Complaints	2.36 (2.73)	0-17
Hopelessness	1.82 (2.14)	0-11

Table 1, cont'd.

Time 2 Major Study Variables	M (SD)	Range
Delinquency	2.60 (3.60)	0-15
Aggressive Behavior	6.53 (5.38)	0-22
Rule Breaking	3.76 (3.45)	0-16
Alcohol Use	11.57 (3.41)	7-16
Sexual Behavior	18.25 (5.61)	12-27
Anxious/Depressed Symptoms	3.42 (3.83)	0-20
Withdrawn/Depressed Symptoms	2.47 (2.54)	0-12
Somatic Complaints	2.40 (3.36)	0-14
Hopelessness	1.50 (1.95)	0-8

Table 2. Correlation Matrix for Time 1 Outcomes

	Variable	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*
1	Mother Age	.																			
2	Youth Age	0.32**	.																		
3	Mother Education	-0.01	-0.01	.																	
4	Household Income	0.09	0.09	0.42**	.																
5	Psychological Control	0.02	0.02	0.13	0.17*	.															
6	Monitoring	-0.08	-0.12	0.13	0.13	-0.21**	.														
7	Knowledge	0.07	-0.08	0.13	0.09	-0.09	0.64**	.													
8	Maternal Warmth	0.03	-0.21	0.03	-0.05	-0.33**	0.23**	0.16*	.												
9	Coparent Warmth	0.05	-0.05	0.09	0.01	-0.05	0.03	0.11	0.28**	.											
10	Youth Self Esteem	0.26**	0.05	0.22**	0.16*	-0.19*	0.35**	0.32**	0.19*	0.19*	.										
11	Youth Ethnic Identity	0.18*	0.08	0.18*	0.16*	0.01	0.40**	0.48**	0.01	0.07	0.35**	.									
12	Youth Religiosity	-0.12	0.11	0.11	0.01	-0.09	0.36**	0.38**	0.13	0.18*	0.16*	0.35**	.								
13	Delinquency	0.12	0.29**	-0.13	0.09	0.12	-0.28**	-0.36**	-0.21**	0.05	-0.11	-0.20**	-0.23**	.							
14	Aggressive Behavior	-0.08	0.07	-0.08	0.07	0.33**	-0.31**	-0.39**	-0.24**	-0.03	-0.25**	-0.28**	-0.20**	0.49**	.						

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15	Rule Breaking	0.02	0.28**	-0.08	0.21**	0.24**	-0.38**	-0.37**	-0.22**	-0.06	-0.19*	-0.27**	-0.29**	0.67**	0.64**	.								
16	Alcohol Use	0.07	0.29**	-0.07	0.02	0.09	-0.28**	-0.33**	-0.17*	-0.01	-0.01	-0.18*	-0.23**	0.43**	0.23**	0.38**	.							
17	Sexual Behavior	0.16*	0.41**	-0.15*	0.06	0.05	-0.36**	-0.35**	-0.21**	-0.06	-0.16*	-0.22**	-0.38**	0.53**	0.31**	0.54**	0.55**	.						
18	Anx./Depression	-0.25	-0.05	-0.04	0.06	0.38**	-0.17*	-0.13	-0.16*	0.02	-0.49**	-0.15*	0.05	0.11	0.47**	0.30**	0.02	0.10	.					
19	Withdrawal / Depression	-0.22**	0.01	-0.05	-0.03	0.32**	-0.08	-0.14	-0.05	-0.04	-0.39**	-0.16*	0.04	0.10	0.38**	0.30**	0.02	0.13	0.69**	.				
20	Somatic Complaints	-0.15	-0.13	0.03	0.1	0.35**	-0.14	-0.22**	-0.16*	-0.01	-0.38**	-0.16*	0.05	0.18*	0.49**	0.29**	-0.07	0.02	0.65**	0.59**	.			
21	Hopelessness	-0.18	-0.03	-0.19*	-0.12	0.28**	-0.31**	-0.36**	-0.28**	-0.11	-0.51**	-0.33**	-0.09	0.24**	0.24**	0.23**	0.25**	0.24**	0.41**	0.35**	0.26**			

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Table 3. Correlation Matrix for Time 2 Outcomes

	Variable	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*
1	T1 Mother Age	.																			
2	T1 Youth Age	0.32**	.																		
3	T1 Mother Education	-0.01	-0.01	.																	
4	T1 Income	0.09	0.09	0.42**	.																
5	T1 Psyc Control	0.02	0.02	0.13	0.17*	.															
6	T1 Maternal Monitoring	-0.08	-0.12	0.13	0.13	-0.21**	.														
7	T1 Maternal Knowledge	0.07	-0.08	0.13	0.09	-0.09	0.64**	.													
8	T1 Maternal Warmth	0.03	-0.21	0.03	-0.05	-0.33**	0.23**	0.16*	.												
9	T1 Coparent Warmth	0.05	-0.05	0.09	0.01	-0.05	0.03	0.11	0.28**	.											
10	T1 Youth Self Esteem	0.26**	0.05	0.22**	0.16*	-0.19*	0.35**	0.32**	0.19*	0.19*	.										
11	T1 Ethnic Identity	0.18*	0.08	0.18*	0.16*	0.01	0.40**	0.48**	0.01	0.07	0.35**	.									
12	T1 Youth Religiosity	-0.12	0.11	0.11	-0.01	-0.09	0.36**	0.38**	0.13	0.18*	0.16*	0.35**	.								
13	T2 Delinquency	-0.15	0.14	-0.19	-0.15	-0.10	-0.29**	-0.14	-0.09	-0.11	-0.22*	-0.28**	-0.29**	.							
14	T2 Aggression	-0.22*	-0.19	-0.18	-0.13	0.09	-0.27**	-0.22*	-0.13	-0.10	-0.20	-0.30**	-0.11	0.53**	.						

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15	T2 Rule Breaking	0.14	0.08	-0.05	0.04	0.04	-0.02	-0.11	-0.25*	-0.21	-0.10	0.05	-0.08	0.08	0.23*	.						
16	T2 Alcohol	-0.11	0.05	-0.14	-0.03	0.03	-0.09	0.04	-0.19	-0.12	-0.22	-0.11	-0.13	0.41**	0.30**	0.12	.					
17	T2 Sex	0.17	0.44**	-0.12	0.04	-0.07	-0.30**	-0.19	-0.25*	-0.24*	-0.18	-0.15	-0.37**	0.52**	0.19	0.05	0.35**	.				
18	T2 Anxiety/ Depression	-0.18	-0.03	-0.05	0.01	-0.01	-0.21	-0.12	-0.02	-0.18	-0.27*	-0.25*	0.02	0.39**	0.58**	0.09	0.13	0.25*	.			
19	T2 Withdrawal/ Depression	-0.17	0.02	-0.10	-0.03	0.11	-0.31**	-0.28*	-0.11	-0.13	-0.35**	-0.32**	-0.05	0.30**	0.60**	0.19	0.21	0.18	0.73**	.		
20	T2 Somatic Complaints	-0.13	0.04	-0.06	-0.14	-0.01	-0.37**	-0.23*	-0.08	-0.14	-0.28*	-0.27*	-0.07	0.36**	0.47**	-0.07	0.11	0.14	0.74**	0.74**	.	
21	T2 Hopelessness	-0.11	0.01	-0.04	0.03	-0.23*	-0.27**	-0.20	-0.00	-0.21*	-0.23*	-0.33**	-0.27*	0.44**	0.44**	0.03	0.36**	0.38**	0.40**	0.41**	0.37**	

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Table 4. Factor Loadings for Primary Study Variables

Time 1 Variables	**Factor Loading**
Internalizing	
Anxiety	0.88
Withdrawal	0.79
Somatic Complaints	0.73
Hopelessness	0.44
Problem Behavior	
Delinquency	0.83
Rule-Breaking	0.82
Aggressive Behavior	0.56
Sexual Risk Behavior	0.66
Alcohol Use	0.50
Boys (*n* = 75)	
Problem Behavior	
Rule Breaking	0.97
Delinquency	0.80
Aggressive Behavior	0.66
Sexual Risk Behavior	0.66
Alcohol Use	0.43
Girls (*n* = 100)	
Problem Behavior	
Delinquency	0.79
Sexual Risk Behavior	0.70
Rule Breaking	0.60
Alcohol Use	0.45
Aggressive Behavior	0.32

Table 4, cont'd.

Time 2 Variables	**Factor Loading**
Internalizing	
Anxiety	0.85
Withdrawal	0.86
Somatic Complaints	0.86
Hopelessness	0.46
Problem Behavior	
Delinquency	0.90
Sexual Risk Behavior	0.55
Rule Breaking	0.12
Alcohol Use	0.54
Aggressive Behavior	0.58

Figure 1. *Proposed Structural Model/Basic Conceptual Model*.*

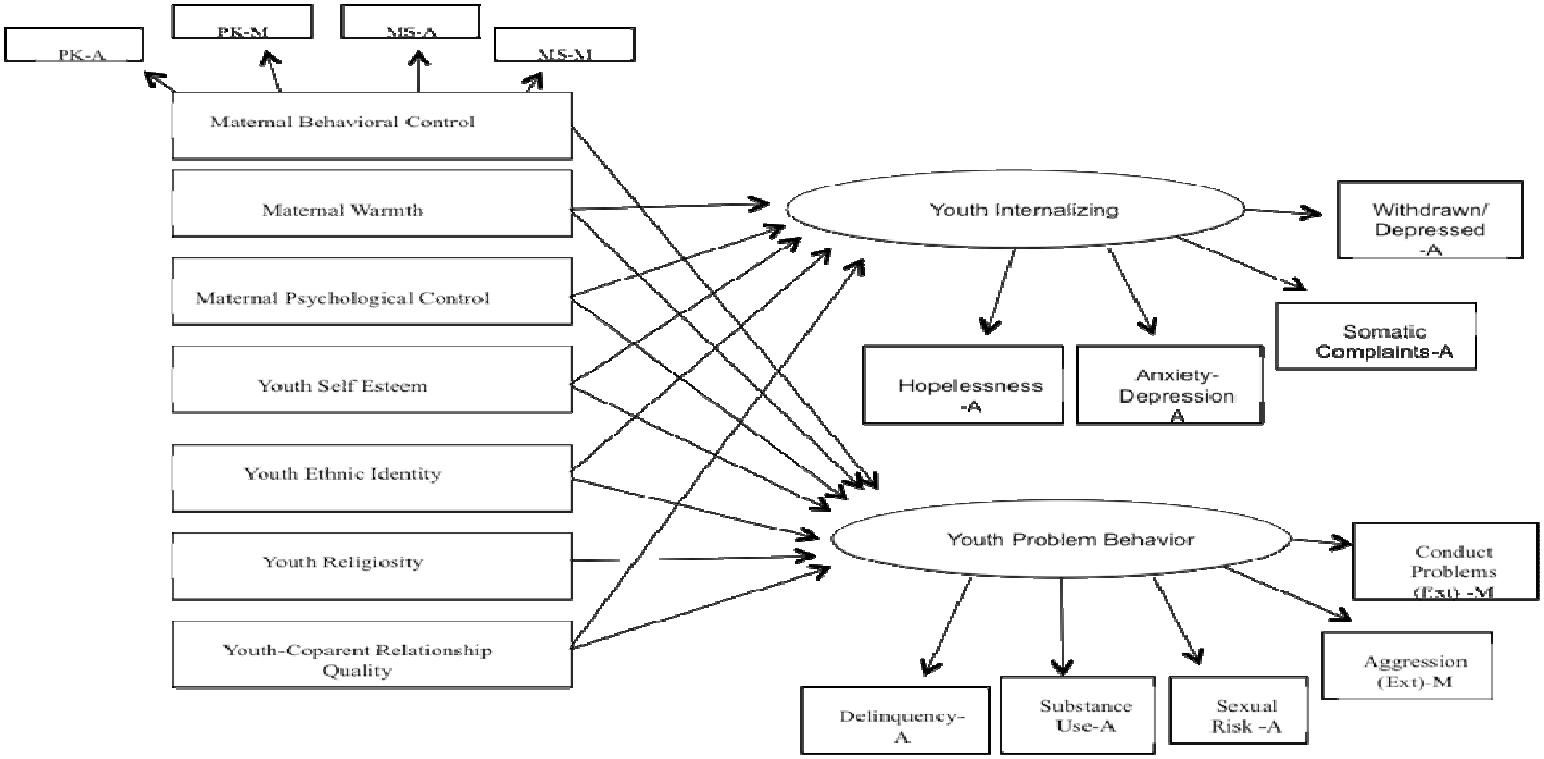

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Figure 2. Structural Model for Internalizing, Time 1 cross-sectional analysis. The full model with significant and non-significant paths is presented. *$p < .05$; **$p < .01$; ***$p < .001$.

χ^2 (20) = 58.45, $p < .001$;CFI = 0.89; TLI = .86; RMSEA = .11; SRMR = .06.

Time 1 Full Internalizing Model

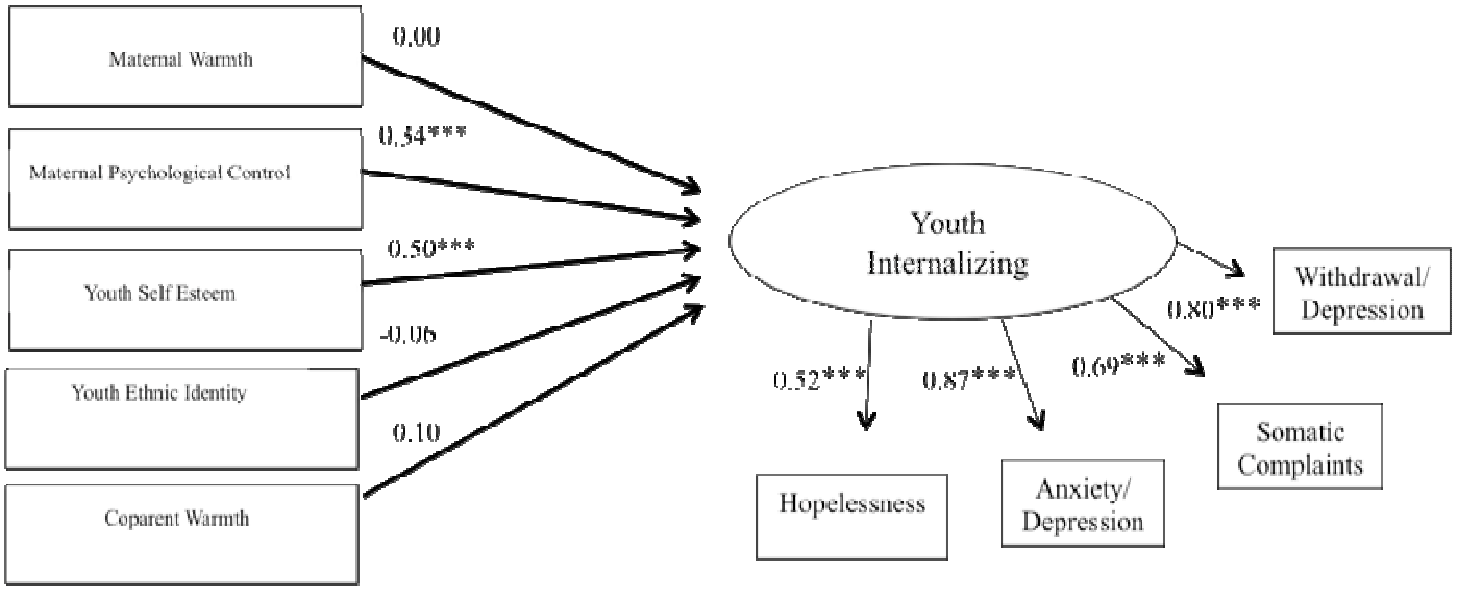

Figure 3. Structural Model for Internalizing, Time 1 cross-sectional analysis. The trimmed model is presented.

*$p < .05$; **$p < .01$; ***$p < .001$.

(χ^2 (14) = 36.83, $p < .001$); CFI = 0.94; TLI = .92; RMSEA = .09; SRMR = .06.

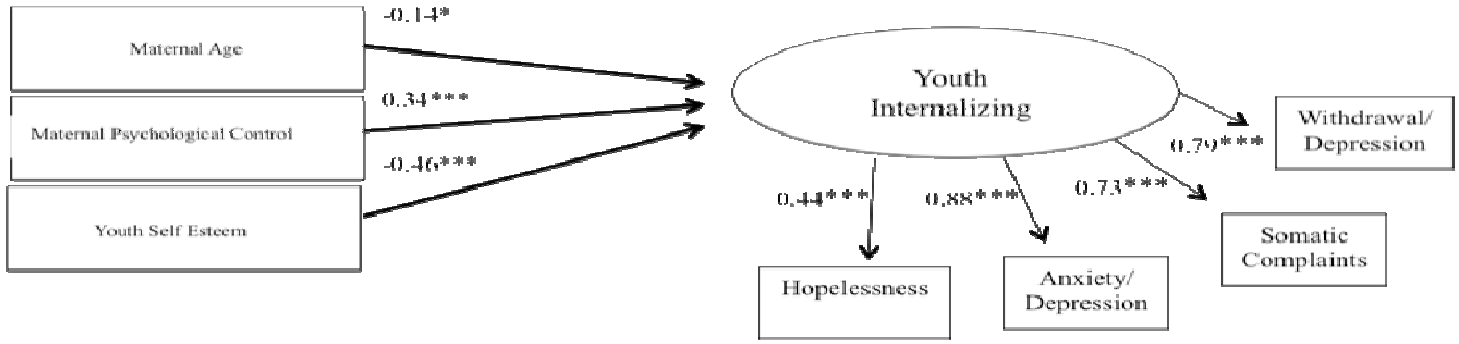

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Figure 4. Structural Model for Problem Behavior, Time 1 cross-sectional analysis. The full model with significant and non-significant paths is presented. *$p < .05$; **$p < .01$; ***$p < .001$.

χ^2 (46) = 121.91, p < .001; CFI = 0.87; TLI = .82; RMSEA = .10; SRMR = .08

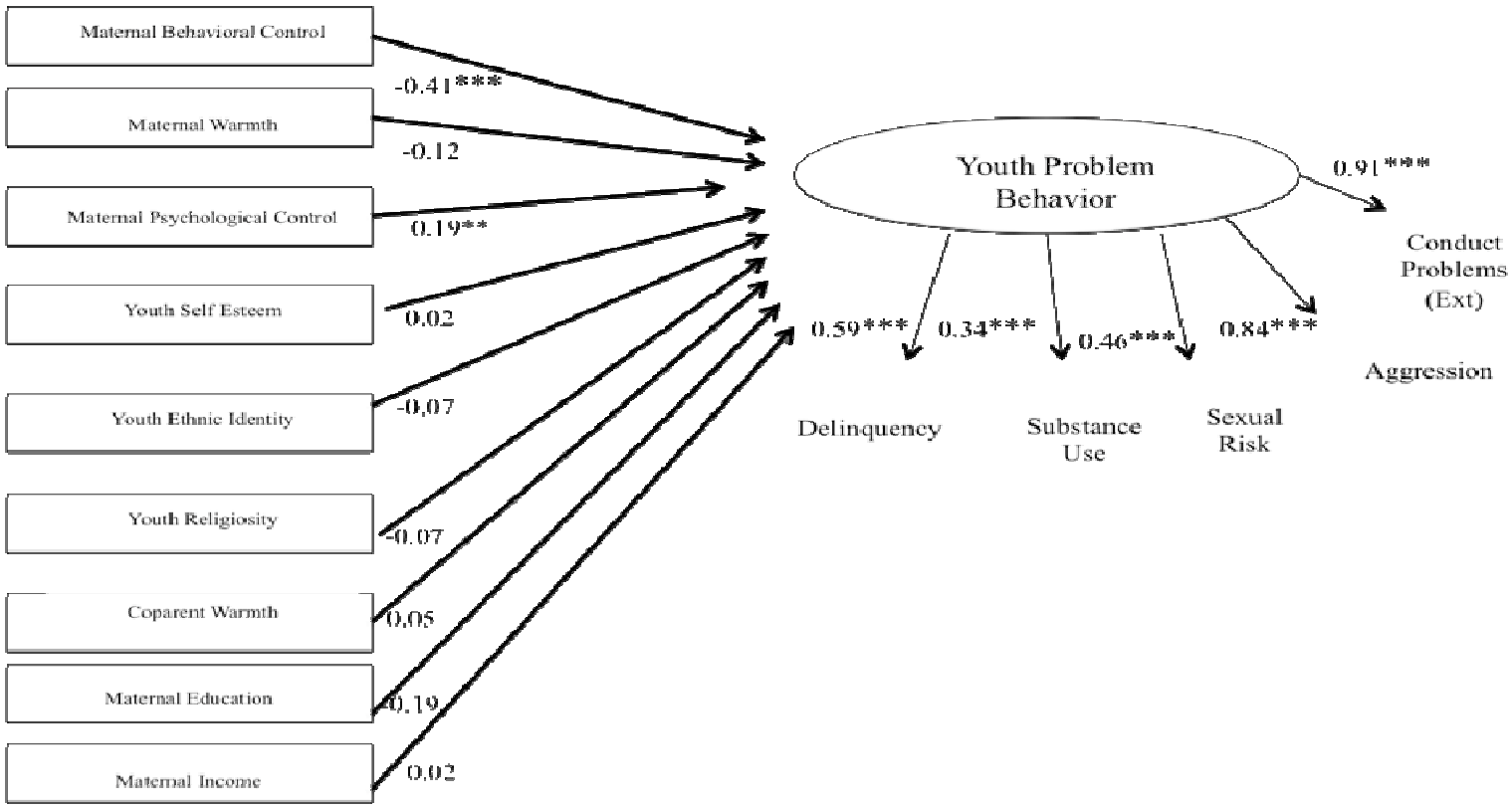

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Figure 5. Structural Model for Problem Behavior, Time 1 cross-sectional analysis. The trimmed model is presented.

*$p < .05$; **$p < .01$; ***$p < .001$.

χ^2 (32) = 108.10, p < .001; CFI = 0.85; TLI = .80; RMSEA = .11; SRMR = .10.

Figure 6. Gender Invariance for the Problem Behavior Model, Time 1 cross-sectional analysis (Boys).

*$p < .05$; **$p < .01$; ***$p < .001$.

χ^2 (131) = 326.87, p < .001; CFI = 0.68; TLI = .63; RMSEA = .13; SRMR = .14.

Figure 7. Gender Invariance for the Problem Behavior Model, Time 1 cross-sectional analysis (Girls).

*$p < .05$; **$p < .01$; ***$p < .001$.

χ^2 (131) = 326.87, p < .001; CFI = 0.68; TLI = .63; RMSEA = .13; SRMR = .14.

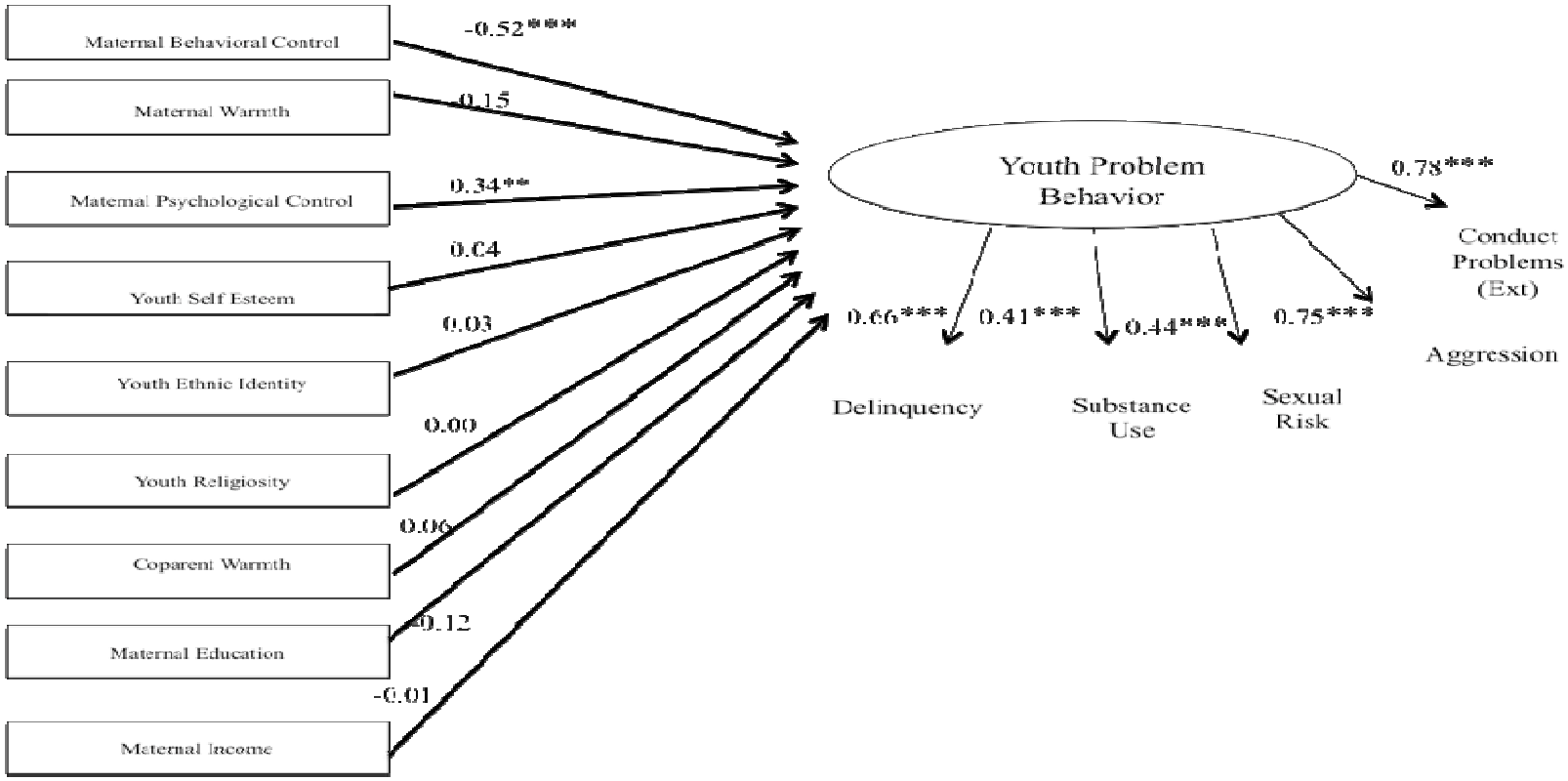

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Figure 8. Structural Model for Problem Behavior, Time 2 longitudinal analysis.

*$p < .05$; **$p < .01$; ***$p < .001$.

χ^2 (135) = 366.19, $p < .001$; CFI = 0.73; TLI = 0.64; RMSEA = .10; SRMR = .09.

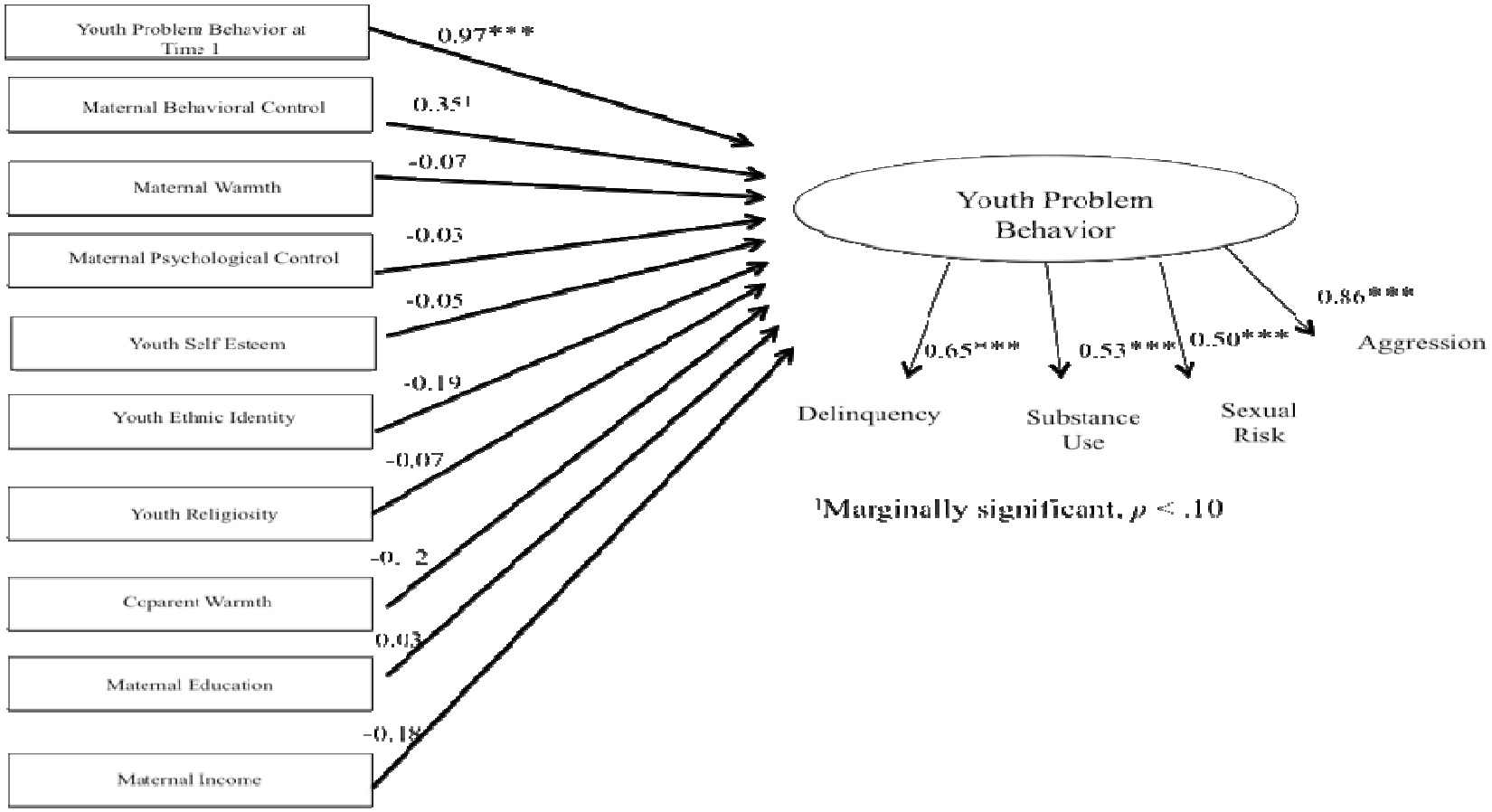

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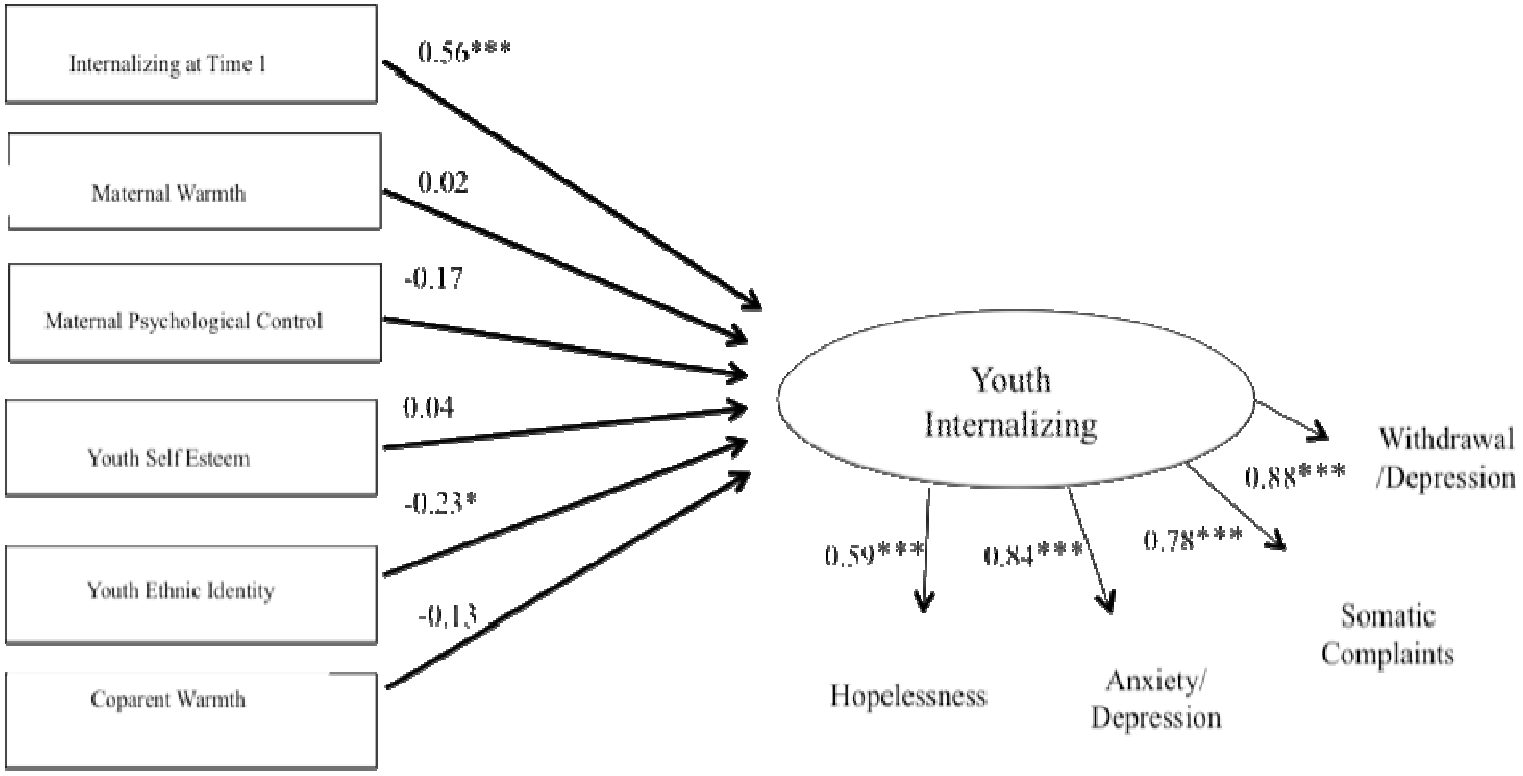
Figure 9. Structural Model for Internalizing, Time 2 longitudinal analysis.

*$p < .05$; **$p < .01$; ***$p < .001$.

χ^2 (85) = 152.14, $p < .001$; CFI = 0.88; TLI = 0.85; RMSEA = .07; SRMR = .07.



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Appendix A: Interaction Behavior Questionnaire-Mother Questions

Think back over the last several weeks at home. The following statements have to do with you and your mother. Please tell us if you believe that the statement is mostly **true** or mostly **false** about you and your mother. Your answers will not be shown to your mother or anyone else in your family.

0 True

1 False

8 Refuse to Answer

Q1. Your mother understands you. She knows where you are coming from.

Q2. When your mother and you fuss with each other, you end your fusses calmly sometimes.

Q3. Your mother and you almost always seem to agree or get along okay with each other.

Q4. You enjoy the talks your mother and you have.

Q5. When you state your opinion, or say what you think, your mother gets upset.

Q6. At least three times a week, your mother and you get angry or fuss at each other.

Q7. Your mother listens when you need someone to talk to.

Q8. Your mother is a good friend to you.

Q9. Your mother says you have no consideration or respect for her.

Q10. At least once a day your mother and you get angry or fuss at each other.

Q11. Your mother is bossy when you talk.

Q12. Your mother doesn't understand you or doesn't know where you are coming from.

Q13. The talks your mother and you have are frustrating or they make you mad.

Q14. Your mother understands what you mean even when she doesn't agree with you or see things the same way as you do.

Q15. Your mother seems to always be complaining about you or talking bad about you.

Q16. You think your mother and you get along very well.

Q17. Your mother screams a lot.

Q18. Your mother puts you down or says bad things about you.

Q19. If you run into problems, your mother helps you out.

Q20. You enjoy spending time with your mother.

Appendix B: Monitoring Scale-Adolescent Version

*terminology adjusted for Mother-report measure, but same items are used for both reporters.

The next several items will ask you how much your mother knows about your activities.

0 Not at all
1 Rarely
2 Some of the time
3 Most of the time
4 Always
8 Refuse to Answer

How often does your mother know:

Q1. What you do during your free time?
Q2. Who you have as friends during your free time?
Q3. What type of homework you have?
Q4. What you spend your money on?
Q5. When you have an exam or assignment due at school?
Q6. How you do on different subjects in school?
Q7. Where you go when out at night with friends?
Q8. What you do and where you go after school?
Q9. In the past month, how often has your mother had no idea where you were at night?

Appendix C: Maternal Knowledge- Adolescent Report

*terminology adjusted for Mother-report measure, but same items are used for both reporters.

The following items will ask you how much your mother and that same co-parent know about your daily activities.

0 Not at all

1 Rarely

2 Some of the time

3 Most of the time

4 Always

8 Refuse to Answer

First, think about you and your mother. How often:

Q1. Do the two of you talk at home about how you are doing in different subjects in school?

Q2. Do you usually tell your mother how school was when you get home? For example, how you did on exams, relationships with teachers, etc.?

Q3. Do you keep a lot of secrets from your mother about what you do with your free time?

Q4. Do you hide a lot from your mother about what you do during nights and weekends?

Q5. If you go out at night, do you tell your mother what you have been doing?

Q6. In the last month, has your mother talked with the parents of your friends?

Q7. Does your mother talk to your friends when they come to your home? For example, ask what they do or think or feel about things?

Q8. In the last month, has your mother started a conversation with you about your free time?

Q9. Does your mother initiate a conversation about things that happened during your school day?

Q10. Does your mother usually ask you to talk about things that happened during your free time, such as whom you met, activities, etc.?

Q11. Do you need to have permission from your mother to stay out late on a weekday evening?

Q12. Do you need to ask your mother before you can decide with friends what to do on a Saturday night?

Q13. If you have been out very late one night, does your mother require that you explain what you did and whom you were with?

Q14. Does your mother require that you tell her where you are at night, whom you are with, and what you do together?

Q15. Before you go out on a Saturday night, does your mother require you to tell her where you are going?

Appendix D: Psychological Control- Adolescent Report

*terminology adjusted for Mother-report measure, but same items are used for both reporters.

Please listen to the following statements and decide how much each is like your mother. Decide whether each is **not at all, somewhat,** or **a lot like** him or her.

First, think about your <u>mother</u>.

0 Not at all like her
1 Somewhat like her
2 A lot like her
8 Refuse to Answer

Q1. My mother changes the subject whenever I have something to say.

Q2. My mother finishes my sentences whenever I talk.

Q3. My mother often interrupts me.

Q4. My mother acts like she knows what I'm thinking or feeling.

Q5. My mother would like to be able to tell me how to feel or think about things all the time.

Q6. My mother is always trying to change how I feel or think about things.

Q7. My mother blames me for other family members' problems.

Q8. My mother brings up my past mistakes when she criticizes me.

Appendix E: Interaction Behavior Questionnaire-Coparent Questions

0 True

1 False

8 Refuse to Answer

Q21. Continue to think back over the last several weeks at home. These statements have to do with you and another person who parents you, besides your mother. Please tell us this other person's first and last initials now: __ __ __

Now, please tell us if you believe that each statement is mostly true or mostly false for you and this other person, who we'll refer to as your mother's "co-parent." Your answers will not be shown to your mother's co-parent or anyone in your family.

Q22. This co-parent understands you. He or she knows where you are coming from.

Q23. When this co-parent and you fuss with each other, you end your fusses calmly sometimes.

Q24. This co-parent and you almost always seem to agree or get along okay with each other.

Q25. You enjoy the talks this co-parent and you have.

Q26. When you state your opinion, or say what you think, this co-parent gets upset.

Q27. At least three times a week, this co-parent and you get angry or fuss at each other.

Q28. This co-parent listens when you need someone to talk to.

Q29. This co-parent is a good friend to you.

Q30. This co-parent says you have no consideration or respect for him or her.

Q31. At least once a day this co-parent and you get angry or fuss at each other.

Q32. This co-parent is bossy when you talk.

Q33. This co-parent doesn't understand you or doesn't know where you are coming from.

Q34. The talks this co-parent and you have are frustrating or they make you mad.

Q35. This co-parent understands what you mean even when he or she doesn't agree with you or see things the same way as you do.

Q36. This co-parent seems to always be complaining about you or talking bad about you.

Q37. You think this co-parent and you get along very well.

Q38. This co-parent screams a lot.

Q39. This co-parent puts you down or says bad things about you.

Q40. If you run into problems, this co-parent helps you out.

Q41. You enjoy spending time with this co-parent.

Appendix F: Rosenberg Self-Esteem Scale

The following items deal with your general feelings about yourself. Please tell us the extent of your agreement or disagreement with each statement. Your answers may range from **strongly disagree** to **strongly agree.**

1 Strongly Disagree
2 Disagree
3 Agree
4 Strongly agree
8 Refuse to Answer

Q1. On the whole, I am satisfied with myself.
Q2. At times, I think I am no good at all.
Q3. I feel that I have a number of good qualities.
Q4. I am able to do things as well as most other people.
Q5. I feel I do not have much to be proud of.
Q6. I certainly feel useless at times.
Q7. I feel that I'm a person of worth, at least on an equal plane with others.
Q8. I wish I could have more respect for myself.
Q9. All in all, I'm inclined to feel that I am a failure.
Q10. I take a positive attitude toward myself.

Appendix G: Multigroup Ethnic Identity Measure- Adolescent Report

In this country, people come from many different countries and cultures, and there are many different words to describe the different ethnic groups that people come from. Some examples of the names of ethnic groups are Black or African American, Hispanic or Latino, Asian American, and Caucasian or White. These questions are about your ethnicity or your ethnic group and how you feel about it or react to it.

1 Strongly disagree
2 Disagree
3 Agree
4 Strongly agree
8 Refuse to Answer

Q1. I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs.

Q2. I am active in organizations or social groups that include mostly members of my own ethnic group.

Q3. I have a clear sense of my ethnic background and what it means for me.

Q4. I think a lot about how my life will be affected by my ethnic group membership.

Q5. I am happy that I am a member of the group I belong to.

Q6. I have a strong sense of belonging to my own ethnic group.

Q7. I understand pretty well what my ethnic group membership means to me.

Q8. In order to learn more about my ethnic background, I have often talked to other people about my ethnic group.

Q9. I have a lot of pride in my ethnic group.

Q10. I participate in cultural practices of my own group, such as special food, music, or customs.

Q11. I feel a strong attachment towards my own ethnic group.

Q12. I feel good about my cultural or ethnic background.

Appendix H: Religiosity-Adolescent Report

The following questions ask about religion and spirituality. For this first set of questions, please click on the number that best represents how you feel.

Q1.	How religious is your family?	Not religious at all	0
			1
			2
		Very religious	3
		Refuse to Answer	8
Q4.	Do you believe in God?	Definitely no	0
			1
		Definitely yes	2
		Refuse to Answer	8
Q5.	How religious are you?	Not religious at all	0
			1
			2
		Very religious	3
		Refuse to Answer	8
Q6.	How important do you think it is for teens to attend religious services?		
		Not important at all	0
			1
			2
		Very important	3
		Refuse to Answer	8

Q7. How often do you read the Bible, or other religious books, magazines, or stories?

Never	1
	2
	3
	4
Nearly every day	5
Refuse to Answer	8

Q8. How often do you say grace before you eat?

Never	1
	2
	3
	4
Nearly every day	5
Refuse to Answer	8

Q9. How often do you pray?

Never	1
	2
	3
	4
Nearly every day	5
Refuse to Answer	8

Q10. How often do you go to religious services?

Never	1
	2
	3
	4
Nearly every day	5
Refuse to Answer	8

Q11. How often do you ask someone to pray for you?	Never	1
		2
		3
		4
	Nearly every day	5
	Refuse to Answer	8

Appendix I: Child Behavior Checklist-Internalizing and Externalizing Problems

(Mother Report)

*terminology adjusted for Adolescent-report measure, but same items are used for both reporters.

The following is a list of items that describe children and adolescents. For each item that describes your child now or within the past 6 months, please tell us whether the item is very true, somewhat true, or not true of your child. Please answer all items as well as you can, even if some do not seem to apply to your child.

0 Not True
1 Somewhat True
2 Very True
3 Refuse to Answer

Q1. Drinks alcohol without parents' approval.

Q2. Argues a lot.

Q3. There is very little he or she enjoys.

Q4. Cries a lot

Q5. Cruelty, bullying, or meanness to others.

Q6. Demands a lot of attention.

Q7. Destroys his or her own things

Q8. Destroys things belonging to his or her family or others

Q9. Disobedient at home

Q10. Disobedient at school

Q11. Doesn't seem to feel guilty about misbehaving

Q12. Breaks rules at home, school, or elsewhere.

Q13. Fears certain animals, situations, or places, other than school

Q14. Fears going to school

Q15. Fears he or she might think or do something bad

Q16. Feels he or she has to be perfect

Q17. Feels or complains that no one loves him or her

Q18. Feels worthless or inferior

Q19. Gets in many fights

Q20. Hangs around with others who get in trouble

Q21. Would rather be alone than with others

Q22. Lying or cheating

Q23. Nervous, highstrung, or tense

Q24. Nightmares

Q25. Constipated, doesn't move bowels

Q26. Too fearful or anxious

Q27. Feels dizzy

Q28. Feels too guilty

Q29. Overtired

Q30. Aches or pains, (not stomach or headaches), without a known medical cause

Q31. Headaches, without a known medical cause

Q32. Nausea, feel sick, without a known medical cause

Q33. Problems with eyes, (not if corrected by glasses), without a known medical cause

Q34. Rashes or other skin problems, without a known medical cause

Q35. Stomachaches or cramps, without a known medical cause

Q36. Vomiting, throwing up, without a known medical cause

Q37. Physically attacks others

Q38. Prefers being with older kids

Q39. Refuses to talk

Q40. Runs away from home

Q41. Screams a lot

Q42. Secretive, keeps things to self

Q43. Self-conscious or easily embarrassed

Q44. Sets fires

Q45. Sexual problems

Q46. Shy or timid

Q47. Steals at home

Q48. Steals outside the home

Q49. Stubborn, sullen, or irritable

Q50. Sudden changes in mood or feelings

Q51. Sulks a lot

Q52. Suspicious

Q53. Swearing or obscene language

Q54. Talks about killing self

Q55. Teases a lot

Q56. Temper tantrums or hot temper

Q57. Thinks about sex too much

Q58. Threatens people

Q59. Smokes, chews, or sniffs tobacco

Q60. Truancy, skips school

Q61. Underactive, slow moving, or lacks energy

Q62. Unhappy, sad or depressed

Q63. Unusually loud

Q64. Uses drugs for nonmedical purposes, (don't include alcohol or tobacco)

Q65. Vandalism

Q66. Withdrawn, doesn't get involved with others

Q67. Worries

Appendix J: Hopelessness Scale – Adolescent Report

The following statements are about how some kids feel about their lives. Your answers let us know about how kids feel about things. We'd like you to tell us if the statement is **true or false** for you. If the statement is how you feel, you would say it is like you, or **true;** if the statement is not how you feel, you would say it is not like you, or **false**. There are no right or wrong answers; just tell us if the statement is like you or not.

0 True

1 False

8 Refuse to Answer

Q1. I want to grow up because I think things will be better.

Q2. I might as well give up because I can't make things better for myself.

Q3. When things are going badly, I know they won't be as bad all of the time.

Q4. I can imagine what my life will be like when I'm grown up.

Q5. I have enough time to finish the things that I really want to do.

Q6. Some day, I will be good at doing the things that I really care about.

Q7. I will get more of the good things in life than most other kids.

Q8. I don't have good luck and there's no reason to think I will when I grow up.

Q9. All I can see ahead of me are bad things, not good things.

Q10. I don't think I will get what I really want.

Q11. When I grow up, I think I will be happier than I am now.

Q12. Things just won't work out the way I want them to.

Q13. I never get what I want, so it's dumb to want anything.

Q14. I don't think I will have any real fun when I grow up.

Q15. Tomorrow seems unclear and confusing to me.

Q16. I will have more good times than bad times.

Q17. There's no use in really trying to get something I want because I probably won't get it.

Appendix K: Adolescent Delinquency Scale- Adolescent Report

Please tell us how often you do the following things. Your answers may range from never to more than once a day.

0 Never
1 Once
2 Once every 2or 3 weeks
3 Once a week
4 2 or 3 times a week
5 Once a day
6 More than once a day
7 Don't know
8 Refuse to answer

Q1. Steal a motor vehicle

Q2. Steal something worth more than fifty dollars

Q3. Buy stolen goods

Q4. Run away

Q5. Carry a hidden weapon

Q6. Steal something worth less than five dollars.

Q7. Seriously assault someone, aggravated assault.

Q8. Engage in prostitution

Q9. Engage in sexual intercourse

Q10. Are involved in gang fights

Q11. Sell marijuana

Q12. Hit a teacher

Q13. Hit a parent

Q14. Hit a student

Q15. Engage in disorderly conduct

Q16. Sell hard drugs

Q17. Go joyriding

Q18. Sexually assault someone

Q19. Strong-arm students

Q20. Strong-arm teachers

Q21. Strong-arm others

Q22. Steal something worth between five dollars and fifty dollars

Q23. Break into a building or a vehicle

Q24. Beg, panhandle

Q25. Use hallucinogens, such as LSD, PCP, mushrooms

Q26. Use amphetamines, "uppers"

Q27. Use barbituates, "downers"

Q28. Use heroin

Q29. Use cocaine, including powder, crack, or freebase

Appendix L: Youth Risk Behavior Survey – Adolescent Report

The following questions are about health behavior. Your responses will be confidential and we will not share your responses with your mother, her co-parent, or any other family members. Please answer every question as honestly as you can. Mark only one answer to every question.

The next set of questions asks about drinking alcohol. This includes drinking beer, wine, wine coolers, and liquor such as rum, gin, vodka, or whiskey. For these questions, drinking alcohol does not include drinking a few sips of wine for religious purposes.

Q7. How old were you when you had your first drink of alcohol, other than a few sips? A drink is 1 can or bottle of beer, 1 glass of wine, 1 bottle of wine cooler, 1 cocktail, or 1 shot of liquor. (Choose one)

0 I have never had a drink of alcohol other than a few sips *(Skip to instruction before Q12)*

1 8 years old or younger

2 9 or 10 years old

3 11 or 12 years old

4 13 or 14 years old

5 15 or 16 years old

6 17 years old or older

Q8. During your lifetime, how many times have you had at least one drink of alcohol? (Choose one)

1 1 or 2 times

2 3 to 9 times

3 10 to 19 times

4 20 to 39 times

5 40 to 99 times

6 100 or more

8 Refuse to Answer

Q9. During the past 30 days, on how many days did you have at least one drink of alcohol? (Choose one)

0 0 days

1 1 or 2 days

2 3 to 5 days

3 6 to 9 days

4 10 to 19 days

5 20 to 29 days

6 All 30 days

8 Refuse to Answer

Q10. During your lifetime, how many times have you had 5 or more drinks in a row, that is, within a couple of hours? (Choose one)

0 0 times Skip to instruction before Q12

1 1 or 2 times

2 3 to 9 times

3 10 to 19 times

4 20 to 39 times

5 40 to 99 times

6 100 or more times

8 Refuse to Answer

Q11. During the past 30 days, on how many days did you have 5 or more drinks in a row, that is, within a couple of hours? (Choose one)

0 0 days

1 1 day

2 2 days

3 3 to 5 days

4 6 to 9 days

5 10 to 19 days

6 20 or more days

8 Refuse to Answer

The next set of questions asks about sexual behavior. These questions will ask about vaginal intercourse, anal intercourse, and oral sex. Again, your responses will be confidential and we will NOT share your responses with your mother or the co-parent participating in this study with you. So, please answer every question as honestly as you can. However, we would like to remind you that you can refuse to answer any questions that you do not want to answer.

Q12. How old were you when you had sexual intercourse, including vaginal, anal, or oral, for the first time? (Choose one)

0 I have never had sexual intercourse Skip to instruction before Q1

1 11 years old or younger

2 12 years old

3 13 years old

4 14 years old

5 15 years old

6 16 years old

7 17 years old or older

8 Refuse to Answer

Q13. During your lifetime, how many times have you had sexual intercourse, (vaginal, anal, or oral)? (Choose one)

1 1 or 2 times

2 3 to 9 times

3 10 to 19 times

4 20 to 39 times

5 40 to 99 times

6 100 or more

8 Refuse to Answer

Q14. During your lifetime, with how many partners have you had sexual intercourse, (vaginal, anal, or oral)? (Choose one)

1 1 partner

2 2 partners

3 3 partners

4 4 partners

5 5 partners

6 6 or more partners

8 Refuse to Answer

Q15. Of the times you have had sexual intercourse, includng vaginal, anal, or oral, during your lifetime, how often have you and your partner used a condom? (Choose one)

0 I have never used a condom

1 I rarely used a condom (about 25% of the time)

2 I sometimes used a condom (about half of the time)

3 I used a condom most of the time (about 75% time)

4 I always used a condom

8 Refuse to Answer

Q16. During the past 30 days, how many times did you have sexual intercourse, (vaginal, anal, or oral)? (Choose one)

0 0 times Skip to instruction before Q1

1 1 time

2 2 or 3 times

3 4 to 9 times

4 10 to 19 times

5 20 or more times

8 Refuse to Answer

Q17. During the past 30 days, with how many partners have you had sexual intercourse, (vaginal, anal, or oral)? (Choose one)

1 1 partner

2 2 partners

3 3 partners

4 4 partners

5 5 partners

6 6 or more partners

8 Refuse to Answer

Q18. Of the times you have had sexual intercourse, including vaginal, anal, or oral, during the past 30 days, how often have you and your partner used a condom? (Choose one)

0 I never used a condom

1 I rarely used a condom (about 25% of the time)

2 I sometimes used a condom (about half of the time)

3 I used a condom most of the time (about 75%)

4 I always used a condom

8 Refuse to Answer

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