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THE INFLUENCE OF FAMILY COMPOSITION ON ADOLESCENT PROBLEM
BEHAVIOR: THE MODERATING ROLES OF GENDER AND ADULT SUPPORT

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science
in Psychology at Virginia Commonwealth University

by

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Abstract

THE INFLUENCE OF FAMILY COMPOSITION ON ADOLESCENT PROBLEM BEHAVIOR: THE MODERATING ROLES OF GENDER AND ADULT SUPPORT

By Jasmine N. Coleman, B.A.

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Psychology at Virginia Commonwealth University

Virginia Commonwealth University, 2017

Major Director: Albert D. Farrell, Ph.D., Commonwealth Professor, Department of Psychology

There is convincing support for the link between family composition and adolescents' problem behaviors. What is less clear is the extent to which these relations exist for African-American adolescents. Previous studies have demonstrated that this relation varies by gender. However, there is limited evidence to suggest the potential moderating influence of adult support. The purpose of this study was to examine the influence of family composition on adolescents' physical aggression, delinquency, and substance use. The study comes from secondary analyses of a larger study that evaluated the effectiveness of a violence prevention program. The current study included 1,116 African-American middle school students from an urban setting who endorsed living with their biological mother and considered her to be their parent. Results indicated that among adolescents who identified their nonresidential biological father as their parent, those in stepfather families reported lower levels of delinquency than those in single-mother families. Support was not found for similar differences in self-report of delinquency and substance use, and teacher-report of adolescents' physical aggression. No other

differences in family composition were found for adolescent problem behavior. Support was also not found for the moderating roles of gender or adult support. However, self-report of delinquency and substance use, and teacher-report of physical aggression were negatively related to adult support. This was not the case for self-report of physical aggression. These findings suggest that interventions may need to provide additional resources that would help both parents and adolescents within single-parent families.

The Influence of Family Composition on Adolescent Problem Behavior: The Moderating Roles of Gender and Adult Support

Research examining the impact of family composition on adolescents' adjustment has identified relations between family composition and adolescents' outcomes. However, studies have been limited by failing to account for how these relations might differ as a function of race and ethnicity. More than half of all African-American youth in the U.S. are from single-parent households (e.g., Dunifon & Kowaleski-Jones, 2002). Due to the increased risk for problem behaviors that has been associated with living in single-parent families (e.g., Mak et al., 2010; Lonczak, Fernandez, Austin, Marlatt, & Donovan, 2007) and stepparent families (e.g., Cavanagh, 2008), research examining differences among African-Americans is needed to clarify the role the family system plays in the lives of these youth. There is also a need for more research examining the factors that strengthen or weaken the relation between family composition and adolescent problem behavior. One such factor is support from an adult. African-American families, on average, tend to emphasize the importance of kinship, or the extended family (e.g., Haxton & Harknett, 2009; Richardson, 2009). The extended family may play an important role, especially among African-American youth who reside in single-parent families. Specifically, additional forms of support from other adults, such as other adult relatives, may serve to lessen the negative consequences of residing in single-parent households by alleviating the impact of lower levels of parental support (e.g., Taylor, 2010).

A second factor that may influence the relation between family composition and adolescents' problem behavior is their gender. Research suggests that the outcomes associated with residing in single-parent families may be different for male and female adolescents (e.g., Mokruue, Chen, & Elisa, 2011). For instance, one study found that the association between

residing in a single-parent household and delinquency was greater for male adolescents compared with female adolescents (Dunifon et al., 2002), whereas another study found an association for male adolescents but not for female adolescents (Vaden-Kiernan, Ialongo, Pearson, and Kellam, 1995). Additionally, studies have found that compared with other family types, male adolescents in single-mother families reported greater problem behaviors, whereas female adolescents in single-father families reported greater problem behaviors (e.g., Becerra & Castillo, 2011). These findings suggest that the relation between family composition and adolescents' problem behavior may depend on adolescents' gender.

This study examined the influence of family composition on adolescents' problem behavior through secondary analyses of data from a large project examining the effects of a school-based violence prevention program. The sample included African American sixth, seventh, and eighth grade students who provided information about who they live with and which parent they consider to be their primary caregiver. Hierarchical multiple regression was used to examine the relations between family composition and adolescents' problem behaviors (i.e., physical aggression, delinquency, and substance use). The moderating roles of gender and adult support on the relations between family composition and each of the three forms of problem behavior were tested. This study advanced the current literature on this relation by using an entirely African-American sample of adolescents from various family types. In addition, it examined moderators of adult support and investigated gender differences for multiple problem behaviors.

Literature Review

This section discusses the role that family composition plays in the family system, and the outcomes that have been associated with different types of family composition. First, studies

are presented that detail the negative outcomes that have been associated with living in various family types. Next, several theories including the family systems, the bioecological model, the family process paradigm, and social capital theory are presented to illustrate the mechanisms through which family composition might influence the development of problem behaviors in adolescents. Lastly, research regarding the roles gender and adult support may play to strengthen or weaken the relation among family composition and adolescents' problem behavior are discussed.

Family Composition and Outcomes

Distinct family composition types have been associated with adolescents' aggressive, delinquent, and substance using behaviors. The research exploring these differences has focused primarily on three types of family composition: two-biological, stepparent, and single-parent families. Much of this literature has compared adolescents in two-biological versus single-parent families, two-biological versus stepparent families, single-mother versus single-father families, and stepparent versus single-parent families. Fewer studies have compared adolescents in two-biological-parent, single parent, and stepparent families within the same study while predicting aggressive, delinquent, and substance using behaviors. For instance, studies have examined differences in adolescent substance use among those in two-biological-parent versus single-parent families (e.g., Eitle, 2005; Hollist & McBroom, 2006), and two-biological-parent versus stepparent families (e.g., Cavanagh, 2008), as well as differences in aggressive behavior for those in two-biological-parent versus single and stepparent families (e.g., Ram & Hou, 2005). However, few studies have explored differences in aggressive and delinquent behavior for adolescents in two-biological-parent versus single-parent families, or compared those in two-biological-parent families with those in stepparent families. Likewise, studies have examined

substance use, delinquency, and adjustment difficulties in stepparent and single parent families, but have not looked specifically at aggressive behaviors. This section explores the findings related to the association between family structure and adolescents' problem behavior. Given the increased likelihood of problem behaviors during adolescence, and differences in reports of problem behaviors across various family types, it is important to compare how the relation between family composition and adolescent problem behavior may vary depending on the outcomes measured.

Two-biological versus single-parent families. Studies examining the influence of family composition on adolescents' problem behavior have found differences for adolescents from two-biological-parent households compared with those from single-parent households (e.g., Murry, Bynum, Brody, Willert, & Stephens, 2001). For example, Lonczak, Fernandez, Austin, Marlatt, and Donovan (2007) assessed family composition and substance use in American Indian/ Alaska Natives between ages 13 and 19. They found that adolescents from two-biological-parent families were at a decreased risk for alcohol, cigarette, and marijuana use compared with those in single-parent families. Similarly, Jablonska and Lingberg (2007) found that among ninth graders, adolescents in two-biological-parent households were at a lower risk for use of alcohol, drunkenness, illicit drugs, and smoking than those in single-parent families. Lastly, Mak et al. (2010) found that among seventh through twelfth graders from Hong Kong, adolescents from two-biological-parent families were less likely to report being substance users compared with those from single-parent or non-parent families. These findings suggest that adolescents residing with two biological parents tend to be less likely to report substance use compared with those residing in single-parent families.

Single-mother versus single-father families. In addition to differences between two-biological and single-parent families, studies have also found differences within types of single-parent families. Specifically, among a sample of ninth graders, Jablonska and Lingberg (2007) found that adolescents living with a single mother were at a decreased risk for aggressive and substance-using behaviors compared with those living with a single father. Similarly, Hemovich and Crano (2009) examined differences in single-mother versus single-father families using a diverse sample of eighth through twelfth graders. Results indicated that adolescents living with single mothers were less likely to report marijuana use compared with those living with single fathers. Lastly, among a sample of adolescents from Hong Kung, Mak et al. (2010) found that adolescents living with a single mother were less likely to be weekly drinkers and current smokers compared with those living with a single father. These findings might be explained by the trend that more children have mothers who work outside of the home than previous years, but those mothers may continue to take on the role of primary caregiver (Bianchi, 2011). Due to the disproportionate number of women who serve as primary caregiver and work outside of the home, when parents shift to being single parents, mothers are more likely to assume the roles of both primary caregiver and primary breadwinner compared with fathers (Osborne, Berger, & Magnuson, 2012). Although fathers may also become single parents, their transition to being both primary breadwinner and caregiver may be more difficult than for single mothers. This is because fathers from dual-earner couples are likely to work longer hours than mothers, who tend to provide more caregiving than fathers. With mothers taking on both roles of breadwinner and caregiver, fathers may take longer to shift or take on the additional role, which may result in adolescents engaging in more problem behavior when they live with a single father compared with a single mother.

Stepparent versus single-parent families. Although studies have found that adolescents from both stepparent families and single-parent families tend to engage in more problem behaviors than those from two-biological-parent families, research findings examining differences between stepparent and single-parent families appear to vary depending on the outcomes measured. Kierkus and Hewitt (2009) found that among a diverse sample of adolescents aged 12 to 17, after controlling for demographics, compared with living with two biological parents, living with a biological parent and a stepparent increased the odds of delinquency behaviors by a factor of 2.45. Similarly, compared with living with two biological parents, living with only one biological parent increased the odds of delinquent behaviors by a factor of 2.58. For substance use, they found that compared with living with two biological parents, living with a biological parent and a stepparent increased the odds of substance using behaviors by a factor of 1.5, whereas living with only one biological parent increased the odds of substance using behaviors by a factor of 2.05. These findings suggest that the differences in negative outcomes among adolescents from stepparent families and single-parent families may depend on the problem behavior that is measured.

Two-biological versus single parent versus stepparent families. As previously mentioned, research comparing adolescents in two-biological, single-parent, and stepparent families on various measures of problem behaviors have been limited. When this relation has been examined, findings tend to vary depending on the outcome of interest. For instance, among a nationally representative sample of seventh through twelfth graders, Demuth and Brown (2004) found that adolescents in two-biological-parent families reported the lowest levels of delinquency, followed by those in mother-stepfather families, then father-stepmother and single-mother families, with those in single-father families reporting the highest levels of delinquency.

On the other hand, Attar-Schwartz et al. (2009) found that among 11- to 16-year-old adolescents from England, those in stepparent and single parent families reported more conduct problems (e.g., stealing) compared with those in two-biological-parent families. Upon further examination, adolescents in stepparent and single parent families did not differ from one another on their reports of conduct problems. These mixed findings may be explained by differences in the samples used. Demuth et al. (2004) sampled adolescents from the United States, whereas Attar-Schwartz et al. (2009) sampled adolescents from England. The different backgrounds that characterize these samples may play a role in the different findings that have been shown for adolescent delinquent/ conduct problems.

Studies exploring this relation for substance use have not been as mixed. Hollist and McBroom (2006) found that among predominantly European-American eighth, tenth, and twelfth graders, adolescents living with two biological parents were less likely than those in other family types to report marijuana use, including those living with one parent only, and one parent with a stepparent. Among a nationally representative sample of young adults aged 18 to 23, Barrett and Turner (2006) found that young adults who were living with only one parent during adolescence were more likely to report substance use problems compared with those living with two parents during adolescence. They did not, however, find differences among adolescents living in families with two parents, a biological parent and a stepparent, and a single parent with a relative. Cavanagh (2008) found that for seventh through twelfth grade adolescents, living in any non-two-biological-parent household during adolescence increased the odds of marijuana use by a minimum of 47%. This effect was strongest among adolescents in stepparent families. Lastly, Eitle, Johnson-Jennings, and Eitle (2013) found that among a sample of predominantly American Indian seventh through twelfth graders, adolescents who were living

with a single parent tended to report more alcohol use problems compared with those living with two parents. Additionally, they found that adolescents from stepparent families did not differ in their reports of alcohol use problems compared with those from two-parent families. These findings suggest that compared with those living in other family types, those living with a single parent are at an increased risk for substance use.

Theoretical Background

Several current theories may account for the relation between family composition and adolescents' problem behavior. Family systems theory posits that each family member plays a distinct role in how the system functions, which also contributes to the lives of those family members (Olson, Sprenkle, & Russell, 1979). The bioecological model emphasizes the importance of two parental figures, with one parent serving as a supportive resource for the second parent (Bronfenbrenner & Morris, 1989). The family process paradigm explores the negative outcomes that may be associated with deviations in the family system, such as when a parent is no longer present within the household (Cavanagh, 2008). Lastly, the social capital theory suggests that adolescents may receive different amounts of necessary resources depending on the residential status of the parents within the immediate family system, as well as the amount of time adolescents spend with the parents within the system (Coleman, 1988).

Adolescence is a period between infancy and young adulthood where the onset of many risky behaviors, such as drinking and smoking, are likely to occur (Brown & Rinelli, 2010). One factor that may increase the chances of adolescents participating in such risky behavior during this stage of development is their family environment. Families, especially parents, play an important role in how adolescents are raised and how they behave later on in life (Amato, 2009). The family system often serves as the first reference adolescents have regarding what behaviors

to model, and includes individuals who serve as models for such behaviors (Buhi & Goodson, 2007). Within a family system, adolescents are provided with their first parental figure, typically a biological parent, who takes on the responsibility for teaching adolescents important values and beliefs (Lau, Quadrel, & Hartman, 1990). In addition, parents distinguish behaviors that are socially acceptable from those that are not (Bandura, 1978; Osborne, Berger, & Magnuson, 2012). Through their interactions and the lives they create for their children, parents can influence adolescents in both positive and negative ways (Furstenberg et al., 1999; Sentse, Lindenberg, Omvlee, Ormel, & Veenstra, 2010).

In order for normal development to occur, Bronfenbrenner and Morris' (1989) bioecological model suggests that children require involvement in transactional activities with one or more individuals over an extended period of time. The nature of the interactions between caregivers and their children depends on the accessibility and active involvement of not only one parent, but also of an additional parent, or caregiver, who is able to provide assistance to a primary caregiver (Bronfenbrenner et al., 1989). A unique characteristic of the family system is that it includes a network of various familial relationships that may each contribute something different to the lives of those within the system (Cox & Paley, 1997). For instance, in the past, mothers were typically known as the primary caregivers, whereas fathers were known to be the primary breadwinners (Hofferth, Forry, & Peters, 2010). This model underscores the important role of parents within the family system.

Given the importance of individual family roles and relationships within this system, any deviation or change in the system may have negative consequences for adolescents. One change in the family system involves changes in the family composition, such as the addition or departure of family members. The family process paradigm (Cavanagh, 2008) posits that

adolescents' negative outcomes may be explained by the deviations in family roles/system functioning that typically result from changes in the family composition. Specifically, the departure of a parent within the family system may result in less parental support for both the remaining parent and the adolescent, as well as less parental contact for the adolescent (Song, Benin, & Glick, 2012). This has been supported by findings that family composition instability has a more negative impact on adolescents compared with family composition stability (e.g., Wu & Martinson, 1993). Likewise, Cavanagh (2015) found that among a diverse sample of seventh through twelfth graders, remaining in two-parent households, with either two-biological, adoptive, or stepparents, decreased the likelihood of marijuana use in adolescents. Additionally, each change in childhood family composition was associated with a 26% increase in the probability that adolescents would use marijuana. These findings suggest that remaining in a two-parent household may protect adolescents from the negative outcomes associated with changes in family composition.

Although parents are typically the ones providing the resources adolescents need to thrive, the opportunities to receive these resources may depend on the family composition of the household. Social capital theory (Coleman, 1988) posits that the relationships between and among individuals within a family system are vital in facilitating the action necessary to provide resources adolescents need to achieve their goals. The exchange of resources is accomplished when adolescents are provided access to their parents' human capital, which is often measured by parents' education and their ability to create an environment suitable for adolescents' cognitive development. Social capital may be provided in two forms: parent-child relations that include what parents do for their child (e.g., caring for, monitoring, and teaching), and parent-child relations that include what parents do with their child (e.g., spending time that would

increase the quality of their relationships; King, Harris, & Heard, 2004). The human capital that is often made accessible to adolescents is less significant if a parent is not an important part of the adolescent's life (Coleman, 1988). This may be the case with an uninvolved stepfather, as well as a nonresidential father. Youth with nonresidential parents may receive less social capital (e.g., resources such as time and money) from their nonresidential parents, which may have negative effects on their development (McLanahan & Sandefur, 1994).

Parental Involvement and Outcomes

The literature addressing parental involvement and its related outcomes has primarily focused on particular forms of involvement, such as parental monitoring, and has often overlooked the influence of nonresidential parents. Generally, parental monitoring has been inversely associated with adolescent problem behaviors (e.g., Fulkerson, Pasch, Perry, & Komro, 2008). However, adolescents from different family types do not report similar levels of parental monitoring. For instance, adolescents residing with two biological parents tend to report greater levels of parental monitoring compared with adolescents living in other family types (e.g., Zeiders et al., 2011). Additionally, due to potential loyalty conflicts (Clingempeel & Segal, 1986), adolescents residing with a residential stepfather may report lower levels of parental involvement, and may also report lower levels of parental involvement from their nonresidential biological father. This is important because high levels of parental involvement from both residential stepfathers and nonresidential biological fathers have been associated with more positive outcomes in adolescents (e.g., Ali & Dean, 2015; King, 2006). This section illustrates this gap in the literature.

Parental involvement, whether through parental monitoring or parental support, is often examined in the context of a two-biological-parent household (e.g., Yabiku et al., 2010). When

there are two parents present within a household adolescents may receive more overall involvement than they would from a single parent. Studies have found that differences exist in adolescents' outcomes for those residing in two-biological-parent families compared with other family compositions (e.g., Apel & Kaukinen, 2008; Lonczak, Fernandez, Austin, Marlatt, & Donovan, 2007). According to the 2015 U.S. Census, single parents head 14% of families with at least one child under the age of 18. Findings suggest that households headed by single parents provide adolescents with more overall stress and less economic security (e.g., Lansford, Ceballo, Abbey, & Stewart, 2001). In their study of family composition experiences in Mexican-American fifth graders, Zeiders, Roosa, and Tein (2011) found that two-biological-parent families reported lower levels of economic hardship, depression, family stress, and parent-child conflict compared with those in single-mother families. Due to the associations related to greater stress and less economic resources, different family compositions may provide varying degrees of parental involvement, which may then have positive or negative effects on adolescent problem behavior.

The role that parents play in the lives of adolescents can manifest itself in a variety of ways. The broader construct of parental involvement can be measured by how much support is provided, the degree to which parents communicate with their adolescents, the amount of conflict between parents and adolescents, whether parents know the whereabouts of their adolescents, and how responsible parents are for their adolescents. Lamb, Pleck, Charnov, and Levine (1987) proposed that parental involvement is comprised of three different categories: accessibility, engagement, and responsibility. Parental accessibility is described as the extent to which parents are available to their children. Parental engagement is characterized as parents directly interacting with their children through activities such as homework or game playing.

Whereas parental engagement and accessibility require actual parent-child interactions, parental responsibility does not (Lamb et al., 1987). Parental responsibility represents the degree to which parents strive to make sure their children are being provided for and taken care of. These activities are less about actual contact with adolescents, and focus more on the completion of background activities, such as making doctor's appointments or daycare arrangements, providing care when children are ill, and talking with teachers (Cabrera & Tamis-LeMonda, 2000).

Whereas parental accessibility and engagement have been frequently studied, research on parental responsibility has been limited.

Unlike the accessibility and engagement categories, there is limited agreement on how to measure parental responsibility. Pleck (2012) proposed adopting an extension of Lamb et al.'s (1987) model that would include four parental involvement categories instead of three. His proposal included positive engagement activities, warmth and responsiveness, control, and two supplementary domains that represent responsibility. These responsibility domains include social and material indirect care, and process responsibility. The positive engagement activities category is similar to Lamb et al.'s (1987) engagement category in that it highlights active and physical parent-child interactions. The warmth and responsiveness category relates to Lamb et al.'s (1987) accessibility category in that it emphasizes parents' availability and responsiveness to their children's needs. The control domain is an additional category that relates to parents' level of involvement in monitoring their adolescents' whereabouts. Lastly, the social and material indirect care and process responsibility categories attempt to specify the areas in which parents may be responsible for their adolescents. Particularly, social and material indirect care is characterized by necessary activities that parents do for their children, but not with their children. This category maps closest to Lamb et al.'s (1987) parental responsibility. On the other hand,

process responsibility recognizes parents who make it their jobs to provide all of the other four parental involvement components. Both Lamb et al. (1987) and Pleck's (2012) models illustrate how parental involvement can take on different forms.

Parental monitoring. Although some parents attempt to provide adolescents with all four types of parental involvement, much of the literature examining parental involvement has focused on the positive outcomes that are typically associated with parental monitoring. Specifically, the control domain has often been explored using measures of parental monitoring, which is one of the most frequently measured forms of parental involvement. Parental monitoring is typically used to gather and communicate information on adolescents' whereabouts and activities when parents are not physically present. Lee and Randolph (2015) examined both the direct and indirect relation between parental monitoring and aggressive behavior among tenth grade adolescents in the U.S. and South Korea. Using archival data from two nationally representative studies, they found a negative association between parental monitoring and aggressive behavior for youth in both the U.S. and South Korea. Likewise, studies examining this relation have also found that adolescents who report higher degrees of parental monitoring tend less frequently engage in deviant and substance-using behaviors (Barnes & Farrell, 1992; Borawski, Ievers-Landis, Lovegreen, & Trapl, 2003; Fulkerson, Pasch, Perry, & Komro, 2008; Shillington et al., 2005).

Parental monitoring has been associated with positive outcomes in adolescents; however, adolescents in different family compositions may receive varying levels of parental monitoring. Single mothers often engage in lower levels of parental monitoring (e.g., Simons, Whitbeck, Beaman, and Conger, 1994) whereas adolescents in two-biological-parent households typically receive more parental monitoring than adolescents in other family types (Zeiders et al., 2011).

This was also supported by findings from Wagner et al. (2010) indicating that residing with a single mother was related to less parental monitoring. Dumas and Wahler (1983) suggested that parental monitoring might be more effective in a family headed by two biological parents compared with a single parent.

Parental support. Parental support, as demonstrated by parents providing assistance when their children are in need, managing their children's emotional needs, and understanding their children's identities, is one way in which parents are involved in their children's lives (Becerra & Castillo, 2011; Rollins & Thomas, 1979). This form of involvement is most closely related with Pleck's (2012) warmth and responsiveness category. Parental support focuses less on physical need and more on emotional need, and has been found to be associated with adolescent adjustment. For instance, Gamble and Dalla (1997) examined parental support among European- and Mexican-American children aged 5 to 8 years old. They found that higher levels of parental support were associated with lower levels of children's externalizing behaviors. These findings have been replicated in adolescent samples as well. In a study examining social support as one resource for reducing aggression in Israeli adolescents, Hamama and Ronen-Shenhav (2012) found negative associations between social support and measures of both general and physical aggression. Specifically, higher scores on perceived parental support were associated with lower scores of general and physical aggression. Adolescents' perceptions of parental support have also been related to delinquent outcomes. For example, Keijsers, Frijns, Branje, and Meeus (2009) examined changes in parental support on adolescents' delinquent activities among a sample of 13- to 16-year-old adolescents. Results indicated that compared with adolescents who reported higher levels of parental support, those indicating lower levels were more likely to report higher levels of delinquent behaviors.

Parent residential status. The family systems theory focuses primarily on parental involvement that takes place within the primary household; however, given the number of adolescents in single-parent and stepparent families, it is important to explore the potential influences of nonresidential parents on adolescents' problem behavior. For instance, Ali and Dean (2015) examined the relation between nonresidential father involvement and adolescent substance use. Among their nationally representative sample of seventh to twelfth graders, they found that increases in nonresidential father involvement were related to a 3% decrease in the number of cigarettes adolescents smoked in the last 30 days, and a 14% decrease in the likelihood of adolescents becoming smokers. Using a similar sample, Hawkins, Amato, and King (2007) reported that active fathering by nonresidential fathers was inversely related to adolescents' externalizing problems, including delinquency, substance use, and violent behavior. Lastly, Jordan and Lewis (2005) reported comparable results among a nationally representative sample of seventh through twelfth graders in findings that indicated that adolescents who reported feeling close to their nonresidential fathers were less likely to have ever drunk alcohol.

Studies have shown that nonresidential mothers and nonresidential fathers differ in their levels of parental involvement. Specifically, among a nationally representative sample of seventh through twelfth graders, Hawkins et al. (2006) found that nonresidential mothers exhibited higher levels of parental involvement compared with nonresidential fathers, who exhibited the lowest levels of parental involvement. They also found that ratings of nonresidential mothers' closeness were higher compared with nonresidential fathers' closeness. Gunnoe and Hetherington (2004) found similar results among a sample of predominantly European-Americans aged 10 to 18. They found that ratings of nonresidential mothers' closeness were higher than those of nonresidential fathers' closeness. Taken together, these findings suggest that

although nonresidential parental involvement is linked to more positive outcomes in adolescents, those with nonresidential fathers may be less likely to benefit from such involvement.

Biological nonresidential father versus residential stepfather. The use of the word stepparent reflects the assumption that they serve a parent-like function and provide for adolescents in a way that a biological parent would (Fine, Coleman, & Ganong, 1998). However, residential stepfathers' level of involvement in adolescents' lives may depend on their role, or status, within the family system. For instance, some stepparents are treated more as third-party individuals who are able to develop relationships with their stepchildren, but who sometimes have no legal rights as official parents (Mahoney, 2006). This treatment of stepparents as third-party individuals often creates a sense of ambiguity in perceptions of the role of stepparents within the family system (Sweeny, 2010), which has been found to be related to poor family functioning (e.g., Brown & Manning, 2009). Although there may be ambiguity related to having a stepparent, the addition of a stepparent may lead to increases in resource availability. Specifically, Morrison and Ritualo (2000) found that transitioning from a single-parent family to a stepparent family was associated with increases in economic stability (Morrison et al., 2000). Additionally, resources in the form of time may be provided if stepparents take on a caretaking role in a way that frees up time for the other parent.

Residential stepfathers' level of involvement in adolescents' lives may also depend on the involvement of the nonresidential biological father. As suggested by Coleman and Ganong (1992), stepfathers are less likely to take on the fathering role if the biological father is still actively involved in their adolescents' lives. In this arrangement, stepfathers serve more of a complementary role to the biological fathers' role. The exception to this is when adolescents have less contact with their biological fathers. The rationale is that when both the biological and

stepfathers take on an active fathering role, adolescents may experience loyalty conflicts in which they have difficulty forming attachments with stepparents out of worry that they will be hurting their relationships with their biological father (Clingempeel & Segal, 1986).

Nonresidential biological fathers may also experience conflicts where they believe that a stepparent who assumes the role of parent may disrupt the nonresidential biological parents' bond with their adolescent (Stewart, 1999). When determining their involvement in adolescents' lives, both nonresidential biological fathers and residential stepfathers take into account the costs and benefits associated with caring for a biological versus non-biological child (Thomson, Hanson, & McLanahan, 1994).

Nonresidential biological fathers and residential stepfathers may each contribute to an adolescent's family system; however, few studies have compared variations in these influences as predictors for adolescents' problem behaviors. One study examined the influence of father's residential status and involvement and how both contributed to adolescents' problem behaviors. Specifically, Carlson (2006) found that among a racially and ethnically diverse sample of 10 to 14 year olds, father involvement was more protective for adolescents' externalizing problems, but not for delinquency, when the fathers shared the same residency with adolescents compared with when they did not. She also found that a higher level of nonresidential father involvement was negatively related to externalizing problems, but not to delinquency. It is important to note that these particular analyses were limited to biological fathers only, and did not look at the influence of residential stepfathers.

Another study examined adolescents' perceptions of whether they believe they matter, or are important, to their father or stepfather. Specifically, Schenck et al. (2009) found that among a sample of seventh grade Mexican- and Anglo-American adolescents, those who perceived that

they mattered to their nonresidential biological fathers reported lower levels of mother-, self-, and teacher-report of internalizing behaviors compared with those who did not. However, adolescents who perceived that they mattered only to their stepfathers reported lower levels of self-report of internalizing behaviors. Additionally, adolescents who perceived that they mattered to their stepfathers reported lower levels of stepfather- and self-report of externalizing problems (e.g., aggressive and delinquent behaviors) compared with those who did not. There were no significant main effects for mattering to nonresidential biological fathers. Finally, there was an interaction that indicated that when levels of mattering to nonresidential biological fathers were low, mattering to stepfathers was negatively associated with externalizing problems. However, when levels of mattering to nonresidential biological fathers were high, mattering to stepfathers was not associated with externalizing problems. These findings suggest that when adolescents do not believe they matter to their nonresidential biological fathers, believing they matter to their stepfathers may protect them from engaging in problem behaviors.

In addition to outcomes related to feelings of importance from nonresidential biological fathers and residential stepfathers, studies have also examined outcomes related to feelings of closeness. For instance, King (2006) examined this relation among a nationally representative sample of seventh through twelfth graders. They found that adolescents who were close to both fathers tended to have the best outcomes in terms of externalizing and internalizing problems, and they tended to be younger males who reported being close to their mothers. Adolescents who were close only to their stepfathers, on the other hand, tended to have the second best outcomes, whereas those close only to their biological father and those close to neither father tended to have less positive outcomes. Adolescents close only to their biological father or close to neither tended to be older females who were not close to their mothers. They found no differences

between these two groups of adolescents with regard to externalizing and internalizing problems, but found that those close only to their biological father received higher academic grades than those close to neither father. These findings suggest that for internalizing and externalizing problems, being close to a residential stepfather is more protective than being close to a nonresidential father. However, being close to both fathers was related to more positive outcomes.

As previously illustrated, adolescents who report being close to both their biological fathers and stepfathers tend to report more positive outcomes; however, adolescents' reports of closeness to these father or stepfather tend to vary based on family composition. Specifically, Falci (2006) found that among a nationally representative sample of 14- to 22-year-olds, youth in stepfather families reported less closeness to their stepfathers compared with how adolescents in two-biological-parent families reported on their biological fathers. Additionally, whereas they reported no differences in closeness of adolescents' perceptions of nonresidential biological and residential stepfathers, they did find that adolescents in stepfamilies reported more closeness to their nonresidential biological fathers compared with adolescents in single-parent families.

In summary, studies have shown that adolescents from two-biological-parent families tend to have a decreased risk for aggression, delinquency, and substance use. Research has been mixed with regards to perceived parental involvement and adolescent outcomes for youth residing in single-parent families compared with stepparent families. For instance, some studies have found that adolescents in stepparent families experience greater levels of parental support and monitoring. However, studies have also shown that adolescents residing in stepparent families report less substance use but more adjustment problems than those in single-parent families. Other studies have found interactions between parental residential status and parental

closeness on adolescent outcomes. Specifically, being close to their stepfather appears to protect adolescents from negative outcomes, especially if adolescents are not close to their nonresidential biological father. Lastly, having a caring father or stepfather, regardless of residential status, may be related to more positive outcomes in adolescents (Lamb, 1986).

African-American Families

According to the 2015 U.S. Census, 38% of African-Americans under the age of 18 were living with both of their parents (i.e., married to each other or not married to each other), 50% were living with a mother only (i.e., married spouse absent, widowed, divorced, separated, never married), 4% were living with a father only (i.e., married spouse absent, widowed, divorced, separated, never married), and 8% were living with neither parent. As previously illustrated, living with two biological parents decreases the risk that adolescents will engage in problem behaviors. However, this family structure is not the reality for many African-American youth. This disproportion is important because it highlights the need to further examine the influence of family composition on adolescents' problem behavior, with an emphasis on African-American youth.

Although more African-American youth live in single mother families compared with youth from other racial/ ethnic groups (Murry, Bynum, Brody, Willert, & Stephen, 2011), this was not always the case. African-American families were not always composed of predominately single-mother families, but were instead headed primarily by fathers in what was considered a nuclear family structure (i.e., two-biological parent households; Ruggles, 1994). Specifically, from the 1860s up until the 1960s, two-biological-parent families were the norm for African-Americans (Poussaint, 1996). Findings suggest that in the 1940s, African-American youths were not more likely to belong to a single-mother family compared with European-

Americans. It was not until between the 1960s and 1980s when the number of African-American single-mother families began to increase significantly, whereas levels of single-parent families remained stable for European-Americans (Ruggles, 1994). During this time, about 37% of African-American children under the age of 14 were living with a single mother. As evident by the U.S. Census data, African-American single-parent families have continued to increase in number (i.e., currently 50% live in single-parent families), and have surpassed that of two-biological-parent families (i.e., currently 38% live in two-parent families).

There have been various reasons put forth to explain the rise of single-parent families for African-Americans. One major reason suggested is mass incarceration of African-American men. Specifically, during the 1980s, in an effort to combat drugs and increases in crime rates, the role of the criminal justice system was strengthened (Western & Wildeman, 2008). The expansion of harsh sentencing policies had a negative impact on African-American men who were likely to be jobless and uneducated during the 1960s and 1970s (Western et al., 2008). This shift resulted in many African-American mothers raising children by themselves or with the help of extended kin. Single mothers who do not live with extended kin, they may still seek social support from nonresidential family members (Roy & Burton, 2007). Other reasons suggested include rises in premarital pregnancies that did not always end in marriage (Ellwood & Jencks, 2004). Lastly, the 1960s experienced a surge of women into the labor force (Teachman, Tedrow, & Crowder, 2000). During this time, many women were able to find work, whereas opportunities for men began to decline. This shift in employment opportunities was believed to have contributed to marital instability among African-American men and women (Ruggles, 1994). This marital instability among these families has continued with many African-American

families being headed by single mothers who may instead choose to live with extended kin, such as grandparents (Ruggles, 1994).

In attempting to explain how African-American adolescents' family composition is related to problem behavior, it is essential to explore the differences in parental involvement that differentiate African-American families from those of other racial/ ethnic backgrounds. Specifically, Hofferth, Forry, and Peters (2010) found that among 11- and 12-year-old adolescents, African-American children reported greater maternal involvement than European-American children. However, Cooper, Crosnoe, Suizzo, and Pituch (2010) found that among a nationally representative sample of kindergarteners, European-American parents reported the highest levels on each of their four measures of parental involvement (i.e. cognitively stimulating materials, organized activities, home-learning activities, and school-based involvement) compared with parents of other racial/ ethnic groups. The findings for specific types of involvement have not been as inconsistent as findings for more general measures of parental involvement. Particularly, Tragesser, Beauvais, Swaim, Edwards, and Oetting (2007) found that among seventh to twelfth grade adolescents, African-American youth reported higher levels of parental monitoring compared with their European- and Mexican-American peers. Although the findings regarding African-American families with two biological parents and overall levels of parental involvement tend to vary depending on how parental involvement is measured, these findings suggest that African-American adolescents in two-biological parent families tend to report high levels of parental involvement.

Given the large percentage of African-American youth who reside in other family types, it is important to assess differences in African-American adolescent outcomes as a function of family type. For instance, Simons, Chen, Simons, Brody, and Cutrona (2006) found that among

10- to 12-year-old African-American children, those in two-biological-parent families, mother-grandmother families, and mother-relative families exhibited fewer problem behaviors compared with those in single-mother and stepfamilies. On the other hand, among a sample of African-American males aged 8 to 13, Shields and Piece (2001) found no support for the association between family composition and problem behaviors, including aggression. Taken together, these studies suggest that the relation between family composition and African-American adolescents' problem behavior may vary depending on the samples used.

In summary, African-American, two-biological-parent families experience high levels of parental involvement. These benefits, however, may not exist for many of the African-American adolescents who reside in single-parent families and stepparent families. Similar to results found in nationally representative samples, African-American adolescents in single-parent families have less positive outcomes than adolescents in other family types.

Non-Parental Adult Support

In addition to receiving adult support from parents, adolescents may also receive support from other adults, such as other family members. Due to the emphasis on kinship support that is often found in African-American families, African-American adolescents, particularly those not residing in two-biological-parent households, may benefit from additional adult support from someone who is not their parent. Having an adult to provide support may mitigate the negative relation that exists between different family types and adolescents' problem behaviors.

Data indicate that many African-American adolescents do not reside in two-biological-parent households, which may decrease the amount of parental support that is provided to them. However, if they do not receive that support from their parents, they may be able to receive it from other sources. The social convoy theory posits that throughout the lifespan, individuals are

surrounded by social networks consisting of a variety of individuals, including other adults, who provide them with support (Kahn & Antonucci, 1980). Many studies have examined the relation between different family types and the characteristics of two-biological-parent households, such as parental monitoring and parental support. Yet, the number of studies that have examined the relation between adult support and different forms of parental involvement on adolescent outcomes is limited. In line with the Process-Person-Context-Time model (Bronfenbrenner & Morris, 1998), as young children get older, other individuals, such as relatives, teachers, and mentors, play an interactive role in their development. These are often individuals who adolescents feel they can depend on in times of need, and may influence adolescent outcomes.

Reliance on other adults in support systems among African-American adolescents is not a new concept. African-American families, possibly due to many children and adolescents not living with both parents, have relied, and continue to rely on family or kin support. In particular, single-mothers often find support and assistance from their female kin (Haxton & Harknett, 2009). Additionally, uncles may serve as father figures to children and adolescents who do not have a father available (Richardson, 2009). Coll et al (1996) suggested that support provided by extended family members, due to cultural beliefs, and economic or practical necessity, plays an important role in the functioning of the family system. In support of this belief, Taylor (2010) found that among African-American mothers, kinship support was positively related to mothers' parenting. Additionally, results indicated that kinship support was inversely related to adolescents' externalizing problems. Lastly, an interaction existed in which kinship support and mother-adolescent communication interacted to influence externalizing problems. Specifically, he found that the association between difficulties with mother-adolescent communication and adolescents' externalizing problems was less visible when mothers reported high levels of

kinship support. These results may be explained by the idea that receiving high levels of kinship support may be related to more positive outcomes in African-American youth by positively influencing (e.g., providing social support) African-American single parents (Murry, Bynum, Brody, Willet, & Stephens, 2001). These findings underscore the important role that additional support from family members plays in both mothers' and adolescents' functioning.

In addition to examining the importance of kinship support, other studies have explored the influence of mentorship on adolescent outcomes. For instance, among an emerging adult sample, Hurd, Stoddard, Bauermesiter, and Zimmerman (2014) found that compared with not having a natural mentor, having a familial natural mentor predicted an increased sense of purpose in life. Additionally, they found that having a non-familial natural mentor was associated with less alcohol, cigarette, and marijuana use. In a study that did not differentiate between familial versus non-familial mentors, Beier, Rosenfeld, Spitalny, Zansky, and Bontempo (2000) found that among individuals aged 12 to 23, those with an adult mentor were less likely to smoke 5 or more cigarettes per day, use illicit drugs in the past 30 days, and carry weapons. Having a mentor, however, was not associated with alcohol use in the past 30 days.

Studies have also explored the role that having a natural mentor plays in emerging adulthood. For instance, DuBois and Silverthorn (2005) found that among 18- to 26-year-olds, those who reported having a natural mentor were more likely to have completed high school and attended college. Similarly, those with natural mentors had a decreased likelihood of being a part of a gang, hurting someone in a fight during the past year, and participating in risky behaviors. It was also found to be associated with higher levels of self-esteem and life satisfaction. The subjective view of whether adolescents believe they have access to a caring adult may serve as a protective factor against adolescent problem behaviors. These findings highlight the need for

investigation into how well adult support interacts with family composition to protect adolescents from negative outcomes.

In summary, due to the number of African-American children and adolescents not residing in two-biological-parent households, these adolescents may benefit from having an adult from whom they can seek support. Studies suggest that having kinship support or having a familial or non-familial natural mentor may protect adolescents against negative outcomes. Additionally, research indicates that having this added support may extend into positive outcomes during early adulthood and may also help to weaken the relation between family composition and adolescents' problem behaviors.

Gender Differences

Studies have found that the relation between family composition and adolescent negative outcomes depend on the gender of the adolescents. Specifically, Vaden-Kiernan, Ialongo, Pearson, and Kellam (1995) found that for male adolescents, those from single-mother families were significantly more likely to display higher levels of teacher-rated aggression in the sixth grade compared with those in two-biological and mother-male partner families. The same was not found for female adolescents. On the other hand, Mokruue, Chen, and Elias (2011) examined the moderating role of child gender on the relation between family composition and externalizing problems, including aggression and temper control. Within a predominately African-American sample of second and third grade children, they found that girls in single-mother households reported greater levels of externalizing behavior than those in two-biological-parent households. They found no significant differences among those in two-biological-parent, single-father, and parent-absent households. Similar results were not found for boys. In contrast, boys in parent-absent and single-father households reported greater levels of externalizing behavior than those

in two-biological-parent households. Additionally, boys in single-father households reported greater levels of externalizing problems than those in single-mother households. They found no difference between those in single-mother and two-biological-parent households. Although the previous studies found differing results for male and female adolescents, Frojd, Kaltiala-Heino, and Rimpela (2007) found that male and female adolescents did not vary in the relation between family composition and substance using behaviors. Specifically, among a sample of eighth and ninth grade male and female adolescents, those living with a single parent or a stepparent reported greater substance using behaviors compared with those living with two biological parents.

Other studies have also found gender differences for outcomes related to adolescent substance use and delinquency. For instance, among a sample of seventh and eighth grade, African- and European-American adolescents, Paxton, Valois, and Drane (2007) found that among African-American male adolescents, those residing in stepfather families, and single-mother with other adult families were more likely to report cigarette initiation and marijuana use compared with those residing within two-parent families. On the other hand, among African-American female adolescents, those residing in stepmother families and single-father with other adult families were more likely to report cigarette use compared with those residing in two-parent families. Additionally, Dunifon and Kowaleski-Jones (2002) found that among 10- to 14-year-olds, whereas adolescents in single-parent families were more likely to report higher levels of delinquent behavior, the association was greater for male adolescents compared with female adolescents.

Previous studies have examined family composition as it relates to the presence of biological or stepparents within the household. However, families can also include individuals

who do not reside within the adolescents' household, but who still influence adolescents' lives in some way (Murry, Bynum, Brody, Willert, & Stephens (2001). Cobb-Clark and Tekin (2014) included the presence of nonresidential biological fathers within their measure of family composition. They examined the relation between having a present father or stepfather and adolescents' delinquency, with separate analyses for male and female adolescents. They found that for male adolescents, the presence of a father or stepfather significantly reduced the chances of engaging in delinquent behavior compared with the absence father or stepfather. For female adolescents, they found that those with a present nonresidential biological father and/ or a stepfather did not differ from those without a nonresidential biological father and/ or a stepfather in their reports of delinquency. These findings suggest that male and female adolescents differ in their associations between family composition and problem behavior. Taken together, these findings suggest the importance of considering the gender of the adolescent when examining how family composition influences adolescent problem behaviors.

Statement of the Problem

Relatively few studies were found that compared adolescents in two-biological-parent families with those in both stepparent families and single-parent families on reports of problem behaviors. Even fewer studies included African-American adolescents in their samples. Even when African-American adolescents were included, subgroup analyses were typically not conducted to explore whether the relation between family composition and adolescent problem behavior varied by race/ ethnicity. This is particularly important because currently, about 50% of African-American youth reside in single-parent households (U.S. Census Bureau, 2015). The literature suggests that parental involvement is relatively high among African-American adolescents living with two biological parents (e.g. Hofferth, Forry, & Peters, 2010). However,

because less than half of African-American adolescents reside in two-biological-parent households, findings based on nationally representative samples may not generalize to African-American adolescents. This study examined this relation among a sample of African-American youth.

Some previous studies examining differences in family structure have combined delinquency, substance use, and aggression into an overall externalizing variable. For instance, these composites have included delinquency, substance use, and violent behavior (Hawkins et al., 2007), aggressive and delinquent behavior (Schenck et al., 2009), and aggression and temper control (Mokruue et al., 2011). Studies that have examined outcomes separately, such as delinquency and aggression, have found different effects for adolescents living in two-biological-parent families, stepparent families, and single-parent families (e.g., Attar-Schwartz et al., 2009; Barrett & Turner, 2006). Specifically, Attar-Schwartz et al. (2009) found that adolescents in stepparent families and those in single-parent families reported greater levels of delinquency compared with those in two-biological-parent families. However, Barrett and Turner (2006) found that adolescents in two-biological-parent families reported lower levels of substance use compared with those in single-parent families, but that adolescents in stepparent families and single-parent with a relative families did not differ from those in two-biological-parent families. By focusing on a single externalizing problem, studies may not detect differences in the influences across different forms of problem behavior. This study measured each problem behavior individually.

Some of the studies that included African-American samples of adolescents were limited in that they only measured a single problem behavior. Specifically, Cavanagh (2008) measured adolescent substance use, whereas Demuth & Brown (2004) measured delinquency. Adolescence

is a period where the onset of reckless behaviors tends to occur (e.g., Brown & Rinelli, 2010; Steinberg, 2007), which means that adolescents may begin to participate in more substance using, delinquent behavior, and aggression. Many of the reviewed studies measured delinquent and substance using behaviors, however, relatively few have examined the influence of family composition on aggression. When aggression was examined with limited family types, it was measured as an overall construct without considering different forms of aggression. This is an issue because studies have found support for separate forms of aggression that include physical, relational, and verbal aggression (e.g., Farrell, Sullivan, Goncy, & Le, 2016). The current study used an empirically validated measure of physical aggression in examining the relation between family composition and adolescent problem behavior.

Another limitation of previous studies is the sole reliance on adolescent self-report for problem behaviors. Many of the studies examining the influence of family composition on adolescents' problem behavior have been limited to a single source of information, which was typically self-report. Self-report measures tend to be subject to social desirability effects (Shields, 2002). Although the literature is consistent in the belief that adolescents are able to report on their own behaviors (e.g., Frick, Barry, & Kamphaus, 2010), it may be advantageous to obtain both self- and teacher-report on behaviors such as aggression. Adolescents and their teachers, just like caregivers, may have different perspectives of adolescents' behavior problems (e.g., Laird & Weems, 2011). In addition to adolescent report, this study also used teacher-report to assess physical aggression. This additional informant may provide useful information to understanding this relation.

This study added to the literature by examining the influence of family composition on African-American adolescents' physical aggression, delinquency, and substance using behaviors.

The literature review found no other study that examined more than two of the major family types (i.e., two-biological, stepparent, and single-parent) and three types of problem behaviors during adolescence (i.e., physical aggression, delinquency, and substance use) with a sample of African-American adolescents. In contrast to previous studies, this study used separate measures of problem behaviors instead of combining them into one externalizing variable. This study also examined physical aggression, in contrast to other studies that have measured overall aggression (i.e., Shields & Piece, 2001). By measuring the problem behaviors individually, and by measuring physical aggression rather than a broader measure of aggression, this study may provide a greater understanding of how family composition influences these outcomes.

The present study also added to the existing literature by including parental and other adult support, and gender as moderators. Given the emphasis placed on kinship support (e.g., Haxton & Harknett, 2009), African-American adolescents who are not in two-biological-parent households may benefit from receiving support from other sources. Studies have found that the relation between family composition and adolescent problem behaviors tend to vary for male and female adolescents (e.g., Mokruue, Chen, & Elias, 2011). Both gender and adult support may weaken the negative relation associated with living in different family types and adolescents' problem behaviors.

This study examined the following six family compositions: adolescents living with both their biological mother and father who consider both to be their parent (TB-M/BF), adolescents living with their biological mother and stepfather who consider both to be their parent (MSF-M/SF), adolescents living with their biological mother and stepfather who consider their biological mother and nonresidential biological father to be their parent (MSF-M/BF), adolescents living with their biological mother who consider both their mother and

nonresidential father to be their parent (M-M/BF), adolescents living with their biological mother and stepfather who only consider their mother to be their parent (MSF-M/), and adolescents living with their biological mother who consider only their mother to be their parent (M-M/). The term father figure was used to characterize biological and stepfathers who adolescents consider to be in a parental role.

The following hypotheses were addressed:

1. Family composition will be related to adolescents' problem behavior including physical aggression (adolescent and teacher report), delinquency (adolescent report), and substance use (adolescent report). The following contrasts were used to test each hypothesis (see Figure 1):

a. Presence or absence of a residential biological father figure: TB-M/BF < MSF-M/SF, MSF-M/BF, M-M/BF, MSF-M/, M-M/

Adolescents who have a residential biological father will have lower frequencies of self- and teacher-reported problem behavior compared with adolescents from the other five family composition combinations.

b. Presence or absence of any father figure for adolescents not in two-parent families: MSF-M/SF, MSF-M/BF, M-M/BF < MSF-M/, M-M/

Among adolescents living with a mother only or a mother and stepfather, adolescents who consider their father or stepfather to be a parent will have lower frequencies of self- and teacher-reported problem behavior compared with adolescents who do not consider their father or stepfather to be a parent.

c. Presence or absence of a residential father figure for adolescents not in two-parent families: MSF-M/SF < MSF-M/BF, M-M/BF

Among adolescents not living with both biological parents, those who consider their residential stepfather to be their parent will have lower frequencies of self- and teacher-reported problem behavior compared with those who consider their nonresidential biological father to be their parent.

- d. Presence or absence of a stepfather for adolescents with a nonresidential biological father figure: MSF-M/BF < M-M/BF

Among adolescents not living with their biological father, but who consider their biological father to be their parent, those living with a stepfather who they do not consider to be a parent (i.e., stepfather family) will have lower frequencies of self- and teacher-reported problem behaviors compared with those in a single mother family.

- e. Presence or absence of a stepfather for adolescents with no other identified father figure: MSF-M/ < M-M/

Among adolescents not living with a biological father who do not identify a male parent, those living with a stepfather will have lower frequencies of self- and teacher-reported problem behaviors compared with those in a single mother family.

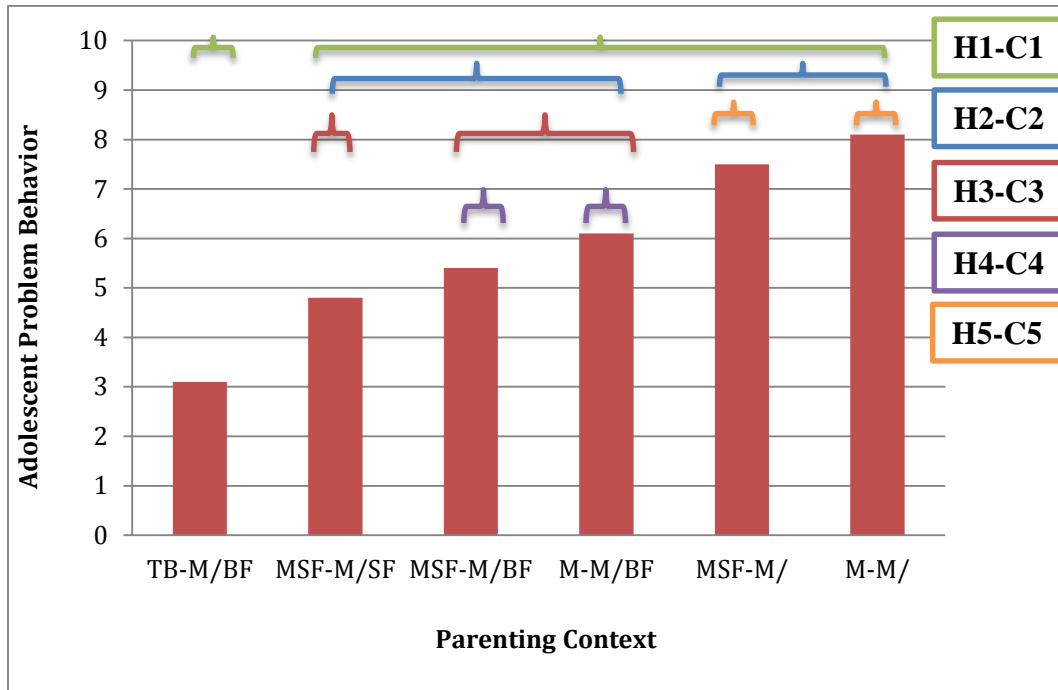


Figure 1. Hypothesized effect of family composition on adolescents' problem behavior.

Note. H=Hypothesis. C=Contrast. TB-M/BF = Two biological parents. MSF-M/SF = Lives with mother and stepfather, and considers stepfather to be father figure. MSF-M/BF = Lives with mother and stepfather, and considers biological father to be father figure. M-M/BF = Lives with mother only, and considers biological father to be father figure. MSF-M/ = Lives with mother and stepfather, and considers no one to be father figure. M-M/ = Lives with mothers, and considers no one to be father figure.

- Gender (female versus male) will moderate the relation between family composition and adolescents' problem behavior including physical aggression (adolescent and teacher report), delinquency (adolescent report), and substance use (adolescent report), such that differences will be larger for male adolescents compared with female adolescents (see Figure 2).

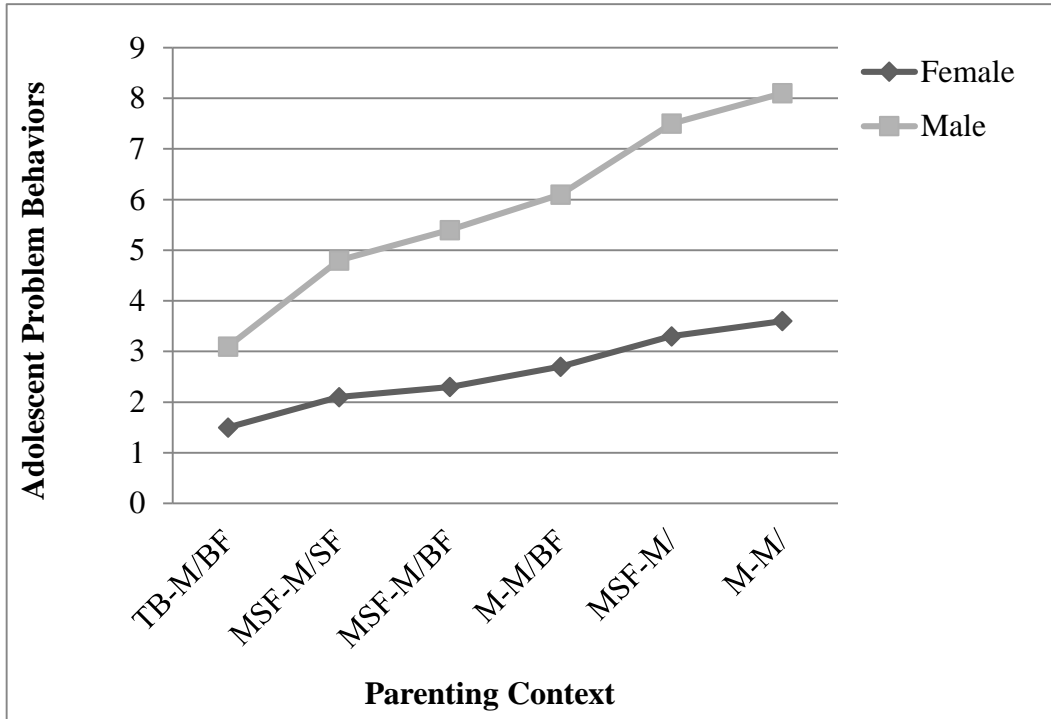


Figure 2. Hypothesized effects for moderating role of gender on adolescents' problem behaviors.

Note. TB-M/BF = Two biological parents. MSF-M/SF = Lives with mother and stepfather, and considers stepfather to be father figure. MSF-M/BF = Lives with mother and stepfather, and considers biological father to be father figure. M-M/BF = Lives with mother only, and considers biological father to be father figure. MSF-M/ = Lives with mother and stepfather, and considers no one to be father figure. M-M/ = Lives with mothers, and considers no one to be father figure.

- Adult support (low versus high) will moderate the relation between family composition and adolescents' problem behavior including physical aggression (adolescent and teacher report), delinquency (adolescent report), and substance use (adolescent report), such that the relation will be less evident as the level of adult support increases (see Figure 3).

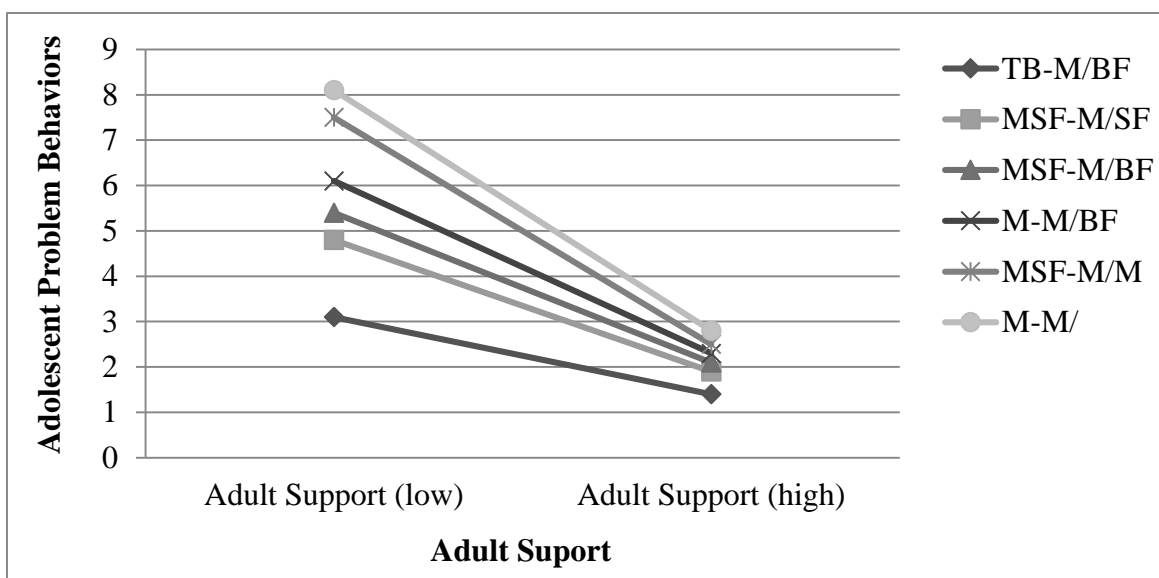


Figure 3. Hypothesized effect for moderating role of adult support on adolescent problem behaviors.

Note. TB-M/BF = Two biological parents. MSF-M/SF = Lives with mother and stepfather, and considers stepfather to be father figure. MSF-M/BF = Lives with mother and stepfather, and considers biological father to be father figure. M-M/BF = Lives with mother only, and considers biological father to be father figure. MSF-M/ = Lives with mother and stepfather, and considers no one to be father figure. M-M/ = Lives with mothers, and considers no one to be father figure.

Methods

Participants

The study was based on secondary analyses of data from a project evaluating the effectiveness of a school-based violence prevention program. Participants were students attending three public middle schools in a medium-sized, city in the southeastern United States who were recruited between 2010 and 2015. The three middle schools had a predominantly African-American student population. All three schools participated in the National School Lunch Program (NSLP), and most of the students were eligible for free or reduced lunch (i.e., 98%). The cross-sectional sample examined in the current study was based on a single randomly selected wave of data from each participant such that there were a similar number of students

from each grade at each time of year. The sample consisted of students who endorsed being ‘African-American or Black’ for one or more of the racial codes ($N = 1,759$), with 14% of those adolescents endorsing additional categories including Hispanic/ Latino, American Indian or Alaska Native, Asian, Native Hawaiian or other Pacific Islander, and White. Of these, 294 adolescents were excluded because they did not live with their biological mother, 33 because they did not consider their biological mother to be their parent, and 316 because they did not belong to one of the six family composition combinations of interest. Of the 316 participants who did not represent the combinations of interest, some categories included those who only were living with their biological father ($N = 61$), a family member ($N = 71$), or a non-familial adult ($N = 92$). The final sample of 1,116 included 353 sixth, 370 seventh, and 393 eighth graders. The majority (i.e., 99.5%) of adolescents in the sample were between the ages of 11 and 15 ($M = 12.71$, $SD = 1.07$). The sample was about evenly divided by gender (54% female).

Procedure

Approximately 210 students were randomly selected from each grade (i.e., sixth, seventh, and eighth) from each of the three schools in the fall of 2010. During each following year, a random sample of new sixth graders was recruited along with a random sample of seventh and eighth graders to replace students who left the study. One school received the intervention at the start of Year 2, a second school received it in Year 3, and the remaining school had not yet received the intervention before the last wave of data collection. In order to reduce participant fatigue and testing effects, a missing-by-design method was used in which each participant was randomly assigned to complete two of four assessment waves per year. Active student assent and parental consent were obtained from all participants. Students were assured that there would be no negative consequences if they decline or discontinue their participation. Students received a

\$5 gift certificate for returning consent forms even if they did not agree to participate and a \$10 gift certificate for each time they were assessed. Research staff administered surveys to most participants in groups of 20 to 30 in classrooms or in the schools' media centers. All measures were administered in English, and students completed the measures using a computer-assisted personal interview. Questions were displayed on the computer screen, and audio recordings were also played through headphones to assist with any reading difficulties. The audio tracks included voices of both women and men from multiple ethnic/ racial groups. Research staff was available throughout the assessment to answer any questions; however, participants completed the assessment privately. Research assistants administered the measures to students in the schools during the fall, winter, and spring, and in students' homes or community locations during the summer. Teachers were only administered the measures during the three waves collected during the school year, which is reflected by a smaller sample size for teacher rating analyses. The university's Institutional Review Board approved all procedures for the larger study and approved use of de-identified data sets for secondary analysis.

Measures

Demographics. Age, gender, race, and ethnicity were based on student report. Gender was assessed using a question that asks, "What is your gender?" Participants were able to choose boy or girl.

Family composition. Household composition was assessed by asking, "Who lives in your house with you ALL or MOST of the time?" Participants were able to choose all that apply from the following list: biological (natural) mother, biological (natural) father, stepmother, stepfather, foster mother, foster father, adoptive mother, adoptive father, grandfather, grandmother, aunt, uncle, other adults, brothers and sisters, and other children.

Parental figure was assessed using a question that asked, “Which of the following people do you consider to be your parent? By ‘parent’ we mean an adult who is responsible for you or takes care of you most of the time.” Participants were able to choose all that apply from the following list: biological (natural) mother, biological (natural) father, stepmother, stepfather, foster mother, foster father, adoptive mother, adoptive father, grandfather, grandmother, aunt, uncle, and other adult.

Family composition was assessed by combining household composition (i.e., who adolescents reported living with) and parental figure (i.e., who adolescents consider to be their parent). Both residential and nonresidential parents serve an important role in adolescents’ lives, so it was essential to assess the impact they have on adolescents’ problem behaviors. The resulting variable was designed to capture the presence and involvement of both residential and nonresidential parents. In the present study, the term father figure was defined as any adult male (i.e., biological father or stepfather), either within or outside of the household, who adolescents considered to be their parent.

Adult support. Adult support was assessed using the Presence of Caring Adult subscale of the Individual Protective Factors Index (Phillips & Springer, 1992). The individual Protective Factors Index measures adolescent resiliency as categorized by ten attitudinal orientations in three major domains (Personal Competence, Social Competence, and Social Bonding). The Presence of Caring Adult subscale is from the Social Bonding domain. It measures an individual’s sense of support from an adult. Participants were asked the general question of, “How true is this about you?” and were given a list of items to respond to. A sample item included, “There are people I can depend on to help me if I really need it.” Items were rated on a 4-point response scale that included: 1=YES!, 2=yes, 3=no, 4=NO!. Scores on the nine items

were summed, with higher scores indicating a strong presence of caring adult and lower scores indicating a weak presence. The Presence of Caring Adult-Individual Protective Factors Index subscale had an alpha of .69 based on data from this project.

Problem behavior: self-report. Self-report of physical aggression, delinquency, and substance use were assessed using subscales on the Problem Behavior Frequency Scale-Adolescent Report (PBFS-AR; Farrell et al., 2016). Participants were asked to report how frequently specific behaviors occurred in the past 30 days. Items assessed physical aggression (e.g., “Hit or slapped someone), delinquency (e.g., “Stolen something”), and substance use (e.g., “Drunk liquor (like whiskey or vodka)”). Items were rated on the following 6-point frequency scale: (1) Never, (2) 1-2 times, (3) 3-5 times, (4) 6-9 times, (5) 10-19 times, and (6) 20 or more times. Results of a confirmatory factor analysis of the PBFS-AR using data from 5,532 adolescents in 37 schools across four states, found support for the seven-factor structure and strong measurement invariance across gender, grade, and geographic locations (Farrell, et al., 2015). The measure’s validity was also supported by its pattern of correlations with beliefs, values, and peer associations, and teacher-report of adolescents’ adjustment. Support for the structure of the PBFS-AR and measurement invariance over gender and grade was also found in study by Farrell, Thompson, Sullivan, and Gonyea (2017) that examined data from the project that provided the data for the current study. The present study used factor score estimates based on the factor loadings and thresholds obtained from that analysis.

Problem behavior: teacher-report. Teacher-report of physical aggression was assessed using the physical aggression subscale on the Problem Behavior Frequency Scale- Teacher Report (PBFS-TR; Farrell, Gonyea, Sullivan, & Thompson, 2017). Teachers were asked to report how many times the student engaged in specific behaviors in the past 30 days. A sample item

was: “Thrown something at someone to hurt them.” Teachers rated each item on a 4-point scale that included: (1) Never, (2) Sometimes, (3) Often, (4) Very Often. Results of a confirmatory factor analysis of the PBSF-TR using data from 1,740 students in three middle schools, found support for a seven first-order factor structure and strong measurement invariance across gender, grade, and time (Farrell et al., 2017). The measure’s validity was also supported by its pattern of correlations with teacher-report of social skills and student-report of problem behaviors.

Data Analysis

Descriptive statistics including frequencies, means, and standard errors were calculated for each scale. Exposure to the intervention was controlled for by including it as a dummy-coded covariate so that coefficients reflect relations for participants who completed the measures while the intervention was not being implemented at their school. All analyses were conducted using M-Plus Version 7.11 (Muthén & Muthén, 2015). Missing data were handled using full information maximum likelihood estimation (FIML). FIML offers estimates of parameters based on all available data, including those with missing responses. Standard errors were estimated using a robust estimator to account for non-normality (i.e., MLR). The problem behavior variables were represented by factor score estimates (DiStefano, Zhu, & Mindrila, 2009). For the model that included family composition, 1% of the data were missing, whereas 14% of the data were missing for the model that included adult support. During the assessments, the adult support measure was the third from the last measure that adolescents completed. It is likely that many adolescents did not complete the adult support measure due to its placement in the survey. Significance for all tests was established at an alpha of .05.

The hypothesized relations between family composition and adolescents' physical aggression, delinquency, and substance use were tested using linear regression analyses (i.e., five contrast codes were used to examine hypotheses part 1A to 1D).

The second set of hypotheses examined the degree to which the strength of the relations between family composition and adolescents' self-report (i.e., physical aggression, delinquency, and substance use), and teacher-report of problem behavior (i.e., physical aggression), differs by gender. This was investigated by a hierarchical regression analysis in which covariates were entered at Step 1 (i.e., intervention condition, age), gender at Step 2, family composition at Step 3, and the Gender x Family Composition interactions (each Family Composition contrast X Gender) at Step 4. Separate analyses were conducted for student self-report of physical aggression, delinquency, and substance use, and teacher-report of physical aggression. Contrast codes were used to examine the specific hypotheses.

The third set of hypotheses examined the extent to which adult support moderated the relation between family composition and adolescents' problem behaviors. This was tested by a hierarchical, multiple regression of adolescents' self-report of physical aggression (Hypothesis 3, part A), delinquency (Hypothesis 3, part B), and substance use (Hypothesis 3, part C), and teacher-report of physical aggression (Hypothesis 3, part D). Within each model, covariates were entered at Step 1 (i.e., intervention condition, age, and gender), family composition was entered at Step 2, the moderator variable (adult support) was entered as Step 3, and the Family Composition x Adult Support interaction term (each family composition contrast X adult support) was entered at Step 4. Four models were used to test the hypothesized moderating effects for each outcome measure. Contrast codes were used to examine the specific hypotheses. Figure 4 illustrates the path model for the moderating role of both gender and adult support on

the relation between family composition and adolescents' self-report of physical aggression, delinquency, and substance use, and teacher-report of physical aggression.

The R^2 at each step was used to determine the percentage of variance in the dependent variable accounted for by each variable or set of variables at the step where they are entered, and the overall significance of groups of parameters was tested using the Wald test of parameter constraints. The Cohen's d estimate of effect size is reported for main effects. A d of .2 is considered a small effect, .5 a medium effect, and .8 a large effect (Cohen, 1992). All effects were interpreted.

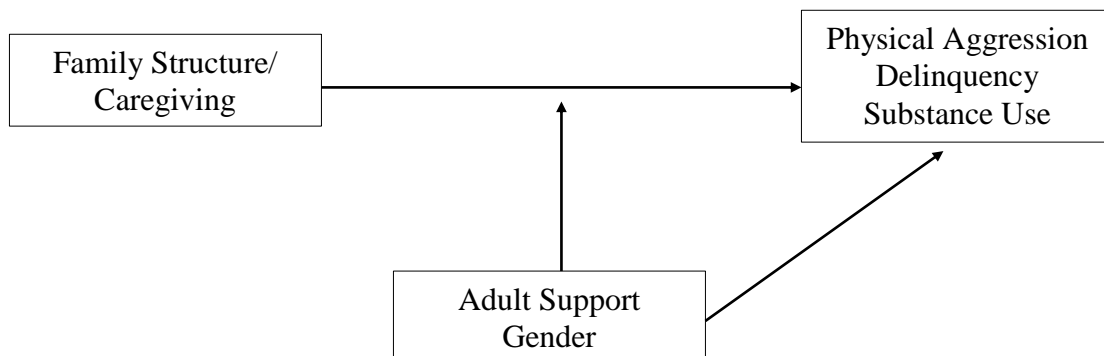


Figure 4. Analytic model illustrating the proposed influence of family composition on adolescents' self-report of problem behavior, teacher-report of physical aggression, and the moderating roles of gender and adult support.

Results

Descriptive Statistics

Descriptive statistics for age, gender, family composition, adult support, self-report of physical aggression, delinquency, and substance use, and teacher-report of physical aggression were calculated. One-third of the participants reported living with a single mother alone and considered their mother alone to be their parent, almost a quarter (24%) of adolescents reporting

living with both biological parents and considered both to be their parent, and almost a quarter (approximately 22%) of adolescents reported living with their biological mother and stepfather and considered their mother alone to be their parent (see Table 1). Sample sizes for each family composition across gender (see Table 2) and intervention conditions (see Table 3) were calculated.

Correlations among variables. Pearson correlations among the study variables are reported in Table 4. Age was positively correlated with self-report of substance use ($r = .12, p < .05$). Student-report of physical aggression was positively correlated with teacher-report of physical aggression ($r = .15, p < .05$), self-report of delinquency ($r = .50, p < .05$) and substance use ($r = .40, p < .05$). Teacher-report of physical aggression was positively correlated with self-report of delinquency ($r = .16, p < .05$) and self-report of substance use ($r = .11, p < .05$), and was negatively correlated with adult support ($r = -.19, p < .05$). Self-report of delinquency was positively correlated with self-report of substance use ($r = .50, p < .05$) and was negatively correlated with adult support ($r = -.14, p < .05$). Finally, self-report of substance use was negatively correlated with adult support ($r = -.14, p < .05$).

Table 1

Sample size for each family composition and contrast codes used to test hypotheses of differences related to family composition

Lives with	Considers biological or stepfather parent ^a	Category	N (%)	Contrast 1 (C1)	Contrast 2 (C2)	Contrast 3 (C3)	Contrast 4 (C4)	Contrast 5 (C5)
Mother & biological father	Biological father	TB-M/BF	264 (23.7)	1	0	0	0	0
Mother & stepfather	Stepfather	MSF-M/SF	55 (4.9)	-1/5	1/3	1	0	0
Mother & stepfather	Biological father	MSF-M/BF	33 (3.0)	-1/5	1/3	-1/2	1	0
Mother only	Biological father	M-M/BF	151 (13.5)	-1/5	1/3	-1/2	-1	0
Mother & stepfather	Neither	MSF-M/	245 (22.0)	-1/5	-1/2	0	0	1
Mother only	Neither	M-M/	368 (33.0)	-1/5	-1/2	0	0	-1

Note. N=1,116.

Table 2

Sample size for each family composition by gender

Lives with	Considers biological or stepfather parent ^a	Category	<u>Girls (N=597)</u> N (%)	<u>Boys (N=513)</u> N (%)
Mother & biological father	Biological father	TB-M/BF	131 (50)	131 (50)
Mother & stepfather	Stepfather	MSF-M/SF	32 (58)	23 (42)
Mother & stepfather	Biological father	MSF-M/BF	133 (55)	111 (45)
Mother only	Biological father	M-M/BF	15 (45)	18 (55)
Mother & stepfather	Neither	MSF-M/	212 (58)	153 (42)
Mother only	Neither	M-M/	74 (49)	77 (51)

Note. N=1,110.

Table 3

Sample size for each family composition by treatment condition

Lives with	Considers biological or stepfather parent ^a	Category	<u>Control (N=472)</u> N (%)	<u>Treatment (N=644)</u> N (%)
Mother & biological father	Biological father	TB-M/BF	116 (44)	148 (56)
Mother & stepfather	Stepfather	MSF-M/SF	20 (36)	35 (64)
Mother & stepfather	Biological father	MSF-M/BF	109 (44)	136 (56)
Mother only	Biological father	M-M/BF	11 (33)	22 (67)
Mother & stepfather	Neither	MSF-M/	152 (41)	216 (59)
Mother only	Neither	M-M/	64 (42)	87 (58)

Note. N=1,116.

Table 4

Correlations among project variables including demographic variables, family composition contrasts, physical aggression, delinquency, and substance use

	1	2	3	4	5
1 Age	1.00				
2 Physical Aggression (A)	.02	1.00			
3 Physical Aggression (T)	.03	.15*	1.00		
4 Delinquency (A)	.02	.50*	.16*	1.00	
5 Substance Use (A)	.12*	.40*	.11*	.50*	1.00
6 Adult Support (A)	-.06	-.04	-.19*	-.14*	-.14*

Note. $N=1,116$. A = Adolescent Report. T = Teacher Report.

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

Main Effects

Family composition, gender, and self-report of physical aggression. A hierarchical, multiple regression analyses was used to test the relation between family composition and self-report of physical aggression. Intervention condition, age, and gender were entered at Step 1. Five contrast codes were created to examine the five specific hypotheses (see Table 1). Specifically, C1 tests the ‘Presence or absence of a residential biological father figure’ hypothesis, C2 tests the ‘Presence or absence of any father figure for adolescents not in two-parent families’ hypothesis, C3 tests the ‘Presence or absence of a residential father figure for adolescents not in two-parent families’ hypothesis, C4 tests the ‘Presence or absence of a stepfather for adolescents with a nonresidential biological father figure’ hypothesis, and C5 tests the ‘Presence or absence of a stepfather for adolescents with no other identified father figure’ hypothesis. At Step 1, the covariates (i.e., intervention condition, age, and gender) were not significantly related to self-report of physical aggression according to results of a Wald test, $\chi^2(3) = 6.35, p = .10$ (see Table 5). Adding the five contrasts representing family composition to the model also did not predict self-report of physical aggression, $\chi^2(5) = 5.83, p = .32$ (see Table 5). In summary, self-report of physical aggression was not found to vary as a function of family composition (see Figure 5).

Table 5

Unstandardized parameter estimates (standard errors) and R² for regression of self-report of physical aggression on covariates, family composition, and interaction terms

	Step 1	Step 2	Step 3
Covariates			
Gender	-.086 (.046)	-.084 (.046)	-.099 (.067)
Age	.020 (.022)	.019 (.022)	.019 (.022)
Intervention condition	-.060 (.046)	-.061 (.046)	-.062 (.046)
Family Composition			
Presence or absence of a residential biological father figure (C1)		-.086 (.051)	-.133 (.073)
Presence or absence of any father figure for adolescents not in two-parent families (C2)		.032 (.082)	.049 (.126)
Presence or absence of a residential father figure for adolescents not in two-parent families (C3)		.070 (.084)	-.001 (.122)
Presence or absence of a stepfather for adolescents with a nonresidential biological father figure (C4)		.001 (.077)	.042 (.130)
Presence or absence of a stepfather for adolescents with no other identified father figure (C5)		.047 (.031)	.049 (.042)
C1*Gender			.090 (.102)
C2*Gender			-.020 (.166)
C3*Gender			.148 (.177)
C4*Gender			-.077 (.156)
C5*Gender			-.004 (.062)
R ²	.006 (.005)	.011 (.007)	.013 (.007)

Note. N=1,104. Standard errors are in parentheses. C=Contrast.

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

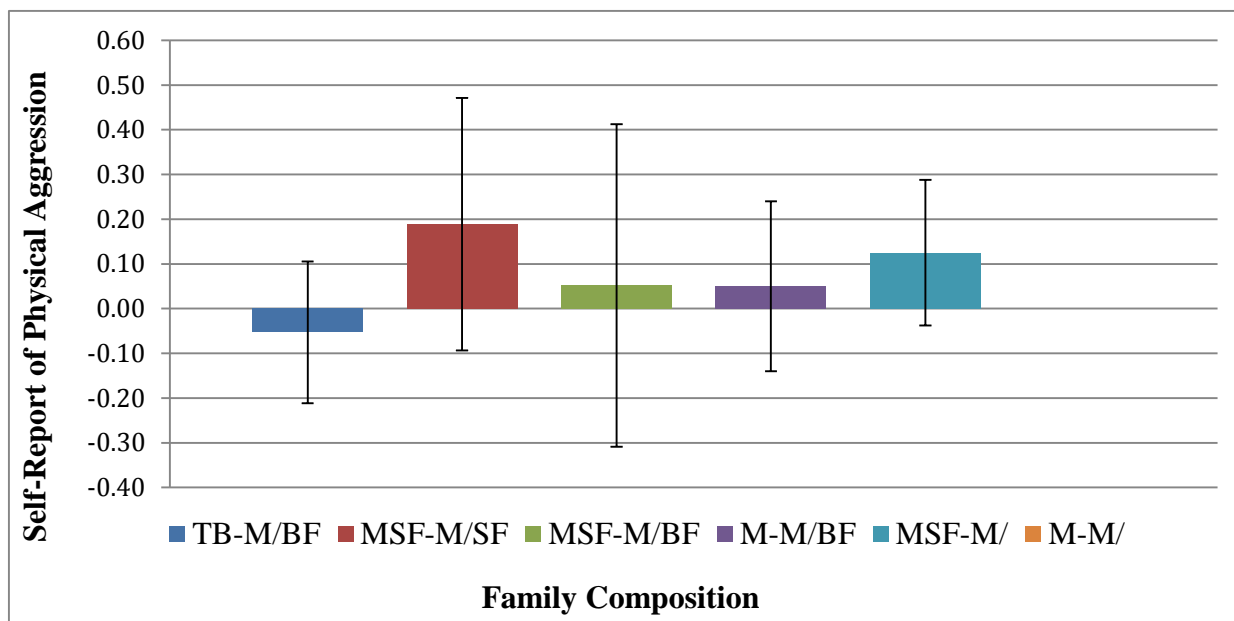


Figure 5. Means and 95% confidence intervals for the influence of family composition on self-report of physical aggression, after controlling for the covariates (i.e., intervention condition, age, and gender).

Note. TB = Two biological parents. MSF-SF = Lives with mother and stepfather, and considers stepfather to be father figure. MSF-BF = Lives with mother and stepfather, and considers biological father to be father figure. M-BF = Lives with mother only, and considers biological father to be father figure. MSF-M = Lives with mother and stepfather, and considers no one to be father figure. M-M = Lives with mothers, and considers no one to be father figure (reference group).

Family composition, gender, and teacher-report of physical aggression. Entering the covariates (i.e., intervention condition, age, and gender) at Step 1 significantly predicted teacher-report of physical aggression and accounted for 3.3% of the variance (see Table 6), $\chi^2(3) = 27.47, p < .001$. Gender was positively related to teacher-report of physical aggression, after controlling for the other covariates. Teachers reported higher levels of physical aggression for male adolescents compared with female adolescents. Intervention condition was negatively related to teacher-report of physical aggression, after controlling for the other covariates, such that teachers reported higher levels of physical aggression for adolescents in the control

condition compared with those in the intervention condition. When family composition was entered into the model, it did not significantly predict teacher-report of physical aggression, $\chi^2(5) = 10.74, p = .06$ (see Table 6). In summary, teacher-report of physical aggression was not found to vary as a function of family composition (see Figure 6).

Table 6

Unstandardized parameter estimates (standard errors) and R² for regression of teacher-report of physical aggression on covariates, family composition, and interaction terms

	Step 1	Step 2	Step 3
Covariates			
Gender	.223*** (.049)	.237*** (.049)	.220** (.068)
Age	-.001 (.024)	-.006 (.024)	-.004 (.024)
Intervention condition	-.127* (.051)	-.133** (.051)	-.134** (.051)
Family Composition			
Presence or absence of a residential biological father figure (C1)		-.125 (.052)*	-.177 (.066)
Presence or absence of any father figure for adolescents not in two-parent families (C2)		-.027 (.087)	-.003 (.104)
Presence or absence of a residential father figure for adolescents not in two-parent families (C3)		.068 (.086)	.168 (.104)
Presence or absence of a stepfather for adolescents with a nonresidential biological father figure (C4)		.075 (.081)	.015 (.097)
Presence or absence of a stepfather for adolescents with no other identified father figure (C5)		-.008 (.034)	-.029 (.041)
C1*Gender			.118 (.103)
C2*Gender			-.083 (.172)
C3*Gender			-.254 (.173)
C4*Gender			.113 (.157)
C5*Gender			.049 (.070)
R ²	.033** (.012)	.045** (.014)	.051*** (.015)

Note. N=814. Standard errors are in parentheses. C=Contrast.

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

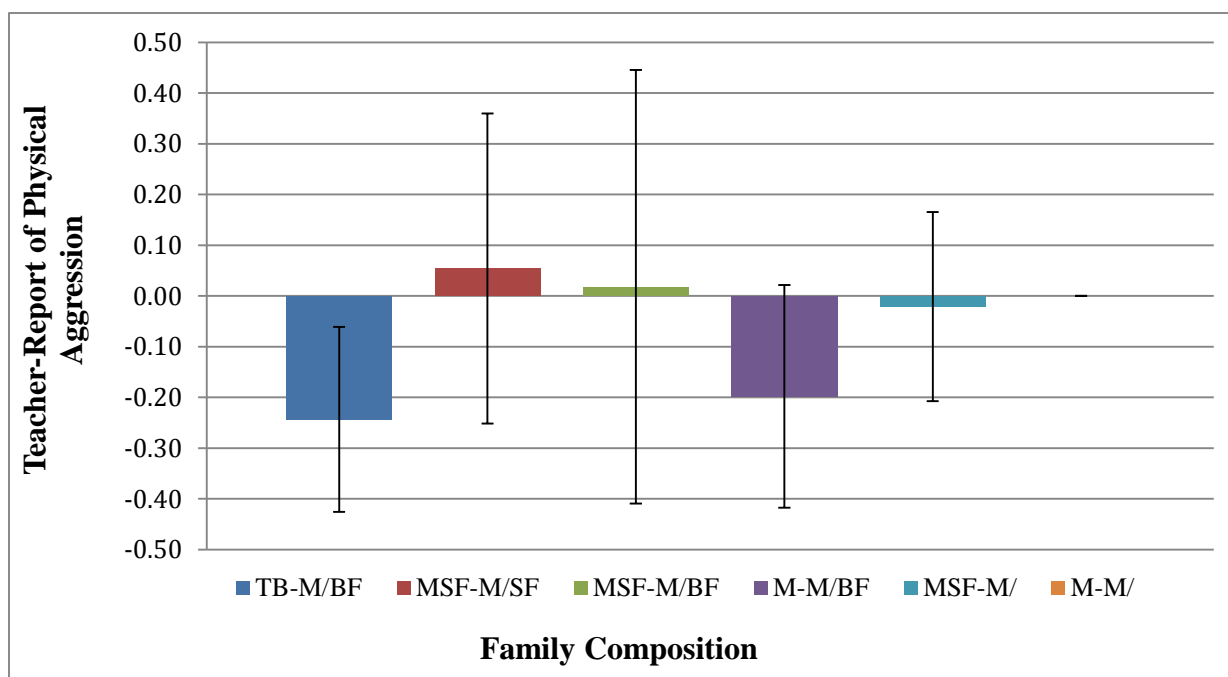


Figure 6. Means and 95% confidence intervals for the influence of family composition on teacher-report of physical aggression, after controlling for the covariates (i.e., intervention condition, age, and gender).

Note. TB = Two biological parents. MSF-SF = Lives with mother and stepfather, and considers stepfather to be father figure. MSF-BF = Lives with mother and stepfather, and considers biological father to be father figure. M-BF = Lives with mother only, and considers biological father to be father figure. MSF-M = Lives with mother and stepfather, and considers no one to be father figure. M-M = Lives with mothers, and considers no one to be father figure (reference group).

Family composition, gender, and self-report of delinquency. At Step 1, although there was a significant effect for gender, the overall effect for the covariates (i.e., intervention condition, age, and gender) was not significantly related to self-report of delinquency, $\chi^2(3) = 9.00, p = .06$. Results of a Wald test of the overall impact of family composition on self-report of delinquency, after controlling for demographics, was significant, $\chi^2(5) = 15.02, p < .01$. Specific to C4, which represented the ‘Presence or absence of a stepfather for adolescents with a nonresidential biological father figure’ hypothesis (see Table 7), among adolescents who

identified their nonresidential biological father as a parent, those who live with their biological mother without a stepfather reported higher levels of delinquency compared with those who live with their biological mother and a stepfather. This was a small effect (i.e., 0.20). In summary, consistent with the hypotheses, self-report of delinquency was found to vary as a function of family composition (see Figure 7).

Table 7

Unstandardized parameter estimates (standard errors) and R² for regression of self-report of delinquency on covariates, family composition, and interaction terms

	Step 1	Step 2	Step 3
Covariates			
Gender	.101*** (.036)	.104** (.036)	.071 (.045)
Age	.016 (.018)	.013 (.018)	.012 (.018)
Intervention condition	-.013 (.036)	-.013 (.036)	-.014 (.036)
Family Composition			
Presence or absence of a residential biological father figure (C1)		-.050 (.035)	-.084 (.045)
Presence or absence of any father figure for adolescents not in two-parent families (C2)		-.026 (.056)	.035 (.077)
Presence or absence of a residential father figure for adolescents not in two-parent families (C3)		.068 (.063)	.032 (.085)
Presence or absence of a stepfather for adolescents with a nonresidential biological father figure (C4)		-.136** (.040)	-.087 (.065)
Presence or absence of a stepfather for adolescents with no other identified father figure (C5)		-.002 (.025)	-.019 (.030)
C1*Gender			.066 (.070)
C2*Gender			-.118 (.113)
C3*Gender			.064 (.130)
C4*Gender			-.091 (.080)
C5*Gender			.038 (.051)
R ²	.008 (.005)	.017* (.007)	.019* (.007)

Note. N=1,103. Standard errors are in parentheses. C=Contrast.

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

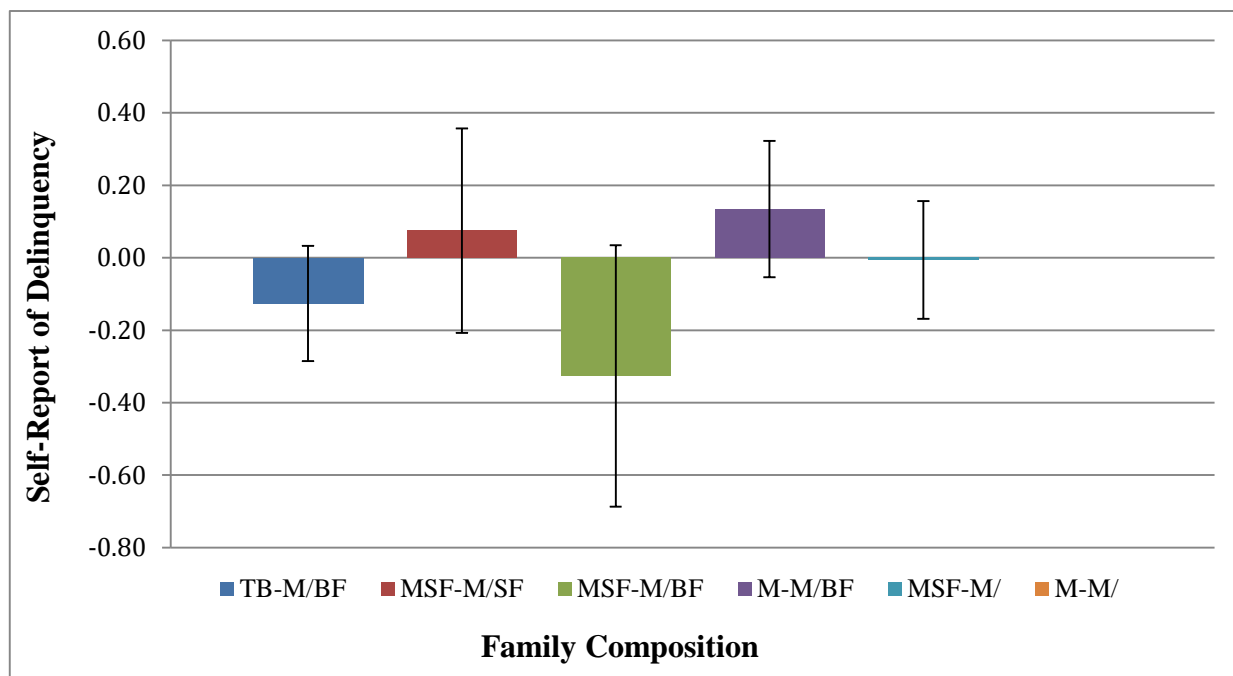


Figure 7. Means and 95% confidence intervals for the influence of family composition on self-report of delinquency, after controlling for the covariates (i.e., intervention condition, age, and gender).

Note. TB = Two biological parents. MSF-SF = Lives with mother and stepfather, and considers stepfather to be father figure. MSF-BF = Lives with mother and stepfather, and considers biological father to be father figure. M-BF = Lives with mother only, and considers biological father to be father figure. MSF-M = Lives with mother and stepfather, and considers no one to be father figure. M-M = Lives with mothers, and considers no one to be father figure (reference group).

Family composition, gender, and self-report of substance use. The covariates (i.e., intervention condition, age, and gender) entered at Step 1 significantly predicted self-report of substance use and accounted for 1.7% of the variance, $\chi^2(3) = 19.90, p < .001$ (see Table 8). Specifically, age was positively related to self-report of substance use, after controlling for the other covariates such that older adolescents reported higher levels of delinquent behavior than younger adolescents. When family composition was entered at Step 2, it was not significantly related to substance use according to results of a Wald test, $\chi^2(5) = 5.01, p = .41$ (see Table 8). In summary, contrary to the hypotheses, self-report of substance use was not found to vary as a function of family composition (see Figure 8).

Table 8

Unstandardized parameter estimates (standard errors) and R² for regression of self-report of substance use on covariates, family composition, and interaction terms

	Step 1	Step 2	Step 3
Covariates			
Gender	.035 (.034)	.039 (.030)	.027 (.044)
Age	.070*** (.016)	.067** (.029)	.067*** (.016)
Intervention condition	.053 (.034)	.051 (.030)	.050 (.034)
Family Composition			
Presence or absence of a residential biological father figure (C1)		-.044 (.030)	-.093 (.044)
Presence or absence of any father figure for adolescents not in two-parent families (C2)		-.016 (.034)	-.006 (.080)
Presence or absence of a residential father figure for adolescents not in two-parent families (C3)		.070 (.032)	.077 (.085)
Presence or absence of a stepfather for adolescents with a nonresidential biological father figure (C4)		-.047 (.032)	-.032 (.069)
Presence or absence of a stepfather for adolescents with no other identified father figure (C5)		-.012 (.031)	-.031 (.032)
C1*Gender			.101 (.067)
C2*Gender			-.018 (.112)
C3*Gender			-.022 (.120)
C4*Gender			-.028 (.092)
C5*Gender			.045 (.048)
R ²	.017* (.008)	.021*** (.008)	.024* (.011)

Note. N=1,104. Standard errors are in parentheses. C=Contrast.

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

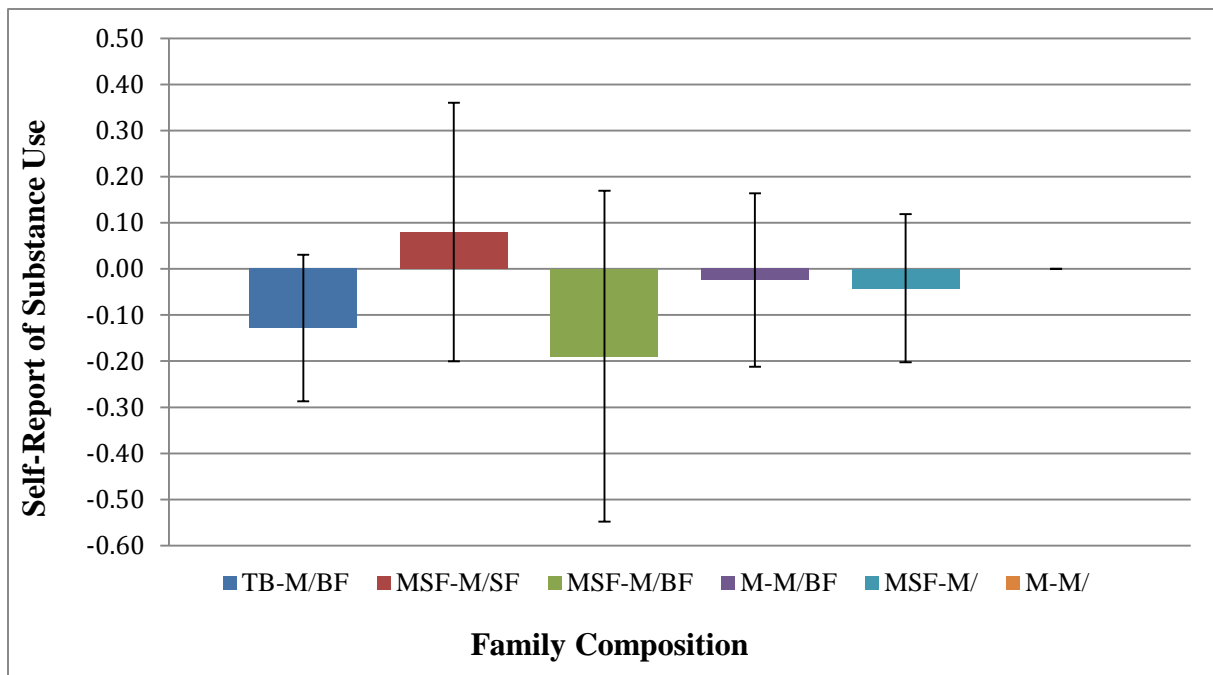


Figure 8. Means and 95% confidence intervals for the influence of family composition on self-report of substance use, after controlling for the covariates (i.e., intervention condition, age, and gender).

Note. TB = Two biological parents. MSF-SF = Lives with mother and stepfather, and considers stepfather to be father figure. MSF-BF = Lives with mother and stepfather, and considers biological father to be father figure. M-BF = Lives with mother only, and considers biological father to be father figure. MSF-M = Lives with mother and stepfather, and considers no one to be father figure. M-M = Lives with mothers, and considers no one to be father figure (reference group).

Moderating Effects

Moderating effects of gender on relation between family composition and problem

behaviors. A hierarchical, multiple regression was used to test whether gender moderated the relation between family composition and self- and teacher-report of physical aggression, and self-report of delinquency and substance use. According to results of a Wald test, At Step 3, the interaction terms were not significantly related to self-report of physical aggression, $\chi^2 (5) = 1.59, p = .90$ (see Table 5), teacher-report of physical aggression, $\chi^2 (5) = 4.64, p = .46$ (see

Table 6), and self-report of delinquency, $\chi^2 (5) = 3.83, p = .57$ (see Table 7) and substance use, $\chi^2 (5) = 3.69, p = .59$ (see Table 8). In summary, contrary to the hypotheses, gender did not moderate the relation between family composition and adolescent problem behavior.

Moderating effect of adult support on relation between family composition and problem behaviors. A hierarchical, multiple regression was used to test whether adult support moderated the relation between family composition and self-report of physical aggression. Adding the main effect for adult support to the model that included the covariates and family structure variables did not significantly increase the variance accounted for by the model, $\chi^2 (1) = 1.58, p = .21$ (see Step 3 in Table 9). There was also no support for the hypothesis that adult support moderated the relation between family composition and self-report of physical aggression, $\chi^2 (5) = 4.8, p = .44$ (see Step 4 in Table 9). In summary, contrary to the hypotheses, support was not found for the hypothesis that self-report of physical aggression would vary as a function of adult support.

Table 9

Unstandardized parameter estimates (standard errors) and R² for regression of self-report of physical aggression on covariates, family composition, adult support, and interaction terms

	Step 1	Step 2	Step 3	Step 4
Covariates				
Gender	-.086 (.046)	-.084 (.046)	-.074 (.048)	-.076 (.048)
Age	.020 (.022)	.019 (.022)	.021 (.024)	.022 (.024)
Intervention condition	-.060 (.046)	-.061 (.046)	-.064 (.048)	-.066 (.048)
Family Composition				
Presence or absence of a residential biological father figure (C1)		-.086 (.051)	-.072 (.051)	-.064 (.052)
Presence or absence of any father figure for adolescents not in two-parent families (C2)		.032 (.082)	.026 (.081)	.024 (.083)
Presence or absence of a residential father figure for adolescents not in two-parent families (C3)		.070 (.084)	.103 (.084)	.089 (.085)
Presence or absence of a stepfather for adolescents with a nonresidential biological father figure (C4)		.001 (.077)	-.018 (.072)	-.011 (.075)
Presence or absence of a stepfather for adolescents with no other identified father figure (C5)		.047 (.031)	.034 (.033)	.033 (.033)
Adult Support			-.006 (.005)	-.003 (.007)
C1*Adult Support				-.012 (.011)
C2*Adult Support				.004 (.017)
C3*Adult Support				.022 (.016)
C4*Adult Support				-.007 (.016)
C5*Adult Support				.008 (.007)
R ²	.006 (.005)	.011 (.007)	.012 (.007)	.014 (.007)

Note. N=1,104. Standard errors are in parentheses. C=Contrast.

p* < .05. *p* < .01. ****p* < .001.

Results of a Wald test of the overall impact of adult support on teacher-report of physical aggression, after controlling for demographics, was significant, $\chi^2 (1) = 20.39, p < .01$. Adult support significantly predicted teacher-report of adolescents' physical aggression, after controlling for the covariates and family composition (see Step 3 in Table 10). The effect was in the expected direction such that teachers reported lower levels of physical aggression for adolescents who reported higher levels of adult support compared with those who reported lower levels of adult support. This was a small to medium sized effect (i.e., 0.30). However, there was no support for the hypothesis that adult support moderated the relation between family composition and teacher-report of physical aggression, $\chi^2 (5) = 1.61, p = .90$. In summary, consistent with the hypotheses, teacher-report of physical aggression was found to vary as a function of adult support, above and beyond family composition.

Table 10

Unstandardized parameter estimates (standard errors) and R² for regression of teacher-report of physical aggression on covariates, family composition, adult support, and interaction terms

	Step 1	Step 2	Step 3	Step 4
Covariates				
Gender	.223*** (.049)	.237*** (.049)	.231*** (.051)	.227*** (.051)
Age	-.001 (.024)	-.006 (.024)	-.022 (.025)	-.021 (.025)
Intervention condition	-.127* (.051)	-.133** (.051)	-.106* (.052)	-.107* (.052)
Family Composition				
Presence or absence of a residential biological father figure (C1)		-.125* (.052)	-.118* (.052)	-.123* (.053)
Presence or absence of any father figure for adolescents not in two-parent families (C2)		-.027 (.087)	-.006 (.088)	-.015 (.092)
Presence or absence of a residential father figure for adolescents not in two-parent families (C3)		.068 (.086)	.078 (.088)	.064 (.092)
Presence or absence of a stepfather for adolescents with a nonresidential biological father figure (C4)		.075 (.081)	.054 (.078)	.069 (.082)
Presence or absence of a stepfather for adolescents with no other identified father figure (C5)		-.008 (.034)	-.009 (.036)	-.009 (.037)
Adult Support			-.022*** (.005)	-.026*** (.007)
C1*Adult Support				.007 (.011)
C2*Adult Support				-.010 (.019)
C3*Adult Support				.016 (.019)
C4*Adult Support				-.018 (.017)
C5*Adult Support				-.003 (.008)
R ²	.033** (.012)	.045*** (.014)	.073*** (.019)	.075*** (.019)

Note. N=814. Standard errors are in parentheses. C=Contrast.

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

The main effect of adult support at Step 3 significantly predicted self-report of delinquency, after controlling for covariates and family composition, $\chi^2 (1) = 10.68, p < .01$, such that adolescents with higher levels of adult support reported lower levels of delinquency (see Step 3 in Table 11). This was a small to medium sized effect (i.e., 0.30). Adult support did not moderate the relation between family composition and self-report of delinquency, $\chi^2 (5) = 3.12, p = .68$ (see Step 4 in Table 11). With the addition of adult support, the influence of C4, the ‘nonresidential biological father figure when living with a stepfather’ hypothesis, remained significant. In summary, consistent with the hypotheses, self-report of delinquency was found to vary as a function of adult support.

Table 11

Unstandardized parameter estimates (standard errors) and R² for regression of self-report of delinquency on covariates, family composition, adult support, and interaction terms

	Step 1	Step 2	Step 3	Step 4
Covariates				
Gender	.101** (.036)	.104** (.036)	.077** (.032)	.090** (.038)
Age	.016 (.018)	.013 (.018)	.013 (.034)	.008 (.019)
Intervention condition	-.013 (.036)	-.013 (.036)	-.014 (.032)	-.017 (.038)
Family Composition				
Presence or absence of a residential biological father figure (C1)		-.050 (.035)	-.047 (.031)	-.051 (.038)
Presence or absence of any father figure for adolescents not in two-parent families (C2)		-.026 (.056)	-.004 (.035)	-.011 (.060)
Presence or absence of a residential father figure for adolescents not in two-parent families (C3)		.068 (.063)	.056 (.036)	.109 (.072)
Presence or absence of a stepfather for adolescents with a nonresidential biological father figure (C4)		-.136** (.040)	-.105** (.024)	-.159** (.038)
Presence or absence of a stepfather for adolescents with no other identified father figure (C5)		-.001 (.025)	-.016 (.032)	-.013 (.026)
Adult Support			-.132** (.030)	-.014** (.004)
C1*Adult Support				-.001 (.007)
C2*Adult Support				.006 (.011)
C3*Adult Support				.002 (.012)
C4*Adult Support				.009 (.008)
C5*Adult Support				-.006 (.005)
R ²	.008 (.005)	.017* (.007)	.040** (.011)	.042*** (.012)

Note. N=1,103. Standard errors are in parentheses. C=Contrast.

p* < .05. *p* < .01. ****p* < .001.

Adult support was significantly related to self-report of substance use, after controlling for covariates and family composition, $\chi^2 (1) = 4.84, p = .02$ (see Step 3 in Table 12). This was a small to medium sized effect (i.e., 0.30). The effect was in the hypothesized direction such that adolescents who reported higher levels of adult support reported lower levels of substance use. However, there was no support for the hypothesis that adult support moderated the relation between family composition and self-report of substance use, $\chi^2 (5) = 4.48, p = .48$ (see Step 4 in Table 12). In summary, consistent with the hypotheses, self-report of substance use was found to vary as a function of adult support.

Table 12

Unstandardized parameter estimates (standard errors) and R² for regression of self-report of substance use on covariates, family composition, adult support, and interaction terms

	Step 1	Step 2	Step 3	Step 4
Covariates				
Gender	.035 (.034)	.039 (.034)	.036 (.035)	.035 (.036)
Age	.070*** (.016)	.067*** (.016)	.063*** (.017)	.062*** (.017)
Intervention condition	.053 (.034)	.051 (.034)	.044 (.036)	.046 (.036)
Family Composition				
Presence or absence of a residential biological father figure (C1)		-.044 (.033)	-.039 (.034)	-.035 (.035)
Presence or absence of any father figure for adolescents not in two-parent families (C2)		-.016 (.056)	-.015 (.059)	-.027 (.058)
Presence or absence of a residential father figure for adolescents not in two-parent families (C3)		.070 (.060)	.060 (.063)	.074 (.064)
Presence or absence of a stepfather for adolescents with a nonresidential biological father figure (C4)		-.047 (.046)	-.026 (.048)	-.039 (.045)
Presence or absence of a stepfather for adolescents with no other identified father figure (C5)		-.012 (.024)	-.025 (.025)	-.025 (.025)
Adult Support			-.014*** (.004)	-.010*** (.005)
C1*Adult Support				-.003 (.007)
C2* Adult Support				.016 (.012)
C3* Adult Support				-.017 (.012)
C4* Adult Support				.010 (.011)
C5* Adult Support				.004 (.005)
R ²	.017 (.008)	.021* (.008)	.039** (.012)	.044** (.013)

Note. N=1,104. Standard errors are in parentheses. C=Contrast.

p* < .05. *p* < .01. ****p* < .001.

Discussion

The purpose of this study was to investigate the influence of family composition on adolescents' self-report of physical aggression, delinquency, and substance use, and teacher-report of physical aggression. This study used a sample of African-American youth in middle schools (i.e., sixth, seventh, and eighth grade) where 98% of students within those schools were eligible for free or reduced lunch. Adolescents who were included in the sample both lived with and identified their biological mother to be their parent. It was hypothesized that family composition would be related to adolescents' problem behaviors. Additionally, both gender and adult support were expected to moderate the relation between family composition and adolescents' problem behaviors.

Overall, there was partial support for these hypotheses. Self-report of delinquency was found to vary as a function of family composition. Specifically, among adolescents who identified their nonresidential biological father as their parent, those who were living with their biological mother and stepfather reported lower levels of delinquency than those who were living with their biological mother only, after controlling for gender, age, and intervention condition. These effects were not found for self- and teacher-report of physical aggression, and self-report of substance use.

There was no evidence to suggest that gender or adult support moderated the relation between family composition and adolescents' problem behaviors. However, both gender and adult support were independently related to adolescents' problem behaviors. Specifically, male adolescents had higher levels of teacher-report of physical aggression, but not self-report of physical aggression, delinquency, and substance use. Additionally, adolescents who reported higher levels of adult support had lower levels of teacher-report of physical aggression, and self-

report of delinquency and substance use, but not self-report of physical aggression, even after controlling for intervention condition, age, gender, and family composition.

Influence of Family Composition on Adolescents' Problem Behavior

It was hypothesized that adolescents who reported living with two biological parents and considered both to be their parents would report lower frequencies of problem behavior compared with adolescents from other family types. This effect was not found for any of the outcomes examined. This is supported by previous findings that biological father involvement was not shown to be more protective against delinquency for adolescents who shared the same residency with their biological father compared with those who did not (e.g., Carlson, 2006). However, this finding is inconsistent with studies by other researchers who have found that adolescents in two-biological-parent families report lower levels of physical aggression compared with those in other family types (e.g., Ram & Hou, 2005). It is also counter to previous studies that have found differences in substance using (e.g., Hollist & McBroom, 2006) and delinquent behaviors (e.g., Demuth & Brown, 2004).

Differences between findings from the current study and previous studies may be explained by differences in sample characteristics, such as participants' racial and ethnic background, and age. For instance, Hollist et al. (2006) sampled predominately European-American eighth, tenth, and twelfth graders, and Demuth et al. (2004) sampled a nationally representative sample of seventh through twelfth graders. In contrast, the current study examined these effects for an African-American sample of middle school students. This distinction is important given that studies have found that African-American adolescents tend to report lower rates of substance use (e.g., Best et al., 2001; Rodham et al., 2005) and delinquency (e.g., Barnes, Hoffman, Welte, Farrell, & Dintcheff, 2007) compared with European-American

adolescents. Because many studies using predominately European-American samples do not have large enough sample sizes to conduct subgroup analyses, it is difficult to determine whether the results are true for individuals from different racial and ethnic backgrounds. Previous studies have also sampled older adolescents, typically high school students, who may report varying levels of problem behavior compared to younger adolescents. This has been supported by findings that problem behaviors tend to increase during adolescence (Dishion & Patterson, 2006).

The hypothesis that among adolescents living with their mother only or a mother and a stepfather, those who consider their father or stepfather to be their parent would report lower frequencies of problem behavior than those who do not consider their father or stepfather to be their parent was not supported. These findings are inconsistent with theory suggesting that having a secondary parent (e.g., a biological or stepfather) in addition to a primary parent (e.g., a biological mother) would be related to more positive adolescent outcomes (e.g., Lamb, 1986). This suggests that among adolescents who do not live with both biological parents, having a father figure may not be sufficient to decrease their risk for engaging in problem behaviors.

Support was also not found for the hypothesis that among adolescents not living in a two-parent household, those who consider their residential stepfather to be their parent would report lower levels of problem behavior compared with those who do not consider their residential stepfather to be their parent. This is inconsistent with results of previous studies that adolescents living in a stepparent family had slightly lower odds of engaging in delinquent behaviors and substance use compared with those living in a single-parent family (e.g., Kierkus & Hewitt, 2009). The differences between the findings of the current study and those of Kierkus et al. (2009) may be explained by differences in measurement and sample characteristics. For instance,

due to the infrequency with which participants endorsed certain items, Kierkus et al. (2009) dichotomized their outcome variables to indicate whether or not a participant had endorsed a particular behavior within the past year. Their delinquency variable included both property and violent crimes, whereas delinquency in the current study included non-violent delinquent behaviors within the past 3 months. Kierkus et al. (2009) sampled predominately European-American, 12 to 17 year olds from both urban and rural settings, whereas the current study sampled African-American middle school students from an urban setting. These studies also differed in how the family composition variable was created. Similar to previous studies, Kierkus et al. (2009) created a family composition variable using only the biological and stepparents present within the household without taking into account nonresidential parents.

It was expected that among adolescents living with their mother who had a nonresidential father figure (i.e., biological father), those living with a stepfather who they do not consider to be their father would report lower levels of problem behavior than those not living with a stepfather. Partial support for this hypothesis was found, but findings varied by problem behavior. Specifically, differences were found for self-report of delinquency, but not for self-report of physical aggression and substance use, or for teacher-report of physical aggression. These findings are consistent with the idea that even when there is ambiguity in the role that stepfathers serve, having a second adult in the household may result in greater resource availability even with a nonresidential biological father (e.g., Morrison & Ritualo, 2000). This also suggests that the benefit of a second adult within the household, such as a stepfather, may have a greater influence on adolescents' delinquency compared with the influence of a nonresidential biological father. For instance, residential stepfathers may be able to assist in monitoring adolescents'

whereabouts, which has been related to lower levels of problem behaviors (e.g., Fulkerson, Pasch, Perry, & Komro, 2008).

Differences in findings across problem behaviors may be explained by variations in the norms associated with each problem behavior during adolescence. For instance, compared with substance use and aggressive behaviors, delinquency is perceived to be more severe (Lynne-Landsman, Graber, Nichols, & Botvin, 2011). This may be due in part to the fact that delinquent acts could be considered criminal offenses (e.g., Dishion & Patterson, 2006). Additionally, Bongers, Koot, Ende, & Verhulst (2003) found that whereas aggression tends to decrease between ages 10 and 17, delinquency tends to increase.

Another hypothesis that was not supported was that among adolescents not living with a biological father, those who do not identify a father figure when living with a stepfather would have lower frequencies of problem behavior compared with those in a single mother family. These findings are inconsistent with theory suggesting that residential stepparents may have a positive influence on adolescent development even when adolescents do not consider their stepfather to be their parent (e.g., Olson et al., 1979). This is also counter to the family systems theory, which contends that each family member plays an important role in how the system operates (e.g., Olson, Sprenkle, & Russell, 1979). These findings suggest that when adolescents do not have a relationship with their biological father, the physical presence of a stepfather who they do not consider to be their parent does not benefit them in terms of reducing their risk of problem behavior. As it relates to the current study, among adolescents with no identified father figure, living with a stepfather does not appear to offer any advantages over living without a stepfather.

In summary, limited support was found for the hypotheses that problem behavior would vary as a function of family composition, with findings being limited to self-report of delinquency, and were only present within one of the five family contrasts. Specifically, findings suggest that among adolescents from mother-only and stepfather families, those who have a nonresidential biological father figure (i.e., biological father) when living with a stepfather who they do not consider to be their parent reported lower frequencies of delinquency compared with those not living with a stepfather.

Moderating Role of Gender

The finding that gender did not moderate the relation between family composition and adolescents' problem behavior is consistent with some previous findings. For instance, Frojd, Kaltiala-Heino, and Rimpela (2007) found that male and female adolescents did not vary in the relation between family composition and substance use. However, Cobb-Clark and Tekin (2004) found differing effects for male and female adolescents in their report of delinquency. Specifically, Cobb-Clark et al. (2004) found that male adolescents with an involved father or stepfather were less likely to engage in delinquent behaviors compared with those with an uninvolved father or stepfather. For female adolescents, however, they found that those with an involved nonresidential biological father and/or a residential stepfather reported just as much delinquent behavior as those with an uninvolved nonresidential biological father and/or a residential stepfather.

There are various reasons why the current findings may differ from previous findings, such as measurement of the relevant variables. Similar to the present study, Cobb-Clark et al. (2004) examined the influence of both residential and nonresidential biological and stepfathers. However, they did not specify the criteria used to place adolescents in their respective family

types. This is particularly important because previous studies have relied on either parents or students to identify whether or not a nonresidential parent is currently involved in adolescents' lives. The current study asked participants to identify who they considered to be their parent. It is unclear whether parents, adolescents, or other informants were asked to report on their family composition in the Cobb-Clark et al. (2004) study. Mokruue, Chen, and Elias (2011) obtained the household composition information from school records and then verified those records by teacher-report rather than student-report. Their measure of household composition only reflects the presence or absence of biological or stepparents within the home rather than the involvement of those parents. The measure also does not reflect the involvement of parents outside of the household, which is reflected in the current study. Additionally, teacher-report of externalizing problems assessed for both verbal and physical aggression, whereas the current study only assessed physical aggression.

Differences may also be explained by variations in sample characteristics. For instance, Mokruue et al. (2011) sampled African-American second and third grade students and Frojd, et al. (2007) sampled eighth and ninth grade students, which differ from the entirely middle school sampled used in the current study. Additionally, although Paxton, Valois, and Drane (2007) compared findings for African- and European-American middle school youth, they included youth from both biological and adoptive parent families, whereas the current study excluded youth in adoptive families. In summary, findings from the current study suggest that the relation between family composition and adolescent problem behavior does not vary as a function of gender.

Moderating Role of Adult Support

Moderation analyses did not find support for the hypothesis that adult support would moderate the relation between family composition and adolescents' problem behaviors. Previous studies have not explored this particular hypothesis, but have instead found that mothers' perception of high levels of kinship support attenuate the positive association between mother-adolescent communication problems and adolescents' externalizing problems (e.g., Taylor, 2010). Findings from the current study suggest that the relation between family composition and adolescent problem behavior does not vary as a function of adult support. The weak association between family composition and adolescent problem behavior may explain the lack of significant moderation results.

According to the social convoy theory, in addition to receiving support from parents, adolescents are able to find support through social networks other adults (e.g., Kahn & Antonucci, 1980). Although a moderated effect was not found for adult support, higher levels of adult support were found to be associated with lower levels of teacher-report of physical aggression, and self-report of delinquency and substance use, but not for self-report of physical aggression. Preliminary analyses found that adult support varied by family composition for two family types. Specifically, adolescents in two-biological-parent families reported higher levels of adult support compared with participants in mother-only families who did not have an identified father figure. These findings are consistent with previous studies' findings that higher levels of parental support are related to lower levels of delinquency (e.g., Keijsers, Frijns, Branje, & Meeus, 2009), as well as findings that adolescents with an adult mentor tended to be less likely to use substances (e.g., Beier, Rosenfeld, Spitalny, Zansky, and Bontempo, 2000). Though consistent with some studies, the current findings were not supported by findings that parental

support was negatively associated with self-report of physical aggression (e.g., Hamama & Ronen-Shenhav, 2012). Unlike the present study, Hamama et al. (2012) included adolescents from either two-biological-parent or divorced families from Israel. Whereas the current study measured adult support, Hamama et al. (2012) measured general social support that was not limited to adults. Additionally, they assessed overall aggression that included physical aggression, verbal aggression, anger, and hostility, and the current study only assessed for physical aggression.

The present study contributes to the literature on adult support and adolescents' problem behavior by examining both adult support and family composition within the same model. This is particularly important given that when adult support was added into the model, the 'nonresidential biological father figure when living with a stepfather' hypothesis (i.e., C4) for self-report of delinquency, remained significant. This suggests that for some problem behaviors (i.e., self-report of delinquency), perceptions of family composition and adult support are both important. Given that adult support was found to be beneficial for self-report of delinquency and substance use, and teacher-report of physical aggression, adult support may have a stronger influence than family composition.

Implications and Future Directions

The present study contributed to the literature on family composition and adolescent problem behavior in a number of ways. It expanded the existing knowledge about the influence of family composition on adolescent problem behavior by not only examining delinquency and substance use, but also physical aggression. In order to examine their specific effects, delinquency, substance use, and physical aggression were not combined into a larger externalizing problems variable, as many previous studies have done. In addition, the study

included an additional informant with the use of teacher-report of physical aggression. It also examined possible moderators of the relation between family composition and adolescent problem behavior (i.e., gender and adult support), though support was not found for moderation effects. The current study also made use of the influence of nonresidential parents and examined various family compositions. Additionally, it examined this relation among African-American middle school students from an urban setting.

Adolescence is a stage of life where problem behaviors, such as delinquency and substance use, tend to occur (e.g., Brown & Rinelli, 2010). Findings of the current study suggest that among adolescents who identify their nonresidential biological father as their parent, having a residential stepfather protects adolescents from self-report of delinquency, even if adolescents do not identify their stepfather as a parent. However, many African-American youth reside in single-mother families (e.g., U.S. Census) without a stepfather. In the current sample, 47% of youth were living with their mother alone, whereas 53% were living with either a biological father (24%) or a stepfather (29%). This suggests that as it relates to self-report of delinquency, many African-American youth may not benefit from the protection of having a residential stepfather.

Research suggests that African-American families tend to be composed of extended family members (e.g., Ruggles, 1994). This indicates that many African-American youth from single-mother families may reside with family members who may offer support to their biological mothers in a way that protects adolescents from engaging in high levels of problem behavior. It would be important to assess whether having a second adult relative in the household (e.g., grandmother, uncle) would protect African-American youth from becoming involved in problem behaviors. Given the added support of extended family within the African-American

community, it may be that these additional family members are providing support to supplement the support that adolescents in mother-only families may not be receiving from a nonresidential biological father. As it relates to the current study, it may also be the case that when adolescents do not identify their nonresidential biological father or residential stepfather as their parent, the presence of extended family may provide adolescents with additional support. Future studies should investigate the influence of residential adult family members on adolescents' problem behaviors.

The previous study did not find support for the moderating role of adult support on the relation between family composition and adolescents' problem behaviors. Future studies should explore other factors that may protect individuals in different family types from the risk of problem behaviors, such parent-child relationship, family cohesion, and sense of belongingness. This would be especially important given the number of African-American youth who are not living with both biological parents or a stepparent and who experience the uncertainty involved with transitioning in and out of various family types. Mechanisms that underlie the influence of different family structures on specific outcomes should also be considered, such as family functioning and parenting practices.

The results of this study indicated that family composition does not have the same influence on each of the three problem behaviors (i.e., physical aggression, delinquency, and substance use). For instance, family composition effects were found for delinquency, but not for physical aggression and substance use. Future studies should investigate other types of problem behaviors, as well as other negative outcomes more generally (e.g., high school dropout, teen pregnancy, incarceration) to determine if belonging to specific types of families increases

adolescents' risk for other negative outcomes. Positive outcomes (e.g., academic achievement, life satisfaction) should also be examined.

Limitations

Although this study attempted to address some of the limitations of previous studies, several limitations should be acknowledged. The current study sampled African-American, middle school students from an urban area. Although this sample was appropriate for the specific aims of the study, findings from this study cannot be generalized to all youth. Specifically, these results may not generalize to youth from other racial/ ethnic backgrounds or to African-American youth in other contexts such as suburban or rural areas. The results may also not generalize to African-American youth who are younger or older than those used in this sample, as well as African-American youth from higher socio-economic backgrounds.

In addition, this study excluded adolescents who did not live with their biological mothers or who did not consider their residential biological mothers to be their parent. Although the majority of the original sample (84%) of adolescents both were living with and identified their mother to be their parent, this was not true for all youth. Consequently, this study was not able to examine outcomes for youth from single-father families or extended families (e.g., living with grandparents or aunts, etc.). The study was also not able to assess adolescents who were adopted or in the foster care system. Relatedly, the way in which the larger family composition variable was created is also a limitation of the current study. Specifically, the family composition categories were created using questions about who lives in the adolescents' household and who the adolescents consider to be their parent. This is a limitation because aside from the consensus that many studies use the family types recognized by the U.S. Census, there is little consistency

in how to include both residential and nonresidential parents into family composition measures. This also means that similar family composition categories may not exist in other samples.

A limitation also existed with the way in which the family composition variable was assessed. Specifically, family composition was measured by combining household composition (i.e., who lives in your household) and parental figure (i.e., who do you consider to be your parent). Adolescents were asked to check all that apply, but were not asked specifics related to how long individuals lived in the household or how long individuals were perceived to be a parental figure. This information may be particularly important in stepparent families because the amount of time a stepparent is present within the household may influence whether adolescents consider their stepparent to be their parent.

Other limitations relate to measurement issues. For instance, the fact that the measure of adult support did not ask adolescents to specify the adult they had in mind makes it difficult to assess whether the adult was a parent, a family member, or a non-familial adult. Additionally, self-report was used to assess all but one of the outcomes. Such measures are prone to social desirability effects (e.g., Shield, 2002). However, self-report was still appropriate for use in this study as adolescents may be able to provide information that parents and teachers are not able to provide. These findings may not hold for other informants, such as with parents or other teacher-report measures, which have limitations of their own. For instance, discrepancies between parent- and teacher-report suggest that parents and teachers may be attending to different behaviors at school versus at home (e.g., Laird & Weems, 2011), which may differ from the behaviors that youth are attending to about themselves. Research also suggests that there are multiple forms of aggression (e.g., physical, verbal, relational; Farrell et al., 2016), but only one

form of aggression was used in this study. Thus, different results may be used if other forms of aggression are measured.

Conclusion

Despite some limitations, this is one of a few studies that examined the influence of family composition, including both residential and nonresidential biological and stepfathers, on African-American adolescents' self-report of physical aggression, delinquency, and substance use, and teacher-report of physical aggression. The majority of prior studies examining the relations between family composition and adolescents' problem behaviors have been limited in that they typically sampled completely or predominately European-American samples that did not allow for subgroup analyses. Additionally, studies have been limited in the family types included in their analyses, as well as the problem behaviors measured.

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