Family Structure and Adolescent Drug Use: The Mediating Effects of Family Management, Parental Bonding, and Family History of Drug Use

by

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ABSTRACT

A considerable amount of previous research has been conducted to examine the relationship between family structure and adolescent drug use, with the overwhelming majority of these studies indicating that adolescent youth living in single-parent homes are statistically at greater risk for involvement in substance use. In recent years, researchers have specifically focused on reasons why such a difference in substance use is found among youth living within various family structures. Thus, mediating factors have been examined to attempt an explanation.

In addition, researchers have examined differences found among demographic variables such as sex, ethnicity, and socioeconomic status. No study thus far, however, has considered the differences among Blacks and Whites living in single- and two-biological-parent homes with regard to family management, parental bonding, and family history of drug use in a single study. The purpose of this study was to examine whether or not these three potential mediating variables statistically explained family structure differences and adolescent substance use for Blacks and Whites.

Results of a multiple regression analysis including a total of 295 subjects revealed that for Blacks, there was no statistical significance between family structure and adolescent drug use. All three possible mediating variables failed to serve as significant mediators between family structure and adolescent drug use. For Whites, a significant relationship was found between family structure and adolescent drug use. Additionally, poor family management and parental bonding were found to be mediators of the

relationship found. There was not a mediation effect for family history of drug use for Whites.

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CHAPTER 1: INTRODUCTION

According to the Office of Applied Studies within the Substance Abuse and Mental Health Services Administration (SAMHSA), Alabama's youth showed considerable use of illicit drugs, alcohol, and tobacco in recent surveys. In 2005-2006 and 2007-2008, for youth aged twelve to seventeen, 10.78% (approximately 41,000) and 8.25% (32,000), respectively, reported using illicit drugs in the past month, including marijuana, cocaine, heroin, hallucinogens, inhalants, or prescription medicine used non-medically. When surveyed youth were specifically asked about their use of marijuana, 11.01% (42,000) in 2005-2006 and 10.80% (41,000) in 2007-2008 reported past year use, while 6.32% (24,000) in 2005-2006 and 5.23% (20,000) in 2007-2008 reported use in the past month.

With regard to alcohol use, 16.13% of youth (62,000) in 2005-2006 and 13.01% of youth (50,000) in 2007-2008, aged twelve to seventeen, reportedly used in the past month, with 9.08% (35,000) in 2005-2006 and 7.97% (31,000) in 2007-2008 reporting binge drinking behavior, defined as consuming five or more drinks on the same occasion. In the same study, 15.29% of youth (59,000) in 2005-2006 and 14.67% (56,000) in 2007-2008 reported past month use of tobacco products including cigarettes, smokeless tobacco, cigars, and pipe tobacco. When reviewing the percentage statistics reported, the relatively low numbers do not appear exceptionally alarming. However, when considering how many thousands of youth fall within these small percentages, the severity of the problem becomes significant.

Johnston, O'Malley, Bachman, and Schulenberg (2010, 2011, 2012) presented national results of adolescent drug use for the Monitoring the Future Survey, gathered from over 46,000 eighth, tenth, and twelfth graders nationwide. Results related to adolescent cigarette use indicated that a large number of adolescents were found to have tried cigarettes by the time they reached the twelfth grade (44% in 2009, 42% in 2010, and 40% in 2011), with 20% in 2009, 19% in 2010, and 19% in 2011 of twelfth-grade students reporting current usage. About 20% in 2009, 20% in 2010, and 18% in 2011 of eighth graders reported they had already tried cigarettes, with a substantial number of these youth reporting current usage (7% in 2009, 7% in 2010, and 6% in 2011).

Alcohol usage, according to the Monitoring the Future Survey, has remained widespread over many years according to Johnston et al. (2010). These researchers noted that 72% of twelfth graders reported having consumed alcohol in 2009, with 71% and 70% reporting the same consumption in 2010 and 2011, respectively. By eighth grade, 37% (2009), 36% (2010), and 33% (2011) of youth reported having consumed alcohol. In 2009, 57% of twelfth graders and 17% of eighth graders reported that they had been drunk at least once, with 54% of twelfth graders and 16% of eighth graders reporting the same in 2010 and 51% (twelfth grade) and 15% (eighth grade) reporting such use in 2011.

A considerable number of adolescents who participated in the Monitoring the Future Surveys conducted in 2009, 2010, and 2011 reported illicit drug use in 2009 (47%), 2010 (48%), and 2011 (50%). About 24% of adolescents reported lifetime usage of illicit drugs, excluding marijuana, in 2009, while the number reporting such use increased to 25% in 2010-2011.

The National Survey on Drug Use and Health (NSDUH), released March 31, 2008 by SAMHSA, included studies citing the linkage between early drinking and problematic adulthood alcohol problems, including heavy drinking behavior. Studies cited in this report pointed to the statistical association between early alcohol use and a variety of risky behaviors by these using youth such as violence, suicide, unprotected sex, and multiple sexual partners. According to this report and other similar reports, the phenomenon of youth substance use in and of itself is not necessarily problematic. It is the behaviors that have been shown to be correlated with early substance use that place using youth in danger.

What is important for adolescents to understand, according to Bachman et al. (2008), is that "patterns of behavior established during adolescence can have important consequences extending into adulthood" (p. 2). Decisions which adolescents make regarding tobacco, alcohol, and other drugs are not only linked to immediate consequences but often lead to long-term problems (NSDUH Report, 2009). Additionally, it is important for adolescents to realize that consequences of such use are not only detrimental to them, but can be detrimental to their families and communities as well (NSDUH Report, 2009).

Jaynes and Rugg (1988) succinctly state the reasoning for substance use and abuse here:

> In attempting to understand and explain adolescent alcohol and drug use, one cannot ignore the fact that this use feels good and it is normal to want to feel good. This may seem obvious. However, this is often overlooked as people wonder about the problem. People become addicted, not so much because the

> drug produces a physical dependence, but because they want to achieve, again and again, those good feelings. Chemically dependent people have either never developed the ability to create good feelings for themselves (as is frequently the case with adolescents) or have chosen to use alcohol or drugs as an "easier" means to feel good (which is frequently the case with adults).
>
> If alcohol and drugs were not appealing upon initial use, there would be no addiction problem. As mentioned, people begin using alcohol and drugs because it feels good. Addiction occurs when people are willing to sacrifice the quality of their lives in order to continue to produce that sense of feeling good. We have a society with vales that encourage this, a society which places a strong emphasis on "taking care of ourselves" rather than others. This attitude promotes limited tolerance for pain or discomfort along with little ability to delay gratification. Relief can actually be only moments away, and this becomes a guiding force for many people. (p. 6)

In addition to wanting to feel good, many adolescents do not perceive or understand the dangers associated with substance use. The National Survey on Drug Use and Health Report, released on November 26, 2009 by SAMHSA, focused on the perceptions of risk from substance use among adolescents. In the report, it was revealed that adolescent attitudes about possible substance use risks are related to substance use inversely. As adolescents' perception of risk decreases, substance use tends to increase.

In their study of risk and protective factors for alcohol and other drug problems in adolescence and early adulthood, Hawkins, Catalano, and Miller (1992) stated that "for the developing young adult, drug and alcohol abuse undermines motivation, interferes

with cognitive processes, contributes to debilitating mood disorders, and increases risk of accidental injury or death" (p. 64). In addition, the authors stated that "alcohol and other drugs are major factors in acquired immune-deficiency syndrome (AIDS), violent crimes, child abuse and neglect, and underemployment" (p. 64). As an explanation of how family alcohol and drug behavior affects youth, these researchers pointed out that "beyond genetic transmission of a propensity to alcoholism in males, family modeling of drug using behavior and parental attitudes toward children's drug use are family influences related specifically to the risk of alcohol and other drug abuse" (p. 82).

Adults must be educated regarding the dangers which adolescent substance use presents. As Jaynes and Rugg (1988) explained:

> Chemical use by young people is not simply a stage of growing up that adults can sit idly by and watch. Adults who do not respond when they know that adolescents are using alcohol or drugs, but rather hope that these young people will experiment and then decide on their own not to continue use (or continue the use in a responsible manner), have unrealistic expectations. (p. 7)

According to Bachman et al. (2008), "Educational successes, as well as substance-using behaviors, reflect individual-level choices–choices that are, of course, influenced by family, peers, and many other factors" (p. 2). Extensive research has been conducted in order to validate this and other similar claims. If adolescents are, in fact, influenced by such factors as these, to what degree do these factors play a role in the lives and decisions of adolescents?

One difference found among groups of adolescent substance users and non-users is the family structure in which they live. The overwhelming majority of studies have

shown that adolescent-aged children are more likely to use drugs if they are not living in a two-biological-parent home. Specifically, those adolescents living in step- and single-parent families have repeatedly been shown to be of highest risk for engaging in substance use. Reporting significantly lower drug use, teens from intact homes are the least at risk of substance use.

Based on the plethora of results from studies that have been conducted over many years, it appears obvious that something is taking place within these step- and single-parent families which statistically increases the chances that the youth in these households will become involved in substance use. Similarly, there is something unique taking place within intact families which statistically decreases the risk of adolescent substance use. Some research suggests that the difference in substance use found among adolescents from intact and non-intact homes may be due to economic reasons, while other research points to a difference in parenting styles and parental involvement. Additional research suggests a difference in the peer groups with whom adolescents come to associate.

Studies have shown time and time again that adolescents living in non-intact biological families are at highest risk of substance use, which puts them at high risk of other detrimental behaviors and consequences as well. Homes in which married biological mothers and fathers reside with their children appear to provide a protective mechanism which, statistically, helps to prevent their adolescents from becoming involved with potentially dangerous substances and substance-using peers. It is of utmost importance to determine how these families operate and what mechanisms provide such protection so that other types of families may attempt to replicate such factors and thus

reduce the risk of their adolescent children coming in contact with alcohol, cigarettes, and other drugs. If such factors could be replicated, or near replicated, families, communities, schools, and organizations would have evidence of the need for necessary programs and funding in order to help provide assistance to parents and youth living in non-intact homes.

Statement of the Problem

Based on previous research, it is clear that adolescent drug use has the ability to damage youth mentally, emotionally, and physically. There exists a difference among adolescent drug use in homes where both biological parents are present and other types of homes. With the current rise in the number of non-traditional families in which youth are being reared, it is important to determine what is occurring in these types of families that puts adolescents at risk. If the reason could be determined, then these at-risk teens could possibly be saved from becoming involved in such unproductive and dangerous behavior.

Purpose of the Study

The purpose of this study was to examine the relationship between family structure and youth drug use among Black and White adolescent-aged students. Specifically, the mediating variables of family management, parental bonding, and family history of drug use were examined in an effort to determine whether they could explain the relationship found between family structure and youth drug use.

Research Questions

The following research questions were used to guide this study:

1. For Blacks, does poor family management mediate the relationship between family structure and adolescent drug use?

2. For Whites, does poor family management mediate the relationship between family structure and adolescent drug use?
3. For Blacks, does parental bonding mediate the relationship between family structure and adolescent drug use?
4. For Whites, does parental bonding mediate the relationship between family structure and adolescent drug use?
5. For Blacks, does family history of drug use mediate the relationship between family structure and adolescent drug use?
6. For Whites, does family history of drug use mediate the relationship between family structure and adolescent drug use?

Significance of the Study

A study of possible mediating variables to explain the relationship between family structure of adolescents and anticipated drug use is critically important for many reasons. First, it would help parents and educators understand the risk which young persons may face, based on their family structure. Second, it would help to further research in the area of youth drug use and anticipated use. If a determination could be made as to why, exactly, teens living in non-traditional families are at higher risk for drug use, further research could be conducted along these lines. Perhaps, most importantly, effective interventions could be developed, implemented, and researched to better help such youth.

Definitions

Adolescent

The terms adolescent, youth, teen, and teenager are used interchangeably, but all are intended to depict an individual within the developmental, pubescent stage between

childhood (pre-puberty) and early adulthood, which is typically thought to begin around age 18 or19.

At risk

At risk in this study is defined as adolescent students who are in danger of becoming involved in unproductive behaviors (substance use) and/or with unproductive peers (substance-using).

Parental Bonding

In this study, the term parental bonding refers to the closeness, or strength, of the relationship between a parent or parents and their adolescent children. Parental bonding is synonymous with family hardiness, family coherence, family bonding, and parental attachment.

Family History of Drug Use

The past or present use of substances by parents is defined as family history of drug use in this study. In other studies, family history of drug use may include the use of substances by any family members. Parent history of drug use, parent history of substance use, parental substance use, and parental use are all descriptions of what in this study is termed family history of drug use.

Family Management

Family management is defined as the knowledge and regulation of adolescent activities and peers for the purposes of this study. Often thought of as tracking, studies involving adolescents frequently refer to this variable as parental monitoring or parental involvement.

Lifetime Use

Lifetime use includes the use of a specified substance at any point in life, including usage "just once."

Substance Use

As opposed to abuse, which is defined as meeting criteria for a clinical diagnosis of problematic usage of substances, substance use is defined as that which may or may not lead to problematic issues. Note: the term substance use disorder is synonymous with abuse, not use, as indicated by the disorder terminology.

CHAPTER 2: LITERATURE REVIEW

This review will first present the theoretical framework for this study including (a) attachment theory, (b) Baumrind's parenting types, and (c) social learning theory. Following the theoretical framework, information from several prominent studies from each of these related research topics will be chronologically presented. Next, several important studies from the general area of (a) family structure will be explored followed by findings from a number of studies which focused on (b) race will also be presented. Following these general categories, studies related to the more specific areas of (c) family management, (d) parental bonding, and (e) family history of drug use will also be elucidated.

Theoretical Framework

Attachment Theory

John Bowlby, a pioneer in attachment theory, came to understand that early relationships were critical to human development and explored, through his lifetime of research, the vital nature of these relationships. He famously stated that "whilst especially evident during early childhood, attachment behavior is held to characterize human beings from the cradle to the grave" (Bowlby, 1979, p. 129). Bowlby's focus on early attachment and its effects on development into adolescence and adulthood paved the way for attachment theorists that followed, including Mary Ainsworth. In her landmark studies, Ainsworth observed mothers and their babies in both their homes and in experimental settings, the latter of which became known as the Strange Situation research

paradigm. Mother-infant interactions were observed in a controlled, experimental interaction involving an unfamiliar environment and a stranger. At one point during the Strange Situation, the primary caretaker (mother) is asked to leave the room and the child's reaction to the caretaker's exit, and more importantly to the return of the caretaker, is filmed. Based on this research protocol, and in particular, the infant's reunion with his or her caretaker, the attachment pattern of either: Group A (insecure avoidant), Group B (secure), and Group C (insecure ambivalent/resistant) is assigned to the infant.

An insecure avoidant attachment was determined in cases where a mother and her infant appeared to lack a connection or bond. In the Strange Situation, infants falling into this category of attachment are often seen as indifferent toward their mothers and may even seem to avoid her, both in separation and reunion. These infants often lack the ability to share effectively and may explore their environment without seeking approval from their mothers. In addition, infants classified as displaying this insecure avoidant attachment type may interact with strangers freely, without first gaining mother approval, and may even be seen as more interactive with strangers in some cases (Ainsworth, 1979; Weinfield, Sroufe, Egeland, & Carlson, 1999).

Secure attachment in infants and young children, according to Ainsworth, is characterized by a mother-infant relationship where the mother serves as a secure base from which the infant explores the environment. In the Strange Situation, young children illustrating this attachment type first determine the mother's response to and interaction with the surrounding environment before initiating their own exploration. In this type of attachment relationship, there is an obvious bond between the child and the mother, often

initially yielding a highly distressed response from the infant upon separation. During reunion, children deemed to have a secure attachment to their mothers are happy to see her and will both seek and maintain contact with her until they are calmed. (Ainsworth, 1979; Weinfield et al.,1999).

Children who display an ambivalent/resistant pattern of attachment to their mothers are seen as unable to effectively use the mother as a secure base from which to explore. During the Strange Situation, children determined to have this attachment type with their mothers become highly distressed during separation from her and are not easily calmed during reunion. In addition, infants in this category of attachment may appear angry with their mothers during reunion and are often observed as continuing to show signs of distress, even after seeking and achieving contact with her (Ainsworth, 1979; Weinfield et al., 1999).

Later, in adolescence, youth still are in need of a secure base from which they can explore and interact with their environment. At a time in life when a multitude of physiological and psychological changes are occurring, "a period of profound transformations in specific emotional, cognitive, and behavioral systems, as the adolescent evolves from being a receiver of care from parents to being a potential caregiver" (Allen & Land, 1999, p. 319), adolescents are most certainly in need of security from their primary caregivers. Based on their interactions with their caregivers, adolescent youth learn how to cope with stress, while also developing a healthy sense of autonomy.

In cases where the primary caregivers are unable to provide adequate support and guidance, youth often turn to their peers to fulfill such needs, which can result in a

potentially dangerous situation. Research has shown that adolescents having a secure attachment to their primary caregivers are better adjusted during this highly stressful stage of life and are less likely to engage in risky behavior such as substance abuse. In addition, adolescents with secure attachment to parents experience more positive, healthy relationships with peers and tend to be readily accepted by their peers.

Baumrind's Parenting Types

Diana Baumrind developed a classification system for parenting types, which was initially published in 1966, that emphasized authoritarian, permissive, and authoritative parenting styles. Through her research, which was based on observations of parent-preschooler interactions, Baumrind found parents to have varied levels of demandingness (control) and responsiveness (warmth) in their parenting style (Berk, 2002).

Parents exhibiting an authoritarian style of parenting typically exhibit low levels of responsiveness (warmth) and high levels of demandingness (control), while showing little concern for developing child autonomy and requiring complete and immediate obedience from their children. The permissive style of parenting, on the other hand, is depicted by high levels of responsiveness (warmth) and low levels of demandingness (control). Parents displaying this style of parenting often allow their children too much freedom and too little responsibility. Their children do not appear to have limits, boundaries, or a clear sense of direction (Berk, 2002; Feldman, 2004; McDevitt & Ormrod, 2007).

In contrast to authoritarian and permissive parenting styles, authoritative parenting is characterized by high levels of both responsiveness (warmth) and

demandingness (control). These parents provide their children with love and support, both of which are necessary in order for children to develop a healthy level of autonomy and handle responsibility placed upon them. Additionally, authoritative parents emphasize the importance of limits and ensure that their children are able to make sound decisions, considering consequences of their actions (Berk, 2002; Feldman, 2004; McDevitt & Ormrod, 2007).

A number of child outcomes have been linked to authoritarian, permissive, and authoritative parenting styles. Children who were reared with an authoritarian style of parenting often appear unhappy and experience unpleasant emotions, such as guilt and anger. In addition, these children may experience low self-esteem, poor social skills, and mistrust. They may appear unhappy and overly aggressive as well. The permissive style of parenting often yields children who, like children with authoritarian parents, experience social difficulties, especially with their peers. They may also be seen as immature, impulsive, and demanding. These children may also experience trouble in school since they are not accustomed to limits and boundaries. Children who are reared in the authoritative style are typically well-adjusted, high achieving, happy, and self-confident. They have good social skills, are mature, and exude friendliness. These children also tend to adjust well in traumatic and stressful situations (Berk, 2002; Feldman, 2004; McDevitt & Ormrod, 2007).

In adolescence, youth whose parents fall within an authoritative style of parenting usually adjust well to the stresses of adolescence and are statistically less likely to engage in high risk behaviors and unhealthy peer involvement. Previous research has shown that adolescents whose parents impose clear, firm limits, while also designating a fair amount

of responsibility, experience a decreased risk of involvement with unhealthy peers and in potentially destructive behavior such as substance use. In addition to the imposition of clear limits and responsibility, having an effective communication pattern with parents which involves feeling supported by one's parents and having the ability to assist in the creation of rules and consequences has been found to serve as a protective factor against substance use and the initiation of such use, as well as other high-risk behavior (Branstetter, Masse, & Greene, 2007; Miller, Alberts, Hecht, Trost, & Krizek, 2000; Turner, 1995).

Thus, it can be assumed that permissive and authoritarian parenting styles are unfavorable during the adolescent years based on the research into the usual resulting characteristics of children with parents who parent in these ways. A parenting style which consists largely of warmth and support but fails to erect limits or implement responsibility warrants concern during this stage of development. Adolescents with parents who exhibit these types of parenting styles become easily involved with unfavorable peers and high-risk activities since there are no clear boundaries, standards, or sense of responsibility to guide and shape their actions (Branstetter et al., 2007; Miller et al., 2000; Turner, 1995).

Similarly, adolescent youth in authoritarian-style homes experience difficulty handling the limits and responsibility placed upon them, as they lack effective communication and feelings of warmth and support from their parents. These adolescents may become involved in risky behavior and with unfavorable peers as they rebel against their parents' strict rules, high demands, stiff consequences, and rigid limits in an effort

to attempt achievement of autonomy from their parents (Branstetter et al., 2007; Miller et al., 2000; Turner, 1995).

Social Learning Theory

Albert Bandura was one of the first theorists to argue with traditional behaviorists who believed that humans could be conditioned to behave only after repeated experiences over time. Instead, he believed that humans could learn by watching others and imitating observed behavior. According to Bandura, humans code information gained through the senses, and through cognitive processing, humans have the ability to recall information in order to display behavior. Therefore, according to social learning theory, it is unnecessary for the presentation of a stimulus on repeated occasions or for multiple repetitions of a particular behavior over a span of time (Crain, 2005; Miller, 2002).

Bandura's famous Bobo doll experiment illustrated a number of his ideas about observational learning. In this study, preschoolers watched films, independent of each other, in which an adult interacted with a Bobo (inflatable) doll aggressively, by using a variety of behaviors. Following the aggressive scenes, depending on which film ending the participant child was assigned to watch, the adult model was either rewarded, punished, or received no feedback for his aggressive behavior toward the doll. Upon completion of watching the film, participants were then placed in an experimental setting with the Bobo doll. While all of the child participants had observed the violence enacted toward the doll, only the subjects who witnessed the adult model being praised or receiving no feedback demonstrated the same aggression. Children who observed the adult model being punished for his actions engaged in fewer aggressive acts. Therefore, Bandura concluded that children not only learned and imitated behaviors through simply

observing others' actions, but that observation of others' reinforcements and punishments affected the presence or absence of such behavior in targeted subjects (Bandura, 1965a; Bandura, 1965b; Crain, 2005).

In addition to his belief that humans could learn through observation alone, Bandura also believed that in cases where social experiences were dramatic enough, humans could immediately be affected and permanently changed, a claim substantiated by a plethora of research. There is also considerable research evidence which demonstrates that in cases of parental substance use, adolescent use often occurs. As the primary role model in most children's lives, youth often mimic both the behavior and coping strategies of their parents, whether positive and negative (Branstetter et al., 2007; Crain, 2005; Miller, 2002; Miller et al., 2000; Turner, 1995).

In childhood, as in adolescence, studies have repeatedly shown that the example set by parents is often repeated by their offspring. Research which has focused on the adolescent period, specifically, has revealed that the chosen substance of use by adolescents is often identical to the preferred substance of use by parents and parental role models. In addition, adolescent youth often engage in substance use as a general coping mechanism modeled by parents, especially in times of marked stress, as well as for recreation purposes. Therefore, the overwhelming majority of studies examining youth and parental substance use find that in cases where parents use, adolescents demonstrate a strong tendency to also become substance users (Branstetter et al., 2007; Crain, 2005; Miller, 2002; Miller et al., 2000; Turner, 1995).

Relevant Previous Research

Family Structure

Amato (1987) considered how single-parent, stepparent, and two-biological-parent families differed in terms of family processes according to the child's point of view. In this study, 402 children in primary and secondary schools served as the participants, as well as one of the child's parents, each of whom was individually interviewed. Based on the number of family types which developed, the sample for this study was reduced to 201 participants who lived in the three most commonly given types: two-biological-parent, single-mother (separated or divorced biological parents), and mother-partner (divorced biological parents) homes.

Both parent and child participants responded to interview questions related to relationships and activities within the family. Family process measures were mother support, father support, mother control, father control, child autonomy, mother punishment, father punishment, household responsibility, sibling relations, marital conflict, and family cohesion. In this study, for participants living in a stepfamily, the father measures were answered according to the residential stepfather. In single-parent homes, the father measures were answered according to the nonresidential biological father. A multivariate analysis of covariance was conducted using the 11 family process measures as dependent variables.

Results revealed many findings. Notably, there was no difference in how children viewed their relationship with their mothers. Children from all three types of families reported that their mothers interacted with and helped them, providing support. Adolescent-aged participants from single-mother families reported less maternal and

paternal control than their peers in both step and intact families. In addition to these findings, children from single-mother families, compared to those children from step and intact biological families, reported more autonomy–a finding that was only significant for adolescents.

Participants reported similarly with regard to maternal punishment but differed when paternal punishment was considered. Children from single-mother homes reported less paternal punishment than those from step or intact families. Results also revealed a significant interaction between family type and participant age. Older participants reported less punishment from fathers in general.

With regard to household responsibility, children from both stepfamilies and single-mother families reported having more responsibility, therefore differing from the responses of their peers living in intact biological homes. The relationship with siblings was reportedly more negative among children in single-mother and stepfamilies, yielding significance at the post hoc level for adolescent-aged youth. For family cohesion, children from intact families reported a higher level, but significance was only found for younger children.

Lee, Burkam, Zimiles, and Ladewski (1994) were interested in how family structure affected young adolescent children, both behaviorally and emotionally. Participants were eighth graders in both public and private schools (N = 16,621), drawn from the National Education Longitudinal Study of 1988 data set. Self-report, parent, school administrator, and teacher measures were completed for each participant. Additionally, SAT scores were collected for participants. Demographic data such as race, gender, parent age at birth, SES, and number of siblings were also collected.

Results indicated a significant relationship between family structure and emotional problems, with adolescents from intact families least likely to experience these types of problems. Results also indicated that both behavioral and emotional problems were more common for participants living in stepfamilies than for those living in intact homes. In homes where the father and a stepmother were present, adolescent participants were shown to be particularly at risk for problematic behavior. Families headed by a single parent tended to have adolescents with more behavioral and emotional problems, when compared to their peers from intact families. This problem, it is believed, may be due in part to a general lack of resources and support which single-parent families experience. The group most at risk for experiencing and exhibiting behavior problems was found to be young male adolescents of minority and low-SES homes who have many siblings and young mothers.

Thomson, Hanson, and McLanahan (1994) focused on family structure and how it related to child well being. Specifically, the researchers were interested in how economic resources and parental behavior played a role in the relationship between a child's family structure and several outcome variables. Data used in this study were taken from the 1987-1988 National Survey of Families and Households and included 5,666 participants having children younger than 19 years of age living in their homes, with a total sample of 3,488 used for analysis. Respondents were placed into one of the following family structure categories: original two-parent family, mother-stepfather family, mother-partner family, and single-mother family.

Results of this study revealed an interesting trend. Those children from homes in which both biological parents were present appeared similar to children living in mother-

stepfather homes on measures of academic performance. However, those children living in homes with a stepfather showed some degree of disadvantage in terms of social adjustment. Not surprisingly, single-mother families experienced the least economic security, while mother-partner, mother-stepfather, and two-parent families each experienced higher levels of economic security, respectively. The researchers of this study concluded that economic disadvantage is responsible to a large degree for the lack of positive child outcomes.

Garis (1998) studied poverty, single-parent households, and youth at-risk behavior. Participants were drawn from the National Educational Longitudinal Survey, conducted in 1988. At the time the first wave of research for this study was conducted, students were in the eighth grade. They completed extensive questionnaires asking about themselves, their teachers, schools, parents, and family characteristics. Student participants were given follow-up surveys every 2 years. During this wave, questions were gathered from parents and caregivers, teachers, school administrators, and adolescent participants as in the first wave of the study, but during this wave information was also collected regarding sexual, drug, and alcohol activity, among other activity related to the participants since they were now older.

Results of this study showed that an increase in family income generally increased adolescent risk of sexual activity and drug/alcohol use at the 4-year mark and that an increase in family income over the 4-year period never resulted in lower incidences of sexual, drug, or alcohol activity. Results also indicated that as long as both parents were involved in the upbringing of the child, adolescents from single-parent homes showed no statistically significant increase in drug/alcohol use and sexual activity. Father input was

statistically a more important factor in the presence of or lack of presence of at-risk behavior than family structure.

Hoffmann and Johnson (1998) questioned the relationship between family structure and drug use among adolescents, as well. These researchers were specifically interested in the direct implications that economic resources and mobility provided, if any. Data used in this study were taken from the National Household Survey on Drug Abuse, conducted from 1991-1993, in which 22,237 adolescents aged 12-17 participated. Due to the large sample size, it was possible for the researchers to create nine different possible family types based on the marital status of the primary parent and whether or not other adults lived in the home.

Results of this study revealed that adolescents from mother-father families had the lowest use of marijuana and other drugs, as well as the lowest prevalence of problematic drug use and alcohol intoxication. Adolescents from father-stepmother, father-only, and other-relative-only families had the highest prevalence of drug-related behavior. Another finding of this study surprisingly revealed that the link between adolescent drug use and family structure could not be explained by economic resources or mobility.

Jenkins and Zunguze (1998) were interested in studying the relationship between family structure, adolescent drug use, peer affiliation, and perception of peer acceptance of drug use. The sample was 2,229 students in Grades 8 (42%), 10 (35%), and 12 (23%), each grade-level having nearly equal gender representation. Adolescent participants completed a 163-item questionnaire measuring drug use, demographic information, and psychosocial variables. Family structure groups included in the analyses were both

natural parents in home, one stepparent and one natural parent in home, natural mother only, natural father only.

Results yielded a number of findings. The largest group differences between participants from different family structures were found in eighth and tenth grades. The general finding related to family structure in this study was that students from single and stepfamilies reported that they had more friends using drugs and that their friends disapproved less of their drug use. Tenth graders living in father-only homes reported a higher frequency of cigarette, marijuana, beer, and liquor use and had more friends using liquor. Adolescents in Grades 8 and 10 reported more frequent drug use when living in stepfamily homes, compared to those living in intact biological homes. Similar results were found when comparing father-only to intact-family homes and mother-only to intact-family homes with regard to cigarette use and friends' use of marijuana. Students from the father-only and mother-only homes reported more cigarette use and friends using marijuana than adolescents from intact families.

Newcomb and Bentler (1989) explored, in detail, the phenomenon of substance use and substance abuse among both children and adolescents. Using data taken from the National Household Survey in 1985, these researchers pointed to the statistics regarding the prevalence of smoking and drinking among early adolescents, 45% and 56% respectively. These same data revealed that about 24% of these adolescents had used marijuana. While these researchers were careful to distinguish between substance use and substance abuse, they pointed to the fact that early adolescent cigarette and alcohol use had most definitely been found to be related to later substance use, and for some teens, abuse.

Newcomb and Bentler focused on how important peer influence is in the lives of the adolescents in their study, as those teens with peers who are involved in initial drug involvement tend also to become involved themselves. Not surprisingly, teens from disadvantaged groups and families tended to be heavier users of substances, as were adolescents from families experiencing disruption of some type and homes with adult substance users. Psychological factors such as self-esteem also played a role in whether or not young adolescents will use drugs initially and the extent to which they will become involved. These researchers thoroughly discussed the fact that not all initial drug users will become abusers and that having used drugs initially does not necessarily indicate any major negative effects on the user. The issue they spotlight is that there is no real way of telling whether or not an initial user will become a habitual user who will engage in negative, risky behaviors associated with drug use. In the same way, there is no real way of determining which initial users will develop abuse patterns, as these are often associated with genetic addiction factors.

Flewelling and Bauman (1990) were interested in how family structure served as a predictor of initial substance use and sexual intercourse in adolescents. Their longitudinal study focused on 2,102 participants 12 to 14 years of age and their mothers. At the time of follow-up (2 years later), participants were 1,637 of the original 2,102. Questionnaires were completed by participants regarding substance use behaviors and attitudes, sexual intercourse, social and psychological characteristics, along with other related questions.

Results of the analyses conducted by these researchers revealed that the adolescents least likely to report substance use and sexual intercourse were those from

two-parent homes with both biological parents. Additionally, results indicated that a significant interaction existed between single-parent home membership and race with regard to cigarette smoking. Interestingly, this interaction affect was much larger for White adolescents than for other racial groups, suggesting that White teens in single-parent homes are more likely to smoke.

Needle, Su, and Doherty (1990) examined how divorce and remarriage impacted adolescent substance use. In this longitudinal study, conducted over 5 years, these researchers considered the age at which parental divorce occurred. Participants for this study were 467 families and were categorized into three groups: those whose parents divorced during childhood, those whose parents divorced during adolescence, and those whose parents were continuously married. Families were interviewed each year.

Results showed that adolescents from homes in which the parents divorced during adolescent years had the greatest drug involvement. In addition, differences were found among adolescent male and female participants. For boys, parental divorce (both in childhood and adolescence) had a significant effect, as there were greater overall drug involvement and substance use consequences. For girls, remarriage of the custodial parent was found to have a negative effect of increased overall drug involvement. Interestingly, results of this study indicated that boys reported fewer consequences from substance use in cases of parental remarriage compared to their peers whose parents remained unmarried following divorce. Remarriage, it seems, is a positive occurrence for male adolescents.

In a study conducted by Kung and Farrell (2000), both parents and peers were examined in relation to substance use by children in early adolescence. Participants in

this study were 531, mostly African American (90%), seventh graders. A final sample of 443 was used in analyses. In this study the following variables were considered: drug use, peer pressure, parenting practices, and family structure. The Alabama Parenting Questionnaire: Child Form (Frick, 1991), a validated, self-report questionnaire, was employed in order to measure student perceptions of their parents' monitoring and discipline practices.

Structural equation modeling analyses revealed both direct and indirect effects. Peer pressure and parenting practices were both found to affect adolescent drug use directly. Additionally, family structure was found to have a direct effect on parenting practices. More specifically, study participants living within intact families were found to receive more adequate parenting than children living in other types of homes, including single-parent extended families. An indirect effect was also discovered, as peer pressure was found to mediate adolescent drug use through parental influence. Results also revealed that both male and female adolescents from intact homes were found to have the lowest levels of drug use compared to peers living in stepfamilies (boys), single-parent (girls), and single-parent extended (girls) homes.

In 2002, Hoffman published a study in which he examined family structure in a community context and related such to adolescent drug use. The hypothesis for this study pointed to the idea that the community in which different types of families lived may explain the difference among drug use in adolescents living in the homes. Data were taken from the 1990 and 1992 National Education Longitudinal Study and included 11,784 students ranging from 10th through 12th grades. Independent variables in this

study were family structure, parental supervision, parental monitoring, parental attachment, and residential mobility.

Regression analyses revealed results that failed to support the hypothesis and instead revealed that, regardless of community, adolescents living in both single and stepfamilies were at higher risk of using drugs. More specifically, Hoffman (2002) found that youth living in single-father homes not only were at higher risk of using, but were also at a heightened risk of increasing use over time.

Manning and Lamb (2003) studied adolescent well-being in cohabiting, married, and single-parent families. Participants were drawn from the National Longitudinal Adolescent Study of Adolescent Heath conducted in 1995, a study conducted with adolescent students in Grades 7 through 12. Overall, 18,924 students were interviewed. The dependent variables in this study were whether or not the participant had ever been expelled or suspended from school, trouble in school (problems with teacher, paying attention, getting homework done, getting along with peers), and self-reported delinquency scores (15 items related to delinquency behavior over past 12 months).

Results of the analyses conducted indicate that adolescents from two-parent biological homes fare better than adolescents from any other type of home. Adolescents living in cohabiting families where the mother is married seem to have an advantage over those who live in the same type of family, but where the mother is not married. Specifically, teens living in married cohabiting families show more positive behavior and academic outcomes according to the results of this study.

An overall outcome of this study is that adolescents, in this particular analysis, do not seem to be positively affected by the presence of a cohabiting stepfather in the house

if he is not married to their mother. In fact, adolescents in this type of home environment appear to be no better off than those in a single-mother home. Additionally, results of this study suggest that family stability is more important in predicting adolescent outcomes than family structure.

Sun (2003) studied adolescent well-being in homes without biological parents. From the National Center for Education Statistics 1988 study, a sample of 19,071 adolescent eighth-grade students was used for this study. Well being was assessed in four areas: academic performance, academic aspiration, psychological well-being, and behavior problems. According to analysis results, adolescent participants in non-biological-parent families scored lowest in terms of their academic performance and aspiration. These students also reported lower levels with regard to locus of control (psychological well being factor). In addition, these participants showed a higher likelihood of problem behavior and cigarette smoking and lower self-esteem when compared to their peers from two-biological-parent, single-mother, and stepfather families.

Results pointed to the notion that for each biological parent absent from the home, the adolescents' well being declined. Adolescent participants from nonbiological-parent homes, single-father homes, and stepmother homes showed similar levels of self-esteem, behavior, and cigarette smoking. Furthermore, results of this study's analysis revealed that non-biological-parent homes are more highly disadvantaged when it comes to resources, even when compared with single-parent families (who also tend to lack in resources).

Broman, Li, and Reckase (2008) investigated the relationship between family structure and adolescent drug use, considering how parenting, peer drug use, religiosity, and neighborhood problems may act as mediators, yielding a pathway between family structure and adolescent drug use. The study focused on 6,120 adolescents in 7th through 12th grades from homes with both biological parents (n = 3,413), step or nonbiological parents (n = 794), and single parents (n = 1,913).

In this study, parenting was assessed using two measures: mother warmth (consisting of five measures) and family acceptance (consisting of four measures). Peer drug use was measured by two questions, religiosity was measured by two questions, and neighborhood problems were measures by two questions. Participant drug use was measured by asking about quantity and frequency of alcohol and marijuana use.

From structural equation modeling, the study yielded many findings. First, after each of the mediators was accounted for, there was no direct effect of family structure on drug use. That is, the relationship found between family structure and adolescent drug use is one which is mediated, specifically through peer drug use, parenting, and religiosity. The variable 'neighborhood problems' was not found to be a significant mediator. Peer drug use was found to have the strongest effect for adolescents, especially those of single-parent families, followed by religiosity. For adolescents from step- or nonbiological families, the mediating effects were small.

In their study of single-parent families and adolescent drug use, Hemovich and Crano (2009) produced results revealing that the gender of the adolescent was an important variable to be considered when examining family structure. Data were drawn from the 2004 Monitoring the Future Survey and included 37,507 usable cases.

Results of an analysis of variance and a multivariate analysis of variance revealed a number of findings. Univariate main effects showed that, consistent with previous studies, boys reported greater marijuana use than girls, while girls reported greater use of amphetamines. Additionally, older students reported more usage of both marijuana and amphetamines. One unexpected and surprising result was that eighth-grade students reported greater usage of inhalants.

Univariate results also revealed that adolescents living in single-father families reported significantly higher substance use than adolescents living in two-parent and single-mother homes. Adolescents living in two-parent homes were found to have the least use of marijuana and amphetamines. Multivariate results of this study revealed that drug use was more prevalent among daughters living in single-father homes than among daughters living in single-mother homes. For sons, however, there was no significant difference in drug use based on which single parent was head of the household.

Hemovich, Lac, and Crano (2011) conducted a study during which they examined the role of family structure and other factors on early-onset drug and alcohol use in youth. Data used in this study were from 4,173 adolescent respondents in the National Survey of Parents and Youth conducted between 1999 and 2001. A number of parental, social, and intrapersonal variables were measured, as was adolescent substance use. A multivariate analysis of covariance and subsequent analysis of covariance tests were employed in order to produce analytic results.

Consistent with numerous previous studies, adolescents living in homes with both parents were least likely to use drugs compared to their peers living in other types of families. Adolescents living in single-father homes reported the highest usage of

cigarettes, alcohol, and marijuana and adolescents with single mothers reported more cigarette and marijuana use than their peers living in two-parent families. Additional results pointed out that parental warmth and parent-child bonds did not appear to be statistically different among family types. Adolescents living in single-parent families also reported more friends with a positive attitude toward drugs, more delinquency, and less involvement in organized activities than did their adolescent peers from two-parent families.

The majority of these studies which closely examined family structure show that adolescents living in intact homes with both biological parents are at least risk of substance use, emotional and behavioral problems, and interactions with substance-using and delinquent peers. Single-parent and stepparent homes are specifically shown to be problematic for some adolescents, especially in cases where nonresidential parents are uninvolved.

Race

A previously detailed study by Flewelling and Bauman (1990) also found results related to race which indicated that a significant interaction existed between single-parent home membership and race with regard to cigarette smoking. Interestingly, this interaction effect was much larger for White adolescents than for other racial groups, suggesting that White teens in single-parent homes are more likely to smoke.

Giordano, Cernkovich, and DeMaris (1993) studied Black adolescents in order to examine both family and peer relations among this group. Researchers hypothesized that these youth, compared to their White peers, would depend on their peers more for support since their homes lack a degree of control and intimacy due to being headed by a single

mother. The sample consisted of 942 participants of whom personal interviews were conducted. The participants were from two-parent (n = 462), mother-only (n = 265), and mother-stepfather (n = 103) homes. Participants were nearly equal in terms of gender and race (Black and White). Participants in this study answered questions about their friends and family. In addition, demographic information, including SES, was collected.

Results indicated that Black and White participants were shown to have significant differences on the family and friend qualities, as did males and females. This study did not reveal many significant differences among participants based on family structure. What these researchers highlighted are the differences found when comparing White and Black adolescents, as there appears, based on the results of this study, to be a difference in balance within the family and peer relationships.

Vega, Zimmerman, Warheit, Apospori, and Gil (1993) studied early adolescent drug use risk factors among four prevalent ethnic and racial groups: Hispanic, Cuban and other Hispanic, Black, non-Hispanic White. Participants were males from sixth and seventh grade (n = 6,760). Illicit drug use, including marijuana, non-prescribed prescriptions, and other illicit drugs, was measured by a series of questions which asked about lifetime use, frequency of use within both the month and year ranges, and grade during which the participant first used.

Risk factors were assessed by multiple questions falling into 10 scales which regarded specific family, psychological, peer, and deviance risks: low family pride, family substance abuse problems, parent smoking, low self-esteem, depression symptoms, suicide attempt, perception of high peer substance use, perception of peer approval for substance use, willingness to engage in nonnormative behavior, and

delinquent behavior. Among other things, results indicated that Blacks' perception of peer approval for substance use was highest, but that they reported the lowest perception of high peer substance use. Additionally, Blacks reported the lowest levels of use for all substances while White non-Hispanics reported higher use of alcohol, cigarettes, and inhalants. Cubans and other Hispanics reported higher use of illicit drugs compared to other groups.

Amey and Albrecht (1998) sought to explain the differences between racial and ethnic groups with regard to adolescent drug use. Specifically, the researchers were interested in how family structure and parenting interactions played a role. The sample was adolescents between 10 and 17 years old (n = 1,389) from the National Survey of Families and Households. Participants were equally represented in terms of gender, and were identified as Black (n = 268, 19%), Latino (n = 117, 8.4%), and White (n = 1,004, 72.3%). Twenty-two of the participants were excluded from analyses due to family relationship unavailability.

In this study, both initiation (having ever used the substance) and extent of use (number of times in a specified amount of time) for alcohol, tobacco, and marijuana were examined. The following categories were formed for family structure: both biological parents in home, one biological parent and one stepparent in home, one divorced parent in home, one never married parent in home. Quality of parental relationship and amount of parental monitoring were measured by gathering the amount of time the parent and child spent together and a rating of the relationship on a 1-10 scale.

According to the results of this study, Black adolescents were least likely to initiate drug use. Latino participants, while found to be less likely to use alcohol and

cigarettes, were found to be at risk for using marijuana about twice as much as Whites. These researchers found that family structure could not explain differences between Blacks and Whites using drugs. Latino and White adolescents from homes with both biological parents present were the least likely to use drugs, but Black adolescents from homes of this same structure were most likely to use alcohol and marijuana. It is suggested that perhaps Blacks have a different way of responding to living in two-parent biological families than do Latino and White adolescents.

Gil, Vega, and Biafora (1998) studied how family structure and family risk factors related to drug use initiation. In this study, only adolescent-aged males served as participants and a longitudinal study consisting of three waves provided the data. During the first wave (T-1) of data collection, the boys were in Grades 6 and 7, with the third wave (T-3) conducted during Grades 8 and 9. Of the original 6,760 participants, 3,413 were used for the data analyses in this study, including U.S.-born Hispanics (n = 1,228), foreign-born Hispanics (n = 1,228), African Americans (n = 412), and White non-Hispanics (n = 551).

Results revealed that two of the ethnic groups were most represented in the two-parent family category–foreign-born Hispanics and White non-Hispanics–while the single-mother category was more likely to be found among African Americans and U.S.-born Hispanics. The group which had the highest proportion of initiation into illicit drugs were the U.S.- and foreign-born Hispanics, whereas the highest proportion of the same initiation for African American and White non-Hispanics were for those participants whose family structure changed. An important finding of this study was in examining the proportion of adolescent-aged participants' initiation in illicit drug use.

For U.S.-born Hispanic adolescents, 17% reported illicit drug use if one of the noted family factors was present, but above 40% indicated being involved in such if three to five of the family factors were present. African American youth reported lower rates of initiation overall, but results indicated that even with three to five of the family factors present, the rate of illicit drug use for this particular racial group was still much lower than that for U.S.-born Hispanics, foreign-born Hispanics, and White non-Hispanics with only one of the family factors.

Cleveland, Gibbons, Gerrard, Pomery, and Brody (2005) studied parenting and risk behavior in African American adolescents. Participants in this study were 714 African American families that were participants in a larger study, the Family and Community Health Study, and who completed three waves of interviews. Child participants were fifth graders aged 10 to 12 years old during the first wave of interviews. The primary caregiver of the fifth-grade target child also participated in the study. Following the initial interview, a second wave of interviews was conducted approximately 2 years later, with the third interview wave occurring about 3 years after (5 years after the initial wave).

A number of parent, peer, and adolescent variables were assessed and a number of tests were conducted to determine the effects of each on adolescent risk cognitions and behavior. Results indicated a relationship between effective parenting and adolescent substance use 5 years after initial interviews. Specifically, it was revealed that parenting behaviors (monitoring, communication about substances, and parental warmth) served as protective mechanisms, shielding adolescents from substance use indirectly through peers and cognitions.

Pilgrim, Schulenberg, O'Malley, Bachman, and Johnston (2006) considered the effect of race in their study of mediators and moderators of parental involvement on adolescent substance use. Participant data were taken from the 1994, 1995, and 1996 Monitoring the Future cohorts of eighth and tenth graders and included 13,244 adolescent students. Adolescent drug use, the dependent variable, was measured by asking participants about the frequency of their cigarette, alcohol, and marijuana use over the past 30 days. Independent variables included parental involvement, risk taking, school success, and time spent with friends.

Overall results of structural equation modeling analyses indicated very similar processes across gender and race for the relationship between parental involvement and adolescent drug use, a relationship found to be mediated by school success and time spent with friends. As parental involvement increased, adolescent substance use was found to decrease, a negative relationship in terms of direction. In addition to these results, similar results were shown with regard to risk taking. Regardless of race, gender, and age, risk taking was revealed as predictive of adolescent substance use, though this relationship was positive in nature (as risk taking increased, so also did substance use).

Farmer, Sinha, and Gill (2008) were interested in how parental limit-setting and monitoring, along with family religiosity, affected adolescent substance use among both Blacks and Whites. The participant sample included 6,894 African American (n = 2,229) and European American (n = 4,665) 12 to 16 year old (M = 13.99) adolescents from the 1997 cohort of the National Longitudinal Survey of Youth. Parental limit-setting and parental monitoring, family religiosity, and adolescent substance use served as the variables of interest in this study.

Results of this study indicated that family relationship and adolescent substance use were an effect found to be mediated by parental limit-setting and monitoring for Blacks. These results indicate that religiosity affects parental limit-setting and monitoring, which then affect the Black adolescents' substance use. No direct effect was found between family religiosity and adolescent substance use for Black families. For White adolescents, both direct and indirect effects were found between family religiosity and substance use. Parental limit-setting and monitoring were found to be mediating variables in Whites as well.

In a study examining parental knowledge and African American adolescent substance use, Tebes et al. (2011) considered gender and grade level as possible influences on the relationship found to exist between parental knowledge and adolescent substance use among African Americans. Participants were 207 African American youth, both male (54%) and female (46%) with a mean age of 14.5 years, who were recruited from an after-school program study. Three waves of interviews were conducted in this longitudinal study (initial, 8 month, and 1 year). Fifty-eight percent of adolescents reportedly lived in mother-headed single-family homes.

Measures assessed a number of variables including parental knowledge, adolescent substance use, and demographic information. Results of a hierarchical generalized linear model indicated that both grade and gender were found to modify the relationship between parental knowledge and adolescent substance use for African American youth. Based on specific patterns found in result data, parental knowledge may prevent or reduce use initially (initiation), while it was not shown to influence adolescent use once begun.

Studies looking to race as a determinant of adolescent substance use found mixed results overall. Several studies indicate that Whites, especially those in single-parent and stepparent homes, use substances more than Blacks. Other studies indicate that Blacks, especially those living in two-biological-parent homes, report more substance use. Still, a number of studies did not find significance among groups of adolescence based on race.

Family Management

Dishion and Loeber (1985) studied the role of both parents and peers in adolescent marijuana and alcohol use. Their sample was 136 adolescent boys in seventh and tenth grades and their families. Single-parent families were represented in the study (28%). Data for this study were collected at the students' school, the family home, juvenile court, and the research center. Extensive structured parent and adolescent interviews were conducted at the research center separately. During the interviews, parents were asked about child behavior, health, background information, parenting practices, parent drug use, and they completed the Child Behavior Checklist (Achenbach, 1978), a standardized measure of child behavior.

Children reported on their behavior and other information similar to that collected from parents, but also answered questions about delinquency. Telephone interviews were conducted in the home on five occasions with interviewers asking both parents and adolescents (separately) about child behavior and drug use in the past 24 hours. Family observations by trained observers were conducted with the families at their homes as well. Additionally, court records were collected for all of the study participants following the initial interview. Independent variables included parent monitoring, inept parent

discipline, parent alcohol use, and peer deviancy. Dependent variables in this study were official delinquency and self-reported alcohol and marijuana use.

Results indicated that parent monitoring and having association with deviant peers had the most influence on adolescent marijuana and alcohol use. In a closer examination of adolescent marijuana and alcohol users, those who were also engaged in delinquency were found to have poor child rearing and negative peer influence, while teens who initiated substance use but had no record of delinquent behavior appeared statistically similar to non-using adolescent peers with regard to many factors, including child rearing.

Bahr, Maughan, Marcos, and Li (1998) conducted a study in order to investigate the relationship between family, religiosity, and adolescent drug use risk. In their sample of 13,250 seventh through twelfth graders, participants completed questionnaires asking about demographic information, drug use (recency and frequency of alcohol, marijuana, and amphetamines/depressants), religiosity, educational commitment, parental bonding, parental monitoring, family conflict, and family drug problems.

Results of the study revealed that participants' drug use was related to peer drug use. Results also indicated that a negative association exists between religiosity and drug use. That is, the higher one's religiosity, the less likely it is that drug use will occur. It is important to note that those students who are more religious tend to have friends that are less likely to be involved with drugs. The researchers also found an association between mother-adolescent bonding and religiosity. Participants reporting strong ties to their mothers tended to be more religious, as reported on the questionnaire. In addition, these researchers found that in homes where there is a problem with drug use, the participants

tended to have drug-using friends. Peer drug use and religiosity were found to have the most profound effects on participant drug use, albeit indirect or direct effects.

Dishion and McMahon (1998) presented a number of important ideas and study summaries related to the important concept of parental monitoring, offering support to the notion that, with appropriate monitoring, prevention of child and adolescent problematic behavior can be achieved. These researchers clearly pointed out that in homes where there is only one parent figure, effective parental monitoring may be difficult to achieve. Not only are single parents faced with increased stress and fewer resources, but also the time they are physically present in the home may be limited. Dishion and McMahon repeatedly pointed to the critical component of parental monitoring as a valuable tool in the prevention of problematic behavior in children and teens. In the case of teens, especially, effective monitoring involves knowing and regulating time spent with peers, time engaging in healthy ventures, and time spent in structured, often supervised activities where problematic behavior is unlikely to occur. Monitoring, also called tracking, is a positive and necessary aspect of healthy parenting according to these researchers.

Kung and Farrell, in their 2000 study (previously detailed in *Family Structure*), found parenting practices, specifically poor monitoring and inconsistent discipline, to have both direct and indirect relationships to adolescent drug use. While peer pressure was found to have a stronger direct effect on drug use than parenting practices, parenting practices were found to influence peer pressure, which was strongly related to adolescent drug use. Adolescent participants completed the Alabama Parenting Questionnaire: Child

Form (Frick, 1991) in order to report their perceptions of their parents' monitoring and discipline in this study.

The influence of parental monitoring on adolescent substance use was investigated by Rodgers-Farmer (2000). Participant data were taken from the first and second follow-up phases of the National Educational Longitudinal Survey of 1988, which consisted of 8,012 participants. The majority of participants were European American (75%) but also included adolescents of Hispanic (9%), African American (8%), Asian (7%) and Native American (.6%) descent. Most of the participants (85%) reportedly lived in two-parent homes.

Parental monitoring was assessed by five indicators rated on a 1 (*not at all*) to 4 (*often*) scale. Another variable, peer group association, was measured by two indicators which participants used a Likert scale and rated as 1 (*not important*), 2 (*somewhat important*), or 3 (*very important*). Adolescent substance use (at T1 and T2) was determined by participant responses on indicators of frequency for past 30 day alcohol and marijuana use. Results of this study indicate that adolescents are at risk of substance use when low levels of parental monitoring exist and that peers reinforce such use. Poor parental monitoring was also found to increase the risk of adolescents becoming involved with deviant peers, a choice which often leads to substance use.

Dishion, Nelson, and Kavanagh (2003) investigated the effectiveness of their family-centered intervention program focused on family management practices, The Family Check-Up. High risk adolescents (n = 71) and their families served as participants, where families were randomly assigned to intervention and non-intervention groups. Of the 71 adolescent participants, slightly over half (60%) were female, while

exactly half (50%) reported that they were African American. European Americans (32%), Hispanic Americans (3%), and mixed ethnicity adolescents (14%) were also represented among the participants. Approximately 34% of families reported a status of married, and families averaged 2.6 children each.

Those families in the intervention group received annual feedback regarding their family management practices, whereas the other families received no such feedback. Results revealed that parental monitoring of intervention families continued during periods where such monitoring tended to decrease (from seventh to ninth grade) in non-intervention families. Thus, The Family Check-Up Program was found to prevent adolescent substance use, an effect mediated by parental monitoring.

Simons-Morton and Chen (2005) examined parental influences on early adolescent alcohol use using a sample of 2,453 adolescent participants in sixth through ninth grades. Participants in the study were assigned to either a treatment or non-treatment group, based on their school (schools were randomly assigned). Treatment was a program named the Going Places Program and offered parent education, school media, and social skills curriculum in an effort to curb adolescent substance use, aggression, and antisocial behavior. Five waves of surveys were conducted for this longitudinal study.

The first and second waves (T1 and T2) were conducted during the participants' sixth grade year–initially in the fall and again in the spring. Successive waves were conducted during the spring of both seventh and eighth grade (T3 and T4) and during the fall of ninth grade (T5). Surveys asked participants about their drinking behavior, peer influence, parental involvement, expectations, and monitoring, along with several demographic variables.

From latent growth curve analyses, results revealed that parental involvement and monitoring were found to be protective factors against adolescent alcohol use progression over time, as a negative correlation was found between positive parenting practices and adolescent alcohol use. In addition to this direct effect, an indirect effect was revealed between parenting practices and alcohol use, as a high level of positive parenting practices was found to limit the number of peers who drink (which was found in this study and other studies to be positively correlated to adolescent alcohol use).

In a longitudinal study of antecedents of adolescent substance use in older adolescents, Siebenbruner, Englund, Egeland, and Hudson (2006) considered 176 adolescent participants who were categorized as abstainers (never used alcohol or drugs) (n = 19), experimenters (used alcohol/marijuana, but not other illicit drugs and did not experience any symptoms of a substance use disorder) (n = 65), at risk (used alcohol/marijuana/other drugs and experiences 1+ symptom(s) for a substance use disorder) (n = 63), and abusers (met criteria for substance use disorder) (n = 29) by age 17.5. A nearly equal number of males (53%) and females participated in this study.

Participants had been involved in this study since before birth, as their mothers were recruited into the study during pregnancy. Predictor variables were parental behavior, peer competence, and problem behavior. Among other variables found to differentiate substance use groups, parental monitoring at age 16 was shown to be a critical factor. This study revealed the importance of numerous experiences occurring both early and later in development as predictive of substance use patterns of behavior during adolescence.

Dick et al. (2007) studied the role that parental monitoring plays in adolescent smoking. This longitudinal study included a sample of 812 pairs of monozygotic (identical) twins (n = 411 female pairs, n = 401 male pairs) and 830 dizygotic (fraternal) same-sex pairs (n = 391 female pairs, n = 439 male pairs) taken from a larger twin study in Finland. Both twins in each pair and their parents were mailed and asked to complete two waves of questionnaires, the first wave occurring at approximately 11 years old (M = 11.4) and the second occurring just around age 14 (M = 14.1).

Parental monitoring was found to moderate adolescent smoking, as evidenced by results. In addition, the importance of both genetic and environmental influences was largely affected by the presence or absence of adequate parental monitoring. As Dick et al. explained, "These analyses suggest that when adolescents receive little parental monitoring, it creates an environment that allows for greater opportunity to express genetic predispositions" (p. 216).

Breivik, Olweus, and Endresen (2009) conducted a study in which the quality of parent-child relationships in single-parent families as possible mediators of adolescent substance use and antisocial behavior were examined. The sample of participants in this study were 4,117 adolescents in fifth and sixth grade (n = 1,737) and seventh through ninth grade (n = 2,380) taken from a larger sample of 5,171 students participating in a larger study. The final sample included adolescents having the following family structures: non-divorced two-parent, single-mother less than 2 years since divorce, single-mother more than 2 years since divorce, and single-father more than 2 years since divorce.

Dependent variables in this study were adolescent antisocial activities and substance use. Parental monitoring was one variable investigated as a possible mediating variable, as was parent-child conflict and mother-child closeness. Results revealed that lack of parental monitoring was found to be a clear mediator of adolescent substance use and antisocial behavior in single-father homes. Additionally, lack of monitoring was found to be of significance in single-mother homes, both divorced within the last 2 years and divorced more than 2 years.

Kiesner, Poulin, and Dishion (2010) examined the effects of parental monitoring and peer activity contexts on adolescent substance use with friends. This 1-year longitudinal study, consisting of two waves of questionnaires, involved a final sample of 285 North Italian and French Canadian female (53%) and male adolescents. Variables measured in this study were parental monitoring rules, youth self-report of substance use, substance co-use with friends, and peer activity context.

Results of structural equation modeling and multiple regression analyses revealed that co-use with friends mediated the relationship between parental monitoring and substance use. In addition, results showed that the relationship between adolescent substance use with friends and individual adolescent substance use was moderated by both parental monitoring and peer activity context. When parental monitoring was low and the peer activity context was unstructured, the relationship was stronger between individual and group substance use.

The majority of studies focusing on family management suggest that high levels of parental monitoring decrease the likelihood of adolescents becoming involved with substance use and substance-using peers. In homes where parents know where their

children are, what their children are doing, and who their children are with, a much lower risk of adolescent substance use is present and/or reported. Families which tend to have the most difficulty in providing effective monitoring are single-parent households. However, a number of single-parents are able to effectively provide monitoring for their children.

Parental Bonding

Andrews (1994) examined parent and adolescent substance use in a 7-year longitudinal study which consisted of 763 11- to 15-year-old adolescent participants, as well as their parents and siblings. Of these, only 512 remained participants through a total of seven waves of questionnaires. Parents and adolescents were asked to report their use of cigarettes, alcohol, and marijuana independently. Parent-adolescent relationships were measured by adolescent and father and/or mother reports on the Cohesion and Conflict subscales of the Family Environment Scale (Moos, 1974), adolescent reports on the Appraisal of Father Subscale or Appraisal of Mother Subscale of the Conflict Behavior Questionnaire (Prinz, Foster, Kent, & O'Leary, 1979), and adolescent report on the Perceived Supportiveness of Parents Scale (Jessor, 1987).

Andrews (1994) found that adolescent risk of substance use was higher when mothers were substance users and also have a close relationship with their adolescent child. Her findings suggest that a strong parent/child relationship may not always serve as a protective factor against substance use. In cases where the mother was a substance user and had a close relationship with her adolescent, the adolescent was found to be at increased risk for using substances, while substance-using mothers who did not have

close relationships with their children had adolescent children who were not at as high of a risk of using.

In addition to these results, it was also revealed that girls having a good relationship with their fathers were more likely to use or not use, based on their fathers use or non-use. One interesting finding of this study was that parental abstinence from substances did not ensure the same in adolescents. This study demonstrated that those adolescents without good relationships with their non-using parents were just as likely to use drugs as adolescents having good relationships with their using parents.

In a study examining adolescent perceptions of family system characteristics and parental behaviors as predictors of adolescent substance use, Anderson and Henry (1994) collected data from 489 high school students aged 13 to 20 years old (M = 16.1). The overwhelming majority of participants were Caucasian (90%) and consisted of both female (56%) and male (44%) students. A number of items were measured in this study including adolescent substance use, family bonding, family flexibility, parent-adolescent communication, and parental substance use, among others. Family bonding was assessed by responses on the Family Bonding Index, adapted from the Cohesion scale from FACES II (Olson, Portner, & Bell, 1982).

Among a number of findings, results of bivariate correlations and multiple regression analyses indicated a negative correlation between adolescent substance use and family bonding. In cases where adolescents perceived high levels of family bonding, there was less adolescent substance use. It would appear that having a close family may serve as a protective factor for the risk of adolescent substance use.

In their 1998 study previously described in detail, Bahr et al. also examined parent-adolescent bonding as a family variable in their study of religiosity and adolescent drug use. Results revealed only an indirect link between parental bonding and adolescent drug use through religiosity. According to the results, adolescents who had a strong bond with their parents also tended to be religious. Furthermore, those teenagers who reported greater religiosity showed lower incidents of drug use. Specifically, Bahr et al. (1998) found that bonding to one's mother was an important factor.

Henry, Robinson, and Wilson (2003) investigated adolescent substance use and adolescent perceptions regarding their parents and families. Participants were 214 high school students aged 14 to 20 years old (M = 16.5), most of whom were Caucasian (90%). Adolescent self-reports of substance use, adolescent perceptions of both family system qualities and parental behavior (including parental substance use), adolescent self-reports of self-esteem and family life satisfaction were some of the overall variables measured in this study. Family hardiness and family coherence could be interpreted as family bonding in this study. Adolescents in this study who perceived their family as hardy and coherent saw their parents as more supportive, which relates to bonding as well. Additionally, results revealed a direct relationship between parental support and adolescent substance use. Those youth who felt supported by their parents were less involved in substance use behaviors.

Pilgrim, Abbey, and Kershaw (2004) examined parental bonding, as well as school and peer bonding, for a final sample of 225 middle school adolescents and their mothers who were drawn from a larger study and for whom both baseline and follow-up data were available. Family bonding was measured by a subscale of the Family

Environment Scale (Moos, 1986) focusing on cohesion within the family unit. A number of other measures were employed in order to assess school and peer bonding, as well as substance use attitudes.

Results of this study revealed a host of findings. With relation to family bonding, results indicated that adolescents' report of family cohesion was directly related to adolescent negative attitudes toward substance use. Also revealed in the results was an indirect effect between family cohesion and adolescent negative attitudes toward substance use, one mediated by school and peer variables.

Kostelecky (2005) considered several variables in relation to adolescent alcohol and drug use. Participants for this study were 133 adolescents who were high school seniors, ranging in age from 16 to 19 (M = 18). A near equal number of females (53%) and males were represented in this study. Parental attachment, academic achievement, life events, and substance use were the variables of interest in this investigation. Parental attachment was measured by the Network of Relationships Inventory (Furman & Buhrmester, 1985).

Items from the Life Events Checklist (Johnson & McCutchen, 1980), the Life Experiences Survey (Saranson, Johnson, & Siegel, 1978), and the Coddington Life Events Record (Coddington, 1972) were combined to measure the life events variable. Academic achievement was measured using a simple, dichotomous, *yes* or *no* response to a question of whether or not the adolescent was on the honor roll (at least 3.0 average) in the past year. Items from the National Youth Survey were used to measure substance use. Results pertinent to family bonding indicated that parental attachment was a significant predictor of adolescent alcohol, marijuana, and other drug use. In this study, adolescents

had lower substance use if they perceived a close relationship between themselves and their parents.

In the previous section, a study by Breivik et al. (2009) was presented in great detail. As part of that study, the researchers also studied the effect of parent-child closeness as a possible mediator of family structure and adolescent substance use and antisocial behavior. Results pertaining to this aspect of their investigation indicated that the closeness of the relationship between parent and child was not found to be a clear mediator.

In summary, family bonding is generally found to be an important factor in preventing adolescent substance use. Many studies showed that the closeness of the relationship between the parent and adolescent was of great importance in the youth's life. In most cases, there was a negative correlation between family bonding, or closeness, and adolescent substance use and risk of such use. As having a close attachment or relationship with parents increases, substance use and substance use risk generally decreases. In cases where the closeness of the relationship involves a substance using parent, however, substance use or risk of such use for these adolescents may increase.

Family History of Drug Use

Fawzy, Coombs, and Gerber (1983) conducted a study of 266 adolescents and their parents, examining parental coffee, cigarette, beer and wine, hard liquor, and marijuana use, as well as use of the same substances by adolescents. For this study, participants were recruited by non-random means (i.e., streets, Boys' clubs). Independent interviews were conducted with youth and one of their parents. Results revealed that

adolescent alcohol and drug use was, indeed, more likely in cases of parental use or adolescent perception of parental use. Maternal use of cigarettes, paternal use of hard liquor, and coffee usage were shown to have the strongest relationships in this study.

Dishion and Loeber (1985) in their study entitled "Adolescent marijuana and alcohol use: The role of parents and peers revisited," investigated the role of parental drug use in addition to parental monitoring and various other variables. A detailed description of this study can be found in the previous *Family Management* section. Results indicated that alcohol use by mothers had a slight relation to marijuana use by their adolescent children, though not statistically significant. These results imply that perhaps parental use fails to have a significant effect on whether or not adolescent offspring engage in substance use.

Andrews, Hops, Ary, Tildesley, and Harris (1993) conducted a study of 763 adolescents and their parents, where both independently completed self-report questionnaires which included a number of items related to personal substance use, parental attitudes toward use, cautionary statements, negative consequences, and others in this longitudinal study spanning 8 years. Parents and adolescents completed self-report questionnaires independently.

Measures of adolescent and parental substance use were completed, as well as measures assessing parental attitudes and cautionary statements and negative consequences of substance use. A final sample of 645 adolescents who completed the first two annual assessments was used in the analyses of this study. Results of this study revealed that adolescent use of a particular substance was related to parental attitude toward use of the substance. Additionally, many variables were revealed as significant

predictors of adolescent initiation and maintenance of substance use including parental modeling, attitude, cautionary statements, and negative consequences.

In their previously described 1994 study, Anderson and Henry also found indications that parental substance use was related to adolescent substance use. Results indicated that adolescent perceptions of parental substance use, as opposed to actual use by parents, significantly predicted substance use by such adolescent children. This result implies that actual parental use is not necessarily a predictor of use by adolescents, but that perception of such use by one's parents is what is most important.

In their study examining the impact of parental substance use on adolescents, Wills, Schreibman, Benson, and Vaccaro (1994) used data from 1,775 adolescent participants aged 12 to 15 (M = 13.3 years) who completed a self-report questionnaire. Participants were mostly Black (30%), Hispanic (25%), and White (34%), with near equal numbers of female (47%) and male (53%) participation. In this study, participants were mostly from two-parent-biological homes (54%), though a sizable number reportedly lived in single-parent (35%) homes or in homes having a stepparent (10%).

Adolescents responded to a number of items including reports of self and parental substance use in addition to measures of other variables regarding coping, life events, and perceived competence, among others. These researchers found that multisubstance use by parents had meditational effects on adolescents, effects explained by affiliation with peers who were drug users and psychosocial variables. These results indicate that there is not a direct effect on adolescent substance use explained by parental use, but rather that such use is explained by contributing factors and behaviors, thus producing an indirect pathway between parental use and adolescent use.

Bahr et al. (1998) as part of their previously detailed study relating family, religiosity, and the risk of adolescent drug use, examined the relationship of family drug problems and adolescent drug use. Results revealed that family drug problems had only modest effects on adolescent drug use and such results were found to be indirect, through peer drug use. Again, as was found in other studies, no direct pathway between parental substance use and the same use by adolescents was found.

White, Johnson, and Buyske (2000) studied the effects of parental monitoring and behavior on children's alcohol and cigarette use. The researchers used a growth curve modeling, conducting telephone interviews with participants from three cohorts four times. Time 1 was between 1979 and 1981 during which the youngest cohort of participants was 12 years old, the middle cohort was 15 years old, and the third cohort was 18 years old. Time 2 was held between 1982 and 1984. Time 3 was held between 1985 and 1987, and Time 4 was held between 1992 and 1994.

Student participants were mostly White, middle-class adolescents living in natural- step-, and adoptive-parent homes. The participants' alcohol and cigarette use was measured by frequency and quantity at each time interval (T1-T4). Parental use was measured by frequency (according to student participants) measured only at T1. Parental warmth and hostility were measured using scales which asked the adolescent participants questions about positive and negative aspects of how their parents behaved towards them. Analyses were conducted on participants in the middle cohort (Age 15 at T1, Age 28 at T4). Depending on the frequency and quantity of alcohol consumed, participants were given one of the following labels: low, later onset moderate, persistent moderate, or

persistent heavy user. For cigarette use, participants were labeled abstained or experimented, smoked half of a pack weekly over time, or regular smoker.

Results showed that there was no pattern of participants having later onset cigarette smoking. There was, however, a trend with regard to alcohol use regarding onset. It appears that children whose parents are light drinkers have a delayed onset of alcohol use. These researchers found that parental modeling was more important than parenting behavior when considering alcohol. When considering smoking, however, results differed. Parenting behaviors and parenting style appear to be more indicative of smoking.

Li, Pentz, and Chou (2002) examined parental substance use and the potential modifying effect on substance use risk of adolescents. Participants in this longitudinal study were 1,807 adolescents who completed three waves of surveys (initial, 6 month, 18 month). Participants were nearly equal females (52%) and males and were mostly White (80%) and African American (19%). A large number of participants in this study reported to be from homes of high socioeconomic status (34%). A 100-item survey was used to gather adolescent reports of their behaviors, attitudes, and social influences regarding substance use as well as personal, parental, and peer usage.

Results of logistic regression analyses and structural equation modeling revealed a positive correlation between parental and peer use and adolescent use. That is, that the higher the number of parent and friend substance use, the higher the risk of substance use by adolescents. Additionally, it was found that even in cases where friend substance use was prevalent, parent abstinence served as a buffer for the adolescent, diminishing the risk of use.

Clark, Cornelius, Kirisci, and Tarter (2005) investigated parental substance use disorders, psychological dysregulation, and early tobacco and alcohol experimentation as childhood risks of adolescent substance use. These researchers pointed to earlier work by Clark, Parker, and Lynch (1999) who found that "compared with reference children, children of parents with these drug use disorders have been shown to have earlier involvement with alcohol and tobacco, higher rates of adolescent illicit drug use, and increased drug use disorder symptoms" (13). In this study of 560 adolescents, participants participated four times over the course of several years, beginning at Age 11 and continuing at Ages 13, 16, and 19.

Results of a cluster analysis with defining variables of parental substance use disorders, childhood tobacco or alcohol use, and neurobehavior disinhibition, revealed five substance use risk categories for adolescents ranging from high to low. Results also revealed that adolescent substance involvement was predicted by parental substance use disorders, though parent substance use failed to significantly predict the onset of regular use by adolescents.

In the previously detailed 2003 study by Henry et al., a relationship was found between parental drug use and adolescent drug use, as well. Specifically, a direct relationship was found illustrating previous findings that parental use is strongly related to adolescent use of substances.

Fagan and Najman (2005) specifically studied the role that siblings play in each others' drug use. Data for this study were drawn from a larger longitudinal study of women and their children. Original recruitment of pregnant women into the study occurred between 1981 and 1983. Interviews were conducted prenatally and postnatally,

as well as when the child was 6 months old, 5 years old, and 14 years old. During the 3-year recruitment period, some of the previously recruited women gave birth to their second child. A sample of Australian sibling pairs (n = 376) was used in this study, ranging in an age difference of 1 to 3 years. Members of each sibling pair were interviewed around age 14.

The dependent variables in this study were tobacco use and alcohol use. Independent variables in this study were parental substance use, family characteristics, and maternal characteristics. Statistical tests used in this study included Pearson correlation coefficients, chi-square analysis, and logistic regression analysis. Results of this study revealed that younger siblings were significantly more likely to engage in the use of alcohol and tobacco when such use was prevalent among older siblings, even after controlling for shared family experiences. The association between younger siblings' use and older siblings' use was found to be stronger than the relationship between younger siblings' use and parental use.

A 2007 study by Walden, Iacono, and McGue examined the impact of parental substance use disorders on adolescent involvement with nicotine, alcohol, and drugs. In this study, the focus was examining trajectories of change in adolescent substance use, a more in-depth examination than the typical use versus non-use study. Participants were 1,514, mostly Caucasian (98%), twin adolescents who participated in the Minnesota Twin Family Study (MTFS).

The MTFS simultaneously followed adolescents in two age cohorts and participants returned for follow-up assessments approximately every 3 years following the initial assessment which occurred when participants were around 12 years old

(M = 11.7) and 17.5 years old (older cohort). For the purposes of this study, the younger cohort was the target sample. Findings of this study, based on hierarchical linear modeling, showed that parental substance use greatly increased adolescent substance use growth during adolescence. Boys were found to display both faster rates of such growth and higher levels of substance use than girls.

In studies examining the effect of parental substance use or abuse on adolescent use, it is generally found that adolescents engage in substance use and are at higher risk of doing so if their parents use and/or abuse substances or in cases where the adolescents perceive that their parents are doing so. There is some evidence which suggests that this transmission may be in part due to genetic components. However, there is also evidence which suggests that the patterns of use youth see and experience tend to lead to the same patterns and habits by way of modeling.

Summary

Reviewing the literature led to a number of general, overall points regarding adolescent substance use, family structure, and mediating variables. First, adolescent substance use tends not to be a more prevalent issue for adolescents living in intact homes having both biological parents present. Second, race may or may not play a role in whether or not an adolescent is at risk of becoming involved in substance use. Third, effective parental monitoring has been found to decrease the risk of adolescent substance use. Fourth, a close relationship may serve as a protective factor against adolescent substance use. Fifth, parental drug use typically places adolescents at higher risk of the same use.

While the available literature is plentiful and provides great insight into possible risk and protective factors for adolescent substance use, there are not studies available which examine all of these factors collectively. The goal of the current study is to show how all of these factors together effect adolescent substance use.

CHAPTER 3: METHODS

This study quantitatively explores the relationship between family structure and adolescent drug use for Black and White adolescents. Within each racial group, poor family management, parental bonding, and family history of drug use were considered as mediating variables. The study's methodology is presented in the following sections: (a) Review of the Problem, (b) Participants, (c) Procedures, (d) Sources of Data, (e) Variables, (f) Data Preparation and Analysis, (f) Statistical Treatment of the Data, and (g) Limitations.

Review of the Problem

Research has repeatedly shown that adolescents living in intact families with married biological parents are at far less risk of engaging in substance use and other risky behaviors compared to their peers living in other types of families. Substance use, as shown in the review of multiple studies, often leads to other risky behaviors that have the ability to cause mental, emotional, and physical damage to and problems for adolescent youth. At a time when non-traditional families are becoming more prevalent in our society, it is crucial to determine why youth in these situations are at higher risk than those in two-biological-parent families.

Poor family management, parental bonding, and family history of drug use were hypothesized to be variables that mediate the relationship between family structure and adolescent drug use.

Participants

Participants in this study were eighth-grade students in both public and private schools within a large county in a southeastern state. The sample was drawn from participants in a large, federally funded drug prevention program evaluation prior to their participation in intervention programs. The total participant group was nearly equal in terms of males (51%) and females (49%) participants. The sample of participants used in this study consisted of 73 Blacks and 222 Whites. They were from two-biological-parent homes and mother- and father-extended homes.

Procedures

Parental approval was first obtained by project personnel for the administration of overall program evaluation assessments including the Core Measure (Halpin & Halpin, 2005) which assessed drug use, family structure, and risk and protective factors. The Core Measure was administered by project personnel in school following standardized procedures. Students followed along in a questionnaire booklet while test administrators read the items aloud. Students then responded on a provided scantron answer sheet.

Sources of Data

Data in this study were derived from the larger data set which was part of the evaluation of the federally funded state initiative aimed at reducing tobacco, alcohol, marijuana, and other drug use by youth. The Core Measure used in this project was developed by program evaluators at Auburn University who also confidentially stored and managed all data associated with this project. In addition, the evaluators completed analyses for this study.

Variables

Family structure served as the predictor variable in this study. Participants responded to the question, "Who did you live or stay with most of the time last year?" by choosing all applicable options from the following options: *Father*, *Mother*, *Stepfather*, *Stepmother*, *Grandparent*, *Other Adult*.

Adolescent drug use served as the outcome variable, to which respondents reported that they had *never*, on *1 to 2 occasions*, on *3 to 5 occasions*, on *6 to 9 occasions*, on *10 to 19 occasions*, on *20 to 39 occasions*, or on *40 or more occasions* used alcohol, cigarettes, marijuana, and other illegal drugs in their lifetime. Cronbach's alpha, indicating reliability, was .71 for Blacks and .74 for Whites.

Poor family management, parental bonding, and family history of drug use served as the mediating variables in this study. Students self-reported on a number of items related to these three variables.

Poor family management was assessed by five items for which respondents answered *Definitely NOT True*, *Mostly NOT True*, *Mostly True*, or *Definitely True* to statements about family rules and expectations. Some of the items related specifically to substance use, while others did not. One item was "My family has clear rules about alcohol and drug use." High scores indicated less parental monitoring. This scale was found to have sufficient reliability, given Cronbach's coefficient alpha at .73 for Blacks and .78 for Whites.

Parental bonding was measured by three items for which respondents reported *Definitely NOT True*, *Mostly NOT True*, *Mostly True*, or *Definitely True* related to mother and father closeness and parental support. One item was "If I had a personal problem, I

could ask my mom or dad to help." High scores indicated a closer relationship between parents and the adolescent. This scale had a lower degree of reliability, with Cronbach's coefficient alpha found to be .58 for Blacks and .72 for Whites.

Family history of drug use was measured by three items for which respondents answered *Definitely NOT True*, *Mostly NOT True*, *Mostly True*, or *Definitely True* to statements asking about family members' use of substances. One item was "Someone in my family has a severe drug problem." Higher scores indicated problematic substance use within the family. Reliability for this scale using Cronbach's coefficient alpha was .69 for Blacks and .66 for Whites.

Data Preparation and Analysis

All scantron answer sheets were visually examined prior to being scanned with a National Computer System scanner. Any scantrons determined to be invalid were discarded and were eliminated from study analysis. Independent, dependent, and mediating variables were analyzed using the software package PASW (Predictive Analytics Software) version 18.0 for Windows.

Statistical Treatment of the Data

A multiple regression following the steps for testing mediation effects advanced by Kenney and his colleagues (as cited in Frazier, Tix, & Barron, 2004) was used for these analyses. In Step 1, the relationship between predictor and outcome variables was determined. The following step, Step 2, was conducted to show the relationship between the possible mediator and the predictor variable. In Step 3, the regression equation included the outcome variable, the predictor variable, and the mediating variable. Here the relationship between the mediator and the outcome was determined, controlling for

the predictor-outcome relationship. Finally, the nature of the relationship between the predictor and outcome variables was determined once the mediating variable was added into the equation.

Limitations

Limitations exist with the methodology of this study. The sample used was restricted due to the data set available. The data only included eighth-grade students from one school system. In addition, this study relies on the self-report data provided by youth. Therefore, there is no way to determine the validity of the responses, which limits the generalizability of the findings of this study to other populations. A number of students were excluded from the study due to perceived invalid or incomplete responses. Additionally, students were excluded who fell outside of the target family structure groups.

CHAPTER 4: RESULTS

Described in this chapter are the results of the statistical analysis. A multiple regression analysis was used to test the many groups of variables of interest and separate tests were completed for Blacks and Whites in order to show the relationship among groups of variables for each racial group. In this chapter, results answering each respective research question are presented.

Research Question 1

For Blacks, does poor family management mediate the relationship between family structure and adolescent drug use?

Results for this question are presented in Table 1. As seen in Table 1, the first step of testing did not reveal significance between family structure and adolescent drug use (B = -.192, *SE* = .186, β = -.122, *p* = .304). Testing of Step 2 similarly revealed no significant relationship between poor family management and family structure (B = .099, *SE* = .071, β = .163, *p* = .170). Typically, no further testing is necessary given that neither of the previous tests reached the significant level. In this study, however, it was important to ensure that no mediation effect occurred. Therefore, testing continued.

Step 3 revealed a significant relationship between adolescent drug use and poor family management (B = .259, *SE* = .111, β = .270, *p* = .023). When poor family management was entered into the equation of family structure and adolescent drug use, however, the resulting coefficient was in fact larger than that for family structure and adolescent drug use alone. While the mediation effect did not reach significance, poor

family management seemingly acted as a suppressor, helping to explain the relationship between family structure and adolescent drug use. Nevertheless, this suppressor effect was not significant as was substantiated by the subsequent test of the difference in the relationship between family structure and adolescent drug use with and without controlling for poor family management ($z = 1.123$, $p > .05$).

Table 1

Testing Mediator Effects of Poor Family Management Using Multiple Regression for Blacks

Regression Step	Variable	B	*SE*	β	Sig.
Testing Step 1					
	Outcome: adolescent drug use Predictor: family structure	-.192	.186	-.122	.304
Testing Step 2					
	Outcome: poor family management Predictor: family structure	.099	.071	.163	.170
Testing Step 3					
	Outcome: adolescent drug use				
	Mediator: poor family management	.259	.111	.270	.023*
	Predictor: family structure	-.261	.183	-.166	.157

*Significant when $p < .05$

Research Question 2

For Whites, does poor family management mediate the relationship between family structure and adolescent drug use?

As shown in Table 2, Step 1 revealed a significant relationship between family structure and adolescent drug use for Whites (B = .485, *SE* = .129, β = .246, $p = .000$). Step 2 also revealed a significant relationship between poor family management and family structure (B = .163, *SE* = .059, β = .183, $p = .006$). In addition, the third step of testing revealed significance between adolescent drug use and poor family management

(B = .383, *SE* = .112, β = .284, *p* = .000). In this round of testing, poor family management seems to have acted as a partial mediator of the relationship between adolescent drug use and family structure given the drop in the coefficient when controlling for poor family management. Assessing whether or not this drop was significant resulted in an affirming result ($z = 2.522$, $p < .05$).

Table 2

Testing Mediator Effects of Poor Family Management Using Multiple Regression for Whites

Regression Step	Variable	B	*SE*	β	Sig.
Testing Step 1					
	Outcome: adolescent drug use Predictor: family structure	.485	.129	.246	.000*
Testing Step 2					
	Outcome: poor family management Predictor: family structure	.163	.059	.183	.006*
Testing Step 3					
	Outcome: adolescent drug use				
	Mediator: poor family management	.500	.112	.284	.000*
	Predictor: family structure	.383	.126	.194	.003*

*Significant when p < .05

Research Question 3

For Blacks, does parental bonding mediate the relationship between family structure and adolescent drug use?

As presented in Table 3, Step 1 of testing of the variable parental bonding with Blacks revealed no significance in the relationship between adolescent drug use and family structure (B = -.192, *SE* = .186, β = -.122, *p* = .304). Similarly, Step 2 revealed no significance in the relationship between parental bonding and family structure (B = -.104, *SE* = .064, β = -.188, *p* = .111). Testing of Step 3 between adolescent drug

use and parental bonding did reveal a significant relationship (B = -.247, *SE* = .101, β = -.284, *p* = .017). The relationship between adolescent drug use and family structure became more pronounced once the mediating variable, parental bonding, was brought into the equation (B = -.277, *SE* = .183, β = -.175, *p* = .135). However, this relationship was not significantly different from that found with family structure and parental bonding without mediation (*z* = 1.344, *p* > .05).

Table 3

Testing Mediator Effects of Parental Bonding Using Multiple Regression for Blacks

Regression Step	Variable	B	*SE*	β	Sig.
Testing Step 1					
	Outcome: adolescent drug use Predictor: family structure	-.192	.186	-.122	.304
Testing Step 2					
	Outcome: parental bonding Predictor: family structure	-.104	.064	-.188	.111
Testing Step 3					
	Outcome: adolescent drug use				
	Mediator: parental bonding	-.247	.101	-.284	.017*
	Predictor: family structure	-.277	.183	-.175	.135

*Significant when p < .05

Research Question 4

For Whites, does parental bonding mediate the relationship between family structure and adolescent drug use?

For Whites, as presented in Table 4, Step 1 of testing the variable parental bonding revealed a significant relationship between adolescent drug use and family structure (B = .485, *SE* = .129, β = .246, *p* = .000). Additionally, a significant relationship was found between parental bonding and family structure in Step 2 of testing (B = -.143, *SE* = .045, β = -.212, *p* = .001). Step 3 revealed a significant relationship

between adolescent drug use and parental bonding

(B = -.278, *SE* = .087, β = -.208, *p* = .002). The final step of testing, Step 4, revealed a significant relationship for adolescent drug use and family structure

(B = .398, *SE* = .129, β = .202, *p* = .002). A subsequent analysis revealed that family bonding is a significant mediator of the relationship between family structure and adolescent drug use ($z = 2.199$, $p < .05$), with there being less use in the nontraditional families with bonding.

Table 4

Testing Mediator Effects of Parental Bonding Using Multiple Regression for Whites

Regression Step	Variable	B	*SE*	β	Sig.
Testing Step 1					
	Outcome: adolescent drug use Predictor: family structure	.485	.129	.246	.000*
Testing Step 2					
	Outcome: parental bonding Predictor: family structure	-.143	.045	-.212	.001*
Testing Step 3					
	Outcome: adolescent drug use				
	Mediator: parental bonding	-.278	.087	-.208	.002*
	Predictor: family structure	.398	.129	.202	.002*

*Significant when p < .05

Research Question 5

For Blacks, does family history of drug use mediate the relationship between family structure and adolescent drug use?

For Blacks, testing of the variable family history of drug use first revealed no significance in the relationship between adolescent drug use and family structure (B = -.192, *SE* = .186, β = -.122, *p* = .304) (see Table 5). Step 2 also failed to reveal significance between family history of drug use and family structure

(B = -.028, *SE* = .058, β = -.056, *p* = .635). Further testing in Step 3 revealed no significance among adolescent drug use and family history of drug use (B = .146, *SE* = .090, β = .189, *p* = .109). Although a decrease in the significant value was found in Step 4 (B = -.175, *SE* = .184, β = -.111, *p* = .344), family history of drug use was not a significant mediator of the relationship between adolescent drug use and family structure (*z* = .398, *p* > .05).

Table 5

Testing Mediator Effects of Family History of Drug Use Using Multiple Regression for Blacks

Regression Step	Variable	B	*SE*	β	Sig.
Testing Step 1					
	Outcome: adolescent drug use Predictor: family structure	-.192	.186	-.122	.304
Testing Step 2					
	Outcome: family history of drug use Predictor: family structure	-.028	.058	-.056	.635
Testing Step 3					
	Outcome: adolescent drug use				
	Mediator: family history of drug use	.146	.090	.189	.109
	Predictor: family structure	-.175	.184	-.111	.344

*Significant when p < .05

Research Question 6

For Whites, does family history of drug use mediate the relationship between family structure and adolescent drug use?

As presented in Table 6, testing of the variable family history of drug use for Whites first revealed significance between adolescent drug use and family structure in Step 1 (B = .485, *SE* = .129, β = .246, *p* = .000). During Step 2 of testing, significance was found between family history of drug use and family structure

(B = .086, *SE* = .037, β = .154, *p* = .022). In addition, significance was also found between adolescent drug use and family history of drug use in Step 3 of testing (B = .254, *SE* = .071, β = .229, *p* = .000). Step 4 indicated that the relationship between family structure and adolescent drug use was significant when controlling for family history of drug use (B = .416, *SE* = .127, β = .210, *p* = .001). A further analysis revealed that family history of drug use did not significantly mediate the relationship between adolescent drug use and family structure (*z* = 1.884, *p* > .05), although this relationship was nearing significance.

Table 6

Testing Mediator Effects of Family History of Drug Use Using Multiple Regression for Whites

Regression Step	Variable	B	*SE*	β	Sig.
Testing Step 1					
	Outcome: adolescent drug use Predictor: family structure	.485	.129	.246	.000*
Testing Step 2					
	Outcome: family history of drug use Predictor: family structure	.086	.037	.154	.022*
Testing Step 3					
	Outcome: adolescent drug use				
	Mediator: family history of drug use	.254	.071	.229	.000*
	Predictor: family structure	.416	.127	.210	.001*

*Significant when p < .05

Summary

Question 1: For Blacks, does poor family management mediate the relationship between family structure and adolescent drug use? Results indicate that poor family management may have acted as a mediator of the relationship between family structure and adolescent drug use.

Question 2: For Whites, does poor family management mediate the relationship between family structure and adolescent drug use? Results show that yes, poor family management acted as a mediator of the relationship between family structure and adolescent drug use.

Question 3: For Blacks, does parental bonding mediate the relationship between family structure and adolescent drug use? Results reveal that parental bonding was not found to significantly mediate the relationship between family structure and adolescent drug use.

Question 4: For Whites, does parental bonding mediate the relationship between family structure and adolescent drug use? Yes, results indicate that parental bonding serves as a mediator of the relationship between family structure and adolescent drug use.

Question 5: For Blacks, does family history of drug use mediate the relationship between family structure and adolescent drug use? Results indicate that no, there was not a mediation effect found for family history of drug use.

Question 6: For Whites, does family history of drug use mediate the relationship between family structure and adolescent drug use? Results indicate that there is not a significant mediation effect for family history of drug use between family structure and adolescent drug use.

CHAPTER 5: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter is divided into three sections. The first section provides a summary of the study. The second section offers conclusions based on previous findings and the current study. Section 3 provides recommendations based on the results of the study and suggests further research.

Summary

The purpose of this study was to conduct a quantitative examination of the relationship between family structure and adolescent drug use by Black and White adolescents as mediated by poor family management, parental bonding, and family history of drug use. This study was guided by the following research questions:

1. For Blacks, does poor family management mediate the relationship between family structure and adolescent drug use?
2. For Whites, does poor family management mediate the relationship between family structure and adolescent drug use?
3. For Blacks, does parental bonding mediate the relationship between family structure and adolescent drug use?
4. For Whites, does parental bonding mediate the relationship between family structure and adolescent drug use?
5. For Blacks, does family history of drug use mediate the relationship between family structure and adolescent drug use?

6. For Whites, does family history of drug use mediate the relationship between family structure and adolescent drug use?

It was hypothesized that each of the three possible mediating variables would partially explain the relationship found between adolescent drug use and family structure for both Blacks and Whites.

Participant data were drawn from a larger data set of eighth-grade students who participated in a federally-funded State Incentive Grant as a comparison group. This sample of youth did not receive any intervention. The Core Measure (Halpin & Halpin, 2005) was used as the survey instrument in the evaluation of the particular State Incentive Grant from which the participants were drawn.

The predictor variable in this study was family structure. Adolescents from two groups were used in this study–two-biological-parent and mother- or father-extended families. The outcome variable in this study was adolescent drug use. Youth reported their use of alcohol, cigarettes, marijuana, and other illegal drugs on the following scale: *never, 1 to 2 occasions, 3 to 5 occasions, 6 to 9 occasions, 10 to 19 occasions, 20 to 39 occasions, 40 or more occasions*. Mediating variables in this study were poor family management, parental bonding, and family history of drug use.

A regression analysis was used to determine how the predictor and outcome variables were related. While the relationship between adolescent drug use and family structure was not found to have significance for Blacks, significance was revealed for Whites. For Black youth, none of the possible mediating variables (family management, parental bonding, or family history of drug use) were found to have significance. For Whites, family management and parental bonding were found to be significant mediators

of the relationship found between family structure and adolescent drug use. Family history of drug use failed to reach significance for Whites.

The findings revealed in this study provide additional information regarding adolescent drug use, protective factors and risk factors of such use, and differences found among racial groups. While many previous studies have been conducted which examined some of the variables of interest in this study, no previous studies have been found which focused on all variables of interest in this study.

Conclusions

While the overall trend in adolescent substance use has shown slight decreases in recent years, there are still thousands upon thousands of youth engaging in substance use each year. Research has consistently shown that teens who engage in substance use are at much higher risk of becoming involved in other high-risk behaviors such as driving under the influence and engaging in unprotected sex. The many high-risk behaviors associated with substance use, along with possible damaging effects of use in and of itself, are of particular importance in both understanding and working to prevent alcohol, tobacco, and drug use among youth.

Results of this study are somewhat consistent with results of previous research by Flewelling and Bauman (1990) who found differences in the relationship between adolescent substance use and family structure for Black and White youth. They found that the interaction between adolescent smoking and family structure was larger for Whites than other racial groups, though all groups of youth from single-parent homes were at higher risk of cigarette smoking compared to their peers from homes with both biological parents. In this study, the relationship between adolescent drug use and family

structure was found to be significant for Whites, but not Blacks, a result somewhat consistent with the Flewelling and Bauman study, as noted, but not a previous study by Amey and Albrecht (1998). In the Amey and Albrecht study, family structure could not explain differences found among differing racial groups with regard to adolescent substance use.

Consistency was found among the results of the present study and studies examining parental monitoring, also referred to as family management. In this study, poor family management was found to be significantly related to adolescent drug use, significantly mediating the relationship between adolescent drug use and family structure for Whites but not for Blacks. Several previous studies indicated that the presence of adequate parental monitoring served as a protective factor against adolescent substance use, a finding clearly supported by results of the present study. Dishion and Loeber (1985) and Dishion and McMahon (1998), in a couple of the early studies examining parental monitoring, postulated that parental monitoring was a crucial variable in examining adolescent drug use and that in single-parent homes such monitoring is often difficult to achieve, as Kung and Farrell (2000) found both indirect and direct effects of parental monitoring on adolescent drug use.

Rodgers-Farmer (2000) suggested, as did other researchers, that parental monitoring indirectly affected adolescent substance use through youth peers. Cleveland et al. (2005) found that effective parental monitoring indirectly affected youth substance use, as did Farmer et al. (2008) who found similar results for Blacks. The same study by Farmer et al. (2008) also revealed that parental monitoring served as a mediating variable for Whites, though results showed both indirect and direct effects for this group of

participants. Dick et al. (2007) specifically revealed that parental monitoring was related to youth smoking. While previous studies, based on what was specifically examined, may have cited parental monitoring as a direct or indirect effect (or both in some cases) on adolescent drug use, the crucial element to consider is that such monitoring was determined to be an important element in the examination and explanation of adolescent drug use.

Results of this study appear to be consistent with Baumrind's theory of parenting types, as parental control through monitoring seems to affect the relationship between family structure and adolescent drug use. As previously discussed, the presence of parental control through monitoring is a critical aspect in whether or not adolescents are likely to become involved in high risk behavior with unhealthy peers. As results of this study illustrate, family management does in fact appear to be an important factor for families to consider, especially those families not living in two-parent-biological parent situations. Given the results, it can be logically assumed that those families having an authoritative or authoritarian style may be at decreased risk of potentially harmful behavior from their adolescent children, even in cases of single-parent or other family structures without married-biological parents.

Parental bonding, or the relationship between adolescents and their parents, was found to be significantly related to adolescent drug use for both Whites and Blacks but to mediate the relationship between adolescent drug use and family structure for Whites only. These results tend to be consistent with several previous studies. Anderson and Henry (1994), for example, found that in cases where youth perceived close family bonds, less substance use occurred. Kostelecky (2005) similarly revealed that parental

attachment was found to predict adolescent substance use. Bahr et al. (1998) found an indirect effect on youth substance use through religiosity, as Henry et al. (2003) found a similar effect, but through parental support. Pilgrim et al. (2004), however, found a direct effect between adolescent substance use and family cohesion in addition to indirect effects through school and peer variables. As was the case with the variable poor family management, the overwhelming majority of studies have pointed to family management (family bonding, parental attachment, family cohesion, family closeness) as a protective factor against youth substance use.

Results of this study related to parental bonding do somewhat support the basic premise of attachment theory. For Whites, from whom studies substantiating attachment theory were originally based, there does appear to be an indication that the relationship between parent and child is of importance, perhaps even helping to explain the relationship found between adolescent drug use and family structure. As previously discussed, the closeness of the parent-adolescent relationship may serve as a protective factor for adolescents, even in cases where both biological parents are not in the home. In parent-adolescent relationships where youth feel adequately supported and accepted, there is an associated lower risk of engagement in high-risk behavior with unhealthy peers.

Results for Blacks in this study did not support the general notions of attachment theory. It can be argued, however, that attachment theory was not born out of studying Black families and, therefore, does not take into account the ways in which closeness and emotional security may be defined by these families.

Family history of drug use was found to be significantly related to adolescent drug use in the present study for Whites, though there was no significant mediation effect. For Blacks, there was no significance. Although approaching significance for Whites, family history of drug use did not significantly mediate the relationship between family structure and adolescent drug use. Some researchers (Fawzy et al., 1983, Andrews et al., 1993, Li et al., 2002, & Henry et al., 2003) found a direct relationship between adolescent substance use and parental substance use, perceived parental use, and parental attitudes toward use though a number of researchers (Wills et al., 1994, Bahr et al., 1998) have found this relationship to be indirect through other variables, such as modeling. Yet still, Dishion and Loeber (1985) failed to find evidence that a significant relationship occurred between parental use and adolescent use.

Social learning theory is somewhat supported by results of this study within the White families given the significant relationship between adolescent drug use and family history of drug use. Based on other findings, though, it appears that neither the White nor the Black adolescents' engagement in drug use based on their family structure is affected by family history of use. Therefore, in this study, it does not seem to have mattered whether participants' parents were substance users when attempting to explain the relationships between adolescent drug use and family structure. Family management and parental bonding may have had an effect on such a relationship, but family history did not.

Results of this study bring to light the possibility that the way in which family structure affects adolescent drug use may be quite different for Black and White adolescents. Consistent with previous studies which examined the ways in which Black

and White families operate, the nonsignificant results for Blacks in this study indicate a difference in family function. Black adolescents do not appear to be as negatively affected by living in non-biological-parent married homes. If the relationship with the parent, even a single parent is strong, then there is less of a need to participate in risky behavior with negative peers. Therefore, it appears as if the quantity of biological parents with whom the adolescent lives is not necessarily what is critical, but rather the quality of the relationship that exists between the parent(s) and youth for Blacks.

Recommendations

Further studies are needed involving the examination of additional mediating variables. While this study found that poor family management and parental bonding each partially explained the relationship between family structure and adolescent drug use for White adolescents, there may be other mediators of the relationship. Additionally, other possible variables could be tested in order to determine how family functioning affects Black adolescents' drug use.

As well, more research should be conducted in order to examine how parental history of drug use affects adolescent offspring use, especially in the context of family structure and other family variables, given the near-significant results for Whites in this study. Previous studies have shown mixed results, as did results of this study.

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