

PARENTING INFLUENCES ON ADOLESCENT RISKY BEHAVIORS: HOW MUCH DO  
PARENTS MATTER?

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By

Mary Beth Moussa

Director: Dr. Kia Asberg  
Associate Professor of Psychology  
Psychology Department

Committee Members: Dr. David McCord, Psychology  
Dr. Jamie Vaske, Criminology & Criminal Justice

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## ABSTRACT

### PARENTING INFLUENCES ON ADOLESCENT RISKY BEHAVIORS: HOW MUCH DO PARENTS MATTER?

Mary Beth Moussa, M. A.

Western Carolina University (February 2016)

Director: Dr. Kia Asberg

This study utilized retrospective reports from a sample of college students and their primary care giver during childhood to examine the interplay among parent and adolescent personality, parent psychopathology, parenting behaviors, and adolescent outcomes, specifically substance use and risky sexual behavior. It was hypothesized that positive parent and adolescent personality traits, low levels of parent psychopathology, and high levels of warmth and demandingness, would reduce the severity of adolescent outcomes of substance use and risky sexual behaviors. Multiple linear regression analyses resulted in a significant equation to predict risky sexual behavior ( $F(15,127) = 2.26, p < .012$ ), with an  $R^2$  of .198. Significant predictors of risky sexual behavior included permissive parenting style, parent internalizing psychopathology, and adolescent neuroticism. A significant equation was also found to predict substance use ( $F(15, 125) = 2.26, p < .008$ ), with an  $R^2$  of .21. Significant predictors of substance use behaviors included adolescent neuroticism and extraversion. Findings illuminate the influence of personality characteristics in particular, on adolescent behavior. Findings suggest also that parenting variables, specifically parenting style and internalizing psychopathology, are better at predicting

risky sexual behavior (i.e., not using contraception) than they are at predicting substance use in emerging adults. Implications, limitations, and suggestions for future research will be discussed.

## CHAPTER 1: INTRODUCTION

Adolescence is an important time in development, marked by a number of important emotional, cognitive, behavioral, and interpersonal changes. These changes are often associated with times of turmoil and strife (Arnett, 1999), and the adolescent's ability to cope with these life stressors may lead to different psychosocial outcomes. Although a number different variables are associated with the different adolescent outcomes, those associated with parenting seem to be particularly formative. Due to the many different ways parents influence their children there can be many variables associated with a specific outcome; thus the theoretical framework is often multivariate in explaining the relationship between parents and adolescents (McKinney & Renk, 2011). Given the complexity of the relationship between parenting and adolescent outcomes, there are several theories that work together to help explain this relationship and the ways in which a parent might lead to an adolescent developing maladaptive coping strategies.

Maladaptive ways of coping with life stressors typically lead to negative outcomes, and in adolescence some of them can become enduring; in particular, substance use, substance abuse, and risky sexual behaviors (McKinney & Renk, 2011). Substance use is defined as the consumption of a substance either illegal or legal, and substance abuse as the regular consumption of these substances (Lee, 2012). Although the use of substances such as alcohol and marijuana have become more normative over time; research still supports that they are maladaptive as they increase the risk of substance abuse as well as the use and abuse of more illicit substances. Risky sexual behaviors are defined as the behaviors that increase the risk of sexually transmitted infections and unintended pregnancy (Hadley et al., 2011). In the literature

it is suggested that while these behaviors are often influenced by several factors, a particular significance lies upon parenting factors that can contribute to either increasing or decreasing these behaviors (Donnelly, Renk, & McKinney, 2012).

Some of these parenting factors that influence adolescent behavior include, but are not limited to, parenting style, parent discipline style, parent personality, and parent psychopathology. Parenting style refers to the specific way a parent raises their child and are typically categorized into four styles known as authoritarian, authoritative, permission, and neglectful (Baumrind, 1991). Parent discipline style, on the other hand, is the way parents enforce rules broken by adolescents. Discipline style typically falls under the same style as parents overall parenting style, but may differ based on an adolescent's behavior. Parent personality also plays an important role in shaping adolescent behaviors because it is highly genetic and thus contributes to adolescent personality. Moreover, studies have found support for associations between particular adolescent personality traits, such as low conscientiousness, and substance use or risky sexual behaviors (Kotov, Gamez, Schmidt, & Watson, 2010). The extent to which parents' personality traits influence adolescent behavior is less well understood, and an area of interest to this study. Moreover, other parent characteristics, such as psychopathology, are important to consider. Parent psychopathology is defined as variations in functioning and can vary from mild to extreme enough for diagnosis. Parent psychopathology has been shown to be associated with the development of maladaptive behaviors in adolescence (McKinney & Milone, 2012).

In the literature, the notion that parents play an important role in their child's life is largely undisputed, and most studies point to an association between parents' behaviors (i.e., warmth, discipline) and the developing behavior of adolescents (McCabe, 2014; McKinney,

Milone, & Renk, 2011). However, the specific influence each of these parenting variables play in their adolescent's behavior as well as the overall influence from all of the variables combined is still not perfectly clear in the research. Expounding the association between these variables will aid in a further understanding of the development of adolescent behaviors. It is important to also predict outcomes in both early and late adolescence as this is the way prevention and intervention programs are developed. These programs aid in reducing the development of disorders in adolescence as well as reducing the chronicity of disorders that may have already developed in adolescence. This study further examines the association between parenting variables and risky adolescent outcomes (i.e., sexual behavior, substance use) in the context of adolescent personality.

## CHAPTER 2: LITERATURE REVIEW

### **Theoretical Perspectives on Adolescence**

Adolescence is known as the time period during development where many important changes in emotional, social, and cognitive functioning occur. Although adolescence is a time of positive, adaptive changes, it is also considered a period of vulnerability in terms of risky substance use and sexual behaviors. This was most famously discussed by G. Stanley Hall (1904) and his theory of adolescent “storm and stress”, which described adolescence as a period of rebellious behavior and conflict which was normative for development (Hall, 1904). Other theorists, such as Albert Bandura, proposed that adolescence was no more a period of conflict than any other developmental period. He purported that conflict in adolescence may be due to parents and teachers expecting adolescents to experience conflict and emotional turmoil and thus creating conflict themselves (Bandura, 1964). Psychologists today are less likely to take an all or nothing approach to the “storm and stress” model, but recognize the biological and environmental changes that are likely to increase vulnerability to risky behaviors (Hollenstein & Loughheed, 2013). These vulnerabilities do not guarantee a stressful developmental period, but instead explain some of the emotional conflict observed (Hollenstein & Loughheed, 2013). Although early models of a developmental period full of conflict have been largely rejected as explanation for adolescent behavior, the role of conflict between parents and the adolescent child has been retained, specifically by the social learning theory. In fact, the parent – child relationship, including conflict, is an important part of explaining adolescent outcomes. Social learning theory and associated perspectives associated with adolescent risky behaviors will be discussed next.

**Social Learning Theory.** Social learning theory argues that adolescent risky behaviors can be explained by differential associations or social interactions with peers and family (Akers, 1985). An adolescent's family and friends model behaviors and the developing adolescent then uses definitions or personal values to determine if those 'modeled' behaviors are 'right or wrong'. If an adolescent joins a family member or peer in a risky behavior and they get positive reinforcement for it, the behavior is more likely to increase (i.e., behavior is reinforced; Akers, 1998). This theory is supported in the literature in its explanation of adolescent deviant behaviors, however it does not fully capture the individual in their behaviors (Schaefer et al., 2015) and lacks the inclusion of other motivations for engaging (or refraining from engaging) in behavior.

**Individuation Theory.** Individuation theory of adolescent outcomes takes into consideration the importance of the individual and their behaviors as they pursue autonomy, and the context and responses of those around them. In this theory adolescent outcomes are predicted by a process of re-adjustment between the parent and child (Kroger, 1998). As the adolescent gets older, they desire more autonomy and the parent has to readjust expectations to allow for this autonomy while still supporting their adolescent child in conflicts (Smetana, 2005). Conflict, then, leads to adaptation in the relationship between the parents and adolescent as the adolescent experiments with the amount of independence they are comfortable with (Delhaye et al., 2012). Thus the three aspects of this process are excessive autonomy, overdependence, and healthy separation (McClanahan & Holmbeck, 1992). The adolescent's 'ultimate' level of independence toward which they strive can also be influenced by their attachment to their parents (e.g., Delhaye et al., 2012).

**Attachment Theory.** Attachment theory discusses adolescent outcomes in the context of the psychological relationship between the parent and adolescent. Parents exhibit attachment behaviors by responding sensitively and appropriately to their child's needs and children respond by seeking their attachment figure when upset or distressed (Ainsworth & Bowlby, 1991). According to this theory (e.g., Ainsworth & Bowlby, 1991), attachment is broken down into 'styles' – secure, anxious/avoidant, anxious/ambivalent, and disorganized, describing the reaction of the child in relation to their primary caregiver. Secure attachment style, which is the most common and adaptive style, is expressed when the adolescent has autonomy but trusts their parents in supporting them. In contrast, two anxious attachment styles – avoidant and ambivalent – can also develop when the parent fails to allow healthy levels of autonomy and support, or where trust has been breached. Specifically, avoidant attachment occurs when the adolescent does not believe they can trust their parents to support them, and this attachment dynamic may involve the adolescent refusing to rely on their parents for support. Ambivalent attachment is expressed when an adolescent cannot rely on the parent and their previous needs have not been met, at least not consistently; thus the adolescent becomes fearful of rejection or abandonment from their parents and may not be able to establish autonomy. Finally, disorganized attachment is inconsistent, sometimes violent (love and abuse from the same caregiver). This typically confuses the adolescent and they will not know if their needs will be met or not (Delhaye et al., 2012). Some additional dimensions of attachment include the amount of trust between the parent and adolescent, the quality of communication, and the amount of anger or alienation (Armsden, McCauley, & Greenberg, 1991). Although the early theory of attachment partially explained differences in adolescent outcomes, it is lacking in a biological component and does not take into

account the ways in which adolescent behavior may develop in response to an interaction between their physiology (stress response system) and the demands of the environment.

**Adaptive Calibration Model.** In recent years, the adaptive calibration model (ACM) has garnered interest as a framework for understanding adolescent risky behavior. In a broader sense, the ACM attempts to explain individual differences in functioning over the course of development via the stress response system (SRS; Del Giudice, Ellis, & Shirtcliff, 2011). The SRS is a biological mechanism that varies in stress responsivity to environmental contexts across different people. This has consistently been associated with differences in psychological functioning. This model integrates the SRS with evolutionary theories and the ability for an organism to shape their environment and vice-versa. Thus, higher general responsivity from the SRS is generally associated with poor outcomes in a high-stress environment, but in a low-stress environment it has higher levels of positive outcomes. Alternatively, adolescents with lower responsivity from their SRS are more likely to have better outcomes in a multitude of environments and not just low-stress (Del Giudice et al., 2011). A multitude of environmental factors adolescents must adjust to include parents and their behaviors. For example, low quality maternal care or less than optimal environments may alter the stress physiology of the organism, bringing about earlier sexual maturation and more active strategies to reproduce. In this context, sexual risk taking may be considered adaptive (albeit risky), such that it increases the likelihood of passing on one's genes. Although the role of adolescents' physiology is beyond the scope of the proposed study, we aim to examine the influence of parent- and adolescent personality traits (largely innate) on outcomes, and explore also the ways in which personality influences parenting.

**Parenting Styles** Throughout the literature, there is clear evidence to suggest that parents, especially through their parenting behaviors, play a crucial role in influencing their children's outcomes (e.g., delinquency and substance use; Hinnant, Erath, & El-Sheikh, 2015; Hoeve, Semon Dubas, Gerris, van der Laan, & Smeenk, 2011; child and adolescent aggression; Kawabata, Alink, Tseng, van IJzendoorn, & Crick, 2011). The four parenting styles that encompass many behaviors of parents are authoritative, authoritarian, permissive, and neglectful. Within this framework, all four parenting styles are measured across the concepts of responsiveness and demandingness or support and control (Baumrind, 1991; Maccoby & Martin, 1983). Responsiveness is how a parent responds to their child's behavior, this is typically displayed through warmth and support, i.e., responsiveness is comprised of behaviors involving parents supporting adolescent self-regulation and self-esteem (Baumrind, 1991). Demandingness refers to parents' expectations of their child's behavior. Demandingness involves behaviors such as parental monitoring, which is how much parents know about what their adolescent does, and disciplinary actions (Baumrind, 1991; Ritchie & Buchanan, 2010).

Authoritative style parenting is both demanding and responsive in that the parents are warm and respond to their child's needs and also expect behaviors of their children. In contrast, authoritarian parenting style has high levels of demandingness and low levels of responsiveness, i.e., this parenting style is typically more controlling and harsh. Permissive parenting style is high in responsiveness, but low in demandingness and so expectations are typically inconsistent, while neglectful parenting style is low in both demandingness and responsiveness, typically leaving the child without much support and too much autonomy (Baumrind, 1991).

Furthermore, parenting styles are also associated with the types of discipline parents are likely to use with their adolescents (McKinney, Milone, & Renk, 2011). Specifically, when

adolescents break rules, parents determine the method for which they will enforce those rules. Most methods involve some form of asserting dominance, withdrawing responsiveness or support, and education (McKinney et al., 2011). If a parent uses asserting dominance as their discipline strategy it often involves physical punishment or threats to force the adolescent to change their behavior. The strategy of withdrawing support more typically involves ignoring or leaving the adolescent alone. Parents that employ education strategies are more likely to communicate clearly with their adolescent or use logic to explain the rules they are enforcing (McKinney et al., 2011). Thus authoritarian parenting style is associated with asserting dominance strategies of discipline and authoritative parenting style is associated with education strategies. Permissive parenting style is more associated with inconsistent disciplinary styles (Renk, McKinney, Klein, & Oliveros, 2006). The various ways in which parents discipline their children are associated with different outcomes in adolescence. Harsher forms of discipline are typically associated with higher levels of adolescent delinquency while inconsistent discipline is associated with higher levels of adolescent depression (Renk et al., 2006). Discipline style explains part of the relation between parenting style and adolescent risky behaviors (McKinney et al., 2011).

Of the parenting styles, authoritative parenting style has been suggested to be the most adaptive parenting style, as it is often negatively associated with adolescent risky outcomes (McKinney et al., 2011; Slicker, Patton, & Fuller, 2004). Low responsiveness or warmth and low demandingness or control are associated with higher levels of adolescent illicit drug use (Montgomery, Fisk, & Craig, 2008). Low responsiveness and low demandingness are most associated with neglectful parenting style, but also with permissive parenting style and thus higher levels of substance use as control may play a larger role in substance use than warmth

(Montgomery et al., 2008). However, other studies suggest that the role warmth plays varies based on cultural context (Alonso-Geta, 2012; Baumrind, 1972; Calafet et al., 2014). In regions more heavily populated by Caucasians, authoritative parenting style is still shown to have the best outcomes, but regions populated with certain minorities (e.g. Latin-American) permissive parenting style is also protective against substance use (Calafet et al., 2014). Adolescents of parents with negative parenting styles are also significantly more likely to report behavioral or relationship difficulties such as self-esteem, conduct problems, hyperactivity, and peer problems (Ritchie & Buchanan, 2011).

Although there are changes in parenting behaviors, parental style is relatively stable across the span of childhood and adolescence (Luyckx et al., 2011). Authoritative parents use high levels of monitoring, which is a facet of control, in childhood and reduce the monitoring as they get older in adolescence. Authoritarian parenting follows a similar pattern, but with sharply reduced monitoring in adolescence which may be due to adolescents spending more time outside of the home due to their parent's high levels of demandingness. Although monitoring has been conceptualized as an active behavior on the parent's part to attain information from children as a means of control, recent studies suggest the positive outcomes associated with monitoring are mostly explained by the adolescent determining to disclose information to the parent and not vice-versa (Kerr & Stattin, 2000). This may explain some of the differences in outcomes between authoritative and authoritarian parenting style. Permissive parenting depicts a pattern of low monitoring overall and a sharp decrease in monitoring in adolescence, while neglectful parenting has the lowest levels of monitoring across development. Due to these trajectories, authoritative parenting has the best overall outcomes and neglectful has the poorest, with adolescents of neglectful parents drinking alcohol and smoking cigarettes almost twice as much as their peers in

authoritative homes (Luyckx et al., 2011). The extent of the influence of parenting variables on adolescents is important to account for when trying to understand adolescent outcomes.

Throughout the literature, negative parenting styles are not only associated with poorer adolescent outcomes, but studies show that if one parent exhibits a negative parenting style the other parent is more likely to also use a negative parenting style. This is problematic as even one parent with authoritative parenting style acts as a protective factor against negative adolescent outcomes (Ritchie & Buchanan, 2011). The amount of protection this provides may depend on which parent has which parenting style. Many studies suggest that maternal parenting behaviors, including monitoring and warmth, predict negative adolescent outcomes more strongly than paternal factors (Hadley et al., 2011; McKinney & Renk, 2011; Shek, 2005). However, other studies suggest that there are differences in the relation between parenting behaviors and adolescent outcomes based on adolescent sex and parent sex (Bornstein et al., 2007; McCabe, 2014). Often maternal influences vary based on internalizing problems, while paternal behaviors are more often related to externalizing problems (McKinney & Renk, 2011). The behaviors of parents and whether they both exhibit negative parenting styles can be influenced by parent personality (Belsky, 1984).

**Five Factor Model of Personality.** Personality is often characterized by the five factor model of personality: extraversion, agreeableness, conscientiousness, neuroticism, and openness to new experiences (Costa & McCrae, 1988). These characteristics are measured on a continuum of normal personality characteristics and are relatively stable over time (Hartmann, 2006). Extroversion measures enjoyment in social activities and activities on the high end and introversion and preference for solitude on the low end. Agreeableness measures kindness and compassion. Conscientiousness measures dependability and responsibility. Neuroticism

measures anxiety, fear, and loneliness on the high end and carefreeness on the low end. Openness to new experiences measures intellect and adaptability on the high end and fixed decision making and rigidity on the low end (Costa & McCrae, 1988). Research supports that the personality traits measured in the 5-factor model are highly heritable (Brody, 1994; Hartmann, 2006; Jang, Livesley, & Vernon, 1996; Schofield et al., 2012). In fact, genetic effects across several studies account for 30 to 50 percent of variability in personality (Brody, 1994; Jang, Livesley, & Vernon, 1996). The more heritable a trait is the more, it is suggested, it might become internalized into the 'self-schema', or ideas about the self. Thus, it takes less time to answer survey questions related to heritable personality characteristics than other items and shared environment predicts very little of personality (Ekehammar et al., 2010; Hartmann, 2006).

There is also evidence that the five factor traits are heritable across cultures and therefore easily generalizable (Jang, McCrae, Angleitner, Riemann, & Livesley, 1998). While some behaviors are better explained by personality traits than others, most if not all behaviors are influenced in some part by personality, and personality is largely explained by heritability (Schofield et al., 2012). This explains part of the variability in developing adolescent personality. In particular, parent personality influences adolescent personality traits both directly and indirectly; directly via heritability and indirectly via personality influencing parenting behaviors (Brody, 1994).

The effect parent personality has on parenting behaviors then leads to different adolescent outcomes (Gfroerer et al., 2011; McCabe, 2014). Parents high in extraversion may be more likely to express high positivity when interacting with their children and they are also typically higher in demandingness (de Haan, Deković, & Prinzie, 2012). High levels of agreeableness are associated with high responsiveness. Also, parents' high in conscientiousness are more likely to

provide a structured environment for their children and exhibit behaviors associated with demandingness. Although all of the big five traits are associated with parenting behaviors, some overlap exists (de Haan, Deković, & Prinzie, 2012). For example, extraversion does not explain significantly more about parent behavior in the context of agreeableness and conscientiousness. Openness to new experiences also is not a significant predictor of parenting behavior in the presence of neuroticism and agreeableness (de Haan, Deković, & Prinzie, 2012). Therefore, the traits most associated with parenting behaviors are agreeableness, conscientiousness, and emotional stability or low neuroticism – all of which are associated with positive parenting behaviors. In contrast, high levels of neuroticism in mothers increase the likelihood of lowered responsiveness and higher demandingness toward their children (Gfroerer et al., 2011). Neuroticism is also associated with lower maternal warmth, but low neuroticism or emotional stability is a positive parent personality trait, as well as high conscientiousness and agreeableness (Schofield et al., 2012). These positive parent personality traits are associated with higher levels of responsiveness and demandingness as well as higher levels of adolescent positive personality traits (Schofield et al., 2012). Maternal conscientiousness has also been shown to be negatively associated with adolescent externalizing problems, while paternal conscientiousness may predict little. It may be that parent conscientiousness is associated with an easier time setting limits with adolescents and being more active in their lives (Oliver, Guerin, & Coffman, 2009).

While parent personality traits are associated with parenting behaviors, adolescent personality traits are also associated with parenting behaviors (Gfroer et al., 2011; Weiss & Schwarz, 1996). For example, having parents with a permissive parenting style is associated with higher agreeableness in the adolescent (Gfroerer et al., 2011). High agreeableness in an adolescent is also associated with more parental warmth and less harsh discipline (de Haan,

Deković, & Prinzie, 2012). Furthermore, adolescents of authoritative parents are more likely to score higher on agreeableness, openness, and extraversion than adolescents of neglectful parents. Adolescents high in extraversion may be more likely to engage in risky substance use behaviors in a social context, however adolescents high in agreeableness are also more likely to disclose information to their parents and are less likely to become heavy users (Walton & Roberts, 2004). Adolescents that score low on conscientiousness are also more likely to heavily use substances and are more likely to elicit harsher discipline from their parents (de Haan, Deković, & Prinzie, 2012; Walton & Roberts, 2004). Adolescents are also much more likely to score higher in neuroticism and lower in openness if their parents use an authoritarian parenting style (Gfroerer et al., 2011; Weiss & Schwarz, 1996). However, adolescents high in neuroticism or low emotional stability are also more likely to elicit more overreactions from parents and experience harsher discipline (de Haan, Deković, & Prinzie, 2012). Neuroticism is not only highly heritable, but also associated with psychopathological outcomes (Aldinger et al., 2014; Barlow, Saur-Zavala, Carl, Bullis, & Ellard, 2014; Jang et al., 1996). Parenting style can be influenced by several different factors, some of the most prominent being personality and child characteristics (Belsky, 1984; Huver, Engels, Vermulst, & de Vries, 2007; Oppenheimer, Hankin, Jenness, Young, & Smolen, 2011).

**Parent and Child Characteristics.** As noted, Belsky (1984) suggested that parenting style was influenced by three factors: parent psychological characteristics and personality, child characteristics or temperament, and environment or context such as social support and relationship quality. Parent psychological characteristics include emotional stability and psychopathology. Child characteristics include traits such as introversion or extraversion, which may influence how the parent interacts with their adolescent. In Belsky's process model of

parenting behavior he discusses the role these factors play in the parent's ability to care for their child and thus how these factors might predict child maladjustment. While outside stressors are influential, he emphasizes that a parent's psychological well-being and personality are the central influences on caretaking ability, and outside stressors are only influential in that they affect parental psychological well-being. Thus Belsky purported parent psychological well-being and parent personality were two of the most important factors associated with negative outcomes in offspring (Belsky & Barends, 2007).

Parent psychopathology is typically associated with adolescent outcomes via its influence on their attachment and parenting style, as discussed previously (e.g., McCabe, 2014; McKinney & Milone, 2012). In particular, parent psychopathology is typically associated with lower warmth, higher levels of control or demandingness, and poor modeling (McKinney & Milone, 2012). Parental warmth plays a role in both parenting style and attachment as a highly responsive parent displays more warmth toward their child and is associated with secure attachment style. Levels of control can be effective when associated with authoritative parenting style, however higher levels of control with lower levels of warmth are typically associated with authoritarian parenting style (McKinney & Milone, 2012). Poor modeling, as discussed in social learning theory, affects the way adolescents learn to behave and the coping mechanisms they may develop over time, such as substance use. Although parenting behaviors have been thought as the manner by which parent psychopathology negatively influences adolescent outcomes, it has been suggested that parenting behaviors change in the context of psychopathology (McKinney & Milone, 2012).

**Parent Gender.** Parent gender also impacts adolescent outcomes, however the literature on this relationship is mixed. In some studies it has been shown that maternal psychopathology

better predicts negative adolescent outcomes, particularly internalizing problems and substance use problems (Burstein, Stranger, & Dumenci, 2012; McKinney & Milone, 2012). Other studies have evidence supporting that while maternal influences affect both internalizing and externalizing outcomes, paternal influences affect externalizing outcomes such as risky sexual behaviors and substance use behaviors (McKinney & Milone, 2012; Shek, 2005). Parental psychopathology, such as major depressive disorder, impacts both adopted and non-adopted children, implying a strong environmental factor associated with it (Marmorstein, Iacono, & McGue, 2012). The relation between parent psychopathology and adolescent externalizing problems can be partially explained by family income and stress, which play a role in the development of most psychopathology (Schleider et al., 2014). Maternal psychopathology may also indirectly influence adolescent risky behaviors, such as risky sexual behaviors, by poorer parental monitoring, which may mean that parent psychopathology increases the need for support and assistance (Hadley et al., 2011).

Parent psychopathology interacts with personality and parenting style to affect adolescent outcomes. In particular, parent personality influences adolescent outcomes such as substance use via heritability. Although personality is not stable in adolescence, the inherited component of personality has been considered an influential factor in adolescent behavior (Hartmann, 2006). It has even been theorized that due to the amount of variance in personality explained by heritability, that no environmental factor on personality exists without being influenced by genetic traits (Brody, 1994). Heritability plays a role in both adolescent psychopathology and personality and both of these factors are important to consider in the context of parenting behaviors. How these factors influence parenting behaviors, which then affect adolescent outcomes such as substance use and risky sexual behaviors are important to understand. These

variables all interact with one another and influence adolescent outcomes via the parent-adolescent relationship and thus are not easily understood when studied individually.

### **Present Study**

The current study takes a multi-faceted approach to understanding the relation between parenting variables and adolescent outcomes of substance use and risky sexual behaviors; in particular, both biological parenting factors and environmental parenting factors. Parent psychopathology and parenting behaviors of warmth, parenting style, and discipline were measured retrospectively at adolescent ages of 13 and 14. Adolescent outcomes of substance use and risky sexual behavior were also retrospectively measured, though from ages 15 to 17. Middle adolescence is a time when puberty has typically completed and adolescents are likely experiencing a shift in autonomy as they enter high school (Baams, Overbeek, Dubas, & van Aken, 2014; Moilanen, 2015). Parent personality and adolescent personality were measured at the ages of 18 and up, as personality is a stable trait and can be assumed to remain relatively the same across time-points (Sneed & Pimontel, 2012).

**Hypotheses.** The hypotheses of the present study explored the degree to which parenting variables are associated with substance use outcomes and risky sexual behavior.

1) First, we hypothesized that parent variables would be associated with one another, such that parent internalizing and externalizing psychopathology would be positively associated with harsh discipline and authoritarian parenting style; while being negatively associated with authoritative parenting style and warmth (Figure 1). Positive associations were also expected between parent conscientiousness and authoritative parenting style, parent agreeableness and warmth, and parent neuroticism and authoritarian parenting style. Negative associations were also expected between parent neuroticism and warmth.

2) Second, we hypothesized that parent and adolescent variables would be associated with adolescent substance use, such that both parent and adolescent personality characteristics, parent psychopathology, and parenting behaviors of decreased warmth, increased harsh discipline, and positive parenting styles would be associated with substance use in adolescence (Figure 2). Specifically, among adolescent variables, positive correlations were expected between adolescent neuroticism and substance use outcomes. Negative correlations were expected between adolescent agreeableness and conscientiousness, and substance use outcomes. Among parent variables, parent internalizing and externalizing psychopathology was expected to be positively associated with authoritarian parenting style and negatively associated with authoritative parenting style. Positive correlations were expected between parent internalizing psychopathology, externalizing psychopathology, parent neuroticism, permissive parenting style, and harsher discipline strategies and substance use outcomes. Parent personality traits were also expected to be positively associated with their respective adolescent personality traits. While inverse associations were expected between adolescent substance use and parent conscientiousness, parent agreeableness, authoritative parenting style, authoritarian parenting style, and warmth.

3) Third, we hypothesized that these same parent and adolescent variables would be associated also with frequency of risky sexual behavior. The directionality of the bivariate associations were also expected to remain the same for the second hypothesis.

4) Fourth, we hypothesized that a multiple regression equation model that included both parent and adolescent variables would be significant in predicting adolescent substance use and sexual behavior, respectively.

**Statistical Plan.** In order to explore bivariate associations between the variables as noted in hypotheses 1-3, three correlation matrices were examined. The first matrix explored the associations among parent variables, parent personality, parent psychopathology parental warmth, parenting style, and discipline. The second matrix explored the relations among adolescent variables of adolescent personality and adolescent outcomes of substance use and risky sexual behavior. The third matrix explored the associations among both parent and adolescent variables. In order to explore the model as noted in hypothesis 4, two multiple regression analyses were estimated to examine the influence of both adolescent and parent variables on adolescent outcomes of substance use and risky sexual behavior.

The associations between parent psychopathology, personality, and parenting style with adolescent personality and outcomes were assessed to expand on the extant literature and further understand the associations between these variables.

## CHAPTER 3: METHODS

### **Participants**

College age younger adults (44 men, 131 women,  $n = 175$ ) and the legal guardian they spent the most time with in adolescence (37 men, 116 women,  $n = 153$ ) were recruited from a psychology participant pool and volunteered classrooms at a southeastern university. Participants indicated main parental guardian during adolescence to be 23% biological mother, 5.7% biological father, 68.4% both biological parents, and 2.9% “Other” (Foster parents, grandparents, etc.). The racial and ethnic composition of the adolescent participants was 84% Caucasian, 7.4% African American, 3.4% Hispanic, 2.3% Asian American, and 2.9% “Other” ethnicity. The racial and ethnic composition of the parent participants was 87.6% Caucasian, 5.2% African American, 2.6% Hispanic, 2.6% Asian American, and 2% “Other” ethnicity. The socioeconomic status composition of the sample ranged from less than 5,000 a year to over 100,000 a year, with the most common status of the sample lying between 50,000 to 75,000 (24.6%).

### **Procedure**

Participants were recruited through the psychology participant pool, classroom extra-credit, or volunteered and then sent a recruitment e-mail with a link to conduct the survey. Initially, participants met with the experimenter in person and were handed a physical consent form with their randomized ID number, information on voluntary participation, and contact information of the researchers. The hour long length and anonymous nature of the survey were disclosed to the participant as well as the directions to email their parents the additional survey link and recruitment email. Participants were instructed to enter their ID number into the recruitment email they copy and pasted to their parents. A secondary procedure was created to

make the process of data collection more efficient. Participants began the online survey and were presented with a consent form informing them of voluntary consent and contact information. They were then given a randomized ID number to pair with their parent's responses, which they emailed to their parent with the parent recruitment email and survey link.

## **Measures**

**Demographics.** Both college aged participants and parents filled out a short demographics form assessing age, gender, main legal guardian during adolescence, whether they were adopted, racial or ethnic background (i.e., Caucasian, African-American, Hispanic/Latin, Asian American, Native American, or Other), and socioeconomic status (SES). Parent demographics form assessed sex and ethnicity.

**Parent psychopathology.** Parent psychopathology was assessed with the Adult Self-Report Achenbach System of Empirically Based Assessment (ASR; ASEBA; Achenbach, 1983). The ASR is a 120-item measure that assesses maladaptive behavioral and emotional problems between the ages of 18 to 59 years. It measures problems such as internalizing and externalizing problems. The measure is on a 3-point Likert scale where 0 = not true 1 = somewhat true and 2 = very true. Sample items include "I am afraid I might think or do something bad" or "I feel that no one loves me". The externalizing, internalizing, and total problems subscales of the ASR were used to measure parent psychopathology. The Cronbach (1951) coefficient alpha value for the ASEBA subscales range from .69 to .88 (Achenbach, 1983). For the present study, the Cronbach alpha for the internalizing and externalizing subscales was .96 and .91 respectively. The subscales are scored so that higher scores of internalizing, externalizing, and total problems indicate greater levels of those problems.

**Parenting Style.** Parenting style and discipline were assessed using the Parental Authority Questionnaire (PAQ; Buri, 1991). The PAQ is a 30-item adolescent report measure that assesses authoritarian, authoritative, and permissive parenting styles. The measure uses a 5-point Likert-type scale where responses range from 1=Strongly Disagree to 5=Strongly Agree. Sample items include “My parent feels that what children need is to be free to make up their own minds and to do what they want to do” and “My parent encourages verbal give-and-take whenever I feel that family rules and restrictions are unreasonable”. The Cronbach alpha values in previous studies were .85 for authoritarian, .82 for authoritative, and .75 for permissive parenting styles (Buri, 1991). For the present study, the Cronbach alpha values were .82 for authoritarian, .87 for authoritative, and .74 for permissive parenting styles.

**Parent Discipline Style.** Parent discipline style was assessed using the Conflict Tactics Scale: Parent-Child Version (CTSPC; Straus, 1979). The CTSPC is a 22-item adolescent report scale that assesses the physical and psychological tactics parents utilized to enforce rules. The measure asks questions to measure strategies that occurred within a recent timeframe and also past prevalence. Sample items include “shook you” or “hit on the bottom with an object”. This scale has test-retest reliabilities that range from .49 to .80 and convergent and divergent validities are good (Straus, Hamby, Finkelhor, Moore, & Runyan, 1998). The Cronbach alpha for the present study was .86.

**Parental Warmth.** Parental warmth was measured using the Parental Bonding Instrument (PBI; Gordon, Tupling, & Brown, 1979). The PBI is a 25-item adolescent report scale that measures maternal and paternal warmth and overprotection. The split-half reliability was found to be .88 for the care scale and .74 for the protection scale. This measure is on a 4-point Likert Scale ranging from 3 Very Like to 0 Very Unlike. Sample items include “Seemed

emotionally cold to me” and “Tended to baby me”. The PBI has been found to have good reliability and validity based on several studies (Gordon et al., 1979). For the present study, the Cronbach alpha for the care subscale was .94.

**Parent and Adolescent Personality.** Parent and adolescent personality was assessed using the M5-50 (McCord, 2002). The M5-50 is a 50-item measure of normal personality designed to measure the Five Factor Model of personality traits. The reliabilities for this measure are approximately .863, .759, .849, .864, and .778 with good validity for extraversion, agreeableness, conscientiousness, neuroticism, and openness to new experiences, respectively (McCord, 2002). This scale is on a 5-point Likert scale from 1 being “Very Inaccurate” to 5 being “Very Accurate”. Sample items include “Love to help others” or “Prefer variety to routine”.

**Adolescent Outcomes.** Adolescent risky sexual behavior and substance use was assessed using the self-report on the Youth Risk Behavior Survey (YRBS; Centers for Disease Control and Prevention, 2015). The YRBS is an 86-item measure that assesses behaviors associated with increased risk for adolescent adjustment, including unhealthy dietary behaviors, drug use, and sexual behaviors. The reliability ranges from .61 to 1 on all items with no significant differences observed (Centers for Disease Control and Prevention, 2015). Each item asks about a specific behavior and adolescents are asked to select first whether they engage in the behavior and then to indicate the frequency with which this behavior occurs. Sample items include “during your life, on how many days have you had at least one drink of alcohol” and “how old you were when you tried marijuana for the first time”. The Cronbach alpha of the substance use subscale of the YRBS was .81 for the current study and .78 for the risky sexual behavior subscale.

## CHAPTER 4: RESULTS

A-priori power analyses were conducted for the expected 15 predictor variables and an anticipated small-moderate effect size, indicating a sample of at least 150 pairs were necessary to achieve desirable power of .80. Means and standard deviations were calculated for all subscales (Table 1). Analyses were performed on a sample of 175 college students (44 men, 131 women) and 153 parents or the legal guardians (37 men, 116 women). For analyses requiring parent – child dyads, a total of 153 pairs were used.

### **Group Differences**

Two t-tests were conducted to determine if there were sex differences among the adolescent and parent variables. Significant sex differences were found in parent conscientiousness  $t(150) = 3.36, p < .001$ , with men receiving higher scores than women, parent neuroticism  $t(150) = -2.14, p < .013$ , with women receiving higher scores than men, and parent internalizing psychopathology  $t(150) = -2.04, p < .006$ , with women receiving higher scores than men (Table 3). No significant sex differences were found within adolescent variables (Table 4). A within groups one-way ANOVA was run in order to determine if there were differences in adolescent variables based on socioeconomic status (SES; Table 5). No significant differences in adolescent variables were found between SES groups.

### **Bivariate Associations**

Three correlation matrices were then conducted. The first correlation matrix analyzed the associations among the adolescent variables of adolescent personality (Neuroticism, extraversion, agreeableness, conscientiousness, and openness), substance use outcomes and risky sexual outcomes (Table 6). Results indicated a positive association between adolescent

neuroticism and substance use outcomes ( $r(173) = .203, p < .01$ ), as well as risky sexual outcomes ( $r(173) = .168, p < .05$ ).

The second correlation matrix analyzed the relations among the parent variables of parent personality, internalizing and externalizing psychopathology, parenting styles (authoritative, authoritarian, and permissive), warmth, and discipline (Table 7). Results for this correlation matrix indicated positive associations between parent internalizing psychopathology and neuroticism ( $r(150) = .82, p < .01$ ) parent externalizing psychopathology and neuroticism ( $r(150) = .69, p < .01$ ), and authoritative parenting style with warmth ( $r(150) = .62, p < .01$ ). Negative associations were found between internalizing psychopathology and extraversion,  $r(150) = -.32, p < .01$ , agreeableness,  $r(150) = -.33, p < .01$ , and conscientiousness  $r(150) = -.78, p < .01$ ; while externalizing psychopathology is negatively associated with agreeableness,  $r(150) = -.46, p < .01$ , and conscientiousness  $r(150) = -.56, p < .01$ . Negative associations were also found between authoritarian parenting style and warmth  $r(150) = -.17, p < .05$ , and between discipline and authoritative parenting style,  $r(150) = .24, p < .01$ .

The third correlation matrix examined the dyad relations among both parent and adolescent variables (Table 8). Significant positive associations were found between authoritative parenting style and adolescent agreeableness  $r(150) = .37, p < .01$ , and adolescent conscientiousness  $r(150) = .17, p < .05$ ; as well as between permissive parenting style and risky sexual behavior  $r(150) = .26, p < .01$  and substance use and discipline  $r(150) = .23, p < .01$ . Negative associations were also found between adolescent conscientiousness and permissive parenting style  $r(150) = -.16, p < .05$ , as well as between adolescent neuroticism and authoritative parenting style,  $r(150) = -.24, p < .01$ , and warmth  $r(150) = -.26, p < .01$ .

### **Multiple Regression Models**

Next, two multiple linear regressions were calculated to predict adolescent risky sexual behavior and substance use outcomes based on both parent and adolescent variables. In particular, risky sexual behavior was predicted based on parent internalizing and externalizing psychopathology, parental warmth, parental discipline, parent ratings on authoritative, authoritarian, and permissive parenting styles, parent personality, and adolescent personality. A significant regression equation was found ( $F(15, 127) = 2.26, p < .012$ ), with an  $R^2$  of .198. Significant predictors included permissive parenting style, parent internalizing psychopathology, and adolescent neuroticism. Permissive parenting style and adolescent neuroticism were positive predictors of risky behavior, such that as each of those variables increased so did risky sexual behavior, while parent internalizing psychopathology was negatively associated with risky sexual behavior (Table 9). Other adolescent personality characteristics, parent personality, externalizing psychopathology, discipline, and warmth were all nonsignificant predictors.

The second multiple linear regression was calculated to predict adolescent substance use outcomes based on parent internalizing and externalizing psychopathology, warmth, discipline, parenting style, and parent and adolescent personality. A significant regression equation was found ( $F(15, 125) = 2.26, P < .008$ ), with an  $R^2$  of .213. Significant predictors included adolescent neuroticism and extraversion. Both adolescent neuroticism and extraversion positively predicted substance use, such that higher levels of extraversion and neuroticism were associated with higher levels of substance use (Table 10). No parenting variables were significant.

## CHAPTER 5: DISCUSSION

The role that parents play in the lives of their adolescent children, specifically in terms of psychosocial adjustment (e.g., risky behavior) has been the focus of many studies (e.g., Abar, Jackson, & Wood, 2014; Baumrind, 1991; Calafat et al., 2014; Delhaye et al., 2012; Lee, 2012; McKinney & Renk, 2011). Few studies, however, have examined the cumulative and relative effect of parental personality, psychopathology, and parenting characteristics on adolescent outcomes in parent – adolescent child dyads. Thus, the present study examined the extent to which parenting variables of parental psychopathology, personality, parenting style, discipline, and warmth play a role in adolescent outcomes of substance use and risky sexual behavior in the context of adolescent characteristics.

Findings indicated significant associations between factors of parental warmth, permissive parenting style, and discipline with the adolescent outcomes of both substance use and risky sexual behavior. The individual parent personality trait of extraversion was also shown to be associated with adolescent extraversion, supporting previous hypotheses that adolescent personality was associated with parent personality (Oppenheimer et al., 2013). However, not all individual parent personality traits were associated with the respective adolescent personality traits. The association between permissive parenting style and risky sexual behavior also supports previous literature in the association between parental control, or lack thereof, and deviant behaviors (Montgomery et al., 2008). Although parenting variables were associated with adolescent outcomes, the self-reported characteristics of the adolescent were more robustly linked to risky sexual behavior and substance use, respectively. In other words, the hypotheses were not fully supported, in that the factors more likely to significantly predict adolescent

outcomes were adolescent personality traits. The role of adolescent personality traits, particularly neuroticism, as a predictor of risky behavior is also in line with previous research (Aldinger et al., 2014; Barlow et al., 2014). Adolescent personality's ability to predict outcomes above and beyond parenting factors may suggest the importance of genetic traits in the context of parenting behaviors.

An interesting finding was the negative association between parent internalizing psychopathology and adolescent risky sexual behavior. Higher levels of parent internalizing psychopathology are associated with higher levels of control or demandingness and lower levels of warmth, which have both been shown to decrease the likelihood of risky behavior in adolescence (Montgomery et al., 2008). However, parent internalizing, as well as adolescent externalizing, were not found to be associated with the adolescent outcomes in bivariate correlation matrices. This suggests that both adolescent extraversion and parent internalizing psychopathology acted as a suppressor in the multiple regression models. Such that this neither adolescent extraversion or parent internalizing psychopathology can be interpreted as significant predictors of adolescent risk outcomes.

### **Limitations**

Findings of this study must be viewed in lieu of several limitations. Limitations of this study include the retrospective research design, use of a convenience sample, and the small sample size. For example, analyses were limited by the small sample size and mediation analyses among variables could not be explored. However, the sample size was large enough to explore the proposed hypotheses. The convenience sample utilized likely limited the frequency of self-reported risky behavior in comparison with what could be expected from a clinical sample; although, the college-aged sample was ideal for a retrospective analysis in that the majority of

participants were not out of high school for very long. Retrospective data collection may also decrease validity of results found, but many of the variables assessed are relatively stable over time and should not skew the data too much. That being said, the variables in this study would be better assessed in a longitudinal research design, and should be the focus of future research in this area. Another limitation was the lack of assessment of how parent sex and adolescent sex may interact in the context of parent behaviors and adolescent risk outcomes. Future research should assess how parent and adolescent sex may change the affect parent behaviors have on adolescent risk outcomes (Burstein, Stranger, & Dumenci, 2012; McKinney & Milone, 2012). In addition, collecting actual biological data may also be important to better understand the genetic components involved in adolescent risk taking (Sales, Smearman, Brown, Brody, Philibert, Rose, & DiClemente, 2015).

Overall, the findings of this study in general support the notion that personality characteristics are important when predicting adolescent outcomes of risky substance use and sexual behaviors. Findings also support previous literature that has suggested that control or demandingness is an important parent characteristic in protecting against substance use and risky sexual behavior. The unique variance that adolescent personality explains when accounting for parenting variables shows how important those stable characteristics are to risky behavior. This could be particularly important in determining how prevention or intervention treatments should be developed in the context of families.

## REFERENCES

- Abar, C. C., Jackson, K. M., & Wood, M. (2014). Reciprocal relations between perceived parental knowledge and adolescent substance use and delinquency: The moderating role of parent–teen relationship quality. *Developmental Psychology, 50*(9), 2176-2187. doi:10.1037/a0037463
- Achenbach TM, Edelbrock CS. *Manual for the child behavior checklist and revised behavior profile*. Burlington: University of Vermont Department of Psychiatry; 1983.
- Ainsworth, M. D. S., & Bowlby, J. (1991), An ethological approach to personality development. *American Psychologist, 46*, 331-341
- Akers, Ronald L. 1985. *Deviant Behavior: A Social Learning Approach*. Belmont, CA: Wadsworth.
- Aldinger, M., Stopsack, M., Ulrich, I., Appel, K., Reinelt, E., Wolff, S., & ... Barnow, S. (2014). Neuroticism developmental courses - Implications for depression, anxiety and everyday emotional experience; a prospective study from adolescence to young adulthood. *BMC Psychiatry, 14*
- Alonso-Geta, P.M.P., (2012). Parenting style in Spanish parents with children aged 6–14. *Psicothema 24*, 371–376.
- Arnett, J. J. (1999). Adolescent storm and stress, reconsidered. *American Psychologist, 54*, 317–326.
- Baams, L., Overbeek, G., Dubas, J. S., & van Aken, M. G. (2014). On early starters and late bloomers: The development of sexual behavior in adolescence across personality types. *Journal Of Sex Research, 51*(7), 754-764. doi:10.1080/00224499.2013.802758

- Bandura, A. (1964). The stormy decade: Fact or fiction? *Psychology in the Schools, 1*(3), 224-231.
- Barlow, D. H., Sauer-Zavala, S., Carl, J. R., Bullis, J. R., & Ellard, K. K. (2014). The nature, diagnosis, and treatment of neuroticism: Back to the future. *Clinical Psychological Science, 2*(3), 344-365. doi:10.1177/2167702613505532
- Baumrind, D. (1972). An exploratory study of socialization effects on Black children: some Black-White comparisons. *Child Development, 43*, 261–267.
- Baumrind, D. (1991). Effective parenting during the early adolescent transition. In P.A. Cowan & E. M. Hetherington (Eds.), *Advances in Family Research, 2*. Hillsdale, NJ: Erlbaum.
- Belsky, J. (1984). The Determinants Of Parenting: A Process Model. *Child Development, 55*(1), 83-83.
- Bornstein, M., Hahn, C., Haynes, O., Belsky, J., Azuma, H., Kwak, K. . . . Galperin, C. (2007). Maternal personality and parenting cognitions in cross-cultural perspective. *International Journal of Behavioral Development, 31*(3), 193-209.
- Brody, N. (2002). Heritability of Traits. *Psychological Inquiry, 11*7-119.
- Buri JR (1991) Parental Authority Questionnaire. *Journal of Personality Assessment, 57*:110–119
- Burstein, M., Stanger, C., & Dumenci, L. (2012). Relations between parent psychopathology, family functioning, and adolescent problems in substance-abusing families: Disaggregating the effects of parent gender. *Child Psychiatry and Human Development, 43*(4), 631-647. doi:10.1007/s10578-012-0288-z
- Calafat, A., García, F., Juan, M., Becoña, E., & Fernández-Hermida, J. R. (2014). Which parenting style is more protective against adolescent substance use? Evidence within the

- European context. *Drug And Alcohol Dependence*, 138185-192.  
doi:10.1016/j.drugalcdep.2014.02.705
- Centers for Disease Control and Prevention (2015). Youth Risk Behavior Survey. Available at:  
[www.cdc.gov/yrbs](http://www.cdc.gov/yrbs).
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16, 297-334.
- Costa, P. T., Jr., & McCrae, R. R. (1988). From catalog to classification: Murray's needs and the five-factor model. *Journal of Personality and Social Psychology*, 55, 258-265.
- Delhaye, M., Kempnaers, C., Burton, J., Linkowski, P., Stroobants, R., & Goossens, L. (2012). Attachment, parenting, and separation–individuation in adolescence: A comparison of hospitalized adolescents, institutionalized delinquents, and controls. *The Journal of Genetic Psychology*, 173(2), 119-141.
- Donnelly, R., Renk, K., & Mckinney, C. (2012). Emerging adults' stress and health: The role of parent behaviors and cognitions. *Child Psychiatry and Human Development*, 44(1), 19-38.
- Eaton, N. R., Krueger, R. F., & Oltmanns, T. F. (2011). Aging and the structure and long-term stability of the internalizing spectrum of personality and psychopathology. *Psychology And Aging*, 26(4), 987-993. doi:10.1037/a0024406
- Fergusson, D. M., & Horwood, L. J. (1999). Prospective childhood predictors of deviant peer affiliations in adolescence. *Journal Of Child Psychology And Psychiatry*, 40(4), 581-592.  
doi:10.1111/1469-7610.00475

- de Haan, A. D., Deković, M., & Prinzie, P. (2012). Longitudinal impact of parental and adolescent personality on parenting. *Journal Of Personality And Social Psychology, 102*(1), 189-199. doi:10.1037/a0025254
- Hadley, W., Hunter, H. L., Tolou-Shams, M., Lescano, C., Thompson, A., Donenberg, G., DiClemente, R., & Brown, L. K. (2011). Monitoring challenges: A closer look at parental monitoring, maternal psychopathology, and adolescent sexual risk. *Journal Of Family Psychology, 25*(2), 319-323. doi:10.1037/a0023109
- Hall, G. S. (1904). *Adolescence: Its psychology and its relation to physiology, anthropology, sociology, sex, crime, religion, and education*. (Vols. I & II). Englewood Cliffs NJ: Prentice-Hall.
- Hinnant, J. B., Erath, S. A., & El-Sheikh, M. (2015). Harsh parenting, parasympathetic activity, and development of delinquency and substance use. *Journal Of Abnormal Psychology, 124*(1), 137-151. doi:10.1037/abn0000026
- Hoeve, M., Dubas, J. S., Gerris, J. M., van der Laan, P. H., & Smeenk, W. (2011). Maternal and paternal parenting styles: Unique and combined links to adolescent and early adult delinquency. *Journal Of Adolescence, 34*(5), 813-827. doi:10.1016/j.adolescence.2011.02.004
- Hollenstein, T., Loughheed, J. P. (2013). Beyond torm and stress: Typicality, transactions, timing, and temperament to account for adolescent change. *The American Psychologist, 68*(6), 444-54. Doi: 10.1037/a0033586.
- Huver, R. E., Engels, R. E., Vermulst, A. A., & de Vries, H. (2007). Bi-directional relations between anti-smoking parenting practices and adolescent smoking in a Dutch sample. *Health Psychology, 26*(6), 762-768. doi:10.1037/0278-6133.26.6.762

- Jang, K., McCrae, R., Angleitner, A., Riemann, R., & Livesley, W. (1998). Heritability of facet-level traits in a cross-cultural twin sample: Support for a hierarchical model of personality. *Journal of Personality and Social Psychology*, *74*(6), 1556-1565.
- Kawabata, Y., Alink, L. R., Tseng, W., van IJzendoorn, M. H., & Crick, N. R. (2011). Maternal and paternal parenting styles associated with relational aggression in children and adolescents: A conceptual analysis and meta-analytic review. *Developmental Review*, *31*(4), 240-278. doi:10.1016/j.dr.2011.08.001
- Kerr, M., & Stattin, H. (2000). What parents know, how they know it, and several forms of adolescent adjustment: Further support for a reinterpretation of monitoring. *Developmental Psychology*, *36*(3), 366-380. doi:10.1037/0012-1649.36.3.366
- Kotov, R., Gamez, W., Schmidt, F., & Watson, D. (2010). Linking 'big' personality traits to anxiety, depressive, and substance use disorders: A meta-analysis. *Psychological Bulletin*, *136*(5), 768-821. doi:10.1037/a0020327
- Kroger, J. (1988). Adolescence as a second separation-individuation process: Critical review of an object relations approach. In E. Skoe & A. von der Lippe (Eds.), *Personality development in adolescence: A cross-national and life-span perspective* (pp. 172–192). London, England: Routledge.
- Lee, R. (2012). Community violence exposure and adolescent substance use: Does monitoring and positive parenting moderate risk in urban communities? *Journal of Community Psychology*, *40*(4), 406-421.
- Latendresse, S. J., Rose, R. J., Viken, R. J., Pulkkinen, L., Kaprio, J., & Dick, D. M. (2008). Parenting mechanisms in links between parents' and adolescents' alcohol use behaviors.

- Alcoholism: Clinical And Experimental Research*, 32(2), 322-330. doi:10.1111/j.1530-0277.2007.00583.x
- Locke, B. D., Buzolitz, J. S., Lei, P., Boswell, J. F., McAleavey, A. A., Sevig, T. D., & ... Hayes, J. A. (2011). Development of the Counseling Center Assessment of Psychological Symptoms-62 (CCAPS-62). *Journal Of Counseling Psychology*, 58(1), 97-109. doi:10.1037/a0021282
- Luyckx, K., Tildesley, E. A., Soenens, B., Andrews, J. A., Hampson, S. E., Peterson, M., & Duriez, B. (2011). Parenting and trajectories of children's maladaptive behaviors: A 12-year prospective community study. *Journal Of Clinical Child And Adolescent Psychology*, 40(3), 468-478. doi:10.1080/15374416.2011.563470
- Maccoby, E. E., Martin, J. A. (1983) Socialization in the context of the family: parent-child interaction. In: Mussen PH, Hetherington EM (eds) *Handbook of child psychology: socialization, personality, and social development*, vol 4. Wiley, New York, pp 1-101
- Marmorstein, N. R., Iacono, W. G., & McGue, M. (2012). Associations between substance use disorders and major depression in parents and late adolescent-emerging adult offspring: An adoption study. *Addiction*, 107(11), 1965-1973. doi:10.1111/j.1360-0443.2012.03934.x
- McCabe, J. E. (2014). Maternal personality and psychopathology as determinants of parenting behavior: A quantitative integration of two parenting literatures. *Psychological Bulletin*, 140(3), 722-750. doi:10.1037/a0034835
- McClanahan, G., & Holmbeck, G. N. (1992). Separation-individuation, family functioning, and psychological adjustment in college students: A construct validity study of the

- Separation-Individuation Test of Adolescence. *Journal of Personality Assessment*, 59, 468–485.
- McCord, D. M. (2002). M5-50 Questionnaire [Administration and scoring materials]. Retrieved from <http://paws.wcu.edu/mccord/m5-50/>
- McKinney, C., & Milone, M. C. (2012). Parental and late adolescent psychopathology: Mothers may provide support when needed most. *Child Psychiatry and Human Development*, 43(5), 747-760. doi:10.1007/s10578-012-0293-2
- McKinney, C., Milone, M. C., & Renk, K. (2011). Parenting and late adolescent emotional adjustment: Mediating effects of discipline and gender. *Child Psychiatry And Human Development*, 42(4), 463-481. doi:10.1007/s10578-011-0229-2
- McKinney, C., & Renk, K. (2011). A multivariate model of parent–adolescent relationship variables in early adolescence. *Child Psychiatry And Human Development*, 42(4), 442-462. doi:10.1007/s10578-011-0228-3
- Moilanen, K. L. (2015). Predictors of Latent Growth in Sexual Risk Taking in Late Adolescence and Early Adulthood. *Journal Of Sex Research*, 52(1), 83-97. doi:10.1080/00224499.2013.826167
- Montgomery, C., Fisk, J. E., & Craig, L. (2008). The effects of perceived parenting style on the propensity for illicit drug use: The importance of parental warmth and control. *Drug And Alcohol Review*, 27(6), 640-649. doi:10.1080/09595230802392790
- Muuss, Rolf E. (1975). *Theories of Adolescence*, 3rd Edition. New York: Random House.
- Myers, M. G., Aarons, G. A., Tomlinson, K., & Stein, M. B. (2003). Social Anxiety, Negative Affectivity, and Substance Use Among High School Students. *Psychology Of Addictive Behaviors*, 17(4), 277-283. doi:10.1037/0893-164X.17.4.277

- Oppenheimer, C. W., Hankin, B. L., Jenness, J. L., Young, J. F., & Smolen, A. (2013). Observed positive parenting behaviors and youth genotype: Evidence for gene–environment correlations and moderation by parent personality traits. *Development And Psychopathology*, 25(1), 175-191. doi:10.1017/S0954579412000983
- Parker, G., Tupling, H., and Brown, L.B. (1979) A Parental Bonding Instrument. *British Journal of Medical Psychology*, 1979, 52, 1-10.
- Renk K, McKinney C, Klein J, Oliveros A (2006) Childhood discipline, perceptions of parents, and current functioning in female college students. *Journal of Adolescence* 29:78–88.
- Ritchie, C., & Buchanan, A. (2011). Self report of negative parenting styles, psychological functioning and risk of negative parenting by one parent being replicated by the other in a sample of adolescents aged 13–15. *Child Abuse Review*, 20(6), 421-438.  
doi:10.1002/car.1103
- Sales, J. M., Smearman, E. L., Brown, J. L., Brody, G. H., Philibert, R. A., Rose, E., & DiClemente, R. J. (2015). Associations between a dopamine D4 receptor gene, alcohol use, and sexual behaviors among female adolescent African Americans. *Journal Of HIV/AIDS & Social Services*, 14(2), 136-153. doi:10.1080/15381501.2014.920759
- Schaefer, B., Vito, A., Marcum, C., Higgins, G., & Ricketts, M. (2015). Heroin Use among Adolescents: A Multi-Theoretical examination. *Deviant Behavior*, 36(2), 101-112.
- Schleider, J. L., Patel, A., Krumholz, L., Chorpita, B. F., & Weisz, J. R. (2015). Relation between parent symptomatology and youth problems: Multiple mediation through family income and parent–youth stress. *Child Psychiatry And Human Development*, 46(1), 1-9.  
doi:10.1007/s10578-014-0446-6

- Shek, D. L. (2005). Paternal and Maternal Influences on the Psychological Well-Being, Substance Abuse, and Delinquency of Chinese Adolescents Experiencing Economic Disadvantage. *Journal Of Clinical Psychology, 61*(3), 219-234. doi:10.1002/jclp.20057
- Slicker, E. K., Patton, M., & Fuller, D. K. (2004). Parenting dimensions and adolescent sexual initiation: using self-esteem, academic aspiration, and substance use as mediators. *Journal Of Youth Studies, 7*(3), 295-314. doi:10.1080/1367626042000268935
- Smetana, J., Crean, H. F. & Campione-Barr, N. (2005). Adolescents' and parents' changing conceptions of parental authority. *New Directions for Child and Adolescent Development, 2005*: 31–46. doi: 10.1002/cd.126
- Sneed, J. R., & Pimontel, M. A. (2012). Stability and change of personality across the life course: The impact of age and major life events on mean-level and rank-order stability of the Big Five. *Journal Of The American Psychoanalytic Association, 60*(5), 1057-1059. doi:10.1177/0003065112459954
- Straus, M. A. (1979). Measuring intrafamily conflict and violence: The Conflict Tactics (CT) Scales. *Journal Of Marriage And The Family, 41*(1), 75-88. doi:10.2307/351733
- Straus, M. A., Hamby, S. L., Finkelhor, D., Moore, D. W., & Runyan, D. (1998). Identification of child maltreatment with the Parent–Child Conflict Tactics Scales: Development and psychometric data for a national sample of American parents. *Child Abuse & Neglect, 22*(4), 249-270.
- Walton, K. E., & Roberts, B. W. (2004). On the relationship between substance use and personality traits: Abstainers are not maladjusted. *Journal Of Research In Personality, 38*(6), 515-535. doi:10.1016/j.jrp.2004.01.002

- Wang, B., Stanton, B., Deveaux, L., Li, X., Koci, V., & Lunn, S. (2014). The impact of parent involvement in an effective adolescent risk reduction intervention on sexual risk communication and adolescent outcomes. *AIDS Education And Prevention*, 26(6), 500-520. doi:10.1521/aeap.2014.26.6.500
- Weiss, L. H., & Schwarz, J. C. (1996). The relationship between parenting types and older adolescents' personality, academic achievement, adjustment, and substance use. *Child Development*, 67(5), 2101-2114. doi:10.2307/1131612
- Wu, P., Goodwin, R. D., Fuller, C., Liu, X., Comer, J. S., Cohen, P., & Hoven, C. W. (2010). The relationship between anxiety disorders and substance use among adolescents in the community: Specificity and gender differences. *Journal Of Youth And Adolescence*, 39(2), 177-188. doi:10.1007/s10964-008-9385-5

APPENDIX: FIGURES AND TABLES

Figure 1

Expected Correlations Among Parent Variables

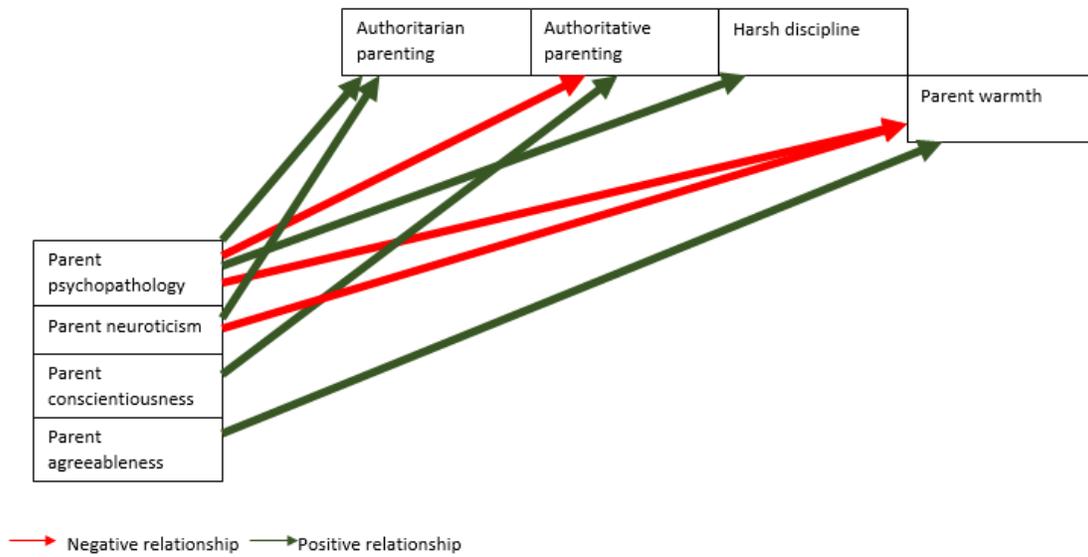


Figure 2

*Expected Correlations Between Parent and Adolescent Outcomes*

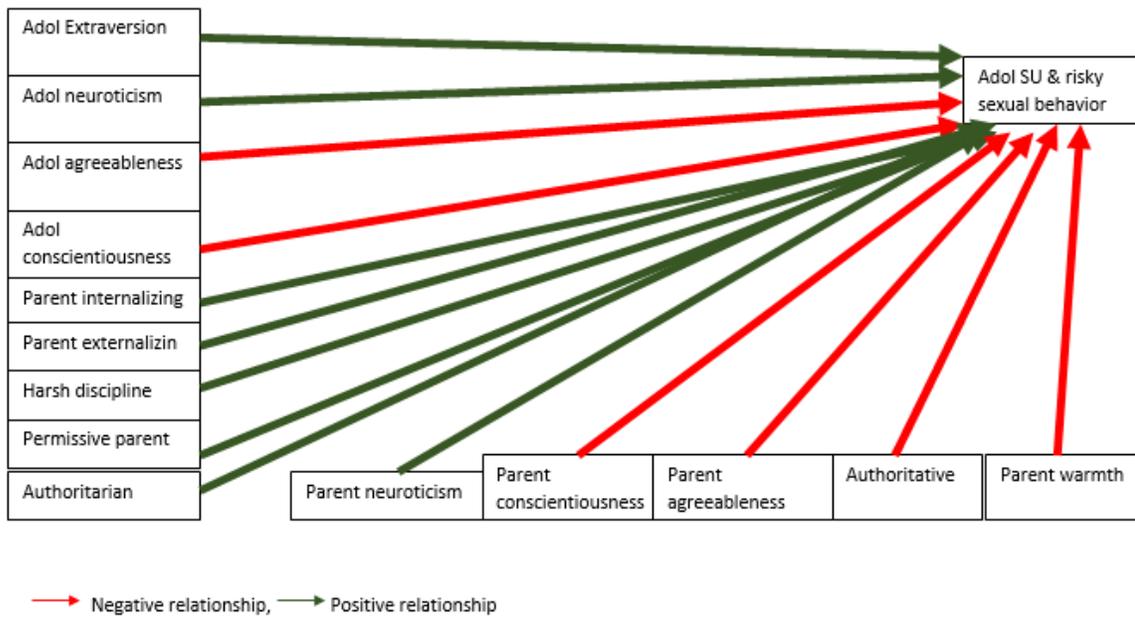


Table 1

Demographic Frequencies

	Number	Percent
Parent Sex		
Male	37	24.2
Female	116	75.8
Parent Ethnicity		
African American	8	5.2
Caucasian	134	87.6
Hispanic	4	2.6
Asian American	4	2.6
Other	3	2.0
Adolescent Sex		
Male	44	25.1
Female	131	74.9
Adolescent Ethnicity		
African American	13	7.4
Caucasian	147	84
Hispanic	6	3.4
Asian American	4	2.3
Other	5	2.9
Main Parental Guardian		
Biological Mother	40	23
Biological Father	10	5.7
Both Bio Parents	119	68.4
Other	5	2.9
Socioeconomic Status		
Lower	64	36.6
Middle	70	40
Upper	41	23.4

Table 2

Measure Descriptors

	N	Minimum	Maximum	Mean	Std. Dev
Parental Discipline	170	0	79	17.05	14.01
Parental Warmth	175	12	43	19.50	7.11
Authoritarian	173	14	50	31.28	7.14
Authoritative	173	11	50	33.55	7.74
Permissive	173	10	40	25.87	6.00
Parent Extraversion	152	1.1	4.8	3.25	.78
Parent Agreeableness	152	2.1	5	4.04	.59
Parent Conscientiousness	152	1.8	5	3.76	.91
Parent Neuroticism	152	1	5	2.67	.97
Parent Openness	152	1.5	4.7	3.49	.75
Parent Internalizing	152	39	102	58.25	15.70
Parent Externalizing	153	35	83	47.98	9.72
Extraversion	174	1.2	4.9	3.23	.82
Agreeableness	174	2.3	5	3.82	.54
Conscientiousness	174	1.5	5	3.68	.72
Neuroticism	174	1	4.6	2.7	.83
Openness	174	1.5	5	3.61	.72
Risky Sex Behaviors	175	2	15	7.31	4.19
Substance Use	173	17	56	27.7	9.28

Table 3

Parent Sex T-test

	df	Parent Sex	
		<i>t</i>	<i>p</i>
Discipline	146	-.05	.96
Warmth	150	-2.05	.04
Extraversion	150	1.86	.06
Agreeableness	150	.41	.69
Conscientiousness	150	3.36	.001
Neuroticism	150	-2.14	.03
Openness	150	-1.74	.09
Permissive	150	-3.21	.002
Authoritarian	151	2.37	.02
Authoritative	150	-2.5	.01
Internalizing	150	-2.04	.04
Externalizing	151	-.29	.77

Table 4

Adolescent Sex T-test

	df	Adolescent Sex	
		<i>t</i>	<i>p</i>
Extraversion	172	-.08	.94
Agreeableness	172	-2.71	.007
Conscientiousness	172	-.35	.73
Neuroticism	172	-2.52	.013
Openness	172	-.46	.644
Substance Use	171	-.62	.54
Risky Sex	172	.007	.99

Table 5

SES One-Way ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Extraversion	171	112.5	.66	3.4	.04
Agreeableness	171	51.1	.30	.65	.52
Conscientiousness	171	87.4	.51	1.57	.21
Neuroticism	171	115.5	.68	1.86	.16
Openness	171	88.5	.52	.18	.84
Substance Use	170	14528.3	85.46	1.59	.21
Risky Sex	171	2975.3	17.3	2.27	.11

Table 6

Adolescent Variables Correlation Matrix

		1	2	3	4	5	6
1	Extraversion	-					
2	Agreeableness	.254**	-				
3	Conscientiousness	.272**	.292**	-			
4	Neuroticism	-.476**	-.333**	-.424**	-		
5	Openness	.152*	.266**	.184*	.020	-	
6	Substance Use	.090	-.062	-.129	.203**	.134	-
7	Risky Sexual Behavior	.036	-.153*	-.042	.168*	.049	.480**

\* $p < .05$  \*\* $p < .01$

Table 7

Parent Variables Correlation Matrix

	1	2	3	4	5	6	7	8	9	10	11
1 Parent Internalizing	-										
2 Parent Externalizing	.81**	-									
3 Parent Extraversion	-.32**	-.11	-								
4 Parent Agreeableness	-.33**	-.46**	.18*	-							
5 Parent Conscientiousness	-.78**	-.56**	.51**	.36**	-						
6 Parent Neuroticism	.82**	.69**	-.43**	-.5**	-.8**	-					
7 Parent Openness	.18*	.04	.01	.04	-.25**	.08	-				
8 Permissive	.04	-.01	.07	.04	-.02	.03	.18*	-			
9 Authoritarian	.07	.143	.03	-.09	-.04	.04	.01	-.4**	-		
10 Authoritative	.06	.02	.09	.06	-.01	-.03	.07	.25**	-.03	-	
11 Parental Discipline	-.004	-.02	.02	-.05	.09	-.06	.01	-.06	.05	-.24**	-
12 Parental Warmth	-.12	-.18	-.02	.08	.05	-.09	.04	.2*	-.17*	.62**	-.43**

\* $p < .05$  \*\* $p < .01$

Table 8

Adolescent and Parent Variables Correlation Matrix

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
1	E	-																		
2	A	.25**	-																	
3	C	.27**	.3**	-																
4	N	-.48**	-.33**	-.42**	-															
5	O	.15*	.27**	.18*	.02	-														
6	Risky Sex	.04	-.15*	-.04	.17*	.05	-													
7	Substan	.09	-.06	-.13	.2**	.13	.48**	-												
8	Int	.07	-.02	-.01	.00	.08	-.004	.07	-											
9	Ext	.13	-.07	-.02	-.01	.08	.05	.10	.81**	-										
10	PE	.19*	.06	.003	-.08	-.04	.11	.12	-.32**	-.11	-									
11	PA	-.03	.13	.21**	-.05	-.1	.02	-.001	-.33**	-.46**	.18*	-								
12	PC	-.07	-.03	.04	.04	-.12	.003	-.01	-.78**	-.56**	.51**	.36**	-							
13	PN	.13	-.05	-.05	-.01	.15	.06	.01	.82**	.69**	-.43**	-.5**	-.8**	-						
14	PO	.15	-.08	-.15	.1	.04	.07	.06	.18*	.04	.01	.04	-.25**	.08	-					
15	Perm	.03	-.02	-.16*	-.04	.01	.26**	.16	.04	-.01	.07	.04	-.02	.03	.18*	-				
16	Autarian	-.01	-.004	.05	.09	.01	-.06	-.02	.07	.14	.03	-.09	-.04	.04	.01	-.39**	-			
17	Autative	.14	.37**	.17*	-.24**	-.06	.02	.01	.06	.02	.09	.06	-.01	-.03	.07	.25**	-.03	-		
18	Discip	-.04	-.19*	-.09	.2*	-.08	.04	.23**	-.004	-.02	.02	-.05	.09	-.06	.01	-.06	.05	-.24**	-	
19	Warmth	.05	.34**	.12	-.26**	.05	.01	-.09	-.12	-.12	-.02	.08	.05	-.09	.04	.2*	-.17*	.62**	-.43**	

\* $p < .05$  \*\* $p < .01$

Table 9

Risky Sexual Behavior Regression Table

	<i>B</i>	<i>SE B</i>	$\beta$
Extraversion	.65	.47	.11
Agreeableness	-.99	.72	-.15
Conscientiousness	.46	.57	.06
Neuroticism	1.12	.49	.21*
Permissive	.24	.07	.33**
Authoritarian	.03	.06	.05
Authoritative	.07	.06	.15
Parental Discipline	.023	.03	.08
Parental Warmth	-.03	.07	-.05
P- Agreeableness	1.12	.71	.17
P- Conscientious	-.06	.71	-.01
P- Neuroticism	1.21	.77	.27
P- Internalizing	-.12	.06	-.44*
P – Externalizing	.10	.07	.23
<i>R</i> <sup>2</sup>		.198	
<i>F</i>		2.26**	

\* $p < .05$  \*\* $p < .01$

Table 10

Substance Use Regression Table

	<i>B</i>	<i>SE B</i>	$\beta$
Extraversion	2.95	1.08	.26**
Agreeableness	1.36	1.67	-.08
Conscientiousness	.68	1.3	-.05
Neuroticism	2.34	1.12	.21*
Openness	.27	.15	.17
Permissive	-.06	.12	-.04
Authoritarian	.24	.14	.19
Authoritative	.12	.07	.17
Parental Discipline	-.25	.15	-.19
Parental Warmth	1.08	1.58	.07
P- Agreeableness	-.60	1.58	-.06
P- Conscientious	-1.99	1.75	-.21
P- Neuroticism	.05	.13	.08
P- Internalizing	.11	.15	.12
P – Externalizing	1.87	1.18	.14
$R^2$		.213	
$F$		2.26**	

\* $p < .05$  \*\* $p < .01$