

THESIS

PARENT AND PEER INFLUENCES:
THEIR ROLE IN PREDICTING ADOLESCENT MORAL VALUES AND
DELINQUENT BEHAVIOR

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ABSTRACT

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Given the alarming number of juvenile arrests in recent years (Puzzanchera, 2009), as well as the appreciation that outcomes of deviant or delinquent activity are often of serious consequence to both the youth and to society, there is a growing interest in examining the factors that lead adolescents to engage in juvenile delinquency or deviant behavior. To address these factors, the present study used secondary data analysis, with a sample of 290 adolescents, aged 13-19 to examine the relationship between adolescent moral values and adolescent delinquency. Adolescent moral values were examined as a mediator of the relationships between parent moral values and adolescent delinquent behavior, and also between peer delinquent behavior and adolescent delinquent behavior. Attachment to parents and peers was also examined as a moderator of these relationships. Regression analysis was used to analyze the data for this study. Overall results revealed that adolescent moral values were negatively and significantly predictive of adolescent delinquent behavior. Findings also showed that adolescent moral values partially mediate the relationships between parent moral values and adolescent delinquent behavior, as well as between peer delinquent behavior and adolescent delinquent behavior. Peer-youth attachment was identified as a significant

moderator of the relationship between peer delinquent behavior and adolescent delinquent behavior. The other moderating pathways of the model were not statistically significant. In general, findings support the current literature in emphasizing parent and peer contexts as highly influential of adolescents' delinquency and introduce how such contexts influence adolescents' moral development. These findings illustrate the important nature of adolescent morality in predicting adolescents' delinquent behavior. Additionally, these findings provide evidence in support of classical theories of risk behavior, such as problem behavior theory, social control theory, and the social development model, as well as attachment theory.

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CHAPTER 1 - INTRODUCTION

Adolescents often engage in behaviors that many adults find perplexing. Sometimes these behaviors are of limited consequence (e.g., an odd haircut) but in other cases, these behaviors can have life-altering outcomes (e.g., pregnancies or a criminal record). Given the alarming number of juvenile arrests in recent years (Puzzanchera, 2009), as well as the appreciation that outcomes of deviant or delinquent activity are often of serious consequence to both the youth and to society, there is a growing interest in examining the factors that lead adolescents to engage in juvenile delinquency or deviant behavior.

To date, extensive research has documented connections between parenting style, monitoring, attachment, and adolescent delinquency (Steinberg, Blatt-Eisengart, & Cauffman, 2006; Fletcher, Steinberg, & Williams-Wheeler, 2004), and links between deviant peer affiliations and increases in adolescent deviancy and risk-taking (Poulin, Dishion, & Burraston, 2001; Dishion, McCord, & Poulin, 1999). Although some risk-taking can be positive (e.g. trying out for a team or auditioning for a school play), the current study focuses on negative risk-taking, as such risk behavior has been linked to negative outcomes for youth (Youngblade, Theokas, Schulenberg, Curry, Huang, Novak, 2007). Notably, the concept of “risk behavior” is broad and includes a range of behaviors that vary by degree (high, low) and type (personal, societal) of consequence. In this study, I specifically examine negative risk behavior that is delinquent and has legal consequences, as this type of risk behavior tends to incur high and multi-dimensional

costs to the individual and society. Despite these consequences, much about this phenomenon of adolescent risk taking still remains unknown. In particular, the relationship between delinquency and moral values, which are often manifested in part through tolerance of risk or delinquent behavior, is a topic that has been relatively unexplored in the area of adolescent behavior research.

Prevalence of Adolescent Delinquency

To fully appreciate why further research on adolescent delinquency is needed, it is crucial to understand the prevalence and costs of such behavior. Adolescence has been found to be a developmental stage during which youth are most responsive to reward (Galvan, Hare, & Parra et al., 2006). This increased reward response can lead individuals to engage in increasing amounts of risk-taking behavior during adolescence. The majority of adolescents are able to experiment with risky behavior remarkably unscathed; however, there are a significant number of adolescents who struggle to maneuver through this without legal consequences. Given the seriousness of the outcomes, it is precisely this delinquent form of risk-taking behavior that the present study focuses on.

It is not uncommon for adolescents to engage in minor acts of delinquency, such as under-age drinking or tobacco use, as revealed by examination of justice data on prevalence rates. National statistics reveal that 52% of youth aged 14-15 years had tried alcohol and 25% in the same age group had tried marijuana (Snyder & Sickmund, 1999). In fact, Moffitt (1993) identified in her taxonomy of adolescent behavior that those individuals who abstain from delinquent activity are actually in the minority and it is the norm, rather than the exception, for youth to engage in some type of criminal activity.

The Office of Juvenile Justice and Delinquency Prevention found that in 2008 juveniles were more likely than adults to commit crimes in groups and to get arrested, as youth were more easily apprehended than adults (Puzzanchera, 2009). Thus, as adolescents are novices and only beginning to experiment with delinquent behaviors during this stage in development, they are more easily caught than adult offenders who have more experience engaging in illegal activity. However, once an individual is arrested, the odds that the individual will commit future offenses significantly increases. A special report on the recidivism rates of nearly 300,000 individuals who were arrested in 1994 revealed that 67.5% of the offenders were rearrested within three years of being released (Langan & Levin, 2002). Younger offenders typically are more difficult to reform and have higher recidivism rates, as indicated by a report from the United Kingdom stating that 72% of male prisoners between the ages of 18-20 who were released in 1997 reoffended within two years (Social Exclusion Unit, 2002). These findings indicate a need for further information about what leads adolescents to commit subsequent delinquent acts, as this information is vital to informing effective prevention efforts.

Juvenile arrest records indicate that the prevalence of juvenile arrests within the United States is slowly decreasing, with a 3% drop in juvenile arrests from 2007 to 2008 (Puzzanchera, 2009). Although this decrease represents progress, the numbers remain quite alarming, as 2.11 million juveniles were arrested in the United States in 2008 alone (Puzzanchera, 2009). Juvenile arrests made up 16% of all violent crime arrests, with one out of every eight violent crimes being cleared and attributed to a juvenile. The rate of juveniles arrested for murder was 3.8 per 100,000 youth aged 10-17 in 2008,

demonstrating a considerable increase of over 17% since 2004 (Puzzanchera, 2009). These statistics highlight the prevalence of juvenile delinquency and violent crimes among youth. Clearly there is a need for continued research in this field to inform prevention and intervention efforts aimed at reducing the incidence of juvenile delinquency and other risk behaviors. Thus, the purpose of this study was to develop further understanding of two specific pathways that may lead adolescents to engage in delinquent behavior – one stemming from parental moral values and one stemming from peer associations -- which could ultimately lead to advances in prevention efforts.

The Current Study

The current study utilized a secondary data set (Youngblade, 2002) to investigate the contributions of parents' moral values about risk tolerance and peers' delinquent behavior to adolescents' formation of their own moral values, a relationship which may likely be moderated, respectively, by attachment to parents and peers. Specifically, I argue that adolescents take on characteristics of the moral values displayed by the social unit, whether parents or peers, to whom they are most securely attached, and that these moral values will directly predict the delinquent behavior of the adolescent.

To begin, I will define the key terms and concepts that are integral to the understanding of this research. Following, I will introduce the basic tenets of my model, and list my research questions.

Definitions of Key Terms and Concepts

Juvenile delinquency is defined in the extant literature as a pattern of observable illegal behaviors committed by an individual under the age of 18, including acts that would not be considered against the law if committed by a person older than 18 years

(Williams, Ayers, & Arthur, 1998). An important distinction must be made between juvenile delinquency and deviancy. An individual's behavior can only be qualified as deviant if it differs from the norms of other individuals within the same developmental stage (Baumrind, 1985). Thus, some behaviors which may be termed delinquent may not be deviant. For example, it is not uncommon for adolescents to experiment with smoking cigarettes, in spite of the action being illegal for individuals under age 18. In this situation, although the behavior would be classified as delinquent because it violates a law, it would not be classified as deviant because it does not violate social norms for this particular age group. In the present study, I examine adolescent risk behavior that is delinquent, i.e., it is illegal for the given age. It should be noted that some of the behaviors measured in this category of delinquent behavior, such as carrying a gun to school, would also be considered deviant. Thus, the construct measured in this study represents a range of behaviors that are illegal, but vary from more to less normative.

For the purposes of this study, moral values are defined as an individual's belief about whether a given risk behavior is morally right or wrong. For example, one individual may value lying under any circumstance as morally wrong, whereas another individual may feel that it is acceptable to tell a white lie. The present study seeks to explore adolescents' own moral values and how such values are related to the values of their parents and the behavior of their peers. It is important to note that one of the constraints of using a secondary data source is that the researcher is limited to using only the variables that were originally collected. Thus, while I am able to assess moral values of the participants, I am limited in my ability to assess this morality in parents and peers; therefore participants' perceptions of their parents' tolerance of delinquency were used as

a judgment of parents' moral values. Additionally, as these limitations made it difficult to assess peer moral values, participants' perceptions of peers' delinquent behavior were examined instead. Frequent engagement in delinquent behavior denotes a certain approval of such behaviors, hence one could expect peer delinquent behavior would likely offer insight into the moral appraisals of peers. The operational definitions of these variables will be discussed in more depth in Chapter 3.

Guiding Model and Hypotheses

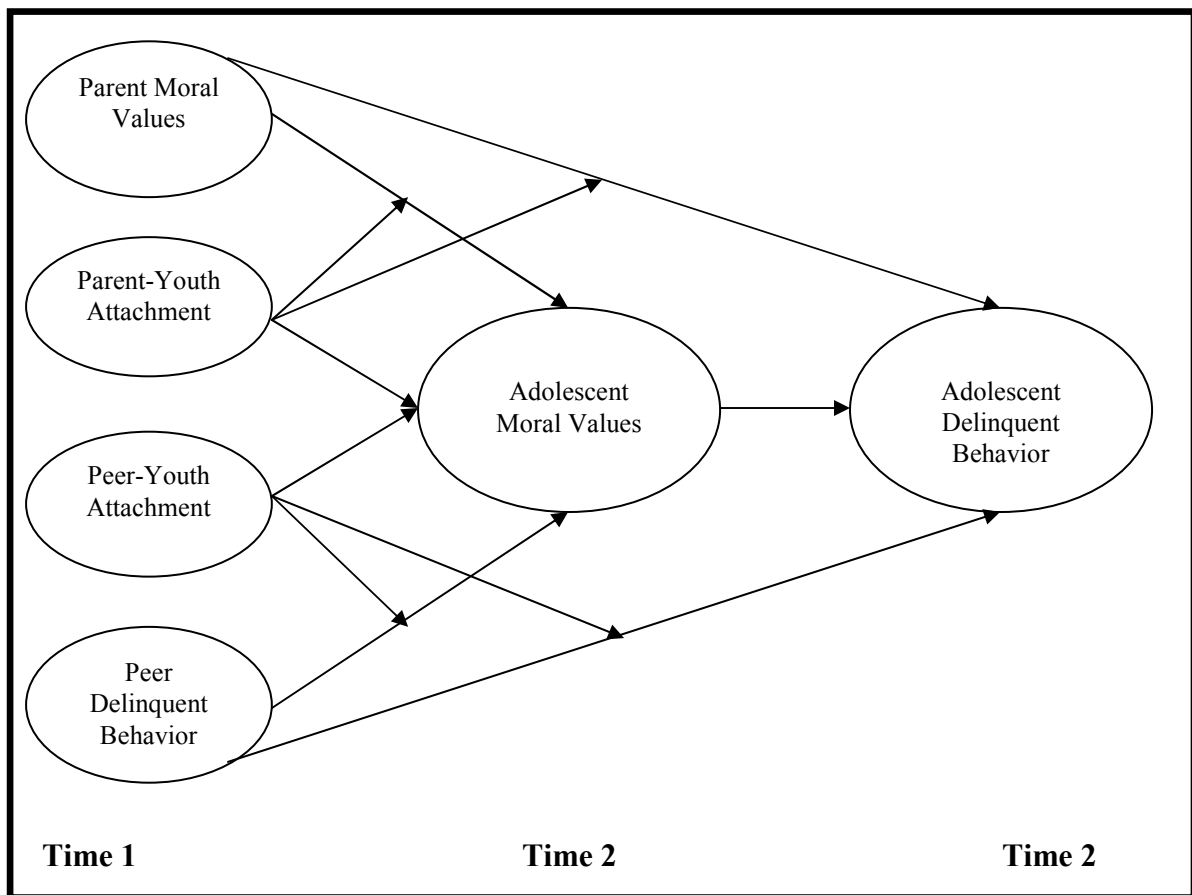
The conceptual model, which will be fully explicated in Chapter 2, is depicted in Figure 1.1. As seen in the figure, a model was utilized in which the effects of attachment to parents or peers moderates the relationships between parent moral values and adolescent moral values, parent moral values and adolescent delinquency, peer delinquency and adolescent moral values, and peer delinquency and adolescent delinquency. Additionally, the model depicts the mediated effects of adolescent moral values on the relationship between parent moral values and/or peer delinquent behavior and adolescent delinquent behavior. To simplify the complexity of the model, parent and peer influences will be discussed separately and the mediated and moderated effects in the model will be described independently.

First, in the parent portion of the model, the relationship between parent moral values and the adolescent delinquent behavior was conceptualized as being mediated by adolescent moral values. Parent-youth attachment was considered as a potential moderator of the relationship between parent moral values and adolescent moral values. Additionally, parent-youth attachment was expected to moderate the relation between parent moral values and adolescent delinquent behavior.

In the peer version of the model, adolescent moral values were expected to mediate the relationship between peer delinquent behavior and adolescent delinquent behavior. Additionally, attachment security to peers was viewed as a potential moderator of the relationship between peer delinquent behavior and the moral values of the adolescent, as well as of the relationship between peer delinquent behavior and adolescent delinquent behavior. Several control variables, including age, gender, ethnicity, race, and household composition, are not shown in the figure, but were included in all analyses.

Figure 1.1

Conceptual Model



The present study addressed several hypotheses, which are depicted in the model in Figure 1.1 and will be described in the following paragraphs. First, it was hypothesized that there was a negatively predictive relationship between adolescent moral values at time two and adolescent delinquent behavior at time two. Specifically, low adolescent moral values were hypothesized to predict high levels of adolescent delinquent behavior and vice versa.

Second, it was hypothesized that parent moral values and peer delinquent behavior at time one would independently predict adolescent moral values at time two. Research on the influence of parents and peers on adolescents' beliefs about delinquency informed the direction of this hypothesis. The direction of parent effect was hypothesized to be positive, with higher parent moral values at time one predicting higher adolescent moral values at time two. The peer effect was hypothesized to be negative in direction, with higher levels of peer delinquent behavior predicting lower adolescent moral values at time two.

The third hypothesis states that adolescent moral values would play a mediating role on the relationships described in hypotheses one and two. Specifically, in the parent model, adolescent moral values were also hypothesized to mediate the relationship between parent moral values and adolescent delinquent behavior. This relationship was assumed to work similarly in the peer model, with adolescent moral values mediating the relationship between peer delinquent behavior and adolescent delinquent behavior.

Finally, in hypothesis four, adolescents' attachment security to parents and peers was hypothesized to play a moderating role. This hypothesis predicts four moderating relationships. First, parent-youth attachment was hypothesized to moderate the

relationship between parent moral values and adolescent moral values, with stronger attachment security predicting a stronger relationship between parent and adolescent moral values. Second, parent-youth attachment was hypothesized to moderate the relationship between parent moral values and adolescent delinquent behavior, with stronger attachment security predicting a stronger relationship between parent moral values and adolescent delinquent behavior. Third, peer-youth attachment was hypothesized to moderate the relationship between peer delinquent behavior and adolescent moral values, with stronger attachment security predicting a stronger relationship between these variables. Finally, peer-youth attachment was hypothesized to moderate the relationship between peer delinquent behavior and adolescent delinquent behavior, with stronger attachment security predicting a stronger relationship between peer delinquent behavior and adolescent delinquent behavior.

In the next chapter, I will review the theoretical foundation that underlies the present study. In addition, I will review extant empirical literature related to the main constructs and relationships proposed in the model. In chapter three I will describe the methods for the study and results of the analyses will be explored in chapter four. Finally, in chapter five I will discuss the relevance of the findings, as well as limitations of the study and future directions for research on this topic.

CHAPTER 2: THEORETICAL BACKGROUND AND LITERATURE REVIEW

Theorists have debated what causes adolescent risk behavior, a broad category which includes delinquent behavior, for some time now. Some of the more prominent ideas that have been proposed to explain such behaviors are found in problem behavior theory (Jessor, 1977/1991), the social development model (Catalano & Hawkins, 1996), and social control theory (Hirschi, 1969/2002). A uniting concept among these theoretical orientations is the notion that individuals act upon a set of beliefs, which are developed and influenced through interactions with the environment and attachments to others.

Problem Behavior Theory

Problem behavior theory (Jessor, 1977/1991) posits that there are three major systems (perceived environment system, personality system, and behavior system) which are each composed of variables that can either protect against or increase the risk of an adolescent engaging in problem behavior. The perceived environment system consists of both proximal and distal factors which are linked to an individual's behavior, such as social controls, models, and support, with proximal factors being more directly influential on behavior than distal factors. The personality system includes an individual's personality characteristics, temperament, as well as other personological components, such as moral values or beliefs. The behavior system entails the actual behaviors, either conventional or problematic, that an individual engages in (Jessor, 1977/1991).

The theory maintains that all behaviors are the result of the overall balance between conventional or problematic variables within the three systems. If the scale is

unbalanced in favor of more problematic variables, the individual is more likely to exhibit problem behavior. For example, low parental disapproval of problem behavior and high peer approval of problem behavior have been found to put an individual at risk for engaging in problem behavior (Jessor, 1977/1991). This example illustrates how the three systems work together to influence behavior proneness, as the approval or disapproval of peers and parents (perceived environmental system) may influence the individual's moral values (personality system) which in turn may lead the individual to behave in a manner that fits such values, either conventionally or problematically (behavior system). It is this version of the model that will be explored in the proposed study, with the addition of attachment as a moderating variable. Problem behavior is discussed further in the social development model, in terms of how behavior is consistent or inconsistent with the values of the social unit to which one is bonded.

Social Development Model

The social development model (Catalano & Hawkins, 1996) explains that individuals adopt the beliefs and values of the social unit to which they are bonded. Whether an individual behaves prosocially or antisocially is directly and indirectly influenced by the behaviors, beliefs, and values of the social unit that is of greatest importance to the individual. A social unit can be an individual, family, school, peer, a neighborhood, or an entire community.

The model explains that social bonds are developed when an individual perceives opportunities for involvement with the social unit, possesses the skills required to be a member of the social unit, and perceives interaction with the social unit as rewarding (Hawkins, 1985). For the majority of adolescents, parents and peers make up the two

main social units to which the youth are bonded; therefore, these individuals are most likely to influence adolescents' beliefs and values. Catalano and Hawkins (1996) argue that people develop their own system of values and morals through commitment and attachment to others, and through the internalization of the morals, norms, and beliefs of the socializing units to which they are bonded.

When an individual behaves in a manner that is consistent with the values of the social unit, the behavior is viewed as rewarding to the individual, whereas behaviors that are inconsistent with the values of the social unit are seen as emotionally unfulfilling. Such inconsistency between behaviors and values could threaten the individual's bond to the social unit, yet an individual may choose to engage in such behaviors, despite the contradiction with the values of the social unit, if the benefits are of greater self-interest to the individual and outweigh the potential costs of threatening the social bond (Catalano & Hawkins, 1996). This concept could explain how some youth choose to engage in delinquent activity in spite of having a supporting and loving family, because the peer rewards were more salient. In such a case, the youth would be choosing to violate the values of his or her family unit in favor of the values of the peer unit.

Individuals who are bonded to social units which uphold antisocial values and beliefs are the most likely to engage in antisocial or delinquent behaviors (Catalano & Hawkins, 1996). For example, if an adolescent bonds to a peer group who places value on drinking alcohol and a carefree lifestyle, that adolescent is likely to engage in behaviors that are consistent with such values, by frequently staying out late and consuming alcoholic beverages. Social control theory, which will be reviewed next, also considers social bonds as influential in determining whether an individual is likely to engage in risk

behavior; however, this theory concentrates on the lack of social bonds or deficient social bonds rather than on social bonds that are antisocial in nature, as in the social development model.

Social Control Theory

Social control theory (Hirschi, 1969/2002) has been critical in the area of risk behavior research, particularly among studies of deviance and delinquency. This theory views delinquency as a result of an individual's weak social bonds with society. The social bond plays an important role in social control theory and consists of four main components: *attachment*, *commitment*, *involvement*, and *belief*. Social control theory views attachment as the most important element in predicting delinquency, making the assumption that without a secure attachment to others an individual is left with a lack of moral values or conscience (Hirschi, 2004). This is largely due to the idea that an individual's main source of control is derived from concern for others' opinions, and that without such a social bond this concern for others' opinions would be absent. Social control theory suggests that if one is attached to conventional others then he or she is less likely to engage in delinquent actions, a concept which is echoed in the social development model.

Hirschi (1969/2002) suggests that there is a prominent link between attachment and beliefs, and explains that when adolescents respect their parents and have a secure attachment to them, they are more willing to accept their rules and share their beliefs. This concept refers to the idea that being attached to others leads to an internalization of social norms and moral beliefs. Due to the important role that attachment plays in the proposed model, as well its theoretical underpinnings, it is critical to have an

understanding of the main attachment concepts and of what attachment represents during adolescence, therefore these topics will be reviewed briefly.

Attachment Theory

John Bowlby developed his attachment theory over 20 years after first reporting on the link between maternal deprivation and the later delinquency of male children (Bowlby, 1944). He noticed the association between what would later be known as attachment, and such detrimental long-term effects as delinquency and sought to understand this phenomenon further by developing a theory of attachment. Attachment theory asserts that the earliest attachment relationships are formed between the infant and caregiver, as the helpless infant is completely dependent upon the caregiver for its survival (Bowlby, 1969/1982, 1973, 1978, 1980).

Attachment theory suggests that the responsiveness of the caregiver and the experience of the attachment relationship, whether *secure*, *anxious/ambivalent*, *anxious/avoidant*, or *disorganized*, would create mental representations or “working models” for how to think and behave in future relationships, through the process of internalizing norms (Ainsworth, Blehar, Waters, & Wall, 1978). Such working models were theorized to lead the individual to develop expectations for future relationships that were based on the attachment experience between the infant and caregiver (Bowlby, 1978). Secure attachment can be displayed during infancy as the ability to use the parent as a secure base from which the infant can move away without anxiety to explore and learn about the surrounding environment (Bowlby, 1978). The secure base provides the infant with security, confidence, and safety for exploration. Using this logic, a child who has a secure attachment to a responsive caregiver is likely to have a working model that

establishes a belief that others will be there for him or her. Bowlby (1969/1982) theorized that these early working models lay the foundation for future relationships expectations.

Attachment in Adolescence

Attachment is extremely salient in infancy and early childhood; however it continues to serve as a foundation for relationship formation across the lifespan. During adolescence, the individual begins to develop his or her own identity (Erikson, 1989) by experimenting with various personalities and “trying on” different social groups to see where he or she fits in. This period of life is also a crucial time for the adolescent to have a secure attachment to a caregiver (Bowlby, 1978). Adolescents who have a secure attachment to a caregiver are more prepared for this transition because they possess a working model that is trusting of others and capable of forming new relationships, which provides a sense of confidence for the individual to explore new relationships (Bowlby, 1978). During the transition into adolescence, the individual begins to form close relationships with peers. The secure base helps the adolescent test out these new relationships by preparing the individual with a mental representation, which offers individuals a set of norms or expectations that serve to guide them through new situations. During this stage of development, adolescents face the challenge of developing autonomy and creating one’s own unique identity while maintaining attachment to parents (Ainsworth et al., 1978).

A child’s initial identity is built upon beliefs passed down from parents. In order to develop an individual identity, separate from the identity formed during childhood, the adolescent must explore and experiment with different beliefs and values. The secure base plays a critical role in giving the adolescent comfort and a sense of safety to freely

explore the surrounding world (Bowlby, 1978). Through having a secure attachment to parents, the adolescent is afforded the opportunity to experiment with potential identities while having an emotional “safe base” to return to. Studies have shown that youth who have been identified as securely attached tend to demonstrate higher levels of self-esteem and confidence than youth who are insecurely attached (Eliciker, Englund, & Sroufe, 1992). Thus, youth who feel comfortable in new situations and are not afraid to meet new people can likely attribute their confidence to a secure attachment relationship.

Shaver and Hazan (1994) took attachment theory one step further by suggesting that the same concepts from attachment theory could be applied to adult peer relationships or romantic partnerships. Adult attachment theory suggests that if peer relationships meet the emotional needs of the individual and take on the functions of the parent relationship, then the attachment will eventually be transferred from the parent to the peer (Shaver & Hazan, 1994). Although Shaver and Hazan (1994) emphasize the romantic relationship, the attachment concepts they refer to can be applied to other close relationships as well. The key components of attachment, either to caregiver or peer, are referred to as proximity-seeking behavior, safe-haven behavior, and the formation of a secure base (Shaver & Hazan, 1994).

Attachment and peers. As children mature, their attachment system matures as well. During middle childhood the attachment system becomes more generalized and attachment behaviors, such as proximity-seeking or safe-haven behaviors, begin to take place in various relationships, leading to an overall feeling of attachment security or insecurity that is not tied to a specific relationship (Mayseless, 2005). Middle childhood marks a developmental stage when children begin to form close attachments to

individuals other than their parents or primary caregiver (Ainsworth, 1989). As a person progresses into adolescence, the bonds to peers become strengthened. As children mature into young adults, they redirect their attachment focus from the primary caregiver to others. An evolutionary perspective has been suggested to account for this as a manner in which they become autonomous, socialize with peers, and find a mate (Caporael, 2001). Previous research by Smith (1976) suggests that adolescents tend to turn to parents for advice on topics of values and decisions about the future, but are more likely to seek advice from peers if they have parents who are rejecting. Thus, the present study examined if the degree to which parents or peers influence delinquent behavior depends upon the security of the attachment relationship.

Attachment and parents. According to Hirschi (1969/2002), adolescents who are more securely attached to their parents are less likely to be delinquent. Attachment to parents is a critical component in developing a system of moral values and a conscience, just as a child's first exposure to a moral code is typically experienced through socialization by parents (Grusec, 2006). Securely attached adolescents tend to have respect for their parents' opinions and consider how their decisions or actions would be received by their parents before engaging in delinquent behavior (Hirschi (1969/2002).

Positive attachment relationships between parents and adolescents have been linked to positive outcomes such as autonomy, peer relationship competency, self-esteem, fewer risk behaviors, and enhanced coping skills (Bell, Forthun, & Sun, 2000; Parker & Benson, 2004). Though secure attachment can lead to positive outcomes for youth, insecure attachments can have negative consequences for youth development. Allen et al. (2002) found that between the ages of 16 and 18, securely attached

adolescents demonstrated an increase in social skills, whereas adolescents with an insecure attachment to parents demonstrated increased delinquency.

Thus, adolescents with secure attachments to their parents are more likely to have better outcomes than those who have insecure attachment relationships. It also suggests that parents are the main source of socialization and moral development for youth during childhood. However, what remains unclear is how moral values are affected by these types of attachment relationships during adolescence, when the adolescent begins forming strong attachments to peers. Certainly, it can be debated whether a particular attachment relationship, such as parents or peers, is more salient or influential than another relationship. However, research seems to indicate that as peer relationships become stronger during adolescence, peers tend to take over as the main source of moral value influence and the effects of parents on adolescent moral values are lessened (Pardini, Loeber, & Stouthamer-Loeber, 2005).

Nevertheless, research suggests that there is evidence that both parent and peer attachments are associated with positive outcomes for youth. Attachment to parents and peers has been found to be significantly positively linked with youth reports of self-esteem and life satisfaction (Greenberg, Siegel, & Leitch, 1983). Additionally, research has indicated that attachment in general is associated with well-being (Gottlieb, 1981). Thus, the current study will include measures of attachment to both parents and to peers; as such attachment bonds are likely to affect adolescent risk behavior.

Previous Research on Delinquency and Moral Values

Many factors have been discussed in the research literature as being influential to adolescent delinquency. For instance, increases in age, low parental attachment, high

risk-seeking, and peer delinquency were found by Childs et al. (2010) to significantly predict later adolescent delinquency. Part of the problem in understanding adolescent delinquency is in making sense of how all of these predictive factors interact together to affect delinquency and in understanding the processes or mechanisms that explain such behavior. The current study examined attachment to parents and peers, as well as moral values as potential mechanisms to explain delinquency.

Parents and Delinquency

The idea that parents influence their children's behavior is not a new concept. Many studies have demonstrated how parental monitoring, parenting style, parental warmth, and attachment affect youth behavior. A review by Steinberg (2001) nicely summarizes what knowledge has been gained about the parent-adolescent relationship, emphasizing findings suggesting positive outcomes in psychosocial development and mental health experienced by adolescents raised in authoritative homes as compared to those adolescents whose parents employed non-authoritative parenting styles.

Disclosure and effects of parental control were explored in a study by Keijsers, Frijns, Branje, and Meeus (2009) which found that strong declines in mother-adolescent disclosure and low levels of father-adolescent disclosure significantly predicted increased adolescents' delinquent activity. Additionally, parental support was found to moderate the effects of parental control on delinquent activity, with highly supportive families demonstrating a decrease in adolescent delinquency when parental control was decreased. However, in families with low parental support, decreased parental control led to increased adolescent delinquency (Keijsers et al., 2009).

Parental monitoring has been implicated in many studies of adolescent delinquency and recently has begun to be viewed more comprehensively. Kerr and Stattin (2000) found that the predictive nature of monitoring was dependent upon the relationships between parents and adolescents, as parental knowledge was more a result of youth disclosure than of parental monitoring. In other words, in order for a parent's monitoring to be predictive of adolescent delinquency, parents and youth had to have a strong relationship that involved youth disclosure. These authors concluded that this new knowledge made it inaccurate to continue to state that parental monitoring prevents deviant peer association and adolescent delinquency, as was the previously held belief. Laird, Criss, Pettit, Dodge, and Bates (2008) explored parental monitoring as a moderating factor. Results showed that parental monitoring moderated the link between antisocial peers and adolescent delinquent behavior. Adolescents with low parental monitoring reported higher levels of delinquent behavior and more antisocial peers during early adolescence, as compared to adolescents with high parental monitoring.

Low family support, attachment, and communication are all similar concepts that have been viewed in the literature as predictive of delinquency. Marcotte, Marcotte, and Bouffard (2002) found a higher occurrence of delinquency and depressive disorders among adolescents with a lower level of family support. Similarly, Hair, Moore, Garrett, Ling, and Cleveland (2008) found that high quality relationships between parents and adolescents and spending time involved in routine family activities was predictive of fewer delinquent behaviors. Finally, perceived lack of communication was found to be an important predictor of delinquency in a study of Mexican American and White non-Latino adolescents (Davalos, Chavez, & Guardiola, 2005). Thus, relationships between

parents and their adolescent children are highly influential predictors of delinquency. As will be emphasized below, peer relationships also produce quite salient effects on adolescent delinquency.

Peers and Delinquency

Although there may be some debate about the processes through which negative peer affiliation is linked with delinquent behavior, there is an abundance of research citing that this association exists. Research has clearly documented the links between peer influence and substance use, as well as delinquent behavior and antisocial values. Childs, Sullivan, and Gullledge (2011) found that peer substance use had a significant positive effect on adolescent substance use, with a one unit increase in peer substance use predicting a 13.4% increase in the expected frequency of adolescent substance use. Additionally, this study found the peer delinquency significantly predicted adolescent delinquency. One unit of increase in peer delinquency was found to lead to a 5.1% increase in the expected count of adolescent delinquent behavior.

In line with previous findings, Dodge, Dishion, and Lansford (2006) discuss in their book that young adolescents who are at risk for delinquency or are on the cusp of exhibiting antisocial behavior are susceptible to negative influences from deviant peers. Similarly, higher levels of deviant peer association were found to predict later increases in pro-delinquency beliefs, as found by Pardini, Loeber, and Stouthamer-Loeber (2005). This finding is especially relevant to the present study, as it highlights the influence peers can have on adolescent beliefs about delinquency (measured as moral values in the current study).

Moral Values and Delinquency

The role of morality on delinquent behavior has only briefly been explored in the literature, despite the potentially important implications of research findings. Many of the studies that have explored moral values and delinquency have called for future research in this area. Brezina and Piquero (2007, p.462) indicate in particular that the relationship between peer involvement and moral beliefs is “under-developed theoretically” and make a request for further research on these topics.

Piquero et al. (2005) examined the moderating effects of moral beliefs on delinquency in a sample of 10th grade students and found a gender difference in the way that delinquency related to moral beliefs. The results pointed out that female students' past delinquency was related to later delinquent acts regardless of moral beliefs, but male students' past delinquency was only related to later delinquency for males who scored low on a scale of moral beliefs. Such findings suggest that females who commit delinquent actions may fall into a delinquent role that is difficult to transition out of, whether or not they feel their actions are morally acceptable. Therefore, for female youth, there may be other more important variables influencing their decision to engage in delinquent behaviors, whereas male youth may be more influenced by their moral values.

Similarly, Mears, Ploeger, and Warr (1998) investigated the role of moral values and gender on delinquency; however, they specifically explored how delinquent peers affected this relationship. The study found that as an adolescent's moral disapproval of criminality increases, the effect of delinquent peers is reduced. However, the results showed that the effect of delinquent peers was stronger for male offenders than for female offenders. Thus, when female offenders with strong moral values (determined by

the degree of wrongness the offender assigned to various actions) associated with delinquent peers the effects of the peers were eliminated, yet when male offenders with strong moral values associated with delinquent peers the effects remained. Additionally, when male and female participants held little to no moral disapproval of an action (such as cheating or alcohol use), both sexes demonstrated a strong sensitivity to peer influence. Owing to this known association, gender has been controlled for in the present study.

Brezina and Piquero (2007) took a different approach to investigating the role of morality on delinquency by studying a group of abstainers (i.e. individuals who have never engaged in delinquent behavior). This study was in response to Moffitt's (1993) taxonomy of antisocial behavior, which indicated that individuals who abstain from delinquent behavior do so because of personality deficits which prohibit them from interacting in normative peer groups in which delinquency occurs. Moffitt's research depicted abstainers as a very rare classification of individuals, due to the idea that at least some delinquency during adolescence is normative. Brezina and Piquero disagreed with the negative image of abstainers painted by Moffitt, and their research sought to shed light on the positive qualities of the abstainer group. They found that abstainers choose to avoid delinquent actions because they possess a strong moral code, rather than because of a deficit in their personality (as Moffitt had previously suggested). Additionally, they found that the prior-held belief that abstainers are isolated from delinquent peers is unsubstantiated. Results suggested that although abstainers have a fairly low level of involvement with such peer groups, most do associate with delinquent peers at least occasionally and are able to avoid delinquent behavior in spite of these associations.

To summarize, research suggests that individuals who engage in delinquent behavior likely possess a moral code which greatly differs from individuals who abstain from delinquent activities. Moreover, it appears that the effects of moral values on delinquent behavior may vary for males and females. As a result, the present study has accounted for these differences by statistically controlling for gender. Further, there is reason to expect that relationship quality may moderate the relation between parent morals or peer behavior and the adolescent's own adoption of a moral belief system. Thus, the present study examines the moderating role of attachment.

The Present Study

The goal of the proposed study was to gain an understanding of the effects of parent moral values and peer delinquent behavior on adolescent delinquent behavior, as mediated through adolescent moral values and as moderated by attachment. To explore this further, a model was utilized which examines the mediating effects of adolescent moral values and moderating effects of attachment to parents and peers (see Figure 1.1 in Chapter 1). It was hypothesized that parent moral values and peer delinquent behavior would influence adolescent moral values, with greater transmission of values occurring within securely attached groups than within insecurely attached groups. It was further hypothesized that adolescent moral values would predict adolescent delinquent behavior; with low moral values (i.e. high tolerance of delinquency) predicting higher levels of delinquent behavior. Prior research indicates that risk behavior occurs more frequently among male youth (Piquero et al., 2005; Mears et al., 1998) and that male youth are more influenced by peer values than female youth (Mears et al., 1998). As such, it was expected that these relationships would be affected by gender; therefore these effects

were statistically controlled for in the analysis. Additionally, because of the well established presumption that more risk behavior occurs among older than younger adolescents; the effects of age were also controlled. Other demographic variables that have been previously related to risk behavior were controlled for and these included ethnicity, race, and household composition.

CHAPTER 3: METHOD

In this chapter I will describe the data source that was used in the analyses. Following, I will discuss the measures and data reduction strategies that were utilized.

Procedure

The present study utilized data from a secondary data set designed to investigate predictors and costs of adolescent risk-taking behavior (Youngblade, 2002; Youngblade & Curry, 2005). The sample was originally recruited from the Florida Healthy Kids Program. This program is a component of Florida's State Children's Health Insurance Program (S-CHIP), which is designed to provide health insurance for children in families whose incomes are between 100-200% of the federal poverty limit and who do not qualify for Medicaid. As such, these children are at risk owing to income factors, but do not represent a poverty population. Children ages 5-18, who meet income criteria, are eligible for this health insurance program and the project drew the sample from enrollees in all 67 counties in the state of Florida.

A preliminary sample of youth ages 12-18 was drawn; these were youth who had at least one encounter with the health care system and had been enrolled for 10 of the prior 12 months. From this sample, individuals were screened based on health care usage and coded as "predisposed to risk" or "not predisposed to risk," based on diagnoses indicative of consequences of risk behavior (e.g., diagnoses of STDs, pregnancy, gun shots, drug use, and so on). From these two groups, enrollees were stratified based on county and gender, and random digit-dialing was used to contact potential participants

until equal groups of approximately 300 participants were formed – 300 predisposed to risk behavior, 300 with no diagnosis of risk. In total, 576 participants had complete survey data at time one.

Of the original 576 participants, 290 participated in a one-year follow-up telephone survey. Of the remaining 286 original participants, the majority were not able to be reached due to: changes in telephone number with no forwarding information, disconnected telephone service, telephone numbers that were no longer valid for the target participant, and attempts (up to 27 per participant) that never resulted in contact with the target individual. Additionally 86 adolescents declined participation and 10 parents refused permission for participation in the time two questionnaire.

Participants were compensated with a \$15 gift card to Wal-Mart, which was mailed to each participant after completion of the 45-minute telephone questionnaire. Interviews were conducted by female interviewers only, due to the sensitive nature of the interview questions, through a professional survey center at the University of Florida.

Participants

The population at time one consisted of 576 participants ranging in age from 12 to 18 years ($M=15.2$, $SD=1.62$). The sample was fairly equally distributed across gender, with 55% of the participants being female. A large portion of the participants reported engaging in delinquent behavior (65%). The racial and ethnic identity of the sample was 53% White (non-Hispanic), 29% Hispanic, and 16% Black (non-Hispanic).

The population at time two consisted of 290 participants who were between the ages of 13 to 19 years ($M=15.22$, $SD=1.62$). The sample was predominantly female (59.66%, 173 participants) and non-Hispanic (72.8%, 211 participants). The mean family

income was \$25, 807 (SD=10,153). Mean family size was 4.1 (SD=1.36). Participants' households consisted of 175 (60.7%) two-parent families.

Sample attrition led to a slight bias in gender and age; however there were no significant differences in reported risk behavior, income, race or ethnicity. A larger proportion of females participated at both time points (59.66%) than at time one only (50.00%). Individuals who participated at both time points (M=14.98, SD=1.56) also were younger than individuals who participated only at time one (M=15.47, SD=1.65).

Measures

The original dataset was used for research on a variety of health outcomes, not limited to delinquent behavior; therefore some of the unrelated measures have been excluded for the purposes of this study. Additionally, some of the measures that were utilized at time one were not utilized at time two and vice versa. The measures that follow will each identify which survey session they were assessed during.

Sociodemographic Characteristics

Several sociodemographic control variables were assessed at time one. For the purposes of the current study, these include participants' age, gender, race, ethnicity, and household composition. Due to the predominately white nature of the sample, race was re-coded in the analyses to indicate whether a participant was white or non-white. Similarly, ethnicity was coded to represent whether participants were Hispanic or non-Hispanic. Household composition referred to who the adolescent participant resided with, whether both parents or in another living arrangement (which included living with one parent or neither parent).

Adolescent Delinquent Behavior

Questions used in the risk assessment section of the survey were modified from the *Communities That Care Youth Survey* (Developmental Research and Programs, Inc., 1999). Items assessed engagement in delinquent behavior, including alcohol and substance use, criminal violence, and other illegal activities, assessed by questions such as “*Have you ever sold illegal drugs?*” A total of 23 items were assessed in these categories at time one, whereas only 20 items were included at time two. The reduction in items came from some items being condensed into a single item (e.g. at time one, hard alcohol and beer consumption were assessed as separate questions, whereas at time two these questions were asked simultaneously in one item).

Participants were initially asked if they had ever engaged in the indicated delinquent behavior, and were subsequently asked how frequently they engaged in the behavior within the past 12 months. Responses were coded 0 (*never*) to 5 (*every or almost every day over the past 12 months*). For the purposes of these analyses, scores were only included from questions assessing whether the participant had ever engaged in the risk behavior. A composite delinquent behavior variable was created by summing engagement in 23 specific risk variables at time one (Cronbach’s $\alpha = .821$) and 20 specific risk variables at time two (Cronbach’s $\alpha = .826$). Time one adolescent delinquent behavior was planned for use in analyses only as a control variable and was not assessed as a predictor of any outcome measures. This variable was not included in the final model, due to high multicollinearity with the outcome variable of adolescent delinquent behavior at time two.

Adolescent Moral Values

At time two participants' beliefs about whether an activity was morally right or wrong were assessed using a subset of 12 items from the Communities that Care Survey (Hawkins, Catalano, et al., 1992). This measure included activities such as *"To take a handgun to school"* or *"To pick a fight with someone."* Participants were asked to select one of the four response options to rate whether they felt each activity was *very wrong*, *wrong*, *a little bit wrong*, or *not wrong*. Some questions from the original measure were not used for the purposes of these analyses, as they were not truly assessing moral values about risk behavior. Variables were summed to create a continuous composite score of moral value, with higher scores indicating a stronger sense of conventional right and wrong (Cronbach's $\alpha = .556$). The reliability for this scale was slightly lower than the preferred alpha level, however, upon examination of itemized reliabilities, removal of items would not have improved the overall reliability score.

Attachment

The parent and peer attachment measures were each assessed at both time one and time two. Parent attachment was measured using 28 items of the original 38-item parent subscale of the *Inventory of Parent and Peer Attachment* (Armsden & Greenberg, 1987), which included items such as *"My parents respect my feelings"* and *"I wish I had different parents."* Participants were offered five response choices and were asked to choose the answer that was true for them. Response options included *almost always or always true*, *often true*, *sometimes true*, *sometimes not true*, *almost never or never true*. Responses on the parent subscale items were summed to create a composite parent attachment score (Cronbach's $\alpha = .810$), with a higher score indicating greater attachment.

Peer attachment was measured using the 24-item peer subscale of the *Inventory of Parent and Peer Attachment* (Armsden & Greenberg, 1987). Items were rated on a 5-point Likert scale ranging from 1 (strongly agree) to 5 (strongly disagree). This measure included questions such as “*My friends accept me as I am*” or “*I feel alone or apart when I am with my friends.*” Responses on the items of the peer subscale were summed to create a composite peer attachment score (Cronbach’s $\alpha=.864$), with a higher score indicating greater attachment.

Parent Moral Values

Parents’ moral values were assessed using a six-item measure adapted from the Communities That Care Youth Survey (Developmental Research and Programs, Inc., 1999). This measure assessed adolescent respondents’ perceptions of their parents’ moral values with six items such as “*How wrong do your parents feel it would be for you to smoke cigarettes?*” It must be noted that this scale is serving as a proxy for parent moral values, as the factor that is truly being measured by this scale is youth perception of parents’ tolerance for delinquency. A composite score of perceived parent moral values was created through a summation of responses on this measure (Cronbach’s $\alpha = .687$), with higher values indicating perceptions of greater parent morality.

Peer Delinquent Behavior

Peers’ delinquent behavior was assessed by an adolescent report on the frequency at which their peers engage in risk behaviors. This measure used items adapted from the *Iowa Youth and Families Project* (Elder, & Conger, 2000) and the *Communities That Care*[®] *Youth Survey* (Developmental Research and Programs, Inc., 1999). Twenty-four items from these two scales addressed questions about their closest friends, asking

respondents to rate the degree to which he or she agreed with each statement, such as *“These friends sometimes get in trouble with the police.”* Owing to the fact that multiple scales were utilized, these twenty-four items were factor analyzed. A single-factor solution best represented the data (eigenvalue = 9.197; accounting for 38.321% of the variance). Accordingly, responses on the 24 items were summed to create a composite score of perceived peer delinquent behavior (Cronbach’s $\alpha = .929$). Table 3.1 lists the factor loading values for each variable of the principal components analysis.

Table 3.1

Principal Components Analysis of Peer Delinquent Behavior (N=290)

Variable	I
Involvement with police (closest friends)	.534
Law violations (closest friends)	.592
School drop-out (general friends)	.532
Running away from home	.497
Skipping school	.621
Destruction of property	.634
Theft <\$25	.702
Theft >\$25	.746
Physical assault	.561
Forcible theft	.530
Recreational use of prescription drugs	.692
Use of inhalants	.595
Recreational use of non-prescription drugs	.527
Cigarette smoking	.656
Alcohol use	.622
Marijuana use	.706
Illegal drug use (LSD, cocaine, amphetamines)	.688
School suspension	.631
Carrying a handgun	.531
Selling illegal drugs	.731
Grand theft auto	.625
Arrests	.737
School dropout	.536
Gang membership	.514
Eigenvalue	9.197
Proportion of variance	.383

Note: Unless otherwise noted, these variables assessed behavior of respondent's four best friends.

Data Reduction Summary

In summary, several variables were selected that best represent the key constructs of this study, which were morality, attachment, and delinquency, as well as sociodemographic controls. Control variables at time one include participant age, gender, race, ethnicity, and household composition. The outcome of interest at time two was adolescent delinquent behavior. Predictors at time one included parent moral values and peer delinquent behavior. Moderating variables, parent and peer attachment, were likewise assessed at time one. The hypothesized mediator, adolescent moral beliefs, was assessed at time two. In the next chapter, I present the results of the analyses used to test the four hypotheses guiding this study.

CHAPTER 4: RESULTS

The present study sought to address the problem of adolescent delinquent behavior and to gain an improved understanding of the relationship of adolescent moral beliefs to adolescent delinquent behavior. To achieve this goal, several hypotheses were addressed within the context of two models: one examining parent predictors of adolescent moral beliefs and delinquent behavior, and the other examining peer predictors of these outcomes. The model described in Figure 1.1 (page 9) served as the framework for testing these hypotheses. First, the predictive relationships of parent moral values or peer delinquent behavior on adolescent delinquent behavior were explored. Second, the predictive relationships of parent moral values or peer delinquent behavior on adolescent moral values were tested. Third, adolescent moral behavior was examined as a potential mediator of the relationship between parent moral values and adolescent delinquent behavior, as well as of the relationship between peer delinquent behavior and adolescent delinquent behavior. Finally, parent-youth attachment, as well as peer-youth attachment, were tested as potential moderators of the effect of parent moral values and peer delinquent behavior, respectively.

This chapter begins with a brief discussion of preliminary analyses and then proceeds to the main analyses. Preliminary analyses consisted of descriptive inspection and bivariate correlations. The main findings are organized by the four hypotheses guiding this study.

Preliminary Analyses

Variables selected for inclusion in this study were checked for missing cases, outlying cases, and incorrect values through inspection of descriptive statistics and frequency distributions prior to hypothesis testing. Three cases contained some missing data that appeared to be missing at random. All available data were used for each respective analysis. Using Cook's distance scores (Cook & Weisber, 1982), no multivariate outliers were found to have a significant effect on the regression coefficients. Inspection of the minimum and maximum values of the key variables revealed that all data reflected accurate values. Skewness was within normal limits on all variables except the outcome variable, adolescent delinquent behavior, which was slightly skewed (Bachman, 2004) but did not appear to affect the model. Table 4.2 presents descriptive information (mean, standard deviation) for variables included in the analyses.

Table 4.2

Descriptive Statistics for Key Variables

Variable Name	N (%)	Mean	Standard Deviation	Range
Age (years)	290	15.22	1.622	13-19
Gender	290			
Male	40.3%			
Female	59.7%			
Ethnicity	287			
Hispanic	26.2%			
Non-Hispanic	72.8%			
Race	290			
White	64.5%			
Non-White	35.5%			
Household Composition	290			
Live with both parents	60.7%			
Other living arrangement	39.3%			
Adolescent Moral Values (Time 2)	289	37.14	3.627	22-43
Adolescent Delinquent Behavior (Time 2)	290	4.81	6.833	0-35
Parent Moral Values	290	22.63	1.931	13-24
Parent-Youth Attachment	290	64.44	14.243	40-111
Peer Delinquent Behavior	290	13.39	13.033	3-79
Peer-Youth Attachment	290	47.19	12.588	29-105

Note: Unless otherwise noted, variables were assessed at time one.

Bivariate correlations between the key variables of the study are depicted in Table 4.3. Adolescent moral values at time two were significantly and negatively correlated with adolescent delinquent behavior at time two, which is consistent with the first hypothesis of the study. Additionally, peer delinquent behavior was significantly and positively correlated with adolescent moral values, meaning greater peer delinquency was associated with lower adolescent values, which is consistent with hypothesis two. Also in support of hypothesis two, parent moral values were significantly and positively correlated with adolescent moral values, indicating that parents with higher moral values were associated with adolescent offspring who also had higher moral values. Finally, adolescent delinquent behavior at time one and adolescent delinquent behavior at time

two ($r = .808$, $p < .01$) were highly correlated. Although I intended to control for time one delinquent behavior, I found that, due to the high correlation between time one and time two adolescent delinquent behavior and due to the low tolerance values ((Tabachnick & Fidell, 2001), the high degree of multicollinearity between the variables would be a problem. Therefore, I decided to drop this control variable from the analyses.

Table 4.3

Bivariate Correlation Matrix of Key Variables (N=290)

Variables	1	2	3	4	5	6
1. Adolescent Delinquent Behavior						
2. Parent- Youth Attachment	.329**					
3. Parent Moral Values	-.386**	-.224**				
4. Peer-Youth Attachment	.117*	.429**	-.177**			
5. Peer Delinquent Behavior	.747**	.313**	-.400**	.188**		
6. Adolescent Delinquent Behavior (Time 2)	.808**	.322**	-.336**	.079	.703**	
7. Adolescent Moral Values (Time 2)	-.528**	-.198**	.361**	-.098	-.567**	-.556**

Note: Unless otherwise noted, all variables were assessed at time one.

** represents correlations significant at the $p < .05$ level (2-tailed), ** $p < .01$*

Hypotheses

The following paragraphs will briefly restate the four hypotheses that were tested in this study. Adolescent age, gender, ethnicity, race, and household composition were statistically controlled for in all analyses. Results are displayed in Tables 4.4-4.6.

Hypothesis 1: Adolescent Moral Values and Adolescent Delinquent Behavior

The first hypothesis of this study, which states that adolescent moral values predict adolescent delinquent behavior, was tested using linear regression. As seen in Table 4.4, the overall model significantly predicted adolescent delinquent behavior at time two, $F(6, 279) = 25.631, p < .001$. This model accounted for approximately 35% ($R^2 = .355$) of the variance in adolescent delinquent behavior at time two. According to Cohen (1988), this is a medium effect. Adolescent moral values at time two were significantly predictive of adolescent delinquent behavior at time two, $\beta = -.513, t(285) = -10.278, p < .001$, holding constant the control variables of age, gender, race, ethnicity, and household status. Positive adolescent moral values were associated with lower adolescent delinquent behavior, meaning that individuals who believed in a high moral code (e.g. felt it was wrong to steal, lie, etc.) tended to be less likely to engage in delinquent behaviors (e.g. skip school, use alcohol or drugs, etc.).

Table 4.4

*Regression of Adolescent Delinquent Behavior on Adolescent Moral Values:
Standardized Parameter Estimates (N=290)*

	Standardized Coefficients
Age	.195***
Gender	.048
Ethnicity	-.028
Race	.066
Household Composition	-.059
Adolescent Moral Values	-.513***

*Note: *** $p < .001$*

Hypothesis 2: Predicting Adolescent Moral Values from Parent Moral Values and Peer Delinquent Behavior

The second hypothesis explored whether parent moral values and peer delinquent behavior at time one were predictive of adolescent moral values at time two. This hypothesis was examined separately for the parent and peer models. First, linear regression was utilized to examine the effects of parent moral values at time one on adolescent moral values at time two (see Table 4.5a). The overall model was statistically significant, $F(6, 279) = 10.767, p < .001$. Approximately 19% of the variance in adolescent moral values was explained by the model ($R^2 = .188$), which is a small effect (Cohen, 1988). Parent moral values at time one were found to significantly predict adolescent moral values at time two, $\beta = .341, t(285) = 6.286, p < .001$, holding other variables in the model constant. These variables are positively associated, indicating that parents who had

strong moral values tended to have adolescent offspring who also had strong moral values.

Table 4.5a

Regression of Adolescent Moral Values on Parent Moral Values (N=290)

	Standardized Coefficients
Age	-.134*
Gender	.136*
Ethnicity	.067
Race	-.155**
Household Composition	.060
Parent Moral Values	.341***

*Note: * $p < .05$, ** $p < .01$, *** $p < .001$*

The peer model, as shown in Table 4.5b, was assessed using linear regression as well. The overall peer model significantly predicted adolescent delinquent behavior at time two, $F(6, 279) = 24.051, p < .001$. This model had a larger than typical effect (Cohen, 1988), with approximately 34% of the variance in adolescent moral values being explained by the model ($R^2 = .341$). Peer delinquent behavior at time one independently predicted adolescent moral values at time two, $\beta = -.556, t(285) = -10.649, p < .001$. A negative association was found between peer delinquent behavior and adolescent moral values, indicating that adolescents who were friends with peers who engaged in delinquent behaviors tended to have weaker moral beliefs (e.g. felt it was morally acceptable to skip school, lie, steal, etc.). Thus, the findings offer support for both the parent and peer models of this hypothesis.

Table 4.5b

Regression of Adolescent Moral Values on Peer Delinquent Behavior (N=290)

	Standardized Coefficients
Age	.022
Gender	.087
Ethnicity	.075
Race	-.103*
Household Composition	.059
Peer Delinquent Behavior	-.556***

*Note: * $p < .05$ level, ** $p < .01$, *** $p < .001$*

Hypothesis 3: Adolescent Moral Values as a Mediator

The third hypothesis assessed whether adolescent moral values at time two mediated the relationship between parent moral values and peer delinquent behavior at time one in predicting adolescent delinquent behavior at time two. The parent and peer models were examined separately. Baron and Kenny's (1986) criteria for mediation were used to determine the mediating role adolescent moral values played in predicting adolescent delinquent behavior. These criteria include the following conditions: (1) a significant relationship between the predictor and outcome variables; (2) a significant relationship between the predictor and mediator variables; (3) a significant relationship between the mediator and outcome variables in the presence of the predictor variables; and (4) the attenuation (either full or partial) of a previously significant relationship between the predictor and outcome variables when the mediator is included. The indirect effect (a+b) was assessed with the use of Sobel's test, which measures the significance of the indirect pathway of the predictor to the mediator to the outcome variable. For these

analyses, figures are used to illustrate the mediation. In all these analyses, control variables were included.

Parent model. Figure 4.2 illustrates the mediated relationship between parent moral values at time one and adolescent delinquent behavior at time two. As seen in Figure 4.2a, path c of the mediational model, in which the independent variable (X) predicts the outcome variable (Y) directly, was significant. Parent moral values significantly predicted adolescent delinquent behavior, $\beta = -.304$, $t(286) = -5.614$, $p < .001$, with the overall model explaining a significant portion of the variance in adolescent delinquent behavior, $F(6, 280) = 10.719$, $p < .001$, adjusted $R^2 = .169$.

Path a of the mediational model, in which the independent variable (X) predicts the mediating variable (M), was also found to be significant. In this path, parent moral values at time one significantly predicted adolescent moral values (the mediator) at time two $\beta = .341$, $t(285) = 6.286$, $p < .001$. This overall model also significantly predicted adolescent moral values, $F(6, 279) = 10.767$, $p < .001$, adjusted $R^2 = .171$.

In addition, path b of the mediational model, in which the mediating variable (M) predicts the outcome variable (Y), was significant. When both parent moral values and adolescent moral values were included in the regression, adolescent moral values significantly predicted adolescent delinquent behavior while controlling for parent moral values $\beta = -.450$, $t(285) = -8.600$, $p < .001$. The overall model also significantly predicted adolescent delinquent behavior, $F(7, 278) = 24.464$, $p < .001$, adjusted $R^2 = .366$.

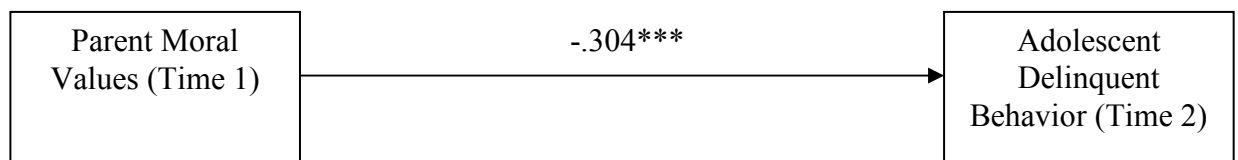
Finally, in testing the c' pathway, linear regression was used to assess whether inclusion of the mediator variable (M) attenuated the relationship between the predictor

(X) and outcome variable (Y). Analyses revealed that the standardized regression coefficient between parent moral values at time one and adolescent delinquent behavior at time two decreased substantially when controlling for adolescent moral values at time two, although it was still significant. Thus, these analyses suggest that adolescent moral values partially mediate the relationship between parent moral values and adolescent delinquent behavior. Specifically, 23% of the effect of parent moral values on adolescent delinquent behavior was mediated by adolescent moral values. To test the significance of this partial mediation, Sobel's test was utilized. In this case, Sobel's test was significant, $t= 5.08, p <.001$, supporting partial mediation.

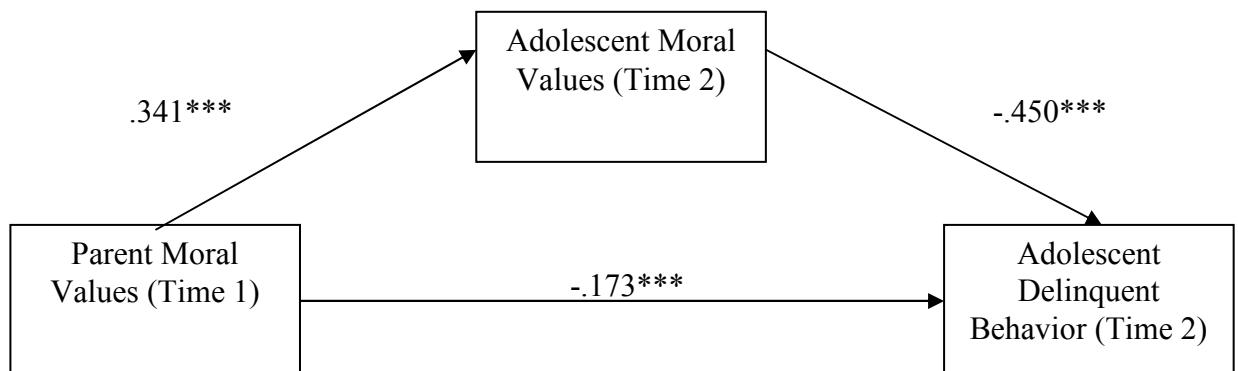
Figure 4.2

Model of Adolescent Moral Values Mediating the Relationship Between Parent Moral Values and Adolescent Delinquent Behavior

A. Direct Relationship



B. Mediated Relationship



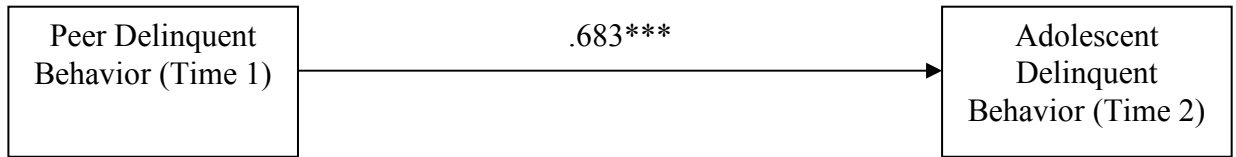
*Note: Standardized regression coefficients for the relationship between parent moral values and adolescent delinquent behavior as mediated by adolescent moral values. Control variables included age, gender, ethnicity, race, and household status. *** $p < .001$*

Peer model. The peer model of mediation is depicted in Figure 4.3. Analyses revealed that the predictor variable (X), peer delinquent behavior at time one, significantly predicted the outcome variable (Y), adolescent delinquent behavior at time two, $\beta=.683$, $t(286)= 15.213$, $p<.001$. This overall model explained a significant portion of the variance in adolescent delinquency as well, $F(6, 280)= 47.545$, $p<.001$, adjusted $R^2=.494$. Additionally, there was a significant main effect of peer delinquent behavior (X) on adolescent moral values (M) at time two, $\beta= -.556$, $t(285)= -10.649$, $p<.001$, with the overall model also being significantly predictive of adolescent delinquent behavior, $F(6, 279)= 24.051$, $p<.001$, adjusted $R^2= .327$. Next, adolescent moral values (M) were shown to significantly predict adolescent delinquent behavior (Y) while controlling for peer delinquent behavior (X) at time one $\beta= -.236$, $t(285)= -4.660$, $p<.001$. According to Cohen (1988), this overall model explained a large amount of the variance in adolescent delinquency, $F(7, 278)= 44.920$, $p<.001$, adjusted $R^2= .519$. Finally, as seen in Figure 4.3b, there was a reduction in the standardized regression coefficient between peer delinquent behavior at time one and adolescent delinquent behavior while controlling for adolescent moral values at time two. The significance of this relationship indicated that a partial mediation, rather than full mediation, had occurred. Therefore, Sobel's test was performed to calculate the significance of the partial mediation; Sobel's test was significant, $t= 4.27$, $p<.001$. Specifically, 34% of effect of peer delinquent behavior on adolescent delinquent behavior was mediated by adolescent moral values.

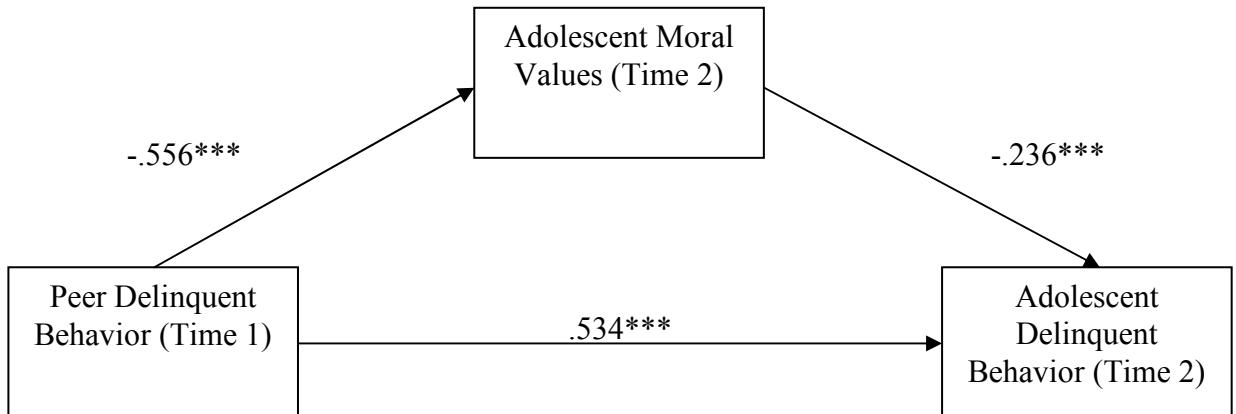
Figure 4.3

Model of Adolescent Moral Values Mediating Peer Delinquent Behavior on Adolescent Delinquent Behavior

A. Direct Relationship



B. Mediated Relationship



*Note: Standardized regression coefficients for the relationship between peer delinquent behavior and adolescent delinquent behavior as mediated by adolescent moral values. Control variables included age, gender, ethnicity, race, and household status. *** $p < .001$*

Hypothesis 4: Attachment as a Moderator

The fourth hypothesis of the study tested attachment as a moderator in four separate models. These models explored the moderating roles of attachment (both parent-youth and peer-youth) on adolescent moral values, as well as on adolescent delinquent behavior. In each analysis, moderation was deemed to have occurred if an interaction term involving the predictor (e.g., parent moral values) and the moderator (parent attachment) was significant. These moderation models were examined:

- 1.) Parent moral values at time one predicting adolescent moral values at time two, as moderated by parent-youth attachment at time one.
- 2.) Parent moral values at time one predicting adolescent delinquent behavior at time two, as moderated by parent-youth attachment at time one.
- 3.) Peer delinquent behavior at time one predicting adolescent moral values at time two, as moderated by peer-youth attachment at time one.
- 4.) Peer delinquent behavior at time one predicting adolescent delinquent behavior at time two, as moderated by peer-youth attachment at time one.

Owing to non-significant interaction terms, tests of the first two models indicated that parent attachment did not moderate the relationship between parent moral values and either adolescent moral values or delinquent behavior. Likewise, the interaction term in the third model was non-significant, suggesting that peer-youth attachment did not moderate the link between peer delinquent behavior and adolescent moral values.

The fourth model, as seen in Table 4.6, was the only one to produce a statistically significant interaction term, indicating that the overall model of peer-youth attachment moderating the relationship between peer delinquent behavior and adolescent delinquent behavior was significant, $F(8, 278) = 36.832, p < .001$, adjusted $R^2 = .501$. Results showed that peer delinquent behavior significantly and positively predicted adolescent delinquent behavior, $\beta = .711, t(286) = 15.414, p < .001$; however there was no significant main effect for peer-youth attachment on adolescent delinquent behavior. However, the interaction of peer delinquent behavior and peer-youth attachment was found to significantly predict

adolescent delinquent behavior, $\beta = -.085$, $t(286) = -1.965$, $p = .05$, beyond the two main effects of peer delinquent behavior and peer-youth attachment.

Table 4.6

Regression of Adolescent Delinquent Behavior on Peer Delinquent Behavior: Peer-Youth Attachment as a Moderator (N=290)

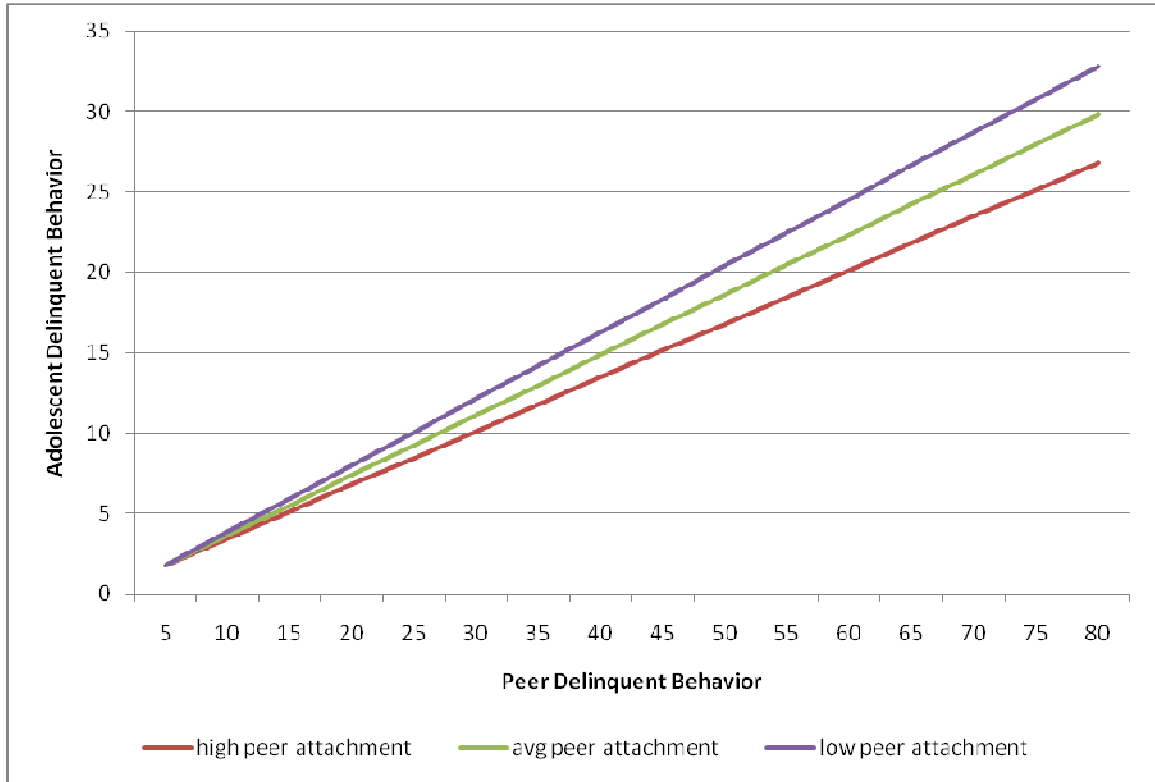
	Standardized Coefficients
Age	.038
Gender	.044
Ethnicity	-.052
Race	.050
Household Composition	-.085
Peer-Youth Attachment	-.050
Peer Delinquent Behavior	.711***
Peer-Youth Attachment X Peer Delinquent Behavior	-.085*

*Note: * $p < .05$, *** $p < .001$*

As depicted in Figure 4.4, there was a significant relation between peer delinquency and adolescent delinquency, as moderated by peer-youth attachment. However, this interaction occurred in the opposite direction as was predicted. It was expected that youth who were attached to highly delinquent peers would themselves be highly delinquent and that this relationship would be stronger for adolescents who were highly attached to peers. As can be seen in the graph (Figure 4.5), as peer delinquency increases adolescent delinquency increases as well; however, this relationship is stronger for youth with low peer-youth attachment than for youth with high attachment. Thus, this relationship suggests that youth with poor attachment to peers tend to fare worse when associating with delinquent peers than youth who are strongly attached to peers.

Figure 4.4

Graph of Peer-Youth Attachment Moderating Peer Delinquent Behavior on Adolescent Delinquent Behavior



Note: Simple slopes of peer delinquent behavior predicting adolescent delinquent behavior for 1 SD below the mean of peer attachment (low peer attachment), the mean of peer attachment (avg. peer attachment), and 1 SD above the mean of peer attachment (high peer attachment).

CHAPTER 5: DISCUSSION

This purpose of this study was to explore the predictive connections between parent and peer relationships and adolescent delinquency by specifically focusing on the role that moral values play in predicting delinquent behavior. To date, research has been devoted to the study of parent and peer correlates of delinquency in processes such as monitoring, communication, and support. This study adds to the literature by considering new aspects of the ways in which parents and peers influence adolescents' delinquent actions, specifically through the manner in which they influence adolescents' moral values. The topic of morality, particularly in regards to peer influence, has been relatively understudied and coverage of this issue has been fairly limited in the delinquency literature (Brezina & Piquero, 2007), therefore the findings of this study are important in establishing the relevance of this topic so that it can become more prevalent in future delinquency research.

The present study examined a model of adolescent delinquency in which the predictive relationship between parent moral values and adolescent delinquency was mediated by adolescent moral values. Likewise, this model examined the mediating role of adolescent moral values on the relationship between peer delinquency and adolescent delinquency. Adolescents' attachment to parents and peers was investigated in the model as a moderator of four relationships: between parent moral values and adolescent moral values, parent moral values and adolescent delinquent behavior, peer delinquent behavior

and adolescent moral values, and peer delinquent behavior and adolescent delinquent behavior.

This study is significant in that it identifies several main relationships, such as those between morality and delinquent behavior, which afford evidence in support of other research findings, provide support for classic theories in the field, and introduce new issues to explore in the field of delinquency research. First and foremost, the findings from this study establish the existence of a key relationship between adolescent moral values and adolescent delinquent behavior, which will be important for future research to explore further, as morality appears to play a critical role in youth's risky decision-making. Additionally, the results of this study offer support of research documenting the links between parents, peers, and adolescents in regards to delinquent behavior and sheds new light on the potential for parents and peers to influence adolescents' moral values and beliefs. Such associations elucidate the need for effective interventions targeting multiple contexts of adolescents' lives, as both parents and peers hold considerable influence over adolescents' beliefs and behaviors, as demonstrated by these findings. Although there are several theories of adolescent risk or problem behavior, many of which offer competing ideas, the findings from the current study document the need for utilizing multiple theoretic approaches in attempting to understand the phenomenon of adolescent delinquency. The results of the present study offer support for multiple theories, including attachment theory, the social development model, problem behavior theory, and social control theory. Yet, it is important to recognize the unique elements that each theory offers, as well as the overall message implied by the theories as a collective whole, which is that adolescents do not make decisions in a

vacuum, rather they highly influence and are influenced by the environment around them, particularly so when parent and peer contexts are involved. It is precisely these influences by parents and peers which the current study has examined.

Review of Findings

Using multiple regression analysis, four specific hypotheses were tested. Each hypothesis is overviewed and discussed in relation to extant literature. Unexpected findings are discussed in terms of theoretical implications and future research.

With regard to my first hypothesis, the analyses revealed that adolescent moral values were significantly predictive of adolescent delinquency. Specifically, youth who upheld a strong moral code were less likely to engage in delinquent behavior than youth who possessed a weak moral code (as defined by low moral values). This finding offers support for Brezina and Piquero's (2007) research, which made claims that adolescents who abstain from delinquent behavior do so because they possess a strong moral code which guides their behavior away from delinquency. Although this finding is consistent with what would be expected based on the literature, it is important to note, as it highlights the direct pathway from which morals lead to behavior. This linkage identifies a crucial element for future prevention and intervention work to focus on. Thus, interventions which target improving the conventionality of adolescents' beliefs and morals are more likely to have a greater impact on reducing their delinquent behavior than interventions which target behaviors only.

In terms of my second hypothesis, parent moral values and peer delinquent behavior were each found to significantly predict adolescent delinquency. Adolescents who reported low engagement in delinquent behavior were more likely to have parents

with strong moral values and to associate with peers who had low levels of delinquency. Adolescents who were highly delinquent, on the other hand, were more likely to have parents with low moral values and to be affiliated with peers who engaged in delinquent behavior. The finding that delinquent adolescents tended to associate with delinquent peers is consistent with the literature citing the negative influences of risky peer group affiliation (Childs, Sullivan, & Gullede, 2011; Dodge, Dishion, & Lansford, 2006, Dishion, McCord, & Poulin, 1999). At this time, the literature on the effects of parental morality is limited; therefore, the findings from the present study are important because this study is among the first to examine the existence of the relationship between parental morality and adolescent delinquency. These results are supportive of my second hypothesis and occurred in the expected direction of effects. This finding emphasizes the importance of the parent and peer contexts in predicting adolescents' delinquent behavior and offers support for interventions targeting multiple contexts of adolescents' lives, particularly those of the parents and peers.

The findings from hypothesis one have clearly demonstrated the relationship between parent moral values and adolescent delinquent behavior. Likewise, findings from the hypothesis two have documented the relationship between peer delinquent behavior and adolescent delinquent behavior, and also parent moral values and adolescent delinquent behavior. As predicted by my third hypothesis, adolescent moral values were found to partially mediate these relationships in both the parent and peer contexts. Therefore, although parent morality predicts adolescent delinquency in the long run, some of the effects of this relationship actually occur through adolescent morality. Thus, parents' moral values were found to predict adolescents' moral values, which in turn

predicted adolescents' engagement in delinquent behavior. Similarly, in the peer model, peers' delinquency was found to predict adolescents' moral values, which in turn predicted adolescents' delinquency. These findings offer theoretical support for Catalano and Hawkin's (1996) social development model, which states that individuals develop their own system of values and morals through commitment and attachment to others, and through the internalization of the morals, norms, and beliefs of the socializing units to which they are bonded. In this model, it would appear that adolescents internalized the moral values of their parents and peers, with these moral values affecting the adolescents' decisions to engage in delinquent behavior or not. With these findings, the present study has offered some insight into the process by which adolescents' delinquent behavior engagement is influenced by parents and peers. The present study is the first to examine adolescent moral values as a mediator of these relationships and thus, plays a central role in establishing the relevance of a process which will be important to explore further in future studies.

Finally, in support of my fourth hypothesis, the predictive relationship of peer delinquent behavior on adolescent delinquency was found to be moderated by attachment to peers, with low attachment enhancing the effect of delinquent peers. Despite the small effect size of the moderation, inspection of the moderated effect reveals an interesting interaction that is worth exploring further. Although the significance of the moderating relationship offers support for my fourth hypothesis, the direction of the interaction was opposite of the expected direction. In fact, the effects between peer delinquency and adolescent delinquency were found to be stronger for youth who had low peer attachment, rather than those with higher peer attachment; this was counter to my

hypothesis. Although the interaction showed that youth who were strongly attached to highly delinquent peers also demonstrated high levels of delinquency, these effects were stronger in youth who had weak attachments to peers. This finding seems to offer support for Hirschi's (1969/2002) social control theory, which has argued that attachment security is the crucial element in predicting delinquency, regardless of whether attachment occurs within prosocial or delinquent relationships. Thus, despite being attached to peers who may not be the best influence due to their negative behavior choices, it is the strength of the attachment relationship that is most important in predicting delinquency in adolescents. Hence, although attachment to delinquent peers predicts delinquent behavior among adolescents regardless of attachment, those individuals who are poorly attached to delinquent peers are more likely to become delinquent than those who are strongly attached to such peers. Therefore, poor attachment in itself becomes a risk factor for delinquency, even if such attachment is to peers who are delinquent themselves. One could speculate that this is due to poorly attached adolescents feeling more pressure to live up to the expectations of their peers or to earn peers' respect by engaging in behaviors that uphold the norms and values of the peer social unit. In this case, adolescents would imitate peers' delinquency in an effort to "fit in" and enhance the security of the attachment relationship, which would be fitting with the qualities of the social development model. Further research would need to be done to test this assumption.

The other moderated pathways tested in these analyses yielded non-significant results. These pathways included attachment as a moderator of the relationships between: 1) parent moral values and adolescent moral values, 2) parent moral values and

adolescent delinquent behavior, and 3) peer delinquent behavior and adolescent moral values. Despite non-significant findings, it is possible that attachment still plays a moderating role in these relationships and that the data were simply not able to show this. One potential reason for the lack of significance in the moderating role of attachment in the parent models may be due to the age of the participants. Research literature has indicated that youths' relationships begin to shift in priority from parents to peers during early adolescence (Pardini, Loeber, Stouthamer-Loeber, 2005). Thus, perhaps attachment to parents would have played a bigger factor in the decision to engage in delinquent behavior for younger youth. Although participants ranged in age from 13-19, the mean age of the sample was approximately 15 years old. Early adolescence has been classified as ranging from ages 9-14 (Nottelmann, Susman, Inoff-Germain, Cutler, Loriaux, & Chrousos, 1987); therefore, most of the sample in the current study would not be considered early adolescents but rather would fall under the classification as middle to late adolescents. Hence, it is likely that the majority of participants had already crossed the threshold through which peer relationships become more salient than parent relationships. I would speculate that, had my study included more youth from the early adolescence stage of development, results would likely have supported a parent model of the moderating effects of parent-youth attachment. Although this is beyond the scope of my thesis, future work should include an explicit test of this age-related assumption.

These findings also indicate that attachment did not play a moderating role in the manner in which peer delinquency influenced adolescent moral values. However, as attachment was successful in significantly moderating the relationship between peer delinquency and adolescent delinquency, it would appear that the key to understanding

the non-significance of attachment in the relationship between peer delinquency and adolescent morality lies within the variable of adolescent morals. It is possible that the measurement tool used to evaluate adolescent morals assessed qualities that were not amenable to attachment characteristics. This variable was also assessed by a measure that yielded lower reliability (Cronbach's $\alpha = .556$), therefore it is possible that the non-significance of the findings were related to capacity of the measurement tool. It is uncertain why attachment did not play a moderating role in this relationship; however, this will be an important question for future research to address as well.

Overall, these findings were consistent with Jessor's (1977/1991) problem behavior theory, in which three systems work together to influence behavior proneness. Findings from the present study demonstrate that the perceived environmental system, as the approval or disapproval of delinquency by peers and parents (as measured through parents' moral values and peers' delinquent behavior), was found to influence the adolescent's moral values (personality system), which in turn led the adolescent to behave in a manner that fits such values, by engaging in delinquent behavior (behavior system). As this theory states, if the scale of these systems is unbalanced in favor of more problematic variables, the individual is more likely to exhibit problem behavior. This was found to be true in the present study, as individuals who perceived low parent morals or high peer delinquency (delinquent perceived environment) were more likely to themselves report low moral values (delinquent personality system) and display higher levels of delinquent behavior (behavior system).

Limitations

All studies have limitations, and the findings from the current investigation must be evaluated in light of several concerns. First, this study was challenged by measurement constraints associated with secondary data analysis, specifically that it is limited to available variables. In the present study, this led to the utilization of variables that are perhaps more aptly described as proxies of the constructs of interest. For example, parent and peer variables were limited to the measurement of the adolescent's perceptions of parent moral values and peer delinquency rather than the actual moral values felt by parents and the true occurrence of delinquency as reported by peers, as this study relied purely on youth self-report measures. However, some research has found that youth's perceptions are more important in predicting behavior than the actual behaviors they perceive. In this case, using adolescents' perceptions of parents and peers may indeed be a strength of this study.

According to a review by Kandel (1996), measures of youth perceptions tend to reflect the adolescents' own projections onto others to make them appear more similar to themselves. Therefore, it is quite possible that adolescent reports in the present study overestimated the similarity between adolescent and parent moral values or adolescent and peer delinquency.

Self-report measures in general have been questioned in regards to their accuracy, as these measures rely on participants' truthful answers to personal questions of a sensitive nature and there is no way to corroborate whether respondents always answer honestly. This study would have been strengthened by the inclusion of parent or peer reports of adolescent delinquency, as a way of increasing the accuracy of the data. It also

would have been helpful to utilize a measure of peer moral values in order to make comparisons between parents and peers in terms of degree of influence; however, this study was limited to exploring peer delinquency due to the available measures that were used in the initial data collection. Therefore, cross comparisons were not able to be made in terms of the effects of parents and peers moral values. Future studies of this topic should explore peer moral values, as this study truly only assessed peers' delinquency. Although delinquent actions convey a sense of tolerance for delinquent behavior, which have been implicated in the development of moral values, one cannot be confident that these actions show the whole picture of one's moral values.

As identified by Kandel (1996), in her article on the interpersonal influences of parents and peers on adolescent delinquency, peer effects are often overestimated in the research literature on adolescent delinquency and deviancy. According to her review, at least some of the influence that has been attributed to peers actually comes in part from parental influence, in that parents play a strong role in affecting the types of peers that their children associate with. Youth also tend to select peers that are similar to them, therefore not all peer effects are the result of socialization, but rather selection plays a critical role as well. One could speculate that in the present study, some of the effects of peer delinquency on adolescent delinquency were due to adolescents self-selecting into delinquent peer groups. It is possible that the adolescent respondents who already possessed delinquent tendencies selected peers who were similar to themselves and therefore were also delinquent. The current study did not empirically explore these issues, therefore, according to Kandel, one must be cautious about interpreting findings on the peer effects so as not to discount the potential for other sources of underlying influence.

Finally, the present study did not examine the reciprocal effects that adolescents may have on their peers. For instance, in the present study, it is possible that adolescents' own moral values influenced peers' delinquent behavior as well. The longitudinal nature of this study helps preserve the predictive nature of this relationship, but it is also possible that these effects were already in place prior to the baseline measure. Multicollinearity issues prevented me from controlling for the effects of time one adolescent moral values and adolescent delinquency when running regression analyses, thus limiting my ability to ascertain the true direction of effects. Extending the time length of the longitudinal study and beginning earlier in the adolescence period may help explore these issues.

Future Directions

Findings of this study highlight the importance of understanding the role of morality in adolescent delinquent behavior. The significance of these findings point to the need for future research on adolescent morality and the development of moral values in youth, as the current literature on such topics are fairly limited. Specifically, it will be important for future research to investigate other contexts in which morality develops, potentially through religious affiliation or faith beliefs. Another relevant topic to explore would be how one forms a moral conscience and how this relates to one's system of moral values.

Perhaps one of the most salient issues related to prevalence of delinquency is gender; therefore an appropriate future direction would be to explore the moderating role of gender in relation to adolescent morality and delinquent behavior. Much of the research on juvenile delinquency documents the gender phenomenon in which juvenile

crimes tend to be committed at disproportionately higher rates by males and minorities. The research suggests that male offenders not only commit more delinquent acts than female offenders, but they also commit crimes that are more severe. Mears, Ploeger and Warr (1998) found a higher prevalence of delinquency and severity of criminal activity among male offenders. Similarly, Anderson, Holmes, and Ostresh (1999) found that boys, on average, reported more severe delinquency than girls. Likewise, Piquero, Gover, MacDonald, and Piquero (2005) found that gender differences exist in the frequency and level of delinquent behavior that youth engage in. For example, Piquero et al. (2005) found that male youth tended to engage in property crimes, such as shoplifting or vandalism, more frequently than female youth.

The available literature suggests that the division of criminal activity by gender can be partially attributed to the varying amount of time each gender spends with delinquent peer groups, thus it might also be worthwhile to dissect time spent with delinquent peers from attachment to such peers in future research. Mears et al. (1998) found that males aged 11-17 were more likely than females of the same age group to associate with deviant peers. Differential peer association by gender was found to account for the variance in delinquent behavior. Having delinquent peers was significantly and positively related to delinquency for male youth while negatively and insignificantly related to delinquency for female youth (Mears et al., 1998). In support of these findings, Piquero et al. (2005) also found that male youth were more likely than female youth to associate with delinquent peers. However, findings from this study indicate that even when variables such as prior delinquency and delinquent peers are controlled, the relationship between gender and delinquency remained.

Not only do male adolescents commit delinquent acts disproportionately more than female adolescents (Puzzanchera, 2009), but evidence suggests that there is a difference in the way that boys' and girls' attachment is linked with delinquency (Anderson, Holmes, & Ostresh, 1999). Results suggested that boys demonstrated a strong negative association between the severity of their delinquent behavior and the security of their attachment to parents and family structure. Girls, on the other hand, demonstrated a strong negative association between the severity of their delinquent behavior and the security of their attachment to school and peers. Thus, family structure and parental attachment may be more meaningful in terms of delinquency outcomes for boys than for girls (Anderson, Holmes, & Ostresh, 1999).

Recidivism rates are also found to be greater among male offenders than among female offenders (Langan & Levin, 2000), indicating that male offenders may have a more difficult time reforming than female offenders. These findings indicate that it will be important to explore gender differences in future studies, as there is a general disparity of delinquent acts and reformation among male and female adolescents.

Conclusion

This innovative study adds to the literature by exploring an understudied concept, morality as it relates to adolescent delinquency. Specifically, these results show that adolescent morality is an important mediator between parent and peer relationships and adolescent delinquency. Further, these findings implicate attachment security as an important moderator of the relationship between peer and adolescent delinquency, with adolescents who are insecurely attached or have low levels of peer attachment faring worst in terms of how their peers' delinquency influences their own delinquency.

Implications of this finding will be important for future prevention and intervention efforts as they highlight the importance of developing secure attachments to peers. Although it is important for youth to develop relationships with the “right” type of peer, as seen by the predictive relationship between peer delinquency and adolescent delinquency, it may be just as important for youth to have strong, high-quality relationships with peers in general.

Additionally, these findings showed that although peers’ behavior greatly influences adolescent delinquency, parents continue to affect their adolescents’ delinquency by influencing the types of moral values that youth internalize. These findings imply that it is crucial for parents to model the types of moral values they want their offspring to share, as these are strongly related to the types of behaviors youth will engage in.

In conclusion, this study has demonstrated several precursors of delinquency and has examined significant mediating and moderating pathways by which these precursors impact delinquency. Parents and peers both play important roles in the occurrence of adolescents’ delinquent behavior; therefore, interventions or prevention efforts that are comprehensive and multicontextual are likely to be most successful. Such efforts are highly important, as adolescent delinquency is a costly social problem that can have long-term negative effects, not only on the adolescent but on the family and community as well.

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