Peer relations among female delinquents: A study of racial/ethnic differences and violence

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PEER RELATIONS AMONG FEMALE DELINQUENTS:
A STUDY OF RACIAL/ETHNIC DIFFERENCES
AND VIOLENCE

by

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Bachelor of Arts
Grinnell College
1999

A thesis submitted in partial fulfillment
of the requirements for the

Master of Arts Degree in Psychology
Department of Psychology
College of Liberal Arts

Graduate College
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Master of Arts in Psychology.

Examination Committee Chair

Dean of the Graduate College

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ABSTRACT

Peer Relations Among Female Delinquents: A Study of Racial/Ethnic Differences and Violence

by

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Recent increases in violence rates among female juveniles, especially African Americans and Hispanics, have necessitated an investigation of contributors to violence. The present study examines differential aspects of peer relationships as predictors of violence among female juvenile offenders, taking racial/ethnic differences into account. Questionnaires assessing for peer relationship variables (i.e., attachment, perceptions of delinquency, involvement in peer pressure, and association with delinquent peers) and delinquent and violent behavior were administered to 136 female juvenile offenders. The results showed that high levels of peer association and extrinsic rewards from peer relationships best predicted violence among female juvenile offenders. Among Caucasians, African Americans, and Hispanics, separate dimensions of peer relationships differentially predicted violent behavior.
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CHAPTER 1

INTRODUCTION

Violence and delinquency among adolescents has historically been an area of interest and concern among researchers and mental health professionals (Bowker, 1978; Chesney-Lind & Brown, 1999; Heimer & De Coster, 1999; Jensen & Eve, 1976). A particular area of study that has gained increasing attention has been sex differences between males and females in offenses committed. Research has shown that while the patterns of violence and delinquency of males and females are similar over time, males commit delinquent and violent acts in greater proportion and with more frequency than do females (Bowker, 1978; Canter, 1982; Chesney-Lind & Brown, 1999; Daly, 1998). However, the majority of existing research has focused mainly on male adolescents (Bowker, 1978; Canter, 1982; Chesney-Lind & Brown, 1999; Daly, 1998), whereas studies that include female adolescents have centered on minor delinquent and status offenses, paying little attention to violent offenses (Bowker, 1978; Canter, 1982; Chesney-Lind & Brown, 1999; Daly, 1998). Recent research suggests that more information on violence among female juveniles is needed (Chesney-Lind & Brown, 1999; Daly, 1998).

In recent years, increasing evidence indicates that violence among female juveniles has become more prevalent (Chesney-Lind & Brown, 1999; Daly 1998). The Federal
Bureau of Investigation Uniform Crime Reports (FBI UCR, 2001) revealed that in 2001 119,287 females and 287,819 males under the age of 18 were arrested for either property or violent crimes. Moreover, the violent crime index, an index of arrest rates for murder, manslaughter, forcible rape, robbery, and aggravated assault, increased by 112.5% among 10-17 year-old females between 1990 and 2000 (FBI UCR, 2001). Snyder (2002) found that between 1980 and 2000, the arrest rate of juvenile females increased by 35% whereas the arrest rate of males decreased by 11%. According to the Office of Juvenile Justice and Delinquency Prevention (OJJDP), females represented 25% of all juveniles arrested and 15% of all juveniles arrested for violent crimes in 1996 (OJJDP, 1998a; 1998b). These statistics suggest that whereas female adolescents are arrested less in overall numbers, violent offenses by females have increased proportionally at a greater rate than offenses by males.

The statistics for ethnic minorities indicated an alarming gap in arrests for violent crimes. In 2000, 42% of juveniles arrested for violent crimes were African American, whereas African Americans represented only 16% of the people under the age of 18 (Snyder, 2002). By comparison, 55% of juveniles arrested for violent offenses were Caucasians, whereas Caucasians represent 79% of the juvenile population. Thus, a disproportional number of African American juveniles were arrested for violent crimes (Snyder, 2002). The violent crime index arrest rate of African Americans was four times that of Caucasians (Snyder, 2002). Population information on Hispanics, which is an ethnic designation as opposed to a race, was subsumed under the classification of Caucasian and not separately reported by Snyder (2002). Of juveniles incarcerated in 1997, 40% were African American, 37.5% were Caucasians, and 18.5% were Hispanic.
(Gallagher, 1999). In 1999, Caucasian females accounted for 47% of females in the detention centers across the county, whereas African American females accounted for 35% of the detention population and Hispanic females accounted for 13% of the detention center population (Census of Juveniles in Residential Placement Databook, 1999). Although there has been little research on female adolescents and violence, even fewer studies have focused on ethnic differences among female delinquents. Most studies examining delinquency among African American females compare this population with that of Caucasians. The lack of research in this area is astounding given that African American and Hispanic females are disproportionately represented in the juvenile justice system (Ageton, 1983; FBI UCR, 2000; League of Women Voters of California, 1996; Snyder, 2002).

Criticisms of delinquency research have revealed that information pertaining to the number of female juveniles and incidents of violence or delinquency may have been misconstrued due to changes in the definitions of violence (Bergsmann, 1989; Chesney-Lind & Brown, 1999), recent changes in the management of females in the juvenile justice system (Chesney-Lind & Brown, 1999), and underreporting (Bowker, 1978). For example, family-centered altercations, such as a girl hitting her mother, that were historically defined as status offenses, recently were relabeled assault (Chesney-Lind & Brown, 1999). The previous official reports reflected lower rates of violence among juvenile females than actually occurred because some violent offenses were labeled as less serious crimes (Chesney-Lind & Brown, 1999). Although the data appear to indicate an increase in female juvenile violence, the data may be inflated due to recent recognitions of inaccuracies in collecting information (Chesney-Lind & Brown, 1999).
Thus, instead of a sudden rise in arrest rates among juvenile females for violent crime, recent data may be an indication that female juveniles have committed violent offenses both in the past and present, but official reports are only now acknowledging the extent of violence among females (Chesney-Lind & Brown, 1999; Giordano, Cernkovich, & Pugh, 1986; Heimer & De Coster, 1999; Morash, 1986). Current official reports on violence among female juveniles have given researchers cause to investigate risk factors for this population.

Delinquency research has identified several risk factors, conditions associated with increased probability of involvement in negative behaviors (Deković, 1999), that have been shown to be interrelated, as well as moderated by gender and ethnicity (Elliot, Huizinga, & Ageton, 1985; Hoyt & Scherer, 1998; Jensen & Eve, 1976). These vulnerabilities include familial relationships (Brendgen, Vitaro, & Bukowski, 1998; Patterson & Dishion, 1985; Poole & Regoli, 1979; Seydlitz, & Jenkins, 1998; Vitaro, Brendgen, & Tremblay, 2000), peer relationships (Brendgen et al., 1998; Brendgen, Vitaro, & Bukowski, 2000; Jesser, Van Den Bos, Vanderryn, Costa, & Turbin, 1995; Marcus, 1996; Mears, Ploeger, & Warr, 1998; Patterson & Dishion, 1985; Poole & Regoli, 1979; Vitaro et al., 2000), psychopathology (Kataoka, Zima, Dupre, Moreno, Yang, & McCracken, 2001; McManus, Alessi, Grapentine, & Brickman, 1984; McManus, Brickman, Alessi, & Grapentine, 1984; Pliszka, Sherman, Barrow, & Irick, 2000), academic performance (Deković, 1999; Jesser et al., 1995; Patterson & Dishion, 1985), and socioeconomic status (SES). Among these risk factors, studies have found support that both family relationships and peer relationships are the most significant vulnerabilities for a juvenile to engage in violent and/or delinquent behavior (Agnew, 1985).

From a familial perspective, research has indicated that specific aspects of family relationships, such as levels of familial support (Gorman-Smith, Tolan, Zelli, & Huesman, 1996; Henggeler, Edwards, & Bourduin, 1987; Hoge, Andrews, & Leschied, 1996), monitoring (Deković, 1999; Pattern & Dishion, 1985; Vitaro et al., 2000), and adolescents’ attachment to the family (Deković, 1999; Kroupa, 1988), are associated with violence and delinquency. Whereas some studies have found that association with delinquent peers is more influential on delinquent behavior than are familial relationships (Bowker & Klein, 1983; Keenan et al., 1995), other research showed that the influence delinquent peers have on adolescents’ involvement in delinquency may be dependent on the quality of the familial relationships (Brendgen et al., 1998; Deković, 1999; Poole & Regoli, 1979; Vitaro et al., 2000).

Adolescents’ familial relationships have been found to interact with peer relationships to contribute to violence and delinquency (Brendgen et al., 1998; Keenan, Loeber, Zhang, Stouthamer-Loeber, & Van Kammen, 1995; Licitra-Kleckler & Waas, 1993; Poole & Regoli, 1979; Vitaro et al., 2000). In general, research showed that high attachment to family may reduce the potential influence of deviant peers on adolescents, whereas weaker familial attachment has been associated with higher affiliations with delinquent peers and more influence by these peers (Brendgen et al., 1998; Keenan et al., 1995; Poole & Regoli, 1979; Vitaro et al., 2000). Studies have shown that delinquents experience higher levels of conflict (Henggeler, 1987; Hoge et al., 1996; Kroupa, 1988).
and lower levels of attachment in familial relationships (Gorman-Smith, 1996), as compared with nondelinquents. It has been theorized that adolescents who have weaker emotional bonds to their families are more likely to seek sources of emotional support and acceptance of peers (Brendgen et al., 1998; Keenan et al., 1995; Licitra-Kleckler & Waas, 1993; Poole & Regoli, 1979; Vitaro et al., 2000). Additionally, when adolescents are less attached to and have more conflicted relationships with their parents, they may be more susceptible to peer influence; in particular, influence by deviant peers (Brendgen et al., 1998; Keenan et al., 1995; Licitra-Kleckler & Waas, 1993; Poole & Regoli, 1979; Vitaro et al., 2000).

Aspects of peer relationships and their influence on delinquency have also been examined (Agnew, 1991; Brendgen et al., 2000; Gardner & Shoemaker, 1989; Giordano et al., 1986; Mears et al., 1998; Morash, 1986). These aspects include attachment to peers (Agnew, 1991; Claes & Simard, 1992; Gardner & Shoemaker, 1989; Giordano et al., 1986; Pleydon & Schner, 2001), perceived delinquency of peers (Agnew, 1991; Claes & Simard, 1992; Giordano et al., 1986; Liska, 1973; Mears et al., 1998; Morash, 1986; Patterson & Dishion, 1985; Poole & Regoli, 1979; Short, Jr., 1958; Warr & Stafford, 1991), perceived peer attitudes towards delinquency (Liska, 1973; Mears et al., 1998; Warr & Stafford, 1991), peer pressure (Giordano et al., 1986; Pleydon & Schner, 2001), and time spent with delinquent peers (Agnew, 1991; Brendgen et al., 2000; Claes & Simard, 1992; Gardner & Shoemaker, 1989; Giordano et al., 1986; Mears et al., 1998; Morash, 1986; Short, Jr., 1958).

Whereas the quantitative aspects of peer relationships (e.g. proportion of delinquent peers, time spent with delinquent peers, and types of peer delinquent activity) have been
the most studied in delinquency research (Agnew, 1991; Claes & Simard, 1992; Giordano et al., 1986; Jensen & Eve, 1976; Keenan et al., 1995; Poole & Regoli, 1979), the qualitative aspects of peer relationships, which include peer attachment and emotional support, have received little attention (Claes & Simard, 1992; Giordano et al., 1986; Mears et al., 1998). The focus on the quantitative aspects of peer relationships in delinquency research may be due, in part, to early theories that characterized delinquent friendships as lacking high levels of attachment (Hirschi, 1969) or theories that emphasized time spent with delinquent peers as the main influence on adolescents’ delinquency (Sutherland & Cressey, 1955). Another reason that studies have used quantitative measures of peer relationships is that the number of delinquent peers and time spent with delinquent peers can be measured with objective questions, for example “How much time do you spend with friends on weekdays?”, as opposed to subjective questions needed to measure the qualitative aspects, such as “How much do you trust your friends?” (Claes & Simard, 1992; Giordano et al., 1986).

Research on the quantitative aspects of peer relationships has shown that adolescents who have committed delinquent and/or violent acts are more likely to have delinquent friends and spend more time with their delinquent friends than are nondelinquent adolescents (Brendgen et al., 2000; Keenan et al., 1995). However, association with delinquent peers does not explain the mechanisms through which peer relationships influence delinquency. Research on the qualitative aspects of peer relationships may provide insight into how peer relationships influence delinquency (Claes & Simard, 1992; Giordano et al., 1986; Pleydon & Schner, 2001).
Although delinquency research has concentrated on the quantitative aspects of peer relationships, previous studies indicated that the qualitative aspects also influence delinquency (Agnew, 1991; Brendgen et al., 2000; Claes & Simard, 1992; Gardner & Shoemaker, 1989; Giordano et al., 1986; Marcus, 1996). Studies on the emotional qualities of peer relationships found conflicting results. In general, studies that took into account a variety of aspects of peer relationships have found evidence of higher levels of attachment to peers (Brendgen et al., 2000; Claes & Simard, 1992; Gardner & Shoemaker, 1989; Giordano et al., 1986), whereas studies that assess for fewer aspects of peer relationships have found that delinquents are less attached to their peers (Agnew, 1991; Marcus, 1996).

In summary, delinquency research has emphasized the quantitative aspects of peer relationships rather than the qualitative aspects. This emphasis on the quantitative aspects of peer relationships may relate to why delinquency studies have focused on males and not examined peer relationships among females. For example, previous researchers theorized that males associate with more violent and delinquent peers than do females (Giordano et al., 1986; Heimer & De Coster, 1999; Morash, 1986). This idea has been supported by studies that have found that adolescent females spend less time with delinquent peers and have fewer delinquent peers (Heimer & De Coster, 1999; Morash, 1986). Such studies inherently emphasize quantitative measures of peer roles. However, because few studies investigated the qualitative aspects of peer relationships, the influence of peers on female delinquency may be underestimated (Giordano et al., 1986; Heimer & De Coster, 1999; Jensen & Eve, 1976; Morash, 1986). Studies have found that females may be more susceptible to peer pressure and more emotionally attached to peers.
than are males to peers (Berndt, 1992; Claes & Simard, 1992; Giordano et al., 1986; Keenan et al., 1995; Morash, 1986). Also, both delinquent and nondelinquent adolescent females have reported higher levels of caring, trust, self-disclosure, empathy, and communication than their male counterparts (Claes & Simard, 1992; Giordano et al., 1986). Whereas adolescent females may have fewer delinquent peers and spend less time with peers, they may be more emotionally attached to their peers than are males. Thus, peer relationships may be as influential, or more influential, on violence and delinquency among female adolescents, given the significance associated with these attachments.

Little research exists regarding how peer relationships may influence delinquency differently among racial/ethnic groups. Most previous research on racial/ethnic differences focused solely on African Americans and Caucasians and did not examine gender differences within racial groups (DuRant et al., 1994; Famworth, 1984; Joseph, 1995; Williams, Ayers, Abbott, Hawkins, & Catalano, 1999). Of the few studies in this area, most research examined how peer relationships influence gang violence and delinquency (Curry & Spergel, 1992; Lyon, Henggeler, & Hall, 1992). Findings from studies on gang violence and delinquency may be insufficient to generalize to nongang delinquents because of evidence that gang members differ significantly from nongang delinquents in severity of offenses (Lyon et al., 1992) and personality (Thompson & Lozes, 1976). However, these studies have suggested that institutionalized racism and discrimination, racial tension, and perceived limited opportunities affect how African American and Hispanic peer relationships differ from Caucasian peer relationships in influencing violence and delinquency (Curry & Spergel, 1992; Fishbein & Pérez, 2000; Hill, Soriano, Chen, & LaFromboise, 1994; Lyon et al., 1992).
Moreover, current research reveals that differential factors contribute to violence and delinquency as a function of sex and ethnic status (Farnworth, 1984). Although there are few studies in this area on minority female adolescents, results have shown differences in how peer relationships influence delinquency for African American and Caucasian females (Giordano, 1978; Giordano et al., 1986). For example, Giordano et al. (1986) found that African Americans perceived less peer pressure to become involved in delinquency than Caucasians.

Also, previous research suggested that the sex differences in perceived supportiveness of peer relationships may be even greater for African Americans and Hispanics than for Caucasians (Bradley, Flannagan, & Fuhrman, 2001; Way & Chen, 2000). Studies by Joseph (1995) and Williams et al. (1999) supported the need for separate models of prediction of delinquency for African Americans and Caucasians. Further investigation on ethnic differences among female delinquents, especially with regards to violence, is necessary to determine how peer relationships influence violence and delinquency.

However, a limitation of these findings is that most studies defined peer relationships by only one or two of these dimensions (e.g., association with delinquent peers) without obtaining a more complete picture of the influence of multiple aspects of peer relationships on delinquency and violence (Agnew, 1985; Brendgen, 1998; 2000; Deković, 1999; Keenan et al., 1995; Patterson & Dishion, 1985; Poole & Regoli, 1979). Therefore, association with delinquent peers may appear to be the most influential because it is the characteristic of peer relationships most often examined. Another limitation is that the majority of studies on sex differences in delinquent peer relationships focus solely on differences between males and females rather than examine
differences within males and females groups (Brendgen et al., 2000; Claes & Simard, 1992; Giordano et al., 1986; Marcus, 1996), despite evidence that different factors contribute to violence among females than among males (Daly, 1998; Heimer & De Coster, 1999). Finally, although studies on violence and delinquency report racial/ethnic and sex differences (DuRant et al., 1994; Farnworth, 1984; Giordano et al., 1986; Jensen & Eve, 1976; Joseph, 1995; Williams et al., 1995), few of these studies have investigated the combination of these factors. For instance, there is little existing research on differences in risk factors for delinquency between African American females and Caucasian females (Bowker & Klein, 1983; Giordano, 1978).

In summary, females appear to have fewer delinquent friends and spend less time with delinquent peers, which could partially account for the sex frequency in frequency of violent and delinquent behavior (Heimer & De Coster, 1999; Morash, 1986). Female juveniles who have committed violent and delinquent offenses may have as many delinquent friends and spend as much time with these delinquent friends as do their male counterparts (Giordano, 1978; Giordano et al., 1986; Morash, 1986). Additionally, this population may have stronger attachment to delinquent friends and be more influenced by peer pressure (Berndt, 1992; Claes & Simard, 1992; Giordano et al., 1986; Keenan et al., 1995; Morash, 1986). Differences among female offenders, such as racial/ethnic differences and type of delinquent act (violent vs. nonviolent), may affect peer relationships in this population.

The present study aims to investigate how peer relationships affect violence and delinquency among juvenile African American, Caucasian, and Hispanic females. This study differs from previous studies in that violent and delinquent females will be
compared with each other instead of with nondelinquent females or violent and
delinquent males (Giordano, 1978; Heimer & De Coster, 1999; Shover, Norland, James,
& Thorton, 1979). Additionally, the present study examines factors contributing to
violent crime among female juveniles (Giordano, 1978; Heimer & De Coster, 1999;
Jensen & Eve, 1976; Shover et al., 1979).

The purposes of the present study are to explore: (1) which aspects of peer
relationships, including attachment, perceptions of peer attitudes toward delinquency,
involvement in peer pressure, and association with peers, are related to violence and
delinquency among female juveniles; (2) how peer relationships among adjudicated
females differ among Caucasians, African Americans, and Hispanics; and (3) how peer
relationships differ for violent versus nonviolent juvenile female offenders.
Patterns of Violence and Delinquency

Historically, studies of violence and delinquency have found that patterns and trends of offenses among juvenile females parallel offenses among juvenile males (Bowker, 1978; Canter, 1982; Chesney-Lind & Brown, 1999; Daly, 1998; Steffensmeier & Allan, 1996). In other words, offenses tend to increase and decrease for both sexes in the same time periods. For instance, Bowker (1978) compared Uniform Crime Reports and self-report statistics for female crime between 1966 and 1976 and found that female violent crime increased as much as male violent crime during this time period. However, rates of violent crime showed a greater increase among female juveniles than among adult females. Canter (1982) examined patterns of sex differences in self-report delinquency from the National Youth Survey in 1977. Results indicated that the overall patterns of male and female delinquency were similarly distributed in types of offenses, except males were involved in delinquent acts (especially in violent crimes) with more frequency and in greater proportions than females.

More recently, research suggests that violent and delinquent offenses among juvenile females continue to increase (Chesney-Lind & Brown, 1999; Daly, 1998; Hoyt &
Scherer, 1998; Steffenmeier & Allan, 1996; Snyder, 2002). Between 1980 and 2000, female arrest rates increased by 35% whereas arrest rates for male juveniles decreased by 11% (Snyder, 2002). For violent crimes (i.e. murder, forcible rape, robbery, burglary, aggravated assault, theft, and arson), female juvenile arrest rates increased by 42% between 1985 and 1994 (Chesney-Lind & Brown, 1999) and females accounted for 25% of all juvenile arrests in 1994 and 1995 (Hoyt & Scherer, 1998). Despite this alarming rise in female juvenile arrests, one should not infer that juvenile females are committing substantially more violent and delinquent offenses. Statistics should be interpreted cautiously as past statistics may be confounded by differential treatment of females in the juvenile justice system (Bowker, 1978; Hoyt & Scherer, 1998; MacDonald & Chesney-Lind, 2001), legal definitions of violence (Chesney-Lind & Brown, 1999), small base rates (Bowker, 1978), and underreporting by females (Bowker, 1978).

Identification of these flaws in previous statistical collection has led to improved methods of data collection on female juvenile violence, but limits comparisons between past and present studies, as the previous legal definitions of violence and treatment of females within the juvenile justice system may have underrepresented violence among females (Chesney-Lind & Brown, 1999). For example, within the juvenile justice system, females are less likely to be arrested and adjudicated. However, arrested females are more likely to be sentenced for less serious offenses and receive more severe sentences for similar offenses than are males (Hoyt & Scherer, 1998). Additionally, an increase in a procedure called bootstrapping, which is “the rearrest of adjudicated minors for violation of court orders” (Hoyt & Scherer, 1998, p. 84), has increased arrest rates of females for minor offenses such as violation of probation. A study by MacDonald and
Chesney-Lind (2001) comparing treatment of male and female juvenile offenders in the Hawaiian juvenile justice system found that males and females were adjudicated and disposed differently as a function of severity of charges.

In addition to case management within the juvenile justice system, relabeling of former status offenses (e.g., domestic violence by a child against a parent) as violent offenses has inflated the arrest rates among females (Chesney-Lind & Brown, 1999). Bowker (1978) proposed two other possible contributors to this sharp increase in female delinquency, which are the small initial base rate of female arrests and the tendency of official reports to underreport female delinquent offenses. In fact, Chesney-Lind and Brown (1999) found that self-report data actually showed a decrease in violent offenses for female juveniles.

In summary, whereas historically patterns of offenses among juvenile females generally parallel male offenses (Bowker, 1978; Canter, 1982), recent data reveals increases in female juvenile violence and delinquency (Chesney-Lind & Brown, 1999; Daly, 1998; Snyder, 2002; Steffensmeier & Allan, 1996). However, the rise in female delinquency may not be as extreme as reports present, due to changes the juvenile justice system and legal definitions of violence and sole reliance on official arrest rates without consideration to self-report data (Chesney-Lind & Brown, 1999; Hoyt & Scherer, 1998). In conclusion, female juveniles appear to be more involved in violence and delinquency than previously reported, although not as substantially as implied by statistics.

Theoretical Background on Female Delinquency

Few theories have been formulated about female juvenile offenders’ involvement in violent and delinquent offenses. Often, explanations for female delinquency have been
subsumed under theories on male delinquency (Figueira-McDonough, 1985; Giordano, 1978; Mears et al., 1998; Steffensmeier & Allan, 1996). The most well-cited theories for female juvenile violence and delinquency are “opportunity and controls” (Giordano, 1978; Hoyt & Scherer, 1998; Shover et al., 1979; Steffenmeier & Allan, 1996), masculinity or gender roles (Heimer & De Coster, 1999; Shover et al., 1979), and differential association (Heimer & De Coster, 1999; Jensen & Eve, 1976).

According to opportunity and controls theory, juveniles are more likely to engage in delinquent activities when they have more opportunities, such as unsupervised time, and fewer controls, such as low attachment to others who subscribe to conventional beliefs (Shover et al., 1979). Historically, females had fewer opportunities than did males to engage in delinquency due to having more controls placed on them, such as receiving higher levels of parental monitoring (Heimer & De Coster, 1999; Jensen & Eve, 1976; Shover et al., 1979). Females who commit crimes have more opportunity and fewer controls (Steffenmeier & Allan, 1996). Thus, control theory, which was developed from research on delinquent males, has received support when applied to female delinquents (Jensen & Eve, 1976; Shover et al., 1979), but most research has focused on minor delinquency and has been limited by small female sample sizes (Steffensmeier & Allan, 1996).

One well-known study based on opportunities and controls theory by Jensen and Eve (1976) investigated the sex differences in official reports and examined whether type of offense differed as a function of sex using self-report data. The authors hypothesized that sex differences may be due to females being more attached to conventional others, being more closely supervised and emotionally supported by parents, and holding stronger
beliefs in following the law than do males. As expected, official records showed that males are more involved in delinquency than are females with the largest sex difference found in fighting offenses. Social bonds and delinquent friends explained the largest amount of variance in the difference between males’ and females’ reported frequency of offenses, although no single variable accounted for a significant amount of variance. The study was limited to mostly nonviolent offenses such as theft and vandalism and only included one question on violent offenses (fighting). As evidenced from statistics, violent crimes are an area of the largest sex difference for delinquent behavior, which may suggest that the study neglected to examine the offenses with the largest gender gap. The influence of social bonds and delinquent friends on males and females may differ for those who have committed more violent offenses.

From a feminist perspective, masculinity or gender roles theory argued that the traditional feminine role, unlike the traditional masculine role, prohibits criminal behavior (Shover et al., 1979). The traditional masculine role dictates that physical aggression and minor delinquency are considered acceptable, and even encouraged. The traditional feminine role, which stresses passivity and physical and emotional weakness, does not coincide with violence. Females are less likely than males to be taught that violent behavior is acceptable and, therefore, they are less likely to learn violent behavior (Heimer & De Coster, 1999). Thus, it has been theorized that females who do not adhere to the traditional feminine role or who identify more with the masculine role are more likely to commit criminal acts because they lack the restraints against criminal behavior placed on them by the traditional feminine role (Heimer & De Coster, 1999; Shover et al., 1979).
A study based on gender roles or feminist theory by Mears et al. (1998) investigated the role of moral evaluations in moderating the relationship between deviant peers and delinquency for males and females. Females were hypothesized to be less susceptible to the influence of delinquent peers because females are socialized to be more inhibited by moral evaluations than are males. Using data from the National Youth Survey, the effects of disapproval of delinquency were stronger for females than for males, but there was no sex difference in influence of deviant peers on delinquency when the participant had little or no disapproval of delinquency. The study supported gender role theory in that strong moral evaluations associated with the feminine gender roles inhibited delinquency.

Another study on both masculinity/gender roles theory and opportunity and controls theory by Shover et al. (1979) explored whether gender roles would be indirectly related to delinquency through opportunity to engage in delinquency, attachment to conventional others, and beliefs about rules and laws. The researchers surveyed 8th through 12th grade males and females about their participation in property and aggressive offenses, adherence to traditional gender roles, opportunities to engage in delinquency, beliefs of the validity of rules and the law, and attachment to conventional others (teachers and parents). In general, the results were more consistent with opportunity and controls theory than with masculinity theory for property crimes but the results for aggressive offenses supported both theories. As anticipated, females who committed aggressive offenses identified less with the traditional feminine role. However, opportunity, attachment to conventional others, and belief in rules and laws were directly related to identification with femininity roles but not related to the likelihood of committing
aggressive offenses. This study found that opportunity and controls theory had good explanatory power for property crimes, but aggressive crimes were better accounted for by a combination of the two theories.

Differential association theory, applicable to both sexes, suggests that groups, such as families or peers whose norms, values, and practices are more permissive of criminal behavior, are more likely to have members that participate in delinquent and violent activities (Heimer & De Coster, 1999). Similar to masculinity or gender roles theory, norms, values, and practices that are consistent with criminal behavior usually coincide with the traditional masculine gender role. Females are less likely to be members of groups holding such values, and, therefore, are less likely to participate in delinquent acts.

In a comprehensive study of violence among adolescent females, Heimer and De Coster (1999) created and tested a theoretical model based on differential association theory, feminist theory, and gender studies. The model illustrated how cultural mechanisms, such as family controls and peer associations, curb violence for female adolescents. For example, female adolescents were more supervised by parents, had stronger emotional bonds with their parents, and were less likely to have aggressive friends than were males. The authors analyzed data from the National Youth Survey and found results consistent with their model. Specifically, the analyses indicated that family had a stronger influence on females than on males, females learned fewer violent behaviors, and suggested the feminine gender role taught females that violence is inconsistent with femininity. Findings indicated that adherence to femininity and family
attachment were inversely related to number of violent offenses among female juveniles, which supported gender roles and opportunity and controls theories.

In conclusion, the previous studies have partially supported all three theories of sex differences in violence and delinquency among juveniles. From this evidence, theories of sex differences in delinquency need to incorporate both the macro (e.g., gender roles, cultural influence) and micro (e.g., familial support, peer relationships) social influences (Heimer & De Coster, 1999; Mears et al., 1998; Morash, 1986; Shover et al., 1979). However, few studies have investigated how racial/ethnic differences among female juveniles may affect different factors that contribute to violence and delinquency.

Racial/Ethnic Differences in Violence and Delinquency

Studies of sex differences in violence and delinquency have paid little attention to racial/ethnic differences despite recent suggestions in delinquency research that race/ethnicity interacts with sex (Kruttschnitt, 1993; Steffensmeier, 1993; Steffensmeier & Allan, 1995) and the findings that minorities tend to be overrepresented in the juvenile justice system. In fact, the Office of Juvenile Justice and Delinquency Prevention, the main source for current information on juvenile arrest rates, only reports juvenile arrest rates by racial/ethnic categories or by gender, but does not report arrest rates for males and females within each racial/ethnic group. However, historical data shows that from 1976 to 1980, African American females were involved in delinquency disproportionately more than were Caucasian females (Ageton, 1983). According to more recent data on the female juvenile offender population, both African Americans and Hispanics are disproportionately represented in detention facilities where African Americans represent nearly half of the population and Hispanics represent 13% of the

Information on the interaction of racial/ethnic and sex differences in delinquency is scarce. Studies on sex and racial/ethnic differences in peer relationships and their influence on delinquency often do not analyze differences between minority and Caucasian females. For example, Jensen and Eve (1976) ran separate regression equations for Caucasians and African Americans and for males and females, but did not combine sex and ethnicity. However, the authors found that the social control theory was more effective in explaining delinquency for Caucasian participants than for African American participants, which may indicate racial differences in the influence of peer relationships on delinquency.

Although few studies of delinquency have examined both sex and racial/ethnic differences, some studies with a sample of only female delinquents have reported racial/ethnic differences within this population (Bowker & Klein, 1983; Giordano, 1978). Giordano (1978) investigated peer relationships and delinquency and found that African American females reported that they were more likely to get into trouble with a group of females than were Caucasian females. African Americans were less likely to differentiate between how male or female friends would view delinquent behavior than were Caucasian females. Results indicated a greater tendency for African American females to commit delinquent acts with other females than for Caucasian females. In a study with only African American females, Bowker and Klein (1983) explored the social structure of juvenile delinquents and gang members. The authors found that frequency of
social contact with female friends was correlated highly with frequency and severity of
delinquent acts and with the likelihood of gang membership. Familial relations and
relations with a boyfriend were not significantly correlated with frequency and severity of
delinquent acts or with the likelihood of gang membership. Whereas this study suggested
that peer influence was a greater influence on delinquency than were either parents or
boyfriends for African American females, the study was based on correlational analyses
and did not measure the quality of the peer relationships. Both Bowker and Klein (1983)
and Giordano (1978) illustrated the need for more research on ethnic differences among
female delinquents, especially with respect to peer relationships.

Peer Influence on Violence and Delinquency

Differential Association Theory

Although several theories have been developed to explain the influence of peer
relationships on delinquency, the theories most researched are differential association
(Short, Jr., 1958; Sutherland & Cressey, 1955; Warr & Stafford, 1991), social control
(Agnew, 1985; Gardner & Shoemaker, 1989; Hindelang, 1972; Hirschi, 1969; Liska,
1973), and social learning theories (Agnew, 1991). Differential association theory
(Sutherland & Cressey, 1955) hypothesizes that juveniles have differential access to
delinquent and/or conventional values through interactions with other people. The more
exposure to people who approve of breaking the law, the more likely the juvenile is to
learn attitudes favorable to violations of the law. As applied to delinquent peers, the
theory proposes a positive correlation between delinquency and association with
delinquent peers. Research on this theory focuses on the relationships between frequency
of contact, duration of friendship, priority of friendships, intensity of relationships with
delinquent peers, and severity of delinquency (Agnew, 1991; Short, Jr., 1958; Warr &

Short, Jr. (1958) tested differential association theory with male and female juveniles
in training and public high schools using questionnaires on the frequency, duration,
priority, and intensity of contact with delinquent peers and self-report of delinquent
offenses, which included stealing, skipping school, physical aggression, use of
substances, and sexual relations. Results indicated that having delinquent friends was
positively correlated with delinquent acts reported by participants. Males reported more
delinquent friends than did females. A constraint of the study was that the interactive
effects of frequency, duration, priority, and intensity were not tested, as each of these
may have provided more information about peer relationships of delinquents versus
nondelinquents.

More recently, Warr and Stafford (1991) investigated the mechanisms (peer attitudes
towards delinquency and peer delinquent behavior) through which delinquent peers
influence an adolescent, using data from the National Youth Survey of adolescent males
and females. Results showed that peer attitudes had a stronger influence on the
adolescent’s delinquency than did peer delinquent behavior. The adolescent’s own
attitude mediated the relationship between peer delinquent behavior (and attitudes) and
the adolescent’s own delinquency. For example, when an adolescent had friends who
approved of delinquency and committed delinquent offenses, and the adolescent
approved of delinquency, there was a strong positive relationship between peers’
delinquent behaviors and attitudes towards delinquency and the adolescent’s delinquent
behavior. When friends approved of delinquency and committed delinquent acts, but the adolescent did not approve of delinquency, the relationship between peers' delinquency and attitudes towards delinquency was weaker. However, when peers' delinquent behavior differed from peers' attitudes towards delinquency (i.e., when peers displayed delinquent behavior but peers did not have attitudes that approved of delinquency), peers' behavior was found to have a stronger influence on delinquency than did attitudes. The authors concluded that peers' attitudes towards delinquency were a strong predictor of delinquency mediated by the adolescent's own attitude. These findings partially support differential association theory – that peer attitudes on delinquency influence an individual's attitude about delinquent behavior and leads to delinquent behavior. A limitation of the study was that only minor delinquent acts, such as cheating, marijuana use, and larceny, were examined. The relationship among peer attitudes, peer delinquent behavior, and severe or violent behavior was not explored.

As the two previous studies indicated, differential association theory has received limited support. Whereas one asset of differential association theory is that it accounts for how peers' attitudes and behaviors influence the vulnerability to engage in delinquent behavior, however, it does not explain why some juveniles who associate with delinquent peers do not engage in delinquent behavior.

*Social Control Theory*

Another major theory about peer relationships and delinquency, social control theory, states that four kinds of strong social bonds hinder individuals from engaging in delinquent acts (Hirschi, 1969). These bonds include (1) attachment, defined as affection and respect that the individual holds for significant others such as parents, teachers, and
peers; (2) commitment, defined as investment in conventional activities; (3) involvement, defined as the amount of time spent doing conventional activities; and (4) belief, defined as commitment to the central value system of society (Hirschi, 1969). This theory proposed that delinquent youth have “cold and brittle” (Hirschi, 1969, p. 141) social relations and lack social skills. In other words, delinquents are less attached to and less influenced by their peers than are nondelinquent youth.

Social control theory was based on a study by Hirschi (1969) that found that participants who identified with, or emulated, their parents were more likely to identify with their friends. Participants who identified with their friends and respected their friends’ opinions reported fewer delinquent acts themselves and fewer friends that were picked up by the police. From these results, Hirschi concluded that participants with higher levels of attachment to peers (i.e., identification and respect for opinions) were more likely to have higher levels of attachment to parents and were less likely to report delinquent acts. However, the study was limited by a sample of only Caucasian males, which may reduce generalizability of the results for minorities or females. Additionally, the author’s definition of delinquency was different from that used in other studies. The study assessed delinquency using questions inquiring about self-identification as a delinquent and whether the participant had been “picked up by the police.” Peer delinquency was assessed by asking whether participants had friends who had been picked up by the police. Both definitions did not inquire about offenses committed and relied on indirect measures of delinquency. The definitions of delinquency also inhibit comparisons with other studies which identify delinquent behavior by measuring the self-report of frequency of delinquent offenses or using official arrest records.
Hindelang (1972) attempted to extend Hirschi’s study using a sample of both male and female juveniles and found a positive correlation between peer attachment and delinquency, a contradiction to Hirschi’s findings that peer attachment was negatively correlated with delinquency. Hindelang suggested that peer attachment may contain multiple characteristics that relate to delinquency in varied ways, instead of being a unidimensional construct. Thus, social control theory was modified to reflect that delinquents, similar to nondelinquents, can be highly attached to their peers.

Studies have found support for social control theory (Agnew, 1991; Gardner & Shoemaker, 1989; Liska, 1973). Gardner and Shoemaker (1989) examined a sample of Caucasian and African American 8th through 12th grade males and females from rural and urban locations using a measure drawn from Hirschi (1969) that assessed attachment to and conventionality of peers. The results, consistent with social control theory, indicated an inverse relationship between all delinquency measures (i.e., property-related offenses, violent behavior, drug possession, and juvenile misbehavior) and conventionality of peers. Thus, delinquents were less likely to report that their peers respect police and teachers and more likely to report that their peers got in trouble with police and teachers. Additionally, attachment to peers was positively associated with overall level of delinquency.

In another study of social control theory, Liska (1973) examined the relationships between delinquent peer association, attitudes, and involvement, taking into account the severity of delinquency. Liska tested three regression models related to severity of delinquency. The results showed that delinquent involvement preceded delinquent peer association for theft, which suggests that most participants committed theft offenses.
before they befriended other delinquents. However, for interpersonal aggression acts and vandalism, delinquent association preceded delinquent involvement, which suggests that most participants associated with delinquent peers before they became involved in aggression and vandalism. Findings from this study supported the theory that delinquent peer relationships differ depending on the severity of the offense. However, the sample (17-19 college students), was a limitation of the study because these individuals were older than those used in other studies. Another limitation of the sample was that participants were in college, which may have been a selection bias because individuals who have committed severe delinquent and violent offenses may be less likely to attend college than are individuals who have not.

Although many studies have supported social control theory, a longitudinal investigation by Agnew (1985) revealed contradictory results. The study followed a sample of males from 10th grade to 11th grade and found that the variance accounted for by peer attachment was much less (1% to 2%) than what was found in previous studies using cross-sectional data (25% to 50%). One of the strengths of this study was the longitudinal design allowed for examination of delinquency and delinquent friends over a long time period. However, the study was limited in the small number of items used to assess peer attachment (two statements). Additionally, the participants were assessed only in the 10th and 11th grades, at which point juveniles’ friendships and levels of delinquency may be well-established and less likely to change than at younger ages. Thus, the results from this study suggest that the amount of variance in delinquency attributed to peer relationships may be overestimated, but by how much it has been overestimated has not been determined.
In summary, social control theory has received some support, especially for assessing for the variety of aspects of peer relationships (Hindelang, 1972; Gardner & Shoemaker, 1989). However, which aspects of peer relationships influence delinquency has not been sufficiently studied. Another theory that addresses the role of peer relationships in delinquency is the social learning theory of deviant behavior.

Social Learning Theory of Deviant Behavior

Social learning theory of deviant behavior developed by Akers in 1979 (as cited in Agnew, 1991) and based on classical and operant conditioning, hypothesizes that delinquent behavior is learned from modeling and reinforced by social interactions, such as with peers. Similar to differential association theory, this theory articulates that the juvenile must have a high level of attachment to peers in order to be influenced by the social interaction (Agnew, 1991). As a result, the juvenile is more likely to be influenced by peers whom they like or respect, than those they dislike or do not respect.

A study supporting this theory evaluated how well differential association theory and social learning theory explained the influence of peer variables on levels of delinquency (Agnew, 1991). Based on data from the National Youth Survey, the author examined attachment to peers, time spent with peers, and peer delinquency as predictors of delinquency. Results indicated that peer delinquency was the best predictor of delinquency. Moreover, seriously delinquent friends had the most influence over serious delinquency when levels of attachment were high, amount of contact was high, and delinquent patterns were clearly presented, and thus, supported differential association theory.

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Criticisms of Peer Relationships' Influence on Delinquency

Whereas much research has found that peer relationships have an impact on delinquency, studies have questioned the extent to which peer relationships actually influence delinquency. Berndt (1992) reviewed friends' influence over adolescents and reported that adolescent females describe their friendships as more intimate than do adolescent males. However, Berndt stated that recent longitudinal studies have shown that friends' influence on adolescents is relatively weak and does not usually lead to a shift in either more or less desirable attitudes or behavior.

Kandel (1996) reviewed how much influence peers have on delinquency. The findings showed that the effect of peer influence may be overestimated in the literature, and thus, detract from the parental influence. Kandel argued that cross-sectional data and data using perceptions of delinquency in peers, instead of self-reported peer delinquency, led to the appearance of peer influence contributing more to delinquency than it actually does. In addition, parents often have input in peer selection by their control over with whom their children affiliate.

Although Berndt (1992) and Kandel (1996) argued that based on longitudinal studies, peer relationships contribute less to delinquency than previously shown. However, other longitudinal studies have found that peer relationships contribute considerably to delinquency (Keenan et al., 1995). Additionally, the longitudinal studies may not have focused on the qualitative aspects of peer relationships which may have a strong effect on delinquency.
Summary of Peer Relationships and Delinquency Theories

In a review of research on differential association, social control, and social learning theories, Marcus (1996) concluded that the most frequent finding in the literature was the inconsistency of peer relationships among delinquents. Marcus presented two of the opposing views on the emotional quality of delinquent friendships: social control theory as proposed by Hirschi (1969), which dictates that delinquents have lower levels of attachment than do nondelinquents, versus differential association theory (Sutherland & Cressey, 1978) and social learning theory (Akers, 1985), that both support the idea that delinquents have similar or higher levels of attachment than nondelinquents. Many studies have supported the latter view, but differences in findings may be due the definition of attachment. When attachment was defined as empathy or sense of security, nondelinquents reported higher levels of peer attachment than did delinquents. Delinquents reported higher levels of self-disclosure than did nondelinquents; self-disclosure has also been used as a measure of peer attachment. Friendships of delinquents have been characterized as having more arguments, more aggressive and impulsive behavior, and more perceptual and cognitive distortion, which suggests more conflict and instability in the friendships of delinquents. Thus, studies have found support for social control theory, differential association, and social learning theories.

In conclusion, though no one theory has received unequivocal support, common factors from all three theories contribute to the understanding of the relationship between peer relationships and delinquency. All three theories concur that for peer relationships to contribute to juvenile’s delinquency, an individual must associate with delinquent peers and delinquent peers must be influential to the juvenile. Whether delinquent
behavior or attitudes of peers have stronger power over delinquency has not been
determined, but the relationship of peers with the juvenile appears to affect the level of
influence.

Although studies have found the influence of peer relationships on delinquency to be
overestimated (Berndt, 1992; Kandel, 1996), the overwhelming majority of research in
this area has concluded that peer relationships do affect delinquency (Agnew, 1991;
Conger, 1976; Figuera-McDonough, 1985; Gardner & Shoemaker, 1989; Hindelang,
Researchers have further explored peer relationships’ influence on delinquency in terms
of interaction with other risk factors (Brendgen et al., 1998; 2000; Patterson & Dishion,
1985; Poole & Regoli, 1979; Vitaro et al., 2000) and if association with delinquent peers
predicts delinquency (Keenan et al., 1995; Tremblay, Mâsse, Vitaro, & Dobkin, 1995).

Interaction between Peer Relationships and Other Risk Factors

Studies have assessed how peer relationships interact with other risk factors thought
to contribute to delinquency, such as parental attachment or monitoring, self-esteem, or
academic achievement, and the combined effect of more than one risk factor on
delinquency. For example, Brendgen et al. (2000) hypothesized that friendships, even
with delinquent friends, would buffer adolescents from emotional problems such as
loneliness, low self-worth, and depression, but adolescents with deviant friends would be
more delinquent than adolescents with nondeviant friends, especially males. In a sample of male and female Caucasian Canadians, adolescents with more deviant friends reported more deviant behavior and higher levels of depression than those with more conventional friends. No significant sex difference was found for deviant behavior.

The majority of research in this area examines the interaction of peer and familial relationships. In a longitudinal study following males from kindergarten to adulthood, Vitaro et al. (2000) compared the social control model with the social interactional model, inquiring whether personal, familial, and social factors served as moderators between the influence of deviant friends and delinquency. The social interactional model states that antisocial orientation and family experiences, such as poor parental monitoring, moderate the relationship between deviant friends and delinquency. The moderators tested were the presence of another nondeviant friend, levels of parental monitoring, attachment to parents, attitudes towards delinquency, and a personal predisposition towards antisocial behavior. Parental attachment and attitudes towards delinquency were shown to moderate the relationship between deviant peers and delinquency. Whereas the authors concluded that the results supported the social interaction model, the study was limited by the homogenous sample of Caucasian Canadian males and the lack of attention to the qualitative aspects of peer relationships.

Similarly, Patterson and Dishion (1985) measured how parental monitoring, social skills, academic skills, and delinquent peers, affect delinquency for 7th and 10th grade boys using parent- and self-report instruments. As expected, deviance of peers and delinquency were correlated. Parental monitoring inhibited delinquency, both directly and indirectly through social skills and deviant peers. This study showed evidence that
lower levels of parental monitoring, in conjunction with fewer social skills, contributes to more deviant friendships for adolescents.

Brendgen et al. (1998) investigated the interaction of peer and familial relationships. The authors explored how perceived closeness with parents, self-esteem, delinquent behavior, and rejection by peers related to affiliations with delinquent friends among male and female Caucasian Canadian adolescents. Self-esteem was a mediator between perceived closeness with parents and friends who engage in delinquent behavior, but only for adolescents who were rejected by conventional peers.

Poole and Regoli (1979) investigated whether association with delinquent friends affects delinquency for different levels of parental support with Caucasian males, ages 14-17. Participants were asked to come to the study with a “close friend”; both adolescents then completed questionnaires that measured frequency, variety, and seriousness of delinquency for the participant and the friend, as well as family support for the participant. Poole and Regoli reported that participants with low family support engaged in more frequent, serious, and varied delinquent acts than did participants with higher levels of family support. Also, participants with a highly delinquent friend committed more frequent, serious, and varied delinquent acts. The findings supported the argument that adolescents with weak parental support were more susceptible to the influence of delinquent associates than were those with strong parental support. Furthermore, greater exposure to delinquent peers increased the gap in delinquent activity between adolescents with weak parental support and those with stronger parental support. The study was limited in that the measure of family support consisted of only five questions and the sample consisted of only Caucasian males.
In summary, parental relationships appear to moderate the influence of delinquent peers on delinquents. Adolescents with weaker parental attachment and lower levels of parental monitoring are more likely to associate with and be influenced by delinquent peers (Brendgen et al., 1998; 2000; Patterson & Dishion, 1985; Poole & Regoli, 1979; Vitaro et al., 2000). However, although many of the studies have investigated the varied aspects of parental relationships with respect to delinquency, few studies have explored the qualitative aspects of peer relationships as they affect delinquency.

*Peer Relationships as Predecessors to Delinquency*

Given that many studies on peer relationships and delinquency are cross-sectional, studies have investigated whether delinquent adolescents tend to gravitate toward delinquent peers or whether exposure to delinquent friends contributes to later delinquent behavior. Research has shown support for both directions. A longitudinal study by Tremblay et al. (1995) examined data from Caucasian Canadian males from kindergarten to young adulthood, using self-reports and reports from teachers to indicate that aggression and delinquency fluctuate very little over time. They showed that high levels of overt and covert delinquency between the ages of 11 to 13 were preceded by aggressive behavior in kindergarten. The results, supporting the theory that delinquents seek out delinquent peers, showed that delinquent friends had little additional influence on delinquency for participants who demonstrated aggressive behavior early on in their childhood. The study was limited by a preadolescent male sample, which may not be applicable to older adolescent males or to females.

A longitudinal study by Keenan et al. (1995) showed that association with delinquent peers preceded delinquency. The authors examined the influence of deviant peers on
Caucasian and African American boys’ disruptive and delinquent behavior. Participants who reported that most or all of their friends had committed either property damage, stolen, sold hard drugs, or physically assaulted someone, were twice as likely to later participate in similar behaviors themselves than were participants who reported little or no exposure to delinquent peers.

In summary, both of these longitudinal studies that investigated if association with delinquent peers preceded delinquency found conflicting results. A limitation of both studies was the lack of females in the sample. Keenan et al. (1995) proposed that the influence of peers may be even stronger for girls.

Sex Differences in Peer Relationships as Contributors to Delinquency

Although much research has shown that peer relationships significantly contribute to violence and delinquency (Agnew, 1991; Deković, 1999; Hindelang, 1972; Patterson & Dishion, 1985; Vitaro et al., 2000; Warr & Stafford, 1991), few studies have investigated this area among females (Giordano, 1978; Giordano et al., 1986; Jensen & Eve, 1976; Morash, 1986; Pleydon & Schner, 2001). Campbell (1990) suggested explanations for the lack of research on delinquent peer relationships among females. First, there is a misperception in the literature that female delinquency is mainly sexual delinquency, which was theorized to result from social isolation. Thus, delinquent females did not appear to have influential peer relationships. Another misperception was that familial factors had a greater influence on females than did peer factors, and that female adolescents do not form strong peer relationships. These misperceptions may have led delinquency research to focus on risk factors other than peer relationships for females. Campbell (1990) cited evidence arguing that female delinquency was not limited to
sexual offenses, familial influence was not more powerful for females than for males, and females had strong peer relationships. Of the few studies on peer relationships and female delinquents, major research questions have been whether peer relationships contribute to delinquency among females, whether that contribution differs more for females than for males, and, if so, how do the peer relationships differ among delinquent and nondelinquent females.

In a study that addresses the question of peer relationships as a contributor to delinquency among females, Figueria-McDonough (1985) showed that peer relationships affect delinquency in females, as well as in males. The author tested a model of socioeconomic background, attachments, norms, self-concept, and peer attitudes towards deviance as contributors to delinquency among both males and females. The findings indicated that for both sexes, normative approval within the adolescent subculture and high participation in peer activities were the strongest predictors of delinquency.

Although findings from the Figueria-McDonough study (1985) suggested that peer relationships play a large role in delinquency for both males and females, the few studies focusing on sex as a moderator between peer relationships and delinquency have found conflicting results (Erikson & Jensen, 1977; Morash, 1986). Morash (1986) interviewed male and female adolescents and tested if peer group association, activities, and peer delinquency mediated the relationship between sex and delinquency and found no sex difference for the contribution of peer relationships to delinquency. Peer groups of females had less delinquent activities than did those of males, but peers’ delinquency was the only significant predictor of property or aggressive offenses, regardless of sex. Both sexes were similarly affected by the influence of peer relationships on delinquency.
However, the study was limited in that the author investigated peer factors based on male gang theory. Such factors included group activities and levels of fighting, which excluded emotional aspects of peer relationships that may be more influential on females than males.

In contrast to Morash’s findings (1986), Erickson and Jensen (1977) investigated sex differences for group participation in violent and delinquent activity among male and female high school students. Contrary to official statistics, females reported higher incidence of burglary, shoplifting, vandalism, and auto theft with groups of peers than did males. For violent offenses, such as assault and fighting, violations for females were slightly less than for males. However, the overall occurrences of both violent offenses were much lower than were nonviolent offenses for both males and females, which may have made sex differences hard to detect. Although the study only tested offenses committed in the company of peers, the results suggested that females commit offenses in the company of peers, which may imply peer influence. Although neither study produced unequivocal results that peer relationships differed for males and females with regards to delinquency, research on the peer relationships of female delinquents may illuminate sex differences in this area.

Pleydon and Schner (2001) and Giordano (1978) have identified mechanisms through which female peer relationships influence delinquency. Pleydon and Schner (2001) surveyed a sample of Caucasian and Aboriginal Canadian delinquents and nondelinquents about qualities of their best friendship and friendship groups. Aspects of group peer relationships included trust, communication, alienation, perceived peer pressure, and intimacy. Delinquents reported significantly more peer pressure and less
communication in their peer groups than did their nondelinquent counterparts, although no differences were found for intimacy, trust, or alienation. The findings revealed important implications for differential aspects of peer relationships between female delinquents and nondelinquents. However, the study was limited by a small sample size (N=78), and it also should be noted that the study took place in Canada, which may differ from populations in the United States. One of the earliest studies on the role of peer groups in female delinquency with only female participants by Giordano (1978) surveyed adjudicated and nondelinquent female adolescents about participation in delinquent (mostly nonviolent) acts, number of peers, and time spent with peers. Participants who were part of a regular group were more likely to commit delinquent acts than those who had a few friends. Time spent with groups was positively correlated with extent of delinquency. Perception of female friends’ approval was significantly and positively correlated with delinquent involvement. This study provided support for the influence of peer relationships on female delinquency. This study, however, assessed only minor delinquency, thus peer influence on more severe offenses may differ.

The previous studies provided evidence for how peer relationships affect female juvenile violence and delinquency. Peer relationships appear to contribute to delinquency among females at least as much as they do among males (Erikson & Jensen, 1977; Figueria-McDonough, 1985). Moreover, studies that have explored the mediators for peer relationships and violence and delinquency among females have rarely investigated areas such as severity of offenses and racial/ethnic differences, which also merit study (Pleydon & Schner, 2001).
Racial/Ethnic Differences in Peer Relationships

Although many studies reported the racial/ethnic characteristics of participants, rarely have studies regarding the influence of peer relationships on delinquency analyzed differences among minorities or aggregated race/ethnicity with sex (DuRant et al., 1994; Farnworth, 1984; Joseph, 1995; Williams et al.; 1999). One longitudinal study by Williams et al. (1995) investigated racial differences in risk factors for delinquency and substance use among Caucasian and African American male and female adolescents, and their families, from neighborhoods with high levels of criminal activity. Findings showed that peer and sibling influences were significant predictors of substance abuse for both African American and Caucasian adolescents, although no significant differences were found between African Americans and Caucasians regarding whether delinquent peers predict delinquency. Although the findings do not suggest the need for separate delinquency models for Caucasians and African Americans, the study inquired only about the number of delinquent friends and amount of time spent with them. Racial/ethnic differences may not appear in these aspects of peer relationships, but may be present in the quality of peer relationships.

Joseph (1995) studied social control and differential association theories of juvenile delinquency among African Americans. In this study, the sample included male and female adolescents between the ages of 12 and 17 selected from public schools, juvenile court, and a juvenile institution. Significantly more males than females reported delinquent acts and, of those convicted, 78% were males and 22% were females. Males were arrested mostly for drug-related offenses, whereas females were arrested mostly for assault. Attachment to school and delinquent companions significantly predicted
delinquency for both males and females, although the relationship was stronger for males. These findings supported the differential association theory that delinquent companions influence delinquency for African American adolescents. Although few sex differences were found, the small sample of African American females may have underemphasized any possible sex differences.

Additional support for the influence of peer relationships on delinquency among African Americans was provided by a study that examined social and psychological factors associated with violence among males and females living in an area of high violent crime (DuRant et al., 1994). Males were found to engage in significantly more violent acts than did females. The self-reported incidents of violence were significantly positively correlated with exposure to violence and victimization, degree of family conflict, and the presence of severity of corporal punishment. The authors concluded that, similar to differential association theory, the data supported the theory that adolescents' use of violence is learned from intimate primary groups such as families and peer groups.

In a study on risk factors for delinquency among African Americans, Farnworth (1984) analyzed separate delinquency models for males and for females. The risk factors were influence of father, parental interest in school, influence in family, involvement in school, and self-evaluated smartness, as predictors of violence, property delinquency, nonvictimizing delinquency, and status offenses. The results indicated a need for separate models for males and females involved in either property offenses or nonvictimizing offenses. Although the author did not find a sex difference for predictors
of violence, the results may be limited by the small sample of females who reported violent crimes.

Although it appears that similar factors, such as peer relationships, contribute to delinquency among African Americans and Caucasians (Joseph, 1995; Williams et al., 1995), the amount and manner of how the factors influence delinquency seem to differ as a function of race/ethnicity and sex (DuRant et al., 1994; Farnworth, 1984). Although the majority of research has focused on ethnic differences between African Americans and Caucasians, studies have found differences in peer relationships between nondelinquent Hispanic and Caucasian adolescents (Bradley et al., 2001; Way & Chen, 2000). Thus, it seems to be the case that racial/ethnic differences in peer relationships’ influence on delinquency need more extensive research.

Peer Relationship Factors Associated with Delinquency

The preceding studies demonstrated that although peer relationships appear to influence delinquency (Agnew, 1991; Conger, 1976; Figueria-McDonough, 1985; Gardner & Shoemaker, 1989; Hindelang, 1972; Liska, 1973; Short, Jr., 1958; Sutherland & Cressey, 1955; Warr & Stafford, 1991), how peer relationships influence delinquency has yet to be determined. Nevertheless, one facet of these studies that may obscure the relationship between peer relationships and delinquency is that the definition of peer relationships varies across studies, ranging from quantitative aspects, such as time spent with delinquent peers or number of delinquent peers (Agnew, 1991; Brendgen et al., 2000; Giordano, 1978; Poole & Regoli, 1979; Short, Jr., 1958; Vitaro et al., 2000), to qualitative aspects, such as self-disclosure, intimacy and attachment to delinquent peers (Agnew, 1991; Claes & Simard, 1992; Giordano, 1978; Giordano et al., 1986; Morash,
Claes and Simard (1992) examined both the qualitative and quantitative aspects of delinquent peer relationships and compared multiple dimensions of friendships (i.e., antisocial acts committed with friends, networks, attachment, intimacy, and conflicts) among male and female delinquents and nondelinquents. Delinquents had more acquaintances but fewer close friends and had higher levels of conflict with their friends than did nondelinquents. Moreover, females reported higher levels of intimacy with and attachment to their close friends. They also placed higher value on communication, self-disclosure, empathy, and sharing than did their male counterparts.

Furthermore, Giordano et al. (1986) assessed a variety of positive and negative aspects of peer relationships among delinquent and nondelinquent males and females ages 12 to 19. Positive aspects (or rewards) were divided into intrinsic rewards (self-disclosure, caring, and trust), extrinsic rewards (such as money, material goods, social status, or privileges), and identity support, whereas negative aspects (or vicissitudes of friendships) included conflict, imbalance (lack of reciprocity), and loyalty in the face of trouble. The authors also examined patterns of interaction and influence as determined by time spent with friends, stability of friendships, and peer pressure. The authors observed that peer relationships are bidirectional instead of unidirectional, such that adolescents exert influence on each other. Participants who reported higher levels of delinquency described receiving more tangible rewards from friendships, having more self-confirmation, and having higher levels of disagreement with peers. Participants with higher levels of delinquency were more likely to be loyal to their friends in the face of trouble and were more susceptible to peer influence than were participants reporting
fewer delinquent acts. Females were more likely to self-disclose, to report higher levels of caring and trust in their friendships, and, contrary to many studies, to report spending as much, if not more, time with their friends, than did their male counterparts. These findings suggested that females who had more intimate relationships may be differentially influenced by peer relationships than are males. African Americans reported less peer pressure, more stability in their friendships, less likelihood of lying for friends, and lower levels of caring and trust than did Caucasians. Advantages of this study were that the authors took into account multiple dimensions of peer relationships, examined sex and ethnic differences, and separated delinquency into minor and major offenses. However, similar to most studies, a limitation of the study was that the authors did not examine the interaction of sex and ethnic differences for peer relationships.

These two studies revealed the value of expanding the definition of peer relationships beyond association (Claes & Simard, 1992; Giordano et al., 1986). Sex and ethnic differences in peer relationships are apparent when both qualitative and quantitative aspects are examined. The implication of the two studies highlights a greater need to assess a variety of characteristics of peer relationships and their influence on delinquency, especially with regard to type of delinquency and sex and ethnic differences.

Summary

Although official reports indicate a disconcerting rise in female juvenile violence and delinquency (Daly, 1998; Steffensmeier & Allan, 1996; Snyder, 2002), this rise may partially be due to improved methods of data collection and definitions of violence.
among females (Chesney-Lind & Brown, 1999). However, data on female juvenile violence and delinquency suggests that females have a greater involvement in violent and delinquent offenses than previously indicated (Chesney-Lind & Brown, 1999; Daly, 1998; Hoyt & Scherer, 1998). Recent information on female juvenile involvement in violence and delinquency has encouraged research in this area (Claes & Simard, 1992; Heimer & De Coster, 1999; Pleydon & Schner, 2001). Theories of female juvenile violence and delinquency have often been extrapolated from theories of male violence and include opportunities and controls (Shover et al., 1979), masculinity or gender roles (Heimer & De Coster, 1999; Shover et al., 1979), and differential association theories (Heimer & De Coster, 1999). Support has been found for all three theories, although no one theory appears best to explain female juvenile violence and delinquency (Heimer & De Coster, 1999; Jensen & Eve, 1976; Mears et al., 1998; Shover et al., 1979).

Delinquency research on racial/ethnic and sex differences is sparse, but the findings have indicated the need for further research in this area (Bowker & Klein, 1983; Giordano, 1978).

Similar to theories on female juvenile violence and delinquency, the most well-researched theories on how peer relationships affect delinquency, including differential association, social control, and social learning theories, have received equivocal support (Agnew, 1985; 1991; Gardner & Shoemaker, 1989; Hindelang, 1972; Hirschi, 1969; Marcus, 1996; Short, Jr., 1958; Warr & Stafford, 1991). Although some studies have argued that the peer relationships’ contribution to delinquency has been overestimated (Berndt, 1992; Kandel, 1996). Studies on the interaction of peer relationships with other risk factors in contributing to delinquency have found that familial relationships affect the
influence that peer relationships have on delinquency (Brendgen et al., 1998; 2000; Patterson & Dishion, 1985; Poole & Regoli; Vitaro et al., 2000). Studies that investigated whether association with delinquent peers preceded delinquency revealed conflicting results (Keenan et al., 1995; Tremblay et al., 1995). Research pertaining to sex differences in the relationship between peer relationships and delinquency suggests that the contribution of peer relationships to delinquency may be different for males and for females. This sex difference may be especially prominent in the qualitative and emotional aspects of peer relationships (Erickson & Jensen, 1977; Figueria-McDonough, 1985; Giordano et al., 1986; Pleydon & Schner, 2001). Racial/ethnic differences in how peer relationships influence delinquency have received little attention (DuRant et al., 1994; Joseph, 1995; Williams et al., 1995), especially in combination with sex differences, but some findings do suggest the need for separate delinquency models for different racial/ethnic groups (Farnworth, 1984). When definitions of peer relationships are expanded to included quantitative and qualitative aspects, sex and racial/ethnic differences in how peer relationships influence delinquency are more apparent (Claes & Simard, 1992; Giordano et al., 1986).

In conclusion, the literature supports the influence of peer relationships on delinquency, but how these relationships contribute to delinquency has not been determined. Additionally, sex and racial/ethnic differences have been shown to affect the relationship between peer relationships and delinquency. The present study intends to investigate what aspects of peer relationships (attachment, delinquent behavior, involvement in peer pressure, and association with delinquent peers) contribute to violence and delinquency among a population of female adjudicated juvenile offenders.
By focusing solely on female offenders, this study intends to improve the definition of peer relationships of this population. Additionally, between-group differences (i.e., racial/ethnic differences and severity of delinquency) will be examined to assess for these factors may affect the relationship between peer relationships and delinquency.

Hypotheses
The hypotheses of the present study are as follows:

1. Predictors of Violence and Delinquency. Based on social control and social learning theory, attachment is expected to be influential in how peer relationships contribute to delinquency (Agnew, 1991; Gardner & Shoemaker, 1989). Specifically, peer relationships should have the largest effect on delinquency when attachment levels were high. Given that studies have found that female adolescents reported greater levels of attachment to peers than males (Claes & Simard, 1992; Giordano et al., 1986), high levels of attachment are expected to best predict violent behavior. For severe offenses (i.e., violent and serious offenses), research has shown that delinquent peers contribute more to serious delinquency when levels of attachment are high, when peers have attitudes in favor of serious delinquency, and when adolescents spend more time with delinquent peers (Agnew, 1991; Poole & Regoli, 1979; Warr & Stafford, 1991). Therefore, attachment, delinquent association, and peer attitudes toward delinquency, are expected to be strongest predictors for females who have committed more violent offenses than females who have committed fewer or no violent offenses.
2. Racial/Ethnic Differences in Predictors of Violence. Given that few previous studies examined racial/ethnic differences in peer relations as a predictor of violence, especially among females, the goal of the current study in this area is exploratory. The main aim is to investigate if minority female juvenile offenders differ from Caucasians in how peer relations predictor violent offenses.
CHAPTER 3

METHODS

Participants

The participants were 136 adjudicated female juvenile offenders ranging in age from 13-18 years ($M=15.89$, $SD=1.18$) who were referred to the Clark County Juvenile Justice Services or the Youth Parole Bureau for the State of Nevada. The racial/ethnic background of participants was 39.7% Caucasian, 25% biracial/multiracial, 16.2% Hispanic, 13.2% African American, and 5.9% other.

Definitions and Measures

Demographics

Demographic information assessed included age, race and ethnicity, current grade, and family composition (members in household). These dimensions were measured by multiple choice questions developed for this study (see Appendix A).

Peer Relations Measure

Peer relationships, defined as perceived characteristics of adolescents’ friendships, were assessed using a measure combined from two measures used in previous studies on friendships and delinquency (Agnew, 1991; Giordano et al., 1986). The Peer Relations Measure (Giordano et al., 1986) consisted of 51 questions developed from interviews
over a 14-year period with male and female adolescents about their friendships and essays by high school and college students about what they like and dislike about their friendships (See Appendix B). Other psychometric properties of the measure were not available.

The measure included five subscales. Questions included on each subscale are listed in Table 1. The first subscale, Attachment, assessed for positive indicators of attachment such as caring, loyalty to peers, and self-disclosure as well as characteristics that indicated decreased levels of attachment such as conflict with peers and perceived lack of reciprocity in peer relationships. The Attachment subscale included 18 questions. Another subscale, Extrinsic Rewards, included tangible rewards the participant receives from peer relationships (i.e., access to a car, drugs/alcohol), help with schoolwork, status among other peers, and self-confirmation of own identity. The Extrinsic rewards subscale consisted of 12 questions. The Peer Influence subscale, which consisted of 14 questions, measured both perceived peer pressure by peers toward participants and how much participants pressured other peers. The Association subscale assessed the length of the relationship between the participant and her peers as well as how much time, on average, the participant spends with her peers in one week. The Association subscale included four questions. The Peer Attitudes toward Delinquency subscale, which consisted of six questions, measured the extent to which the participant perceived that peers approve or disapprove of delinquent and violent behavior.

Using data from the current study, internal consistency was calculated for the scores on the Peer Relations Measure subscales using Cronbach's α. Scores on the both the Peer Influence and the Peer Attitudes toward Delinquency subscales displayed good internal
consistency (Nunnally, 1978), Cronbach's $\alpha=.80$ for Peer Influence and Cronbach's $\alpha=.89$ for Peer Attitudes toward Delinquency. Scores on the Extrinsic Rewards and Association subscales had only moderate internal consistency (Nunnally, 1978), Cronbach's $\alpha=.66$ and Cronbach's $\alpha=.65$, respectively. Scores on the Attachment subscale also had only moderate internal consistency (Nunnally, 1978), Cronbach's $\alpha=.62$.

**Adolescent Delinquency Scale – Violence Subscale**

The Adolescent Delinquency Scale (Elliott et al., 1985) is a self-report measure of the frequency of violent and delinquent behaviors over the last year. For the purposes of this study, violence includes youth involvement in physical aggression, assault, sexual assault, and burglary. Nonviolent delinquency includes youth involvement in substance use charges, theft, property destruction, grand theft auto, and status crimes. The dimensions were assessed using a subset of 45 multiple choice questions, nine of which assessed for violence, pertaining to participants’ violent and delinquent behavior from the National Youth Survey (NYS) (Elliott et al., 1985) (See Appendix C). Response choices range from “Never” to “2 to 3 times a day.”

Test-retest reliability of the general delinquency measure from the NYS was found to be $r=.73$ (Huizinga & Elliot, 1986). In a study on self-report delinquency measures, Huizinga and Elliot (1986) reported that the general delinquency measure from the NYS demonstrated adequate content validity in that items are face valid and each offense accounts for more than 1% of juvenile arrests according to the FBI UCR. By comparing self-report data from the NYS with official records, Huizinga and Elliot (1986) found that
the majority of respondents, approximately 80%, self-reported offenses matched their official records which showed adequate criterion validity (Nunnally, 1978).

Again, internal consistency was calculated for the scores on the violence subscale using data from the current study. Scores on the Violence subscale of the Adolescent Delinquency Scale had good internal consistency, Cronbach's $\alpha=0.87$.

Procedures

Consent for participants was obtained from the Youth Parole Bureau and Clark County Juvenile Justice Services (See Appendix D). Participants from Clark County Juvenile Justice Services were assessed in classrooms by the primary investigator. Participants from the Youth Parole Bureau were assessed in the dining area by the primary investigator and a research assistant. The primary investigator read an introduction that included information pertaining to the study, issues of confidentiality, and instructions for completing the questionnaire. After the introduction, the primary investigator prompted the participants for any questions. Subsequently, participants signed the assent form before beginning testing (See Appendix E). Measures were administered in a random order to control for carryover effects. If an adolescent chose not to participate, she was excused from the classroom or dining area without penalty. Participants completed the measures in 30 to 45 minutes and were allowed breaks as needed.
CHAPTER 4

RESULTS

Descriptive Analyses

Effects of Age on Violence Scores

Given that the age of participants ranged from 13 to 18 years, it is possible that level of violence was affected by increased age. In particular, one concern was that older participants would report higher levels of violence due to the fact that they have had more time to commit violent behavior as opposed to older participants actually being more violent than younger participants. To test this concern, a one-way analysis of variance (ANOVA) was conducted with age groups as the independent variable and violence scores as the dependent variable. Participants were grouped into either the low group, ages 13-14 (n=17), middle group, ages 15-16 (n=67), or high group, ages 17-18 (n=47). Five participants did not report their age and were excluded from the analysis. The results indicated that the three age groups significantly differed with regards to violence scores, $F(2, 128)=5.584, p<.01$. The results, however, did not indicate that violence increased with age. Using a Student Newman-Keuls range test to examine how the three groups compared with each other, the low age group ($M=17.35$) had significantly higher violence scores than did the middle age group ($M=7.34$), $p<.01$. The low age group also had significantly higher violence scores than did the high age group ($M=11.38$), $p<.05$. 

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There was no significant difference in violence scores between the middle age group and the high age group, $p>.05$. Thus, the youngest group of participants had the highest violence scores, indicating that age alone did not influence violence scores by allowing for more time to commit violent behavior. It is possible, however, that females in the youngest group had to commit more violent offenses to be adjudicated than did females in the middle and oldest groups.

**Descriptive Analyses of Scores on the Peer Relations Measure and the Adolescent Delinquency Scale**

In order to test the first hypothesis, which was that attachment, delinquent association, and peer attitudes toward delinquency would best predict violent behavior of all the peer relationship characteristics, the Peer Relations subscales and the Violence subscale of the Adolescent Delinquency Scale were examined for descriptive information. Descriptive analyses for the Peer Relationships subscales and the Violence subscale are presented in Table 2. Responses on each question were coded and converted into subscale scores. On the Attachment, Extrinsic Rewards, and Association subscales, a low score indicated that the participant reported a low level of this characteristic in her friendships (i.e., few extrinsic rewards from peer relationships) whereas a high score reflected that the participant reported a high level of this characteristics in her peer relationships (i.e., high attachment to peers). On the Peer Attitudes toward Delinquency subscale, low scores indicated that the participant’s peers have highly negative attitudes toward delinquency. However, high scores on this subscale indicated the participant’s peers have highly positive attitudes toward delinquency. As for the Peer Influence subscale, a low score reflected that the participant strongly influences her peers whereas a
high score reflected that the peers strongly influence the participant. Low scores on Violence scale from the Adolescent Delinquency Scale indicated no violent behavior in the past year. High scores on this subscale indicated frequency of violent behavior in the past year.

Analyses of Predictors of Violent Behavior

*Relationships among Peer Relations Measure Subscales and Violence Subscale of the Adolescent Delinquency Scale*

Pearson product-moment correlations were computed to identify the patterns of bivariate relationships among Peer Relations subscales and the violence measure of the Adolescent Delinquency Scale. A Bonferroni-Holm correction (Holm, 1979) was used to control for Type I error. Most of the subscales were correlated in the expected direction. Association was significantly and positively correlated with Violence (See Table 3). These results were consistent with the hypothesis that peer association would be strongly associated with reported violent behavior. Peer Attitudes toward Delinquency was positively correlated with Violence, but did not reach significance. However, the data showed a trend toward a significant correlation between Peer Attitudes toward Delinquency and Violence. Attachment was negatively correlated with Violence, but the relationship was nonsignificant, contrary to the hypothesis that attachment and violence would be strongly, positively related.

Among the Peer Relations subscales, Extrinsic Rewards was positively and significantly correlated with Peer Influence and Association. Peer Attitudes toward Delinquency was also positively and significantly correlated with Peer Influence.
Attachment was positively and significantly correlated with Association. The different aspects of peer relations were correlated with each other, indicating that the multiple aspects of adjudicated female adolescents' friendships are related. It was next determined how well the Peer Relations subscales predicted the Violence subscale.

_Peer Attachment, Extrinsic Rewards, Peer Influence, Peer Association, and Peer Attitudes toward Delinquency as Predictors of Violence_

A standard multiple regression analysis was used to predict Violence from Attachment, Extrinsic Rewards, Peer Influence, Association, and Peer Attitudes toward Delinquency. The overall regression equation suggests that these predictors significantly predicted violence among adjudicated female adolescents, $R^2=.171$, $F(5, 130)=5.38$, $p<.01$. Consistent with the hypothesis that association would be among the strongest predictors of violence, Association contributed a significant amount of variance to the equation, $F(1, 130)=10.46$, $p<.01$, $\Delta R^2=.066$. Attachment also contributed a significant amount of variance to the equation, $F(1, 130)=5.6$, $p<.05$, $\Delta R^2=.036$. Extrinsic Rewards also contributed a significant amount of variance, $F(1, 130)=4.46$, $p<.05$, $\Delta R^2=.028$, which was unanticipated by the hypothesis. Contrary to the hypothesis peer attitudes toward delinquency would be a strong predictor of violence among adjudicated female adolescents, Peer Attitudes toward Delinquency did not contributed a significant amount of variance to the equation. Thus, peer association and attachment were the only hypothesized predictors that significantly predicted violent behavior among adjudicated female adolescents. Given that different aspects of peer relations may better predict violence at different levels, it was then determined how scores on the Peer Relations
subscales differentiated between participants who reported either low, moderate or high levels of violent behavior.

**Peer Attachment, Extrinsic Rewards, Peer Influence, Peer Association, and Peer Attitudes toward Delinquency as Predictors of Levels of Violence**

In order to examine if the peer relationship variables differentially predict violence at different levels, participants were divided into low, moderate, and high levels of violence. The groups were established based on the mean ($M=10.74$) and standard deviation ($SD=12.77$) of scores on the Violence subscale with an effort to divide participants into approximately same size groups. The low violence group included participants whose Violence scores fell between 0 to one half standard deviation below the mean (4.35), ($M=1.8, SD=1.43$). The low violence group consisted of 54 participants. The moderate violence group included participants whose Violence scores fell between one half standard deviation below the mean (4.35) to one half standard deviation above the mean (17.12), ($M=8.93, SD=3.07$). This group consisted of 55 participants. The high violence group included participants whose score fell between one half standard deviation above the mean (17.12) to 65, the maximum score, ($M=32.3, SD=12.93$). This group consisted of 27 participants.

A one-way analysis of variance (ANOVA) with violence level as the independent variable and violence score as the dependent variable was conducted to test if the groups differed significantly in scores on the Violence subscale. The ANOVA revealed a significant difference among the three groups, $F(2, 133)= 228.17, p<.01$. Using a Student Newman-Keuls range test to examine how the three groups compare with each other, the high violence group ($M=32.3$) had significantly higher violence scores than did the
moderate violence group ($M=8.93$), $p<.01$. The high violence group ($M=32.3$) had significantly higher violence scores than did the low violence group ($M=1.8$), $R^2=31.983$, $p<.01$. The moderate violence group ($M=8.93$) had significantly higher violence scores than did the low violence group ($M=1.8$), $p<.01$. Thus, all three violence groups differed significantly from each other on violence scores.

After the participants were divided into violence level groups, a direct discriminant function analysis was performed using five attitudinal variables (Attachment, Extrinsic Rewards, Peer Influence, Association, and Peer Attitudes toward Delinquency) as predictors of membership in the three violence level groups (low, moderate, and high violence). Two discriminant functions were calculated, with a combined Wilks’ $\lambda(10)=.82$, $p<.01$. When the first function was removed, there was no significant relationship between the groups and the predictors, Wilks’ $\lambda(4)=.987$, $p>.05$. The first discriminant function accounted for 93.9% of between-group variability. The second discriminant function only accounted for 6.1% of between-group variability. Thus, the first discriminant function was the only function to differ among the groups. The second discriminant function did not reliability discriminate among the three groups.

The standardized canonical discriminant function coefficients and pooled within-groups correlations between discriminating variables and standardized canonical discriminant functions were presented in Table 4. As suggested by the loading matrix of correlations between the predictors and discriminant functions, the best predictors for distinguishing between the high violence group and the low and moderate violence groups were Peer Attitudes toward Delinquency, Extrinsic Rewards, and Peer Association. Theses results were somewhat consistent with the hypothesis that peer
association, attachment, and peer attitudes toward delinquency would be more influential on females who commit a greater number of violent acts than they are on females who commit few to no violent acts.

Of the total usable sample of 136 adjudicated females, the discriminant function analysis correctly classified 65 (47.8%) of the original grouped cases (see Table 5). Among cases in the low violence group, 31 (57.4%) of 54 cases were correctly classified by the discriminant function. The discriminant function correctly classified fewer of the cases in the moderate violence group. Only 24 (43.6%) of 55 cases in the moderate violence group were correctly classified. Few of the cases in the high violence group were correctly classified by the discriminant function. Ten (37%) of 27 cases were correctly classified. These results indicate that the discriminant function failed correctly to classify the majority of participants into their reported violence level groups. In summary, the data partially supported the first hypothesis but mostly among females who reported low to moderate levels of violent behavior.

One possible reason why this discriminant function failed to correctly classify participants into the three violence groups is that participants were assigned to low, moderate, and high violence groups based on the mean and standard deviation of scores on the Violence subscale. The differences among the groups may not be clear cut, especially between the low and the moderate groups. Participants in the low and moderate groups may be more similar to each other than they are to participants in the high violence group. Thus, the predictors may not have effectively distinguished between participants in the low and moderate groups. In order to test this idea, the low
and moderate groups were collapsed into one group and the discriminant function analysis was rerun with only two violence level groups.

A one-way analysis of variance (ANOVA) with violence level as the independent variable and violence score as the dependent variable was conducted to test if the groups significantly differed in scores on the Violence subscale. The ANOVA revealed a significant difference among the two groups, $F(1, 134)=330.29, p<.01$. The high violence group reported significantly higher scores ($M=32.3, SD=12.93$) on the Violence scale than did the low-moderate violence group ($M=5.39, SD=4.31$).

The second discriminant function analysis used the same five attitudinal variables (Attachment, Extrinsic Rewards, Peer Influence, Association, and Peer Attitudes toward Delinquency) as predictors of membership in two groups (low-moderate and high violence). One discriminant function was calculated, with a Wilks' $\lambda(5)=.851, p<.01$. The discriminant function reliably discriminated between the low-moderate and the high violence groups.

The standardized canonical discriminant function coefficients and pooled within-groups correlations between discriminating variables and standardized canonical discriminant functions are presented in Table 6. As suggested by the loading matrix of correlations between the predictors and discriminant functions, the best predictors for distinguishing between the high violence group and the low-moderate violence groups were Peer Attitudes toward Delinquency, Extrinsic Rewards, and Peer Association.

Of the total usable sample of 136 adjudicated females, the discriminant function analysis correctly classified 130 (83.1%) of the original grouped cases (see Table 7). Among cases in the low-moderate violence group, 108 (99.1%) of 109 cases were
correctly classified by the discriminant function. However, the discriminant function did not correctly classify many of the cases in the high violence group. Of 27 cases, only 5 (18.5%) of the cases were correctly classified. Whereas, this discriminant function analysis better classified cases in the low-moderate violence group, it did not successfully classify the majority of the cases high violence group. These findings suggest that perhaps the peer relations predictors do not discriminate among the three violence levels.

Analyses of Racial/Ethnic Differences

Peer Attachment, Extrinsic Rewards, Peer Influence, Peer Association, and Peer Attitudes toward Delinquency as Predictors of Violence among Different Racial/Ethnic Groups

In order to test the second hypothesis, that there would be racial/ethnic differences in how well peer relations variables predict violence, the analyses included participants from four out of the five racial/ethnic groups (i.e., African Americans, Caucasians, Hispanics, Biracial/Multiracial). Participants who fell into the Other category were not included as the group contained too few participants ($n=8$) and included a wide variety of races/ethnicities.

Separate standard multiple regression analyses were run for each of the four racial/ethnic groups. The independent variables were Attachment, Extrinsic Rewards, Association, Peer Influence, and Peer Attitudes toward Delinquency and the dependent variable was Violence.

Among Hispanics ($n=22$), the overall regression equation suggested that Attachment, Extrinsic Rewards, Association, Peer Influence, and Peer Attitudes toward Delinquency
significantly predicted violence, $R^2=.602$, $F(5, 16)=4.83, p<.01$. Peer Attitudes toward Delinquency accounted for a significant amount of variance in the equation, $F(1, 16)=18.07, p<.01, \Delta R^2=.450$. Due to the small sample size and a small ratio of predictors to participants, shrinkage may have been a problem. When corrected for shrinkage using the Wherry formula (Carter, 1979) the estimate of the population correlation was reduced by approximately 30%, $R^2=.401$. Despite the small sample size, the overall regression equation had good power, power=.978 (Faul & Erdfelder, 1992).

Among Caucasians (n=54), the overall regression equation suggested that Attachment, Extrinsic Rewards, Association, Peer Influence, and Peer Attitudes toward Delinquency significantly predicted violence, $R^2=.232$, $F(5, 48)=2.9, p<.05$. Association contributed a significant amount of variance to the equation, $F(1, 48)= 8.82, p<.01$, $\Delta R^2=.141$. A power analysis indicated that the overall regression equation had moderately good power, power=.853 (Faul & Erdfelder, 1992).

Among African Americans (n=18), the overall regression equation suggested that Attachment, Extrinsic Rewards, Association, Peer Influence, and Peer Attitudes toward Delinquency significantly predicted violence, $R^2=.581$, $F(5, 12)=3.6, p<.05$. Extrinsic Rewards accounted for a significant amount of variance in the equation, $F(1, 12)= 10.07, p<.01, \Delta R^2=.353$ Due to the small sample size and a small ratio of predictors to participants, shrinkage may have been a problem. When corrected for shrinkage using the Wherry formula (Carter, 1979), the estimate of the population correlation was reduced by approximately 42%, $R^2=.245$. A power analysis indicated that the overall regression equation had good power, power=.916 (Faul & Erdfelder, 1992).
Among the Biracial/Multiracial group (n=34), the overall regression equation was nonsignificant, $R^2 = .222$, $F(5, 28) = 1.601, p > .05$, which suggested that Attachment, Extrinsic Rewards, Association, Peer Influence, and Peer Attitudes toward Delinquency did not predict violence among participants in this racial group. These results may be due to a lack of power, power = .566 (Faul, & Erdfelder, 1992).

A test of the equality of slopes was used to determine if there was a significant difference among the four regression equations. The test indicated that there was no significant difference between the four regression equations, $F(18, 105) = 1.165, p > .05$.

These results suggest that among different racial/ethnic groups, specific aspects of peer relationships contribute differentially to the prediction of violence. Among Caucasian female adjudicated adolescents, the largest racial/ethnic group in the overall sample, peer association is the best predictor of violence behavior. On the other hand, among Hispanic female adjudicated adolescents, peer attitudes toward delinquency best predicted violent behavior. Extrinsic rewards of peer relations appears to be the best predictor of violent behavior among African American female adjudicated adolescents. Therefore, the data supported the exploratory hypothesis that there would be significant differences among the racial/ethnic groups in how well different peer relationship characteristics predict violent behavior among adjudicated adolescent females.
CHAPTER 5

DISCUSSION

Despite a rise in violence among female juveniles (Chesney-Lind & Brown, 1999; Daly, 1998; Hoyt & Scherer, 1998; Steffenmeier & Allan, 1996; Snyder, 2002), few studies have examined risk factors that specifically contribute to violence among females (Giordano et al., 1986; Mears et al., 1998; Morash, 1986). Studies on risk factors for violence among males or among both males and females indicated that peer relations may be one of the strongest contributors to violence and delinquency (Brendgen et al., 1998; 2000; Jessor et al., 1995; Marcus, 1996; Mears et al., 1998; Patterson & Dishion, 1985; Poole & Regoli, 1979; Vitaro et al., 2000). Among the few studies on the effects of peer relations on violence among juvenile females, researchers have mainly focused on the quantitative aspects of peer relations, such as proportion of delinquent peers, time spent with delinquent peers, and types of peer delinquent activity (Agnew, 1991; Claes & Simard, 1992; Giordano et al., 1986; Jensen & Eve, 1976). Few studies have assessed the effects of the qualitative aspects of peer relations (i.e., attachment and emotional support) (Claes & Simard, 1992; Giordano et al., 1986; Mears et al., 1998). Thus, one of the goals of the current study was to assess how both qualitative and quantitative aspects of peer relations contribute to violence among a sample of 136 female adjudicated adolescents. The first hypothesis, which addressed this goal, was that attachment, delinquent
association, and peer attitudes toward delinquency should be the strongest predictors for females who have committed more violent offenses than for females who have committed fewer or no violent offenses.

Another goal of the current study was to explore how various aspects of peer relations differentially predicted violence among female adjudicated adolescents in different racial/ethnic groups. Despite the disproportionate overrepresentation of minorities in juvenile detention centers in recent years (Census of Juveniles in Residential Placement Databook, 1999; Gallagher, 1999), few studies have investigated racial/ethnic differences in how peer relations contribute to violent behavior, especially in a female population (DuRant et al., 1994; Farnworth, 1984; Joseph, 1995; Williams et al.; 1999). No study, as of yet, has assessed racial/ethnic differences in how various aspects of peer relations predict violence among female adolescents. Given the lack of research on racial/ethnic differences in this area, the second hypothesis was exploratory. Therefore, the second hypothesis was that characteristics of peer relations would differentially predict violence for African American, Hispanic, and Biracial/Multiracial adjudicated female delinquents than they would for Caucasians.

The findings from this study only partially supported the first hypothesis. Peer association was significantly and negatively correlated with violence, as expected. Attachment and Peer Attitudes toward Delinquency, however, were not significantly correlated with violence, although the correlation between Peer Attitudes toward Delinquency and Violence approached significance. Also, attachment was negative correlated with Violence. Based on the regression analysis, peer association and attachment were strong predictors of violence. Contrary to the hypothesis, low levels of
attachment better predicted violence. Peer attitudes toward delinquency was not a significant predictor of violence. Unexpectedly, extrinsic rewards also strongly predicted violence.

These results did not support social control theory, as proposed by Hindelang (1972), or social learning theory (Akers, 1979) both of which suppose that high attachment is necessary for peers to influence delinquent behavior. Instead, these results were more suggestive of differential association theory (Sutherland & Cressey, 1955), which proposes a strong connection between delinquent behavior and association with peers who hold positive attitudes toward delinquency. In order for the results to more fully coincide with differential association theory, peer attitudes toward delinquency should have been a stronger predictor of violent behavior.

One reason why attachment failed to show a significant, positive correlation with violence may be due to the measure itself, which has not been psychometrically validated. The Attachment subscale had only moderate internal consistency. Further validation of the measure may improve internal consistency. Also, given that attachment covered both positive and negative aspects of peer relations (i.e., self-disclosure, caring/trust, conflict, imbalance, and loyalty), the measure included a wide variety of peer relations aspects. The heterogeneity of the measure may have contributed to the low internal consistency of the items.

Another reason why the findings did not indicate a positive correlation between attachment and violence may have been due to measurement of both positive and negative aspects of attachment. Although previous studies found a positive correlation between attachment and delinquency, some of these studies only assessed positive
aspects of attachment, such as self-disclosure, trust, or caring, and failed to assess for negative aspects of attachment, such as conflict or imbalance (Agnew, 1991; Gardner & Shoemaker, 1989; Hindelang, 1972). Among studies that did measure both positive and negative aspects of attachment (Claes & Simard, 1992; Giordano et al., 1986; Marcus, 1996), findings showed that although delinquents reported similar or greater levels of attachment to their peers, both male and female delinquents reported high levels of conflict and less stability in their peer relationships than did nondelinquents.

Additionally, female adolescents, both delinquent and nondelinquent, reported that they place greater importance on attachment than did males (Claes & Simard, 1992; Giordano et al., 1986). Given that the current study measured both positive and negative aspects of peer attachment, delinquent females may have had very conflicted peer relationships, even if they are highly attached to their peers. Perhaps, females who report greater violent behavior have strong attachment in their peer relationships but also high levels of conflict and imbalance. In future studies, it would be beneficial to measure positive and negative aspects of attachment separately to test this theory.

Part of the first hypothesis suggested that different aspects of peer relations may be more predictive of violence depending on the level of violence. Thus, the participants were divided into three groups based on scores on the Violence subscale. After grouping participants into high, moderate, and low violence groups, the initial discriminant function analysis indicated that peer attitudes toward delinquency and peer association, in accordance with the hypothesis, did separate participants into high, moderate, and low levels of violence. As expected, the high violence group reported higher levels of peer association and more positive peer attitudes toward delinquency than did the low and
moderate violence groups. These results indicated adjudicated adolescent females who have reported the highest frequency of violent acts also report more contact with peers who have positive attitudes toward delinquency activity. Again, extrinsic rewards also discriminated between the three violence level groups which suggested that the participants who reported the greatest frequency of violent acts also reported obtaining tangible goods through their peers more often than did participants who reported lower levels of violence.

Although the previous results were in accordance with the hypothesis, the classification statistics from the discriminant function analysis, however, suggested that the discriminant function did not correctly classify the majority of cases into the appropriate groups. Instead, members of both the low and moderate violence groups were similarly classified. Accordingly, these results implied that members of the low and moderate violence groups reported peer relationships that were more similar than they were different. Part of the reason for this similarity may have been that the two groups were actually only one group and the division into separate groups was artificial. When this idea was tested by regrouping participants into either a low-moderate violence group or a high violence group, the second discriminant function analysis correctly classified almost all members of the low-moderate violence group. The second discriminant analysis, however, poorly classified cases in the high violence group, which indicated that the peer relations variables were poor discriminators of participants into their assigned violence level group.

The results of these two discriminant function analyses did not support the hypothesis that different aspects of peer relations are more predictive of violence depending on the
level of violence. Although the standard multiple regression equation indicated that the five aspects of peer relations (attachment, extrinsic rewards, peer association, peer attitudes toward delinquency, and peer influence) did significantly predict reported violent behavior for the participants overall, these aspects of peer relations did not discriminate among participants at different levels of violence behavior. One previously mentioned explanation for failing to find support for this hypothesis is that participants were assigned to violence level groups based on the mean and standard deviation of the Violence subscale. Thus, differences between the low, moderate, and high violence level groups may be artificial. For example, participants with a violence score of four, who would be classified into the low level violence group, may report similar peer relationships as did participants with a violence score of five, who would be classified into the moderate level violence group. Given that violent behavior fell on a continuum based on frequency of behavior, differences in peer relations may not be clear-cut. In order to test this explanation, future research should examine peer relations among female adjudicated adolescents at extreme ends of the Violence subscale, such as those who have committed no violent acts versus those who have committed frequent violent acts. Investigation of females who fall into these two categories may better illustrate differences in the contribution of peer relations to violent behavior.

The second hypothesis, that different aspects of peer relations would better predict violent behavior for minorities as compared with Caucasians, received greater support. As expected, the standard multiple regression equations suggested that the five aspects of peer relations significantly predicted violent behavior among African American, Hispanic, and Caucasian female adjudicated adolescents. Additionally, for each of these
three racial/ethnic groups, different aspects of peer relations accounted for the greatest amount of variance.

For African American adjudicated female adolescents, extrinsic rewards was the strongest predictor of violent behavior, which indicated that African American females who reported high frequency of violent behavior had greater access to tangible items, received more help on schoolwork, and gained more social status through their peers than did female participants from other races/ethnicities. Previous research on peer relationships among African American adolescents found that African Americans report lower levels of intimacy and attachment to their peers, but also report less susceptibility to peer pressure and peer influence (Giordano et al., 1986; Giordano, Cernkovich, & DeMaris, 1993). Based on these findings and the results of the current study, African American adjudicated adolescent females may be less attached to their peers and be less influenced by peer attitudes towards violence and delinquency. The tangible benefits that one received from peer relationships, however, may be of greater importance to African American adjudicated adolescent females in contributing to the frequency of violent behavior. Possibly, African American adjudicated adolescent females are more likely to commit violent behavior to obtain similar tangible benefits than are adjudicated adolescent females from other races/ethnicities.

Among Hispanic adjudicated female adolescents, perceived peer attitudes toward delinquency was the strongest predictor of violent behavior. These results suggested that Hispanic female adolescents who report high frequencies of violent behavior have peers who approve of violent and delinquent behavior. A previous study on the qualitative differences in peer relationships among male and female adolescents from African
American, Asian American and Hispanic low-income families found that Hispanic females, by far, reported peer relationships characterized by high levels of attachment and low levels of conflict (Way, Cowal, Gingold, Pahl, & Bissessar, 2001). The results from this study indicate that Hispanic adolescent females reported more intimate and close peer relationships than did adolescents from other ethnicities/races. If Hispanic adolescent females report a greater amount of intimacy and closeness in their peer relationships, then peer attitudes (e.g., attitudes toward delinquency) may have a stronger influence on these females as compared with females from other races/ethnicities. Thus, Hispanic adjudicated adolescent females may be more likely to commit violent acts if their peers perceive delinquency and violence to be acceptable.

For Caucasian adjudicated female adolescents, the strongest predictor of violent behavior was peer association. These findings coincide with much of the research on how peer relationships influence delinquency among females (Claes & Simard, 1992; Giordano et al., 1986) and are not surprising, given that most of the research in this area focuses on Caucasian females. These results suggested that Caucasian adjudicated adolescent females were more likely to participate in violent behavior when they spent more time with their peers than were adjudicated adolescent females from other racial/ethnic groups.

Some of the results, however, did not support the hypothesis. For one, the Peer Relations Measure subscales did not significantly predict violent behavior among biracial/multiracial adjudicated female adolescents. Although the lack of power may be one explanation for these nonsignificant results, another reason why the peer relations aspects failed to predict violence for the biracial/multiracial group may be due to the
heterogeneousness of the group. As opposed to the other three racial/ethnic groups, the biracial/multiracial groups included females from many combinations of racial/ethnic groups. For example, within this group, four females were African American-Hispanic, four females were African American-Caucasian, twelve females were Caucasian-Hispanic, three females were biracial from other racial/ethnic groups, and eleven females reported that they were members of more than two racial/ethnic groups (i.e., multiracial). Thus, this group contained adjudicated female adolescents from a much larger variety of racial/ethnic backgrounds and may have greater differences in their peer relationships.

Another finding that failed to support the hypothesis was that the test of equality among slopes showed that the four regression equations did not differ significantly from each other. This finding means that although some aspects of peer relations were more predictive for one racial/ethnic group than they were for the other racial/ethnic groups, overall, the five peer relations aspects did not better predict violent behavior for one racial/ethnic group than they did for the other racial/ethnic groups. Therefore, the five aspects of peer relations predicted violent behavior similarly for all of the racial/ethnic groups.

The lack of significance in the findings for the test of equality of slopes may have been, in part, due to small sample sizes in three of the four racial/ethnic groups of participants. For African American (n=19), Hispanic (n=22) and biracial/multiracial (n=34) adjudicated female adolescents, the findings may have capitalized on chance variance as opposed to reliable differences in peer relations variables as predictors of violence. Although the regression equations for both African Americans and Hispanics displayed good power, both sample sizes were extremely small. In order to better support
the findings from this study, one should replicate the study with a larger and more equally proportioned sample of Caucasian, African American, and Hispanic female adjudicated adolescents.

The current study appeared to be one of the first investigations into how peer relations contribute to violence among female adjudicated adolescents. The study, however, did have two main limitations: small sample size and the measure and construct of attachment. First, although the study included a larger sample of female adjudicated adolescents than did most previous studies, the small size of certain subgroups within the sample may well have decreased the generalizability of the results. In particular, because few participants were classified in the high violence level group, the weak results of the discriminant function analyses may have been due to a lack of power. Similarly, the small sample size of African American and Hispanic female adjudicated adolescents, in all probability, limited the results of the multiple regression equations. The power analyses for both regression equations, however, did show that both equations had good power. Nevertheless, these findings need to be replicated with larger samples of African American and Hispanic participants to garner more support for the findings.

The second and more troubling limitation was the lack of support for a positively correlated relationship between peer attachment and violence. Two factors may account for the negative and nonsignificant correlation between peer attachment and violence. For one, the scores on the Attachment subscale showed only moderate reliability. The lack of significant correlation between peer attachment and violence may be an artifact of the reliability of the scores. Secondly, as previously mentioned, the Attachment subscale encompassed a variety of both positive and negative peer relations aspects. Certain
Aspects of attachment may show a greater positive association with violence than other aspects. The heterogeneity of the construct may have minimized the association between peer attachment and violence. In order to address this limitation, future research should investigate different aspects of attachment in relation to violence.

Despite these limitations, the current study did contribute to the literature on the effects of peer relations on violence among female delinquents. As of yet, this study was the one of the first to show that both qualitative and quantitative aspects of peer relations significantly predict violence for female adjudicated adolescents. Additionally, the current study investigated the previously unexplored area of racial/ethnic differences in how peer relations contribute to violence among adjudicated adolescent females. Implications from this study may be used to identify which aspects of peer relations have the strongest influence on violent behavior among female adjudicated adolescents. Treatment providers may then target these areas to reduce the influence of delinquent peers on future violent behavior.
Table 1.

*Peer Relations Measure Subscales.*

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Attachment Questions</th>
<th>Extrinsic Rewards</th>
<th>Association</th>
<th>Peer Influence</th>
<th>Peer Attitudes toward Delinquency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1a, 1c, 1d, 1e, 3a, 3b, 3c, 3d, 2a, 2b, 3j, 3k, 3l, 3m, 3n, 6, 7</td>
<td>3c, 3f, 3g, 3h, 1f, 1g, 1h, 1b, 1i, 4k, 3i</td>
<td>5, 8, 9, 10</td>
<td>4a, 4b, 4c, 4d, 4e, 4f, 4g, 4h, 4i, 4j, 11a, 11b, 11c, 11d</td>
<td>12a, 12b, 12c, 12d, 12e, 12f</td>
</tr>
</tbody>
</table>
Table 2.

*Means, Standard Deviations, and Range of Scores on the Peer Relations Measure and the Adolescent Delinquency Scale.*

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Peer Relations Measure</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attachment</td>
<td>107.34</td>
<td>23.69</td>
<td>43.36 to 165.85</td>
</tr>
<tr>
<td>Extrinsic Rewards</td>
<td>41.45</td>
<td>17.91</td>
<td>2.5 to 90.84</td>
</tr>
<tr>
<td>Peer Attitudes toward Delinquency</td>
<td>26.17</td>
<td>17.35</td>
<td>0 to 60</td>
</tr>
<tr>
<td>Peer Influence</td>
<td>43.98</td>
<td>23.69</td>
<td>0 to 102.5</td>
</tr>
<tr>
<td>Association</td>
<td>29.94</td>
<td>7.6</td>
<td>0 to 41</td>
</tr>
<tr>
<td><strong>Adolescent Delinquency Scale</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Violence</td>
<td>10.74</td>
<td>12.77</td>
<td>0 to 65</td>
</tr>
</tbody>
</table>
Table 3.

*Bivariate Correlations of Peer Relations Subscales and Violence Measure of the Adolescent Delinquency Scale.*

(N=136)

<table>
<thead>
<tr>
<th></th>
<th>Violence</th>
<th>Attachment</th>
<th>Extrinsic Rewards</th>
<th>Peer Attitudes toward Delinquency</th>
<th>Peer Influence</th>
<th>Association</th>
</tr>
</thead>
<tbody>
<tr>
<td>Violence</td>
<td>—</td>
<td>-0.067</td>
<td>0.226</td>
<td>0.246</td>
<td>0.068</td>
<td>0.297*</td>
</tr>
<tr>
<td>Attachment</td>
<td>—</td>
<td>0.205</td>
<td>-0.019</td>
<td>-0.140</td>
<td>0.310*</td>
<td></td>
</tr>
<tr>
<td>Extrinsic Rewards</td>
<td></td>
<td>—</td>
<td>0.210</td>
<td>0.301*</td>
<td>0.271*</td>
<td></td>
</tr>
<tr>
<td>Peer Attitudes toward Delinquency</td>
<td></td>
<td>—</td>
<td>0.275*</td>
<td></td>
<td>0.237</td>
<td></td>
</tr>
<tr>
<td>Peer Influence</td>
<td></td>
<td>—</td>
<td></td>
<td></td>
<td>0.154</td>
<td></td>
</tr>
<tr>
<td>Association</td>
<td></td>
<td>—</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 4.

Results of Discriminant Function Analysis of Peer Relations Variables.

\((N=136)\)

<table>
<thead>
<tr>
<th>Predictor variable</th>
<th>Standardized canonical discriminant function coefficients</th>
<th>Pooled within-group correlations between discriminating variables and standardized canonical discriminant functions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Attachment</td>
<td>-0.352</td>
<td>0.919</td>
</tr>
<tr>
<td>Extrinsic Rewards</td>
<td>0.561</td>
<td>0.171</td>
</tr>
<tr>
<td>Peer Association</td>
<td>0.488</td>
<td>-0.038</td>
</tr>
<tr>
<td>Peer Influence</td>
<td>-0.369</td>
<td>-0.208</td>
</tr>
<tr>
<td>Peer Attitudes toward Delinquency</td>
<td>0.629</td>
<td>-0.05</td>
</tr>
<tr>
<td>Canonical R</td>
<td>0.412</td>
<td>0.114</td>
</tr>
<tr>
<td>Eigenvalue</td>
<td>0.204</td>
<td>0.013</td>
</tr>
</tbody>
</table>
Table 5.

*Classification Results of Discriminant Function Analysis of Peer Relations Variables.*

*(N=136)*

<table>
<thead>
<tr>
<th></th>
<th>Low Violence</th>
<th>Moderate Violence</th>
<th>High Violence</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Violence</td>
<td>31 (57.4%)</td>
<td>17 (31.5%)</td>
<td>6 (11.1%)</td>
<td>54</td>
</tr>
<tr>
<td>Moderate Violence</td>
<td>24 (43.6%)</td>
<td>24 (43.6%)</td>
<td>7 (12.7%)</td>
<td>55</td>
</tr>
<tr>
<td>High Violence</td>
<td>8 (29.6%)</td>
<td>9 (33.3%)</td>
<td>10 (37%)</td>
<td>27</td>
</tr>
</tbody>
</table>
Table 6.

Results of Discriminant Function Analysis of Peer Relations Variables with Low and Moderate Violence Groups Collapsed.

\( (N=136) \)

<table>
<thead>
<tr>
<th>Predictor variable</th>
<th>Standardized canonical discriminant function coefficients</th>
<th>Pooled within-group correlations between discriminating variables and standardized canonical discriminant functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attachment</td>
<td>-.241</td>
<td>.070</td>
</tr>
<tr>
<td>Extrinsic Rewards</td>
<td>.572</td>
<td>.610</td>
</tr>
<tr>
<td>Peer Association</td>
<td>.476</td>
<td>.573</td>
</tr>
<tr>
<td>Peer Influence</td>
<td>-.387</td>
<td>.063</td>
</tr>
<tr>
<td>Peer Attitudes toward Delinquency</td>
<td>.617</td>
<td>.681</td>
</tr>
<tr>
<td>Canonical R</td>
<td>.386</td>
<td></td>
</tr>
<tr>
<td>Eigenvalue</td>
<td>.175</td>
<td></td>
</tr>
</tbody>
</table>
Table 7.

Classification Results of Discriminant Function Analysis of Peer Relations Variables.

\[(N=136)\]

<table>
<thead>
<tr>
<th></th>
<th>Low-Moderate Violence</th>
<th>High Violence</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Violence</td>
<td>108</td>
<td>1</td>
<td>109</td>
</tr>
<tr>
<td></td>
<td>(99.1%)</td>
<td>(.9%)</td>
<td></td>
</tr>
<tr>
<td>High Violence</td>
<td>22</td>
<td>5</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>(81.5%)</td>
<td>(18.5%)</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX I

Demographic – Background Information
1. Age: __________________

2. Which of the following best describes your racial/ethnic background?  
   (Check ALL that apply)
   
   ___ Asian or Pacific Islander
   ___ African American/Black
   ___ Native American/Indian
   ___ Alaskan Native
   ___ Mexican American or Chicano
   ___ Mixed Race
   ___ (Please specify)
   ___ Puerto Rican American
   ___ Latin American
   ___ Caucasian/White
   ___ Other
   ___ (Please specify)

3. What grade are you currently in?  (Check ONE)
   
   ___ 6th grade
   ___ 7th grade
   ___ 8th grade
   ___ ungraded / mixed grade class
   ___ (Please specify)

4. Which of the following people live in the same household with you?  (Check ALL that apply)
   
   ___ I live alone
   ___ Mother
   ___ Stepmother
   ___ Foster mother
   ___ Father
   ___ Stepfather
   ___ Foster father
   ___ Brothers / Sisters (including step or half brothers/sisters)
   ___ Grandparents
   ___ Other relatives (aunts, uncles, cousins)
   ___ Non-relatives (boyfriend, girlfriend, friend)
   ___ Other
   ___ (Please specify)
APPENDIX II

Peer Relations Measure
Peer Relations
Instructions
This is a survey to learn more about the actual experiences of people your age with their friends. This section of the questionnaire asks questions about how you feel about your friends. Please answer each question as honestly as possible. Remember, your answers will be kept strictly confidential.

Please read each question and circle the answer that best matches how you feel about your friendships.

1. How often do you talk to your friends about the following:

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Once A Month or Less</th>
<th>2 or 3 Times a Month</th>
<th>At Least Once a Week</th>
<th>2 or 3 Times Each Week</th>
<th>Almost Every Day</th>
<th>Daily</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Questions or problems about sex?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>b. Help in meeting people to date?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>c. How your parents treat you?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>d. Whether your parents understand you?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>e. Things you have done that you feel guilty about?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>f. How well you get along with your teachers?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>g. Problems you are having at school?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>h. Help with school work?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>i. Job plans for the future?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
2. How often do the following things happen with you and your friends:

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Once A Month or Less</th>
<th>2 or 3 Times a Month</th>
<th>At Least Once Each Week</th>
<th>2 or 3 Times Every Day</th>
<th>Almost Daily</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Have disagreements or arguments (fights)?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>b. Purposely not talk to your friends because you are mad at them?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
3. How true are the following statements about you and your friends for the past year?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Not True</th>
<th>Rarely True</th>
<th>Sometimes True</th>
<th>Often True</th>
<th>Always True</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. I feel comfortable calling my friends when I have a problem</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>b. I can trust them - I can tell them private things and know they won't tell other people</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>c. My friends care about me and what happens to me</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>d. My friends are easy to talk to</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>e. My friends get a car for us</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>f. My friends get booze for me</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>g. My friends get drugs for me</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>h. When my friends' parents go out, we hang out at their house</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>i. I can't really be myself if I want to stay friends with these people</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>j. Sometimes my friends just won't listen to me or my opinion.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>k. I think I like most of the people in my group more than they like me.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>l. Some people in the group are always trying to impress people outside our group</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>m. There is too much competition in the group.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>n. There is too much jealousy in the group.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
4. How much do you agree or disagree with the following statements?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. I sometimes do things because my close friends are doing them.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>b. I sometimes do things because that’s what the popular kids in school are into.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>c. I sometimes do things so my friends won’t think I’m chicken (afraid to do things).</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>d. I sometimes do things because my friends give me a hard time or hassle me until I do them.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>e. I sometimes do things so my friends won’t think I’m immature.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>f. I don’t like being different or sticking out in a crowd.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>g. I sometimes do things not because my friends pressure me but just because I think it will impress them.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>h. I sometimes do things because I don’t want to lose the respect of my friends.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>i. I probably pressure my friends to do things more than they pressure me.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
How much do you agree or disagree with the following statements?

<table>
<thead>
<tr>
<th>j. I sometimes talk my friends into doing things they really don’t want to do.</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>k. People look up to me more because of my friends.</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

5. In general, how many years have you been friends with most of your friends?

1 2 3 4 5 6 7 8 9 10 More than 10

6. If you found that your group of friends was leading you into trouble, would you still hang around with them? Yes No

7. If your friends got into trouble with the police, would you be willing to lie to protect them? Yes No

8. On average, how many afternoons during the school week do you spend with your friends?

0 1 2 3 4 5

9. On average, how many evenings during the school week do you spend with your friends?

0 1 2 3 4 5

10. On the weekends, how much time do you spend with your friends?

1-3 hours 4-6 hours 7-10 hours 11-14 hours 15 hours or more
11. How much do you agree or disagree with the following statements?

<table>
<thead>
<tr>
<th></th>
<th>Strongly</th>
<th>Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>b.</td>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>c.</td>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>d.</td>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

12. How would your close friends react if you . . .

<table>
<thead>
<tr>
<th></th>
<th>Strongly</th>
<th>Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td></td>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>b.</td>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>c.</td>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>d.</td>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>e.</td>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>f.</td>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
APPENDIX III

Adolescent Delinquency Measure
**ADS**  
**Instructions**

This survey is to learn more about the actual experiences of people your age. This section of the questionnaire asks questions about your behavior during the LAST 12 MONTHS. Please answer each question as honestly as possible. **Remember, your answers will be kept strictly confidential.**

Please read each question and circle the answer that best matches your behavior in the LAST 12 MONTHS.

How many times in the LAST 12 MONTHS have you . . .

1. Purposely damaged or destroyed property belonging to your PARENTS or other family MEMBERS?

1 - Never  
2 - Once or Twice a Year  
3 - Once Every 2-3 Months  
4 - Once a Month  
5 - Once Every 2-3 Weeks  
6 - Once a Week  
7 - 2-3 Times a Week  
8 - Once a Day  
9 - 2-3 Times a Day

2. Purposely damaged or destroyed property belonging to a SCHOOL?

1 - Never  
2 - Once or Twice a Year  
3 - Once Every 2-3 Months  
4 - Once a Month  
5 - Once Every 2-3 Weeks  
6 - Once a Week  
7 - 2-3 Times a Week  
8 - Once a Day  
9 - 2-3 Times a Day

3. Purposely damaged or destroyed OTHER PROPERTY that did not belong to you (not counting family or school property)?

1 - Never  
2 - Once or Twice a Year  
3 - Once Every 2-3 Months  
4 - Once a Month  
5 - Once Every 2-3 Weeks  
6 - Once a Week  
7 - 2-3 Times a Week  
8 - Once a Day  
9 - 2-3 Times a Day
4. Stolen (or tried to steal) a MOTOR VEHICLE, such as a car or motorcycle?

   1 – Never
   2 – Once or Twice a Year
   3 – Once Every 2-3 Months
   4 – Once a Month
   5 – Once Every 2-3 Weeks
   6 – Once a Week
   7 – 2-3 Times a Week
   8 – Once a Day
   9 – 2-3 Times a Day

5. Stolen (or tried to steal) something worth more than $50?

   1 – Never
   2 – Once or Twice a Year
   3 – Once Every 2-3 Months
   4 – Once a Month
   5 – Once Every 2-3 Weeks
   6 – Once a Week
   7 – 2-3 Times a Week
   8 – Once a Day
   9 – 2-3 Times a Day

6. Found something (like a wallet or some jewelry) and returned it to the owner or the police?

   1 – Never
   2 – Once or Twice a Year
   3 – Once Every 2-3 Months
   4 – Once a Month
   5 – Once Every 2-3 Weeks
   6 – Once a Week
   7 – 2-3 Times a Week
   8 – Once a Day
   9 – 2-3 Times a Day

7. Knowingly bought, sold, or held stolen goods (or tried to do any of these things)?

   1 – Never
   2 – Once or Twice a Year
   3 – Once Every 2-3 Months
   4 – Once a Month
   5 – Once Every 2-3 Weeks
   6 – Once a Week
   7 – 2-3 Times a Week
   8 – Once a Day
   9 – 2-3 Times a Day
8. Thrown objects (such as rocks, snowballs, or bottles) at cars or people?

1 - Never
2 - Once or Twice a Year
3 - Once Every 2-3 Months
4 - Once a Month
5 - Once Every 2-3 Weeks
6 - Once a Week
7 - 2-3 Times a Week
8 - Once a Day
9 - 2-3 Times a Day

9. Run away from home?

1 - Never
2 - Once or Twice a Year
3 - Once Every 2-3 Months
4 - Once a Month
5 - Once Every 2-3 Weeks
6 - Once a Week
7 - 2-3 Times a Week
8 - Once a Day
9 - 2-3 Times a Day

10. Lied about your age to gain entrance or to purchase something, for example, lying about your age to buy alcohol or get into a movie?

1 - Never
2 - Once or Twice a Year
3 - Once Every 2-3 Months
4 - Once a Month
5 - Once Every 2-3 Weeks
6 - Once a Week
7 - 2-3 Times a Week
8 - Once a Day
9 - 2-3 Times a Day

11. Carried a hidden weapon (like a gun or a knife)?

1 - Never
2 - Once or Twice a Year
3 - Once Every 2-3 Months
4 - Once a Month
5 - Once Every 2-3 Weeks
6 - Once a Week
7 - 2-3 Times a Week
8 - Once a Day
9 - 2-3 Times a Day
12. Stolen (or tried to steal) things worth $5 or less?

1 - Never
2 - Once or Twice a Year
3 - Once Every 2-3 Months
4 - Once a Month
5 - Once Every 2-3 Weeks
6 - Once a Week
7 - 2-3 Times a Week
8 - Once a Day
9 - 2-3 Times a Day

13. Attacked someone with the idea of seriously hurting or killing him/her?

1 - Never
2 - Once or Twice a Year
3 - Once Every 2-3 Months
4 - Once a Month
5 - Once Every 2-3 Weeks
6 - Once a Week
7 - 2-3 Times a Week
8 - Once a Day
9 - 2-3 Times a Day

14. Been paid for having sexual relations (sex) with someone?

1 - Never
2 - Once or Twice a Year
3 - Once Every 2-3 Months
4 - Once a Month
5 - Once Every 2-3 Weeks
6 - Once a Week
7 - 2-3 Times a Week
8 - Once a Day
9 - 2-3 Times a Day

15. Had sexual intercourse (sex)?

1 - Never
2 - Once or Twice a Year
3 - Once Every 2-3 Months
4 - Once a Month
5 - Once Every 2-3 Weeks
6 - Once a Week
7 - 2-3 Times a Week
8 - Once a Day
9 - 2-3 Times a Day

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16. Been involved in gang fights?

1 – Never
2 – Once or Twice a Year
3 – Once Every 2-3 Months
4 – Once a Month
5 – Once Every 2-3 Weeks
6 – Once a Week
7 – 2-3 Times a Week
8 – Once a Day
9 – 2-3 Times a Day

17. Sold marijuana or hashish (pot, grass, weed)?

1 – Never
2 – Once or Twice a Year
3 – Once Every 2-3 Months
4 – Once a Month
5 – Once Every 2-3 Weeks
6 – Once a Week
7 – 2-3 Times a Week
8 – Once a Day
9 – 2-3 Times a Day

18. Cheated on school tests?

1 – Never
2 – Once or Twice a Year
3 – Once Every 2-3 Months
4 – Once a Month
5 – Once Every 2-3 Weeks
6 – Once a Week
7 – 2-3 Times a Week
8 – Once a Day
9 – 2-3 Times a Day

19. Hitchhiked where it was illegal to do so?

1 – Never
2 – Once or Twice a Year
3 – Once Every 2-3 Months
4 – Once a Month
5 – Once Every 2-3 Weeks
6 – Once a Week
7 – 2-3 Times a Week
8 – Once a Day
9 – 2-3 Times a Day
20. Helped out someone who was badly hurt such as someone who was beaten up, in an accident, or very sick?

1 – Never
2 – Once or Twice a Year
3 – Once Every 2-3 Months
4 – Once a Month
5 – Once Every 2-3 Weeks
6 – Once a Week
7 – 2-3 Times a Week
8 – Once a Day
9 – 2-3 Times a Day

21. Stolen money or other things from YOUR PARENTS or other MEMBERS of your family?

1 – Never
2 – Once or Twice a Year
3 – Once Every 2-3 Months
4 – Once a Month
5 – Once Every 2-3 Weeks
6 – Once a Week
7 – 2-3 Times a Week
8 – Once a Day
9 – 2-3 Times a Day

22. Hit (or threatened to hit) a TEACHER or other adult at school?

1 – Never
2 – Once or Twice a Year
3 – Once Every 2-3 Months
4 – Once a Month
5 – Once Every 2-3 Weeks
6 – Once a Week
7 – 2-3 Times a Week
8 – Once a Day
9 – 2-3 Times a Day

23. Hit (or threatened to hit) one of your PARENTS?

1 – Never
2 – Once or Twice a Year
3 – Once Every 2-3 Months
4 – Once a Month
5 – Once Every 2-3 Weeks
6 – Once a Week
7 – 2-3 Times a Week
8 – Once a Day
9 – 2-3 Times a Day
24. Hit (or threatened to hit) other STUDENTS or PEERS?

1 – Never
2 – Once or Twice a Year
3 – Once Every 2-3 Months
4 – Once a Month
5 – Once Every 2-3 Weeks
6 – Once a Week
7 – 2-3 Times a Week
8 – Once a Day
9 – 2-3 Times a Day

25. Been loud, rowdy, or unruly in a public place (disorderly conduct)?

1 – Never
2 – Once or Twice a Year
3 – Once Every 2-3 Months
4 – Once a Month
5 – Once Every 2-3 Weeks
6 – Once a Week
7 – 2-3 Times a Week
8 – Once a Day
9 – 2-3 Times a Day

26. Sold hard drugs such as heroin (smack, junk), cocaine (coke), and LSD (acid)?

1 – Never
2 – Once or Twice a Year
3 – Once Every 2-3 Months
4 – Once a Month
5 – Once Every 2-3 Weeks
6 – Once a Week
7 – 2-3 Times a Week
8 – Once a Day
9 – 2-3 Times a Day

27. Taken a vehicle for a ride (drive) without the owner’s permission?

1 – Never
2 – Once or Twice a Year
3 – Once Every 2-3 Months
4 – Once a Month
5 – Once Every 2-3 Weeks
6 – Once a Week
7 – 2-3 Times a Week
8 – Once a Day
9 – 2-3 Times a Day
28. Bought or provided liquor for a minor?

1 – Never
2 – Once or Twice a Year
3 – Once Every 2-3 Months
4 – Once a Month
5 – Once Every 2-3 Weeks
6 – Once a Week
7 – 2-3 Times a Week
8 – Once a Day
9 – 2-3 Times a Day

29. Given money, food, or clothing to someone or some group who needed them very much?

1 – Never
2 – Once or Twice a Year
3 – Once Every 2-3 Months
4 – Once a Month
5 – Once Every 2-3 Weeks
6 – Once a Week
7 – 2-3 Times a Week
8 – Once a Day
9 – 2-3 Times a Day

30. Had (or tried to have) sexual relations (sex) with someone against their will?

1 – Never
2 – Once or Twice a Year
3 – Once Every 2-3 Months
4 – Once a Month
5 – Once Every 2-3 Weeks
6 – Once a Week
7 – 2-3 Times a Week
8 – Once a Day
9 – 2-3 Times a Day

31. Used force (strong-arm methods) to get money or things from other STUDENTS?

1 – Never
2 – Once or Twice a Year
3 – Once Every 2-3 Months
4 – Once a Month
5 – Once Every 2-3 Weeks
6 – Once a Week
7 – 2-3 Times a Week
8 – Once a Day
9 – 2-3 Times a Day

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32. Used force (strong-arm methods) to get money or things from a TEACHER or other adult at school?

1 - Never
2 - Once or Twice a Year
3 - Once Every 2-3 Months
4 - Once a Month
5 - Once Every 2-3 Weeks
6 - Once a Week
7 - 2-3 Times a Week
8 - Once a Day
9 - 2-3 Times a Day

33. Refused to participate when another student asked you to help him or her cheat on an exam?

1 - Never
2 - Once or Twice a Year
3 - Once Every 2-3 Months
4 - Once a Month
5 - Once Every 2-3 Weeks
6 - Once a Week
7 - 2-3 Times a Week
8 - Once a Day
9 - 2-3 Times a Day

34. Used force (strong-arm methods) to get money or things from OTHER PEOPLE (not students or teachers)?

1 - Never
2 - Once or Twice a Year
3 - Once Every 2-3 Months
4 - Once a Month
5 - Once Every 2-3 Weeks
6 - Once a Week
7 - 2-3 Times a Week
8 - Once a Day
9 - 2-3 Times a Day

35. Avoided paying for such things as movies, bus or subway rides, and food?

1 - Never
2 - Once or Twice a Year
3 - Once Every 2-3 Months
4 - Once a Month
5 - Once Every 2-3 Weeks
6 - Once a Week
7 - 2-3 Times a Week
8 - Once a Day
9 - 2-3 Times a Day

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36. Been drunk in a public place?

1 - Never
2 - Once or Twice a Year
3 - Once Every 2-3 Months
4 - Once a Month
5 - Once Every 2-3 Weeks
6 - Once a Week
7 - 2-3 Times a Week
8 - Once a Day
9 - 2-3 Times a Day

37. Stolen (or tried to steal) things worth between $5 and $50?

1 - Never
2 - Once or Twice a Year
3 - Once Every 2-3 Months
4 - Once a Month
5 - Once Every 2-3 Weeks
6 - Once a Week
7 - 2-3 Times a Week
8 - Once a Day
9 - 2-3 Times a Day

38. Stolen (or tried to steal) something at school, such as someone’s coat from a classroom, locker, or cafeteria, or a book from the library?

1 - Never
2 - Once or Twice a Year
3 - Once Every 2-3 Months
4 - Once a Month
5 - Once Every 2-3 Weeks
6 - Once a Week
7 - 2-3 Times a Week
8 - Once a Day
9 - 2-3 Times a Day

39. Broken into a building or vehicle (or tried to break in) to steal something or just look around?

1 - Never
2 - Once or Twice a Year
3 - Once Every 2-3 Months
4 - Once a Month
5 - Once Every 2-3 Weeks
6 - Once a Week
7 - 2-3 Times a Week
8 - Once a Day
9 - 2-3 Times a Day
40. Begged for money or things from a stranger?

1 - Never
2 - Once or Twice a Year
3 - Once Every 2-3 Months
4 - Once a Month
5 - Once Every 2-3 Weeks
6 - Once a Week
7 - 2-3 Times a Week
8 - Once a Day
9 - 2-3 Times a Day

41. Skipped classes without an excuse?

1 - Never
2 - Once or Twice a Year
3 - Once Every 2-3 Months
4 - Once a Month
5 - Once Every 2-3 Weeks
6 - Once a Week
7 - 2-3 Times a Week
8 - Once a Day
9 - 2-3 Times a Day

42. Failed to return extra change that a cashier gave you by mistake?

1 - Never
2 - Once or Twice a Year
3 - Once Every 2-3 Months
4 - Once a Month
5 - Once Every 2-3 Weeks
6 - Once a Week
7 - 2-3 Times a Week
8 - Once a Day
9 - 2-3 Times a Day

43. Tried to talk your friends out of doing something that was against the law?

1 - Never
2 - Once or Twice a Year
3 - Once Every 2-3 Months
4 - Once a Month
5 - Once Every 2-3 Weeks
6 - Once a Week
7 - 2-3 Times a Week
8 - Once a Day
9 - 2-3 Times a Day
44. Been suspended from school?

1 – Never  
2 – Once or Twice a Year  
3 – Once Every 2-3 Months  
4 – Once a Month  
5 – Once Every 2-3 Weeks  
6 – Once a Week  
7 – 2-3 Times a Week  
8 – Once a Day  
9 – 2-3 Times a Day

45. Made obscene phone calls, such as calling someone and saying dirty (sexual) things?

1 – Never  
2 – Once or Twice a Year  
3 – Once Every 2-3 Months  
4 – Once a Month  
5 – Once Every 2-3 Weeks  
6 – Once a Week  
7 – 2-3 Times a Week  
8 – Once a Day  
9 – 2-3 Times a Day
Voluntary Permission for Participants in a Research Study

Purpose/Description of Study
You are invited to permit your child to participate in this research study. The following information is provided in order to help you make an informed decision whether or not to allow your child to participate. If you have any questions, please do not hesitate to ask.

Your child is eligible to participate in this study because your child has been referred to Clark County Juvenile Justice Services<INSERT the State of Nevada Youth Parole Bureau>. The purpose of this study is to investigate how peer relationships affect the behavior of female adolescents.

This study will take approximately an hour of your child's time. In order to assess peer relationships we will have your child fill out a series of questionnaires. Your child will be able to take short breaks as needed during the survey. This information will allow us to assess on your child’s peer relationships.

Risks
There are no known risks associated with this research. Your child may not receive any direct benefits from participating in this study. However, the information derived from this study may help mental health professionals provide future programs that will aid in the prevention of delinquency. Neither you, nor your child will be billed for your participation in this research. In addition, your child will not be paid for participation in this research.

Confidentiality
Any information obtained during this study which could identify your child will be kept strictly confidential. The information obtained in this study may be published in scientific journals or presented at scientific meetings, but your child’s identity will be kept strictly confidential. The only people who will know that your child is a research participant are the members of the research team. The primary researcher has obtained a Certificate of Confidentiality from the National Institutes of Health in order to protect your child’s privacy. With this Certificate, the researcher can't be forced to disclose information that may identify your child, even by a court subpoena, in any federal state or local civil criminal, administrative, legislative or other proceedings. This Certificate does not prevent you from voluntarily releasing information about your child or your child’s
involvement in this research. If an insurer, employer, or other person obtains your written consent to receive research information, then the researcher may not use the Certificate to withhold information. The Certificate of Confidentiality does not prevent researchers from disclosing voluntarily, without your consent, information that identifies your child as a participant in the research project under the following circumstances:

- Intent to hurt self or others
- Incidents of child or elder abuse

Your child’s participation in this research is entirely VOLUNTARY. If you choose not to allow your child to participate it will not affect her situation with Clark County Juvenile Justice Services <INSERT>. If you decide to allow your child to participate, you are free to withdraw your consent and discontinue your child’s participation at any time without prejudice.

During the course of this study, you will be informed of any significant new findings (either good or bad) such as changes in the risks or benefits resulting from participation in the research or new alternatives to participation that might cause you to change your mind about allowing your child to participate. If such new information is provided to you, your consent for your child to participate will be re-obtained.

You may withdraw your child at any time and discontinue her participation in the study without penalty. You are not waiving any legal claims, rights or remedies because of your child’s participation in this research study. If you have any questions regarding your child’s rights as a research participant, you may contact the University of Nevada, Las Vegas Institutional Review Board (UNLV-IRB), at (702) 895-2794. If you have any questions about the research, please contact Jenna Silverman or Roslyn M. Caldwell, Ph.D. (advisor), at (702) 895-0193.

I acknowledge that Jenna Silverman and Roslyn Caldwell, Ph.D. and Clark County Juvenile Justice Services <INSERT>: has fully explained to me the risks involved and the need for the research; has informed me that I may withdraw my child form participation at any time without prejudice; has offered to answer any inquiries which I may have concerning the procedures to be followed; and has informed me that I will be given a copy of this consent form. I freely and voluntary consent to my child’s participation in the research project.

Signature of Parent or Guardian Date

Name of Parent (Print)

Name of Child

Signature of Investigator Date
APPENDIX IV

university of nevada, las vegas

ASSENT TO PARTICIPATE IN A RESEARCH STUDY

Why am I here?
Ms. Silverman wants to tell me about a study that she is conducting that examines people's thoughts, feelings, and behavior. She wants to see if I would like to participate in this study.

Why is she doing this study?
Ms. Silverman wants to know what I am thinking, how I am feeling, and how I behave.

What will happen to me?
Only if I want to, one thing will happen:
1. I will fill out papers that describe my thoughts, feelings, and behaviors.
2. I may feel tired from completing the survey.

Who will know about my thoughts, feelings, and behavior?
Only Ms. Silverman will see what I write, however, my name will be withheld. Ms. Silverman will assign me a number and my name will not appear on the survey. Ms. Silverman will not release what you write to the court.

Will I get better if I am in the study?
This study won't make me feel better or get well. But Ms. Silverman might find out something that will help other people like me later.

Do I have to be in the study?
I do not have to be in the study. I will not get in trouble if I don't want to do this. I just have to tell Ms. Silverman if I want to participate or not. I can say yes now and change my mind later. It's up to me.

Signature Age Date
Name of Participant

Signature of Investigator Date

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REFERENCES


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Committee Member, Dr. Roslyn M. Caldwell, Ph. D.
Committee Member, Dr. N. Clayton Silver, Ph. D.
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