

## ABSTRACT

TICHAVSKY, LISA PAULETTE. The Influence of Situational Factors and Domestic Assault Laws on Juvenile Arrests for Assault. (Under the direction of Dr. Margaret A. Zahn).

Between 1996 and 2005, Uniform Crime Reports show an increase in girls' arrests for assaults. Previous research has suggested two possible reasons for this increase. Some suggest that girls are becoming more violent, while others argue that increases in girls' arrests for assaults may be an artifact of changes in parents' and police response to girls' conflicts in the home. To test these possibilities, this study uses data for 445 agencies (N=128,787) which continuously reported to the National Incident Based Reporting System (NIBRS) during the years 1996-2005 and information on state domestic violence arrest laws. Bivariate analyses, which assessed the patterns of female violence across years, failed to find evidence of increasing female violence. Through logistic regression analyses, support is found for increasing social control practices despite the fact that after controlling for injury, weapon use, and other characteristics of the incident, state arrest policies appear to equally increase the odds of arrest for boys and girls. Further, an unexpected finding is that African American girls were more likely to be arrested than white girls until arrest laws were introduced into the model indicating that the effect of race was mediated by domestic violence laws. Directions for future research are discussed.

The Influence of Situational Factors and Domestic Assault Laws on Juvenile  
Arrests for Assault

by  
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## DEDICATION

This thesis is dedicated to my grandfather, Paul Playton, who from the moment I could talk, encouraged me to ask questions.

## BIOGRAPHY

Lisa Tichavsky obtained a Bachelor's of Science in Psychology and a Bachelors of Art in Sociology from Arizona State University in 2003, graduating Summa Cum Laude. In addition to her interest in girls' delinquency, she also studies issues related to the division of household labor and domestic violence. She is married with one daughter, and in her spare time enjoys fishing in Alaska with her father and boating.

## ACKNOWLEDGMENTS

I would like to thank my chair and mentor, Dr. Margaret Zahn who is responsible for igniting my interest in girls and delinquency and criminology in general. Her dedication towards understanding delinquent girls opened opportunities for me to meet with girls in custody and to become involved in reviewing programs directed at helping these girls. Her immeasurable knowledge in this area was crucial to the design of this study. I would also like to thank Dr. Rod Engen and Dr. Maxine Thompson for their insightful contributions to this thesis. Additionally, I would like to thank Dr. William Smith for his earlier methodological guidance, and Dr. Rose Weitz who nourished my early enthusiasm for research.

Finally, I want to express my gratitude to my parents, Leonard and Janice Tichavsky, who believed in me when I did not, (even though this meant their spending several summers fishing alone); my grandparents, Paul and Lillian Playton, for understanding my absence from them and encouraging me when things got rough; my husband, Pat DeSomma, who was often accused of only pretending to have a wife since no one ever really saw him with one; and my daughter Jennifer, for her patience while having to share my attention with a computer.

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## INTRODUCTION

Patterns of increasing female involvement in crime are not new. Adler's (1975) and Simon's (1975) studies of the UCR crime rates which found a narrowing of the gender gap in crime sparked multiple theories of the causes of the new female criminality. However, most of the increases reported were in the area of property crimes or minor offenses (Heimer 2000; Steffensmeier 1993), and violent crime was still considered to be a male phenomenon (Pollock and Davis 2005). Yet, over the past two decades, the disparity in official data between boys and girls violent offending has steadily decreased, particularly for assaults (Synder and Sickmund 2006; Federal Bureau of Investigation 2006; Pollock and Davis 2005). For example, between 1996 and 2005, Uniform Crime Reports show that although boys' arrests for aggravated assaults decreased 23.4%, girls' arrests for aggravated assaults only decreased by 5.4%. Further, while boys' arrests for other assaults decreased over this period by 4.1%, girls' arrests for other assaults increased by 24% (Federal Bureau of Investigation 2006). Further, because of the disproportionate confinement rates for African American girls, a racial component is suggested in the increases of girls' arrests (Davis 2007; American Bar Association and National Bar Association 2001).

Some studies suggest that girls are simply becoming more violent, and intervention and prevention policies must consider the "new nature" of female violence in order to develop effective programs (Archer and Grascia 2006). Others have voiced skepticism towards the raw interpretation of official arrest rates and suggest that the changes in girls' arrests are due to society's reactions to female violence, particularly violence by juvenile

girls, creating a culture of control (Frye, Haviland, and Rajah 2007; Steffensmeier et al. 2005; Chesney-Lind 2002; Garland 2001). This viewpoint proposes that new social control policies disproportionately affect girls, with mandatory arrest policies being especially influential (Chesney-Lind and Irwin 2007; Buzawa and Hotaling 2006). Regardless of the position taken, the reason for the increase in girls' arrests for assaults remains a question to be explored.

Researchers have questioned whether or not official arrest statistics are capturing true changes in female criminal behavior. For example, after comparing UCR arrest data to longitudinal self-reported data (NCVS and NYRBS and Monitoring the Future) for the years 1980-2003, Steffensmeier et al. (2005) failed to find the pattern of increasing female violent offending found in official arrest data in any of the self-reported data. They conclude that the increases in violent female offending are unique to official data and that there is no true increase in female violent offending at the national level.

Other research has noted that, because girls commit far fewer violent crimes than boys, the use of figures that measure changes in percent of offending may be misleading as even small increments of change in counts may produce a large percentage change in overall offending (Pollock and Davis 2005). To address this concern, Pollock and Davis (2005) suggest that a better measure for assessing change in rates of offending is to use the "percentage of total" statistic which is a measure of the percentage of all offenders in an offense category that are female compared to the percentage of all offenders that are male. They use this disparity measure to measure trends in self-report data from the National Crime Victimization survey for the years 1993-2002, and conclude that females' aggravated

and simple assault rates “are one of the few areas of violent crime that show and increase in the past decade” (p. 13). The change in disparity was fueled by a 4.3% decrease in boys’ reported simple assaults and a 41% *increase* in simple assaults reported by girls. Further, girls’ reports also showed increases for aggravated assaults (+8%) compared to a decrease for boys (-29%). Thus, self-reports as well as official data reflect increases in assaults committed by girls. Yet, the *meaning* of the increases is questioned by several researchers (Archer and Grascia 2006; Pollock and Davis 2005; Steffensmeier et al. 2005; Chesney-Lind 2002).

Although several exceptional studies have attempted to tease out the subjective from the explicit meaning of the increase in girls’ participation in violent behavior, quantitative studies testing possible reasons for girls’ arrests are relatively rare. The lack of quantitative studies might be due to the difficulty of obtaining data that include variables necessary to examine the circumstances that may influence arrests such as the victim-offender relationship, level of injury, weapon use, and measures of formal social control policies. However, the availability of the FBI’s National Incident Based Reporting System (NIBRS) data, which contains variables to measure characteristics of the incident which may influence arrest, offers a new tool for researchers to address possible reasons for girls increasing arrests for assaults.

Through an analysis of NIBRS data for the years 1996-2005, this thesis explores two equally plausible reasons for girls’ increased arrests. In addition to the offender, victim, and incident characteristics available in NIBRS, a proxy for domestic violence arrest policies is

represented by whether the state has a mandatory arrest, pro-arrest or discretionary arrest law. Although policies regarding the handling of family violence cases are set at the jurisdictional level, a state policy regarding arrest procedures in family violence cases may set the context for jurisdictional policies and actions (Hirschel et al. 2007).

In addition to examining the factors predicting girls' and boys' arrests for assault, this study also hopes to inform the discussion of increasing female violence. Towards this goal, I will examine trends in the assault incidents involving girl offenders over a ten-year period to identify changes or patterns that might guide future research on the reasons for girls' increases in arrests for assaults.

## **POSSIBLE REASONS FOR GIRLS' INCREASED ARRESTS FOR ASSAULT**

### ***Increasing Female Violence***

One possible reason for girls' increased arrests is that girls are simply becoming more violent. Frieda Adler (1975) envisioned that women's liberation, and the subsequent increase in gender equality, would lead to increased violence by women as the line between genders become more blurred and women assume traditional male roles and begin to behave more like men. Conversely, Simon (1975) predicted that increases in gender equality, particularly in the economic realm, would cause women to be more content and thus violence by women would become increasingly rare, but women's white-collar crime would increase as women's workplace opportunities increased. If official arrest records are to be taken at face value, then the question of increasing female violence has been answered. But some would argue that official arrests statistics cannot be interpreted in this way.

Taken at face value, the interpretation of official arrest rates for assaults suggests that girls are becoming more violent. This possibility has been embraced by the popular media and considered by several researchers. The portrayal of “mean girls” and the violent or aggressive adolescent female have flourished in both print and film, often depicting the “new” violent girl nearing a national crisis (Chesney-Lind and Irwin 2007; Archer and Grascia 2006; Chesney-Lind 1999). According to Chesney-Lind and Irwin, media images and newspaper reports of violent acts by girls stir the public imagination toward wild and aggressive young females. Beyond the public concern with the emergence of the violent female offender, social science researchers, particularly those that study “gang girls”, have also raised concern over increasing female violence.

Jody Miller (2001) studied girl gang members and concluded that in addition to the sexualized nature of gang membership, violence is a reality in the experiences of female gang members. Similarly, a qualitative study of girl gang members conducted by Arthur Lurigio (1998) found that girls’ involvement in gangs has moved beyond the previously conceived roles of female gang members such as drug “mules” or as peripheral participants to male gang activities. Additionally, he found that in the gangs studied, females comprised about half of the gang membership and the level of violence perpetrated by females rivaled that of the males.

Archer and Grascia (2006) welcome the attention the increases in female violence has generated stating that the recognition of increasingly violent girls is calling much needed attention to a problem that has been long silenced. After citing increased gang membership

and violence, they posit that ignoring female violence, or dismissing it as trivial, prevents social policy makers from addressing the roots of female violence, which they propose is female victimization. They suggest that only when we acknowledge girls' increasing violence can help these girls whose acts of violence are "blatant cries for help" (p. 45).

Researchers and the media who take the rise in female offending at face value, along with the qualitative research on female gang membership adopt few criminological theories to explain the increase. Although weak familial and social bonds, as described in Hirschi's (1969) social control theory, is thought to explain increasing violent female offending (Archer and Grascia 2006), most do not explicitly offer theoretical explanations for their position (*see Miller 2001 for an exception*). However, the implicit theoretical perspective for the causes of increasing female violence seem to support Adler's 1975 prediction that as females gain social equality with males, their behavior will increasingly mirror the behavior of males, including violent criminal behavior.

However, several researchers disagree with this interpretation of the meaning behind girls' increased arrests for assaults. Instead of interpreting official arrest records as an indicator of changes in girls' behavior, some suggest that the official arrest data reflect changes in society's reaction to signs of female aggression, particularly in the home (Chesney-Lind and Irwin 2007; Buzawa and Hotaling 2006). Reports of girls in gangs and other signs of girls' violence can stir a moral panic within the society affecting parents of girls and formal social control practices (Chesney-Lind and Irwin 2007; Garland 2001).

### ***Increasing Arrests as an Artifact of Increased Social Control***

The mass media emphasis on “mean girls” and the headlines reporting shocking acts of violence by young females may be contributing to what Garland (2001) describes as a culture of control. As the public responds to the media reports of unprecedented female violence, demands may be made to increase institutional control of the group posing the risk, in this case, young females (Chesney-Lind and Sheldon 2004). Several researchers have proposed this sort of attention to female violence may artificially inflate the true nature of girls’ violence in one of two ways.

The first is a reduced tolerance for any sort of violent offending, causing less serious offense to be “charged up” to an offense for which an arrest can be made (Steffensmeier et al. 2005; Chesney-Lind 2002; Acoca 1999). The second way that public concern over female violence may be inflating official arrest rates is through girls increased involvement with the police, either through police response to domestic violence incidents (Hirschel et al. 2007; Chesney-Lind 2002, 1999; Acoca 1999; Buzawa et al. 1999) or parents’ increasing reliance on police to control their unruly children (Davis 2007; Acoca 1999). Any increased involvement of the police may be particularly problematic for minority girls as “changes in police practices may lead to the re-labeling of girls’ family conflicts as violent offenses, with a particularly serious impact on minority girls” due to racial biases in the criminal justice system (American Bar Association and National Bar Association 2001:17).

Through qualitative interviews with girls living in a residential detention center, Davis (2007) reports that 57% of the girls were arrested following an altercation with a family member. These girls, mostly African American and Hispanic, reported that their

parents or guardians involved the police after the girls defied some level of control. For example, one girl came to the attention of the juvenile justice system when she pushed her mother against a wall while attempting to leave the home despite her mother's insistence that she stay home. The mother, as other parents and custodial grandparents have been reported to do (Davis, 2007; Acoca, 1999), called the police either out of fear that the girls would cause injury or out of a perceived need to use police control to gain the girl's obedience.

Belknap, Winter, and Cady (2003) also report narratives from interviews with similarly situated girls. In their study, the majority of the girls were detained, or had their first involvement with the juvenile justice system, as a result of trivial acts during a fight with a family member. For example, one girl recounts being arrested for assault after throwing cookies at her mother during an argument and another for throwing a Barbie doll during a fight.

Other researchers have theorized that since the majority of incidents involving females are a result of a family conflict, formal social control practices are likely to be the mechanism behind increasing arrests of girls for assault, and that there is little evidence that females are more violent in their behavior (Steffensmeier et al. 2005; Sondheimer 2001; Chesney-Lind and Sheldon 1998; Steffensmeier and Allen 1996). This has led some researchers to look at mandatory and pro-arrest laws that have been associated with increases in women's arrests for assault in numerous studies (Miller 2005; Hirschel and Buzawa 2002; DeLeon-Granados, Well, and Binsbacher 2006) and connecting these practices to the

increases in girls' arrests for assault (Hirshel et al. 2007; Buzawa and Hotaling 2006; Bureau of Criminal Information and Analysis 1999).

### ***Juvenile Involvement in Domestic Violence and Arrest Laws***

Until recently, there has been no empirical evidence that domestic violence laws would be applicable or enforced in conflicts involving juvenile offenders other than anecdotal evidence provided through interviews with girls in detention facilities. In the past, studies that focused on the impact of domestic violence laws on the increases in arrests of women typically excluded cases involving minors from their analysis, regardless of the proportion of their sample that involved minors as offenders (DeLeon-Granados et al. 2006; Hirschel and Buzawa 2002). Only recently has there been reason to believe that domestic violence laws, which originated with the intent of protecting adult women in situations of intimate partner violence (Buzawa and Austin 1993), might be affecting juvenile male and female arrests for domestic assaults.

Juvenile offenders were included in a recent study conducted by Buzawa and Hotaling (2006), which studied police domestic violence calls in five towns with pro-arrest domestic violence laws. Of the calls involving domestic violence that police responded to, 33% of the cases involved juveniles as offenders. They found a bias against juveniles who are involved in disputes with their parents or other family members with juveniles being more likely to be arrested than adults. This was particularly pronounced in situations where the parent and the juvenile were mutually combative. In these cases, the parent's complaint to the police was taken more seriously (as measured by arrests) than juvenile complaints against their parents.

Buzawa and Hotaling (2006) cite one case where the police were called after a mother slapped her daughter and the daughter had slapped the mother back. Officers responding to the call, though convinced that mutual “assault” had occurred, arrested the daughter but not the mother. They suggest that this finding can be explained through Black’s (1980) position that juvenile violence against their parents is taken as a rejection of authority and are thus taken more seriously than parents who are viewed as exercising parental control or disciplining their children. Black also suggested that juveniles hold lower social positions than adults and therefore statements or accounts to the police are likely to be taken less seriously than a statement of an adult (Black and Reiss 1970).

Based on Black’s theory of police reaction to juveniles and on the evidence presented by researchers who have included juvenile, either ad hoc or intentionally (Hirschel et al 2007; Buzawa and Hotaling 2006; DeLeon-Granados et al. 2006) there appears to be sufficient reason to believe that police enforce domestic violence laws regardless of the age of the offender, at least in the areas studied. Whether or not the enforcement of these laws is equally applied to males and females has not been determined and is one purpose of this study.

## **FACTORS THAT MAY INFLUENCE ARREST DECISIONS**

### ***Situational Factors***

In addition to law or policy as a factor influencing arrest decisions, a number of situational factors have been found to influence whether police contact results in an arrest. Prior research has shown that arrest is more likely when the suspect’s attitude or demeanor is

considered uncooperative or argumentative (Visher 1983; Smith and Visher 1981; Black and Reiss 1970), when the suspect is present at the scene (Robinson and Chandek 2000; Eigenberg, Scarborough, and Kappeler 1996), or when the victim requests an arrest be made (Eigenberg et al 1996; Visher 1983; Smith and Visher 1981; Black 1970).

Strong support is found for increased probability of arrests for incidents that are considered more serious, for example, aggravated assault versus simple assault. The severity of injury and weapon use has also been consistently linked to increased arrest probability (Sealock and Simpson 1998; Ferraro 1989; Smith and Visher 1981; Black 1980; Black and Reiss 1970). When weapon use is measured independently from a general category of “seriousness”, weapon involvement still is often found to increase the likelihood of arrest (Felson and Ackerman 2001; Eigenberg et al. 1996; Ferraro 1989). Likewise, when severity of injury is measured independently from a scaled “seriousness” indicator, greater degrees of injury are shown to increase the probability that the suspect will be arrested (D’Alessio and Stolzenberg 2003; Felson and Ackerman 2001; Feder 1997; Buzawa and Austin 1993; Ferraro 1989) The one exception to this is reported by Eigenberg et al. (1996) who found no relationship of victim’s injury to arrest decision.

Black (1980) suggested that when there is a greater relational distance between the offender and the victim, arrest is more likely to occur. The closer the relational distance between the offender and the victim, the less likely the victim would request an arrest, and victim’s request for an arrest was found to also increase the likelihood of arrest. Thus, an assault against a stranger should be more likely to involve an arrest than an assault against a

friend or family member, and there is some evidence to support this. Visher (1983) found the victim-offender relationship to influence female arrests, but males are less likely to be arrested when the victim is a friend or relative. A similar effect was found by Felson and Ackerson (2001) but only for minor offenses.

The location of the incident may also influence arrest decisions, but there is less consensus regarding what part location plays. For example, although no effect was found for females, Visher (1983) found that if a crime occurs in a commercial location, males were more likely to be arrested. Conversely, researchers have reported greater likelihoods of arrest for incidents that take place in a private residence (D'Alessio and Stolzenberg 2003) or semi-private location (Felson and Ackerman 2001).

Since all of these factors clearly influence arrest decisions in one way or another, ideally they should all be included in models predicting arrest decisions. Historically, it has been difficult to include these factors in any large scale secondary analysis as these measures have not been included in Uniform Crime Reports. However, many of the factors found to influence arrest are now readily available. Though NIBRS does not report on victims' requests for arrests, prior arrests, nor the demeanor of the offender, several other influential factors such as victim and offender age, race, and sex, severity of injury, victim-offender relationship, and weapon use are reported.

### ***Offender Characteristics***

*Gender.* Past research has also shown that the gender of the offender or victim influences the likelihood of arrest. Earlier studies, which found lower likelihoods of arrest

for females compared to males (Smith and Visher 98; Visher 1983), suggested that perhaps the police held more “chivalrous” attitudes towards women and therefore were less likely to place them under arrest (Visher 1983). Thus, this study will examine difference in the odds of arrest for males and females while controlling for other variables. Further, when a victim is female, the risk of arrest has been found to increase (D’Alessio and Stolzenberg 2003). Therefore the gender of the victim will be included in the models.

*Race.* Numerous studies report increased risk of arrests for Blacks compared to whites (Felson and Ackerman 2001; Cureton 2000; Hindelang 1978; Visher 1983; Smith and Visher 1981), but this is not consistently found. Several studies have found the opposite to be true with whites more likely to be arrested for assaults than Blacks (Hirschel et al. 2006; Eitle, Stolzenberg, and D’Alessio 2005; D’Alessio and Stolzenberg 2003). These disparate findings obscure our understanding of the effects of race in arrest decisions. Differences may be due to the type of offense studied, the data used, the location of the sample, and the time period under study. Regardless of the specific nature of the impact of race on arrest decisions, it is clear that race is a particularly influential predictor of arrests. Further, the race of the victim can influence arrests, as past research has found that offenders who victimize a minority victim have less risk of arrest than if they had victimized a white victim (D’Alessio and Stolzenberg 2003; Felson and Ackerman 2001; Ferraro 1989). Race of the victim and offender will also be included in the current study.

*Age.* Several studies have identified effects of either the offender’s or victim’s ages. Visher (1983) found that age influenced arrest decisions for females but not for males, with

younger females more likely to be arrested than older females. Therefore, although the age range of offenders included in this study was restricted to offenders between the ages of 10 to 17 years old, the offender's age is included as a predictor in the analytical models predicting the probability of arrest. Also, age was shown to be a significant predictor of arrest for both sexes in a study by D'Alessio and Stolzenberg (2003) who found that arrests were more likely for younger offenders, and when the incident involved older victims and therefore victim's age is also included as a predictor in the analytical models.

### **COMPARISON OF NIBRS TO THE UCRs**

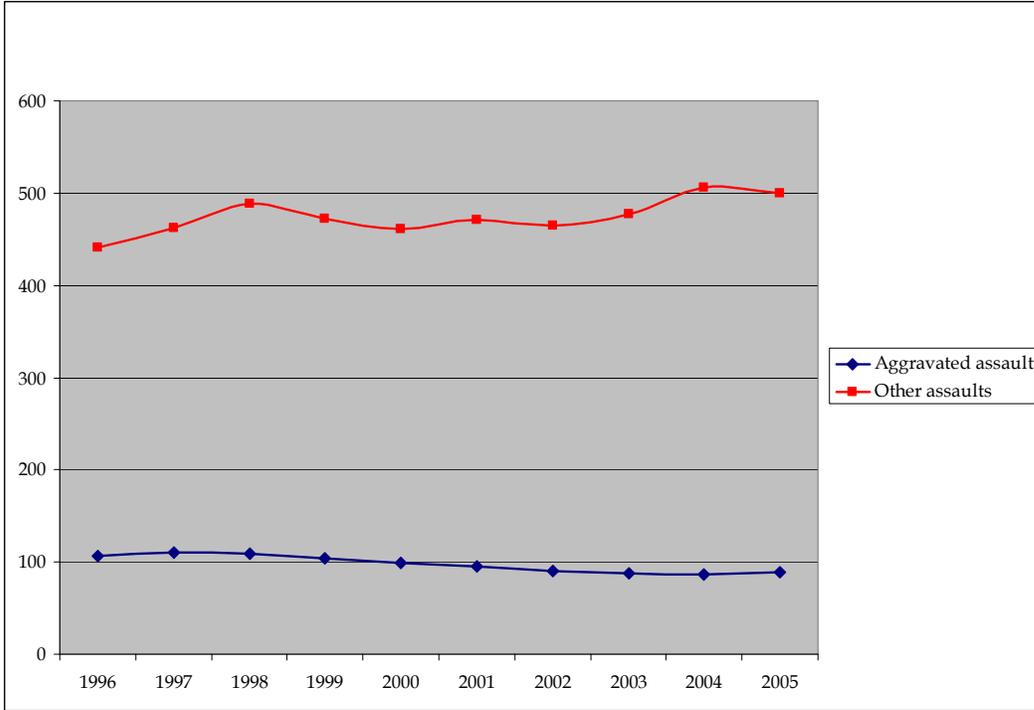
As indicated by the above discussion, most research that has attempted to address the issue of increased female involvement in the juvenile justice system has relied on qualitative studies, typically focus groups or interviews with incarcerated girls (Archer & Grascia 2006; Ness 2004; Belknap, Winter, and Cady 2003; Belknap, Holsinger and Dunn 1997). However, the availability of NIBRS data, which contains information on the characteristics of the incident, offers the opportunity to perform quantitative analysis on situational characteristics that may increase the probability of juveniles' arrests. Unlike UCR data, NIBRS offers the advantage of being able to obtain information on all incidents reported to police regardless of whether an arrest resulted. Therefore, NIBRS includes information on both incidents resulting in arrest and incidents where no arrest was made.

Additionally, NIBRS incorporates an extensive set of quality control standards throughout the data entry and submission process, including clear data classification guidelines (Hirschel et al. 2007). This provides the added advantage of some degree of

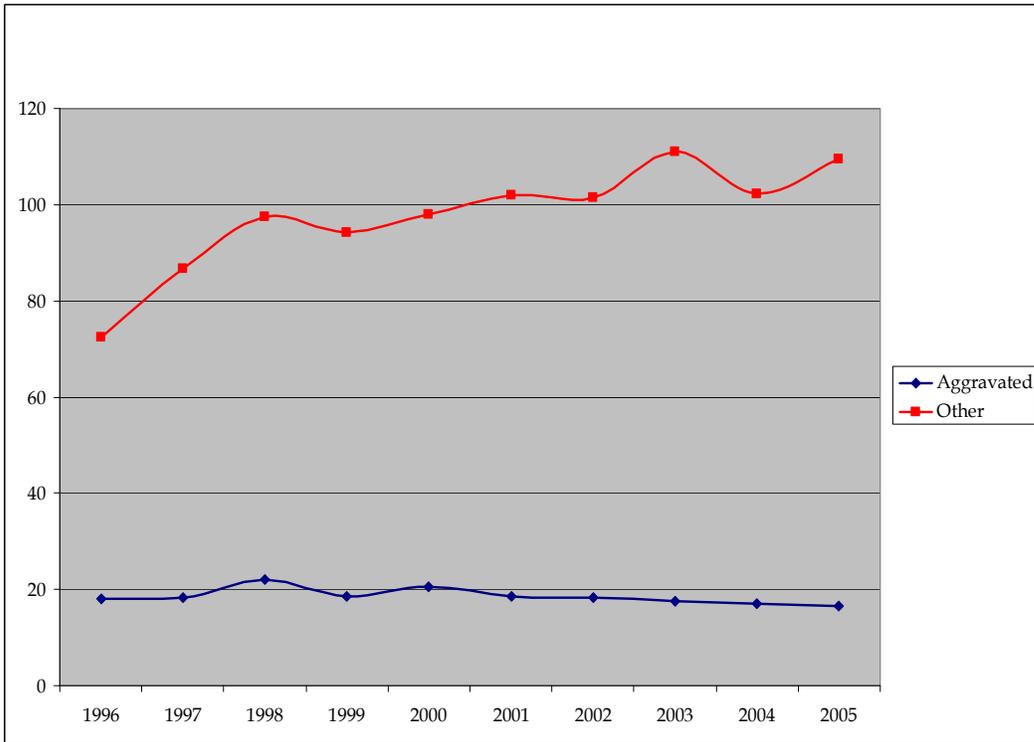
consistency with how the crimes are classified from one agency to another. The definitional criteria and quality control standards provide greater overall reliability, particularly when comparing crime information gathered across different agencies.

However, because the implementation of NIBRS requires greater resources for larger agencies than for smaller agencies, the agencies reporting in the first several years of NIBRS data tend to be smaller agencies with populations mostly under 100,000. Since it is possible that data collected from smaller locales might reflect different patterns than National data reported in the UCR, it is necessary to assess the appropriateness of the use of NIBRS to test possible explanations for trends in national data. One way of doing this is to compare the trends in the mostly rural areas in NIBRS to the trends in the national data.

Current and prior population size is available in NIBRS for every agency reporting. However, these population variables are not disaggregated by sex or age. Therefore, in order to calculate arrest rates for juvenile offenders aged 10-17, population estimates were obtained through the National Center for Health Statistics, Bridged-Race Estimates (provided by the Center for Disease Control and Prevention) individually for the years 1996-2005 and matched to Federal Information Processing Standard (FIPS) codes for the NIBRS agencies. For the agencies in the NIBRS sample, it appears that the trends in the rates of juvenile arrests for assaults in the UCRs are not unique to urban areas. Similar patterns, of increasing arrests for female assaults are found for the more rural areas reporting to NIBRS (see Figures 1a and 1b).



**Figure 1a. Female Arrests for Assault by Type, UCR 1996-2005 (per 100,000)**



**Figure 1b. Female Arrests for Assault by Type, NIBRS 1996-2005 (per 100,000)**

Further, there is little reason to believe that the dynamics of intrafamilial conflict is dissimilar in rural and urban areas. Support for urban and rural similarity is offered by Grossman (et al. 2005) who found few differences in the circumstances of domestic abuse between urban and rural residents. Therefore, it would certainly be beneficial to have more urban areas represented, but the under-representation of urban areas should not present a critical limitation to the analyses.

### **CURRENT STUDY**

This study explores several possible explanations for the increase in girls' arrests for assaults by examining the characteristics of an incident that increase the likelihood of arrest. Additionally, I hope to inform the discussion of girls' increasing violence by examining the trends in weapon use and injury inflicted over a ten year period. It is hoped that the results will guide future research on this phenomenon through connecting social processes and juvenile arrests.

#### ***Possible Explanations to Be Examined***

*Explanation 1. Girls are becoming more violent.* If girls are simply becoming more violent, then girls' percentage of incidents that involve weapons or that cause serious injury to the victim should significantly increase over the years. Bivariate analyses will look at these trends using information on available in NIBRS for weapon use and severity of injury.

*Explanation 2. Girls increased arrests are due to their greater involvement in familial conflicts being brought to the attention of the police.* There are two parts to this possibility. The first is the suggestion that girls' assaults, more so than boys' assaults, are often against

members of their family. The second is that girls' involvement in family conflicts are increasingly brought to the attention of the police. If the increases in girls' violence is due mostly to conflicts with family members, and if these conflicts are increasingly brought to the attention of law enforcement, then the number of family related assaults by girls should increase over the years. This possibility will be explored through a bivariate analysis showing the percentage of girls' incidents that involve family members. Since boys' assaults are believed to be less family-centered than those of girls, I will also examine the same trends for boys.

*Explanation 3. Girls are disproportionately affected by state domestic violence laws.* Since girls' assaults are believed to disproportionately involve intrafamilial conflicts, domestic violence arrest policies are likely to affect girls than boys. Although jurisdictional level policies are not available, the state domestic arrest laws may set the tone for jurisdictional policies and practices. This can be tested by including variables indicating whether the state has a mandatory arrest, pro-arrest, or discretionary arrest law in domestic violence cases. If state domestic violence laws are affecting juveniles, particularly girls, then incidents occurring in states with mandatory arrest laws should have the greatest probability of arrest, followed by those with pro-arrest laws, and lastly those with no statewide formal statement of arrest practices (discretionary arrest policies).

Again, the use of arrest law variables does not assume that these statutes are practiced at the jurisdictional level. However, it is reasonable to believe that state statutes set the context from which jurisdictional policies may be derived. Evidence of state statutes setting the context of jurisdictional practices was found by Hirschel (et al. 2007).

Hirschel and colleagues used NIBRS data in conjunction with state domestic violence laws to examine characteristics of arrests made in domestic violence cases. Recognizing that state laws do not necessarily translate into jurisdictional policies and practices, they also interviewed over 600 agencies in 29 states with the purpose of comparing how well the jurisdictional policies or practices resembled state law. They found that for an overwhelming majority of jurisdictions, the jurisdictional policies mirrored state policy. The exceptions, they note, were in a few states that held pro-arrest laws in which case the jurisdictions were found to be harsher than the state law. Therefore, there is evidence that state law may influence the policies and practices of jurisdictions so I include variables for state domestic violence arrest as a proxy for jurisdictional practices.

Thus, state laws regarding domestic assaults that require an arrest or specify that arrest is the preferred action may set the context in which jurisdictional policies are adopted. Still, since data on arrest laws are not collected at the jurisdictional level the analyses here are intended to offer descriptive information on the characteristics of incidents involving juveniles for the purpose of offering a framework for future research and should be viewed with caution when drawing conclusions about the causes of juvenile arrests.

Multivariate analyses will include state domestic violence laws as a predictor in the probability of arrest of juvenile assaults. Adding characteristics of the incident in addition to the arrest laws will allow for a test of the effect of domestic violence laws on the probability of arrest while controlling for other factors known to affect arrest decisions. In addition to examining characteristics of the incident which may influence arrest decisions, bivariate

analyses will examine patterns of female offending over time to assess changes in female behavior.

## **DATA**

NIBRS data for the years 1996-2005, representing states from the South, North East, South East, and Western United States are used for analysis (N= 128,787). Since NIBRS reporting is voluntary, not all agencies reporting in 2005 reported in 1996. Every year, new agencies begin reporting to NIBRS which create artificial differences when attempting to compare variables across years. Thus, I controlled for possible confounds from the addition of new agencies by limiting the sample to only agencies that reported for all 12 months for all years. This resulted in 445 agencies representing 8 states (Iowa, Idaho, Michigan, North Dakota, South Carolina, Utah, and Virginia).

The sample includes all incidents involving juvenile offenders (ages 10 through 17) for all aggravated and simple assault and intimidation (NIBRS codes 13A-13C).<sup>1</sup> Although NIBRS provides data for up to 10 offenders and ten victims, I limit the sample to cases involving one victim and one offender. Therefore, these data do not capture assaults that were committed with more than one offender or more than one victim (i.e. assaults by or against multiple girls such as those which might occur in gang fights). Including multiple victims and offenders for a single incident complicates the calculation of the probabilities of arrest as a single incident may involve multiple arrests, multiple victim offender

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<sup>1</sup> The Uniform Crime Reports (UCRs) includes intimidation with simple assaults (FBI 2006; FBI 2004:23). NIBRS allows intimidation to remain a separate category from simple assault thus possibly reducing misclassifications (Rantala and Edwards 2000:5). For comparisons of UCR and NIBRS definitions of assault types, see FBI 2004:23, FBI 2000:23, Rantala and Edwards 2000, FBI 1992.

relationships, and varied victim and offender characteristics such as race, age, sex (Buzawa and Hotaling 2006). Ninety-three percent of cases in NIBRS during 1996-2005 involved one offender and one victim, and therefore limiting the sample to these cases still captures the majority of incidents. Analyses involving multiple offenders and victims, such as those involving gang activities, are beyond the scope of this study, but should be considered in future studies on female adolescent violence.

## MEASURES

Variables included in the analyses were selected based on evidence of their importance in arrest decisions found in previous research including seriousness of the incident, victim's and offender's sex, race, and age, and the victim-offender relationship.

*Dependent variable.* The dependent variable is dichotomized with a value of one given if the incident resulted in arrest and incidents where no arrest was made are assigned a value of zero.

*Seriousness of the incident.* Seriousness of the incident is measured by weapon use and the level of injury the victim sustained. Dummy variables for the weapon categories were collapsed into "weapon" (any gun or rifle, knife/cutting instrument, blunt object, pushed from high place, motor vehicle, etc.), "no weapon" (body, hands, feet, teeth), or "intimidation".<sup>2</sup> The reference category is intimidation. The level of injury was categorized as serious (broken bones, unconsciousness, internal bleeding, severe laceration); minor

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<sup>2</sup> NIBRS (as does the UCR) includes intimidation in other assaults. In this study, about 11% of both boys' and girls' incidents involved intimidation, meaning no injuries were visible and no weapon was used.

(apparent minor injuries); and no injuries, which is the reference group in the logistic regression models.<sup>3</sup>

*Offender and incident characteristics.* The age of the offender and the control variable for the year the incident occurred were centered for ease of interpretation. The location of the incident was categorized as occurring in a home or residence, at school, or other location (e.g. street, store or commercial establishment, bus station).

*Victim Characteristics.* The victim's race was categorized into white, Black, or "other" race. Included in the victim characteristics are the victim's age (centered) and a dummy variable representing the cases for which values were missing for victim's age. Missing values for victim's age (1% of the sample) were replaced with mean substitution and the dummy variable representing the missing cases is included in the multivariate analyses to adjust for any change in the coefficients due to differences among those cases where the victims' age was recorded and those for which the victim's age was missing.<sup>4</sup>

NIBRS includes the victim-offender relationship of parent, step-parent, sibling, and step-sibling. Since there were relatively few cases involving step-parents and step-siblings,

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<sup>3</sup> Offense categories of intimidation, simple assault and aggravated assault were highly correlated with weapon use and injury and thus could not be included together in the model. Weapon and injury were substantively more informative, and were chosen to be included in the model.

<sup>4</sup> I considered the possibility that disparity in the offender's and victim's ages might be a factor in the probability of arrest. Conceivably, youths who assault a much younger victim or someone much older than themselves may be treated more harshly than those who assault someone near their own age. A preliminary model that included victims' age was compared to a model that included an age disparity measure (offender's age minus the victim's age) and little difference were found between the models. It is likely that age disparity is captured in the victim-offender relationships. The age difference between a mother and daughter compared to a sibling or friend is captured by the nature of those variables. Therefore, victim's age is used as a control rather than a covariate in the final models.

step-parents were included with parents and step-siblings were grouped with siblings. In order to further distinguish the nature of the victim-offender relationship, a variable which considered the NIBRS reported relationship (e.g. parent) and the victim's sex (e.g. female) resulted in the categories of mother, father, sister, and brother. "Otherwise known" included other relatives related by blood or marriage, boyfriends or girlfriends, neighbor, acquaintance, or friend were grouped as "otherwise known". The relationship category of "stranger" is the reference category in logistic regression models. Although it would seem logical for "stranger" to serve as the referent group in the victim-offender relationship, the much smaller number of cases involving assaults on strangers became problematic in preliminary analyses and therefore the referent was changed to those victims who were "otherwise known" to the offender.

*Arrest Laws.* For the variable representing the context of jurisdictional practices or policies towards family violence, legal codes for each state were reviewed. First, data on state statutes on warrantless arrest laws involving family violence cases provided by Hirschel et al. (2007) and Neil Miller (2005) provided the statute numbers for each state that then guided the research. Each state's definition of "family" was carefully reviewed to determine if the statute excluded juveniles or limited the individuals covered by the statute to intimate partners. For example, Massachusetts and Michigan explicitly include juveniles in their definitions of covered parties, with Massachusetts even allowing parents to obtain restraining order against their children [Mich. Comp. Laws § 764.15a; Mass. Gen. Laws Ann. ch. 209A § 6 (7)]. Utah and Iowa explicitly *excluded* juveniles in their definitions of covered parties

and therefore these states were coded as discretionary arrest practices even though they had mandatory arrest policies for adults [Utah Code Ann. § 77-36-2.2(2)(a) and (§ 30-6-1): Iowa Code § 236.12(2) (3)]. The definitions of “family” in the remaining four states included any person related by blood or marriage without limiting the age of the person covered under the law.

Finally, the implementation dates were obtained either through date references within the legal codes (where available), or by tracing the legal history of the code through Lexis Nexis. The coding of the variable was based on the year of implementation. Most states’ legal codes were implemented prior to the study period (*Table 1*).<sup>5</sup> States with statutes that indicated an officer “shall arrest” or similar verbiage indicating that an arrest was mandatory, were coded as having a mandatory arrest laws. States statutes that contained the wording “arrest is the preferred action” or similar verbiage indication that arrest was the preferred response, were coded “pro-arrest”. Finally, states that contained no specific direction on arrest preferences were coded as discretionary (see Miller 2004 for a more detailed explanation of these categories and history).

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<sup>5</sup> Three states implemented a domestic violence policy after 1997 but in each case the state adopted a discretionary arrest law and were coded as “discretionary” for all years.

**Table 1. Coding of Arrest Policies by State**

State	Statute	Effective	Includes Juveniles?	Mandatory	Pro-Arrest	Discretionary
Idaho	Idaho Code §19-603 (6)	1997	Yes			√
Iowa	Iowa Code §236.12(2) / Iowa Code §236.12(3)	2000*	No	(Ages >17)		√
Massachusetts	Mass. Gen. Laws Ann. ch. 209A § 6 (7)	1991	Yes		√	
Michigan	Mich. Comp. Laws §764.15a	2000	Yes			√
North Dakota	N.D. Cent. Code §14-07.1-10(1)	1991	Yes		√	
South Carolina	S.C. Code Ann. §16-25-70(B) / S.C. Code Ann. §16-25-70 (D)	1994	Yes	√		
Utah	Utah Code Ann. §77-36-2.2(2)(a) / Utah Code Ann. §77-36-2.2	1995	No	(Ages >16)		√
Virginia	Va. Code Ann. §19.2-81.3 / (B)	1991	Yes	√		

(Source: Lexis Nexis, Hirschel et al. 2007)

\*Effective date is the earliest date the code was able to be traced through Lexis Nexis. Actual effective date may be earlier.

## ANALYSES

I use descriptive and bivariate analyses to look at the characteristics of incidents involving juveniles across the study period and to address the question of increasing female violence. Logistic regression analyses are performed to determine the probability of arrest based on characteristics of the incident and the state laws for police response to domestic violence calls. Since the analysis includes several categorical variables, which would require multiple variables to be created in order to test for interactions effects with sex of the offender, separate models are analyzed for girls and boys. Running separate models for girls and boys also simplifies the interpretation of the analysis. Logistic regression is appropriate for this analysis as the dependent variable is a dichotomy and comparing boys' and girls' odds ratios will be best achieved through logistic regression (Pampel 2000).

The robustness of each model was tested through analysis of the Cook's D statistic and by plotting studentized residuals. Preliminary diagnostics identified 69 cases with

studentized residuals greater than  $|2|$  in the girls' models. The removal of these outliers had a significant effect on the coefficients and the predictive value of the model, so these cases were eliminated. No problems with outliers were found for boys and therefore all cases are included in the boys' models. As there is no true equivalent of the Pearson  $R^2$  in logistic regression, I report the Nagelkerke pseudo  $R^2$  for each model; however the interpretation of this statistic should be used viewed with caution.<sup>6</sup>

Thus, in addition to the Nagelkerke pseudo  $R^2$ , I evaluate the fit of the final model by considering the improvement in the percentage of correctly predicted events overall. I also consider the sensitivity of the model (the percentage of correct predictions for arrests) and the specificity of a model (the percentage of correct predictions for no arrests) by comparing the sensitivity and specificity of a given model to the zero-block model, which includes only the constant.

I use the formula suggested by Paternoster et al. (1998:863) for determining statistical significance of the differences between coefficients between models. Paternoster et al.'s suggests that calculations of  $T$  statistic typically used to test for the significance of the difference between two coefficients produce biased estimates because they use the estimated standard error of the difference  $[\delta_{b_1 - b_2}]$  in the denominator. Particularly for large sample sizes, Paternoster and his colleagues have demonstrated that the use of the following formula does not produce biased estimates.

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<sup>6</sup> The Hosmer-Lameshow statistic is not used to assess the goodness of fit for any of the models since the sample sizes and the Hosmer-Lameshow test has a tendency to overestimate differences in the predicted probabilities when the sample size gets very large (Hosmer and Lameshow 1989).

$$Z = \frac{b_1 - b_2}{\sqrt{SEb_1^2 + SEb_2^2}} .$$

*Figure 2. Formula for Testing Statistical Significance of Difference of Coefficients*

Based on the large sample sizes in the analysis, I use their suggested formula for testing the significance of differences between the coefficients for boys and girls.

## **RESULTS**

### *Descriptive*

The percentage distributions for incident characteristics and the mean offender and victim ages are shown for males and females in Table 2. There is little gender difference in the mean age of the offender with a mean of 14.6 years for boys and 14.8 year for girls. The mean victim age for girls of 25 years old is not much different than the mean victim age of about 24 years old for boys. Given that a greater percentage of boys' incidents compared to those for girls were for aggravated assault (17.1% for boys compared to 12.5% for girls), it is surprising that the percentage of boys' and girls' incidents that resulted in arrest are nearly the same; 44.4% of girls' incidents resulted in arrest while 45% of boys' incidents resulted in arrest.

**Table 2. Percentage Distribution of Incident Characteristics by Sex, 1996-2005**

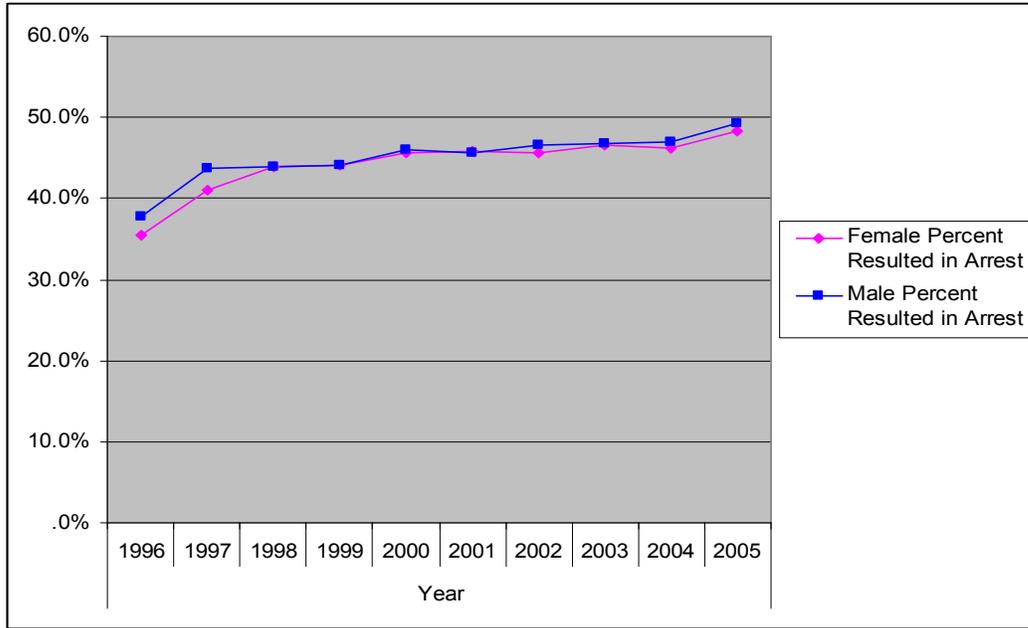
<b>Variable</b>	<b>Females</b>	<b>Males</b>	<b>Variable</b>	<b>Females</b>	<b>Males</b>
<b>Arrests</b>			<b>Location</b>		
Arrested	44.4	45.0	Residence	47.5	39.6
No Arrest	55.6	55.0	School	18.5	22.4
<b>Offense Type</b>			Other	34.0	38.0
Aggravated Assault	12.5	17.1	Unknown	0.8	0.7
Simple Assault	75.9	71.7	<b>Weapon</b>		
Intimidation	11.6	11.2	Firearm	0.2	1.9
<b>Offender's Race</b>			Knife/Cutting Tool	3.8	3.6
White	70.5	71.5	Blunt Object	2.0	3.1
Black	26.8	26.3	Person	71.6	67.3
Other	1.6	1.2	Other	4.3	6.3
Unknown	1.1	1.0	No Weapon	18.1	17.8
<b>Victim's Sex</b>			<b>Injury</b>		
Male	21.5	62.7	Broken Bones	0.3	0.7
Female	78.5	37.3	Possible Internal	0.2	0.3
<b>Victim's Race</b>			Severe Laceration	1.2	1.6
White	69.6	70.7	Minor Injuries	43.8	42.6
Black	27.6	27.0	No Injuries	53.9	53.6
Other	1.6	1.2	Other Major Injuries	0.5	0.8
Unknown	1.2	1.1	Loss of Teeth	0.1	0.2
<b>V/O Relationship</b>			Unconscious	0.0	0.2
Mother	17.7	9.6	<b>Offender's Age</b>		
Father	3.6	4.4	Mean Age	14.8	14.6
Sister	3.7	3.3	Standard Deviation	1.7	2.0
Brother	1.7	2.9	Min/Max	10/17	10/17
Grandmother	0.8	0.4	<b>Victim's Age</b>		
Grandfather	0.1	0.1	Mean Age	25.0	23.9
Other Family Member	2.3	1.8	Standard Deviation	15.9	16.7
Boy/Girl Friend	2.7	3.4	Min/Max	1/99	1/99
Otherwise Known	62.5	66.5	<b>Population</b>		
Stranger	4.9	7.5	Mean Agency Population	63,159	

**Males: N=90,657;**  
**Females: N=38,062**

Similarly, very little gender difference is seen in the proportion of incidents by offender's race, victim's race, and level of injury. However, the percentage of incidents involving mothers is higher for girls (17.7%) than for boys (9.6%) while the percentage of incidents involving strangers is higher for boys (7.5%) compared to girls (4.9%). For both boys and girls, the majority of the incidents involved persons "otherwise known" such as friends and acquaintances, although the percentage was slightly higher for boys (66.5%) than for girls (62.5%). Comparing the sex of the victim and offender, the majority of boys' victims were male (62.7%) and similarly, the majority of girls' victims were female (78.5%).

Although the patterns are similar, differences are also found for the percentage of incidents by location. The highest percentage of incidents for both genders were those at a home or residence, but more so for girls (47.5%) than for boys (39.6%). Incidents at school were higher for boys (22.4%) than for girls (18.5%), although incidents at school were the least common for both sexes. Incidents occurring in other locations were slightly higher for boys (38%) than for girls (34%).

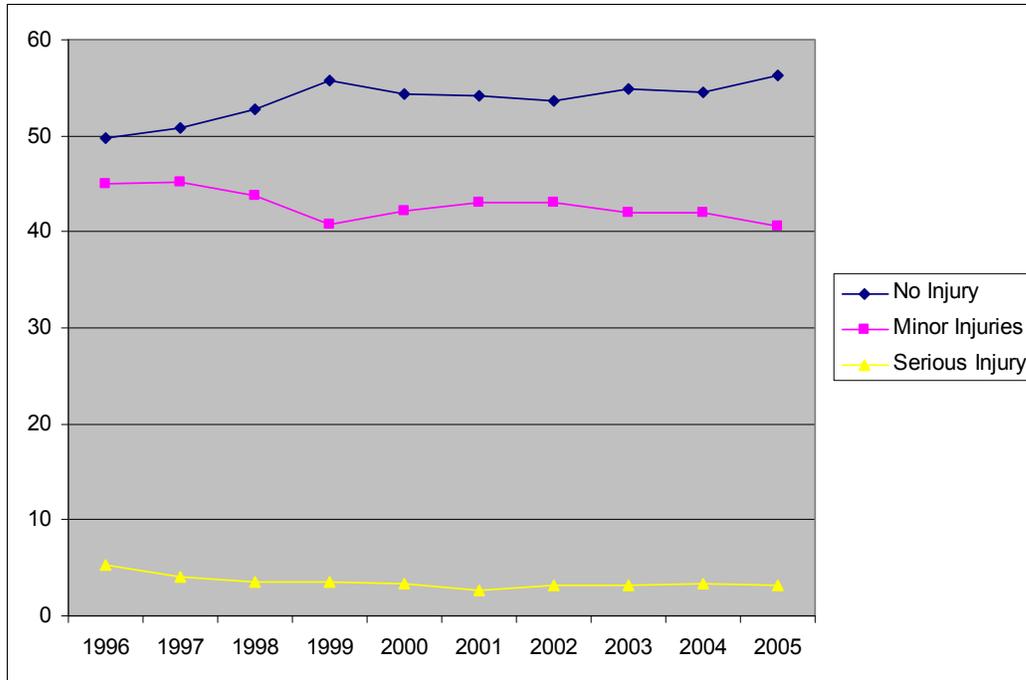
Figure 3 shows the percentage of incidents that resulted in arrest for both girls and boys during the years 1996-2005. Although the percentage of girls' incidents resulting in arrest in 1996 is a 2.4 percent lower than boys (35.4% in 1996 for girls compared to 37.8% in 1996 for boys), by 2005 the percentage of incidents that result in arrest are nearly equal for girls (48.4%) and boys (49.3%) with a *net difference in increase* of only .9%. Although the differences in the percentage are small, they are still of interest given the total number of cases involved.



**Figure 3. Percentage of Male and Female Incidents Resulting in Arrest by Year**  
 (Male N=90,657; Female N=38,062)

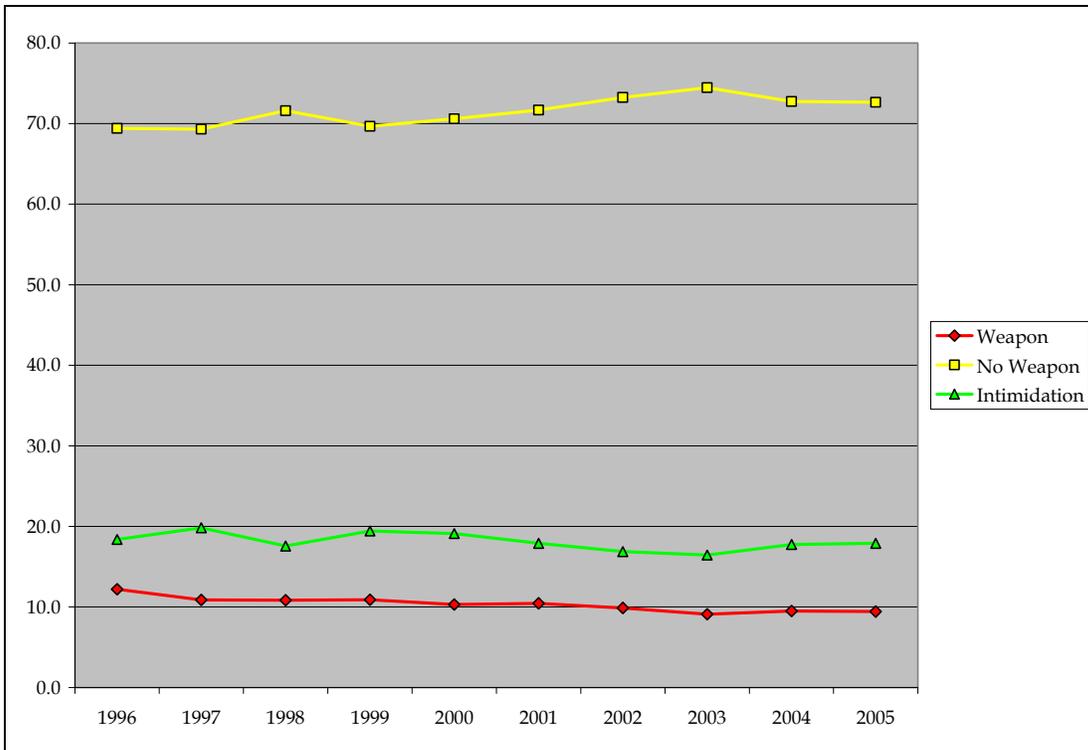
### ***Bivariate Analysis***

In order to explore the possibility of girls' increasing violence (Explanation 1), two bivariate analyses show the percentage of girls' incidents involving injury and weapon use for 1996-2005. These results are shown in Figures 4 and Figure 5. Figure 4 shows the percentage distribution for all incidents involving serious injuries, minor injuries, or no injuries for all girls whether they were arrested or not. Across the years, the greatest percentage of incidents involved no injury and the smallest percentage involved serious injury. Incidents involving no injuries have a net increase of 4.5% (51.3% - 55.8%) while incidents involving serious injuries show a net decrease of 1.5% (3.7% - 2.2%). The percentage of incidents involving minor injuries also show a slight decrease over the years decreasing from 45% in 1996 to 42% in 2005. These differences across the years were statistically significant ( $p < .000$ ) for all injury types.



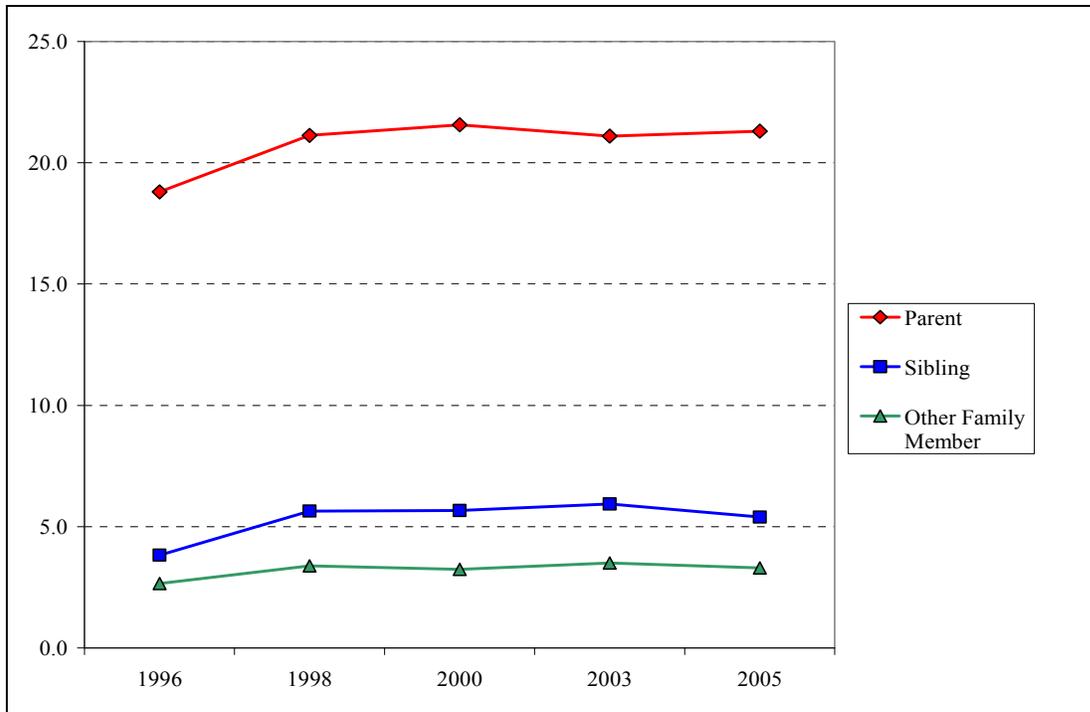
**Figure 4. Female Percentage of Incidents Involving Injury by Type of Injury and Year, 1996-2005** (N= 38,062,  $X^2 = 64.80$ , df=18, p. = .000)

Figure 5 shows the percentage of incidents involving a weapon, no weapon (fists, feet, etc), or intimidation for the same period. Incidents involving no weapon increased from 1996-2005 (70.3% - 73.0%), and the percentage of incidents involving intimidation slightly increased (17.3% - 17.6%). The percentage of incidents involving the use of a weapon decreased from 12.4% to 9.5%. Therefore, girls show about a 2.9% increase in assaults involving no weapons. During the same time, their use of weapons (such as guns and knives) has decreased by about the same amount (2.7%). Chi-square analyses show these changes to be statistically significant at p. <.000. While the use of weapons also decreased for boys (-3.6%), their incidents involving no weapon use only increased by 1.8% (not shown).



**Figure 5. Female Percentage of Incidents Involving Weapons by Weapon Type and Year, 1996-2005 (N= 37,762, p. = .000)**

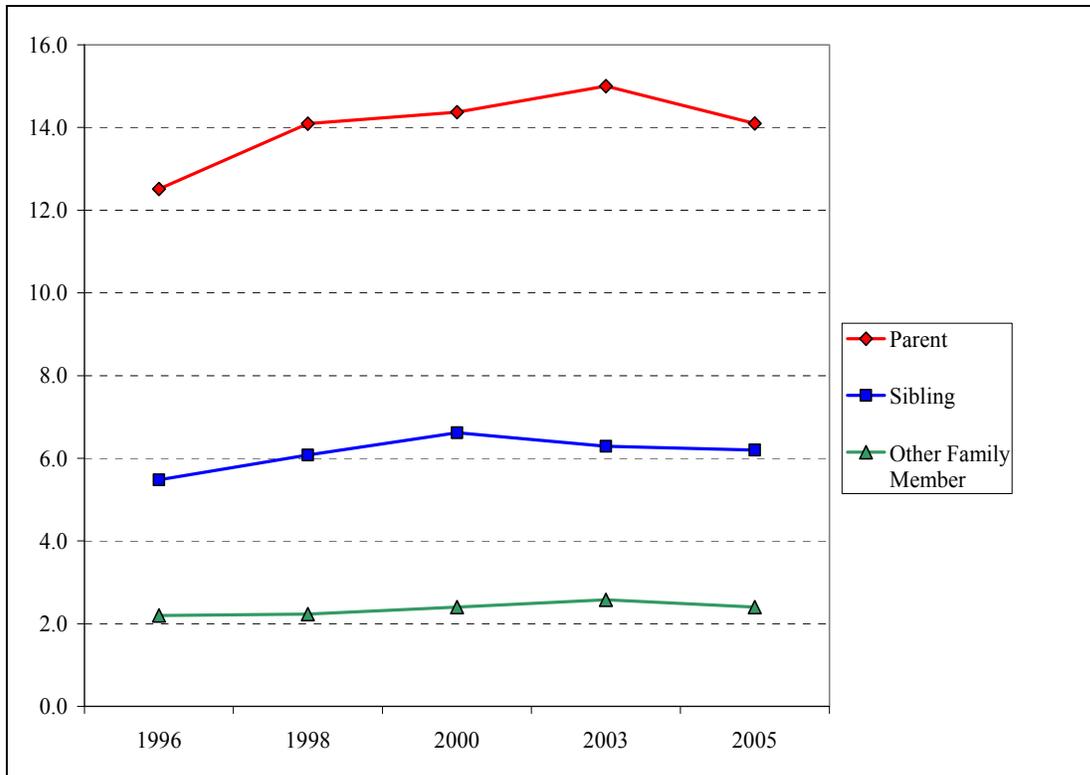
If the increases in girls' arrests are a result of their greater involvement in family conflicts increasingly brought to the attention of the police, (Explanation 2) then the proportion of incidents involving family members should increase over time for more so girls than for boys (Explanation 2). Figure 8a shows the percentage of incidents involving family members for girls across all years. The data points for five of the ten years are shown for readability.



**Figure 6a. Girls' Percentage of Incidents by Relationship Type and Year, 1996-2005**  
*(N= 38,062,  $X^2 = 403.76$ ,  $df=99$ ,  $p. = .000$ )*

Overall, the proportion of girls' incidents involving parents slightly increased between 1996 (18.8%) through 2005 (21.3%). Incidents involving siblings also increased by about 1.6%, and incidents involving other family members (i.e. grandparents) also increased by a half a percent.

However, the difference between boys' and girls' conflicts within the family which come to the attention of the police is clear when comparing the percentage of incidents involving parents for girls and the percentage of boys' incidents which involve parents (Figure 8b). While girls' percentage of incidents involving parents ranged from 19% to 21%, boys ranged from about 12% to 14%. Although there is about a 2% increase in the percentage of incidents known to the police that involve parents for both genders, the total percentage of incidents involving parents is about 6% to 7% for girls than for boys.



**Figure 6b. Boys' Percentage of Incidents by Relationship Type and Year, 1996-2005**  
 (N= 90,657,  $X^2 = 826.96$ ,  $df=99$ ,  $p = .000$ , Cramer-V=.03)

Although boys also show increases in conflicts with family members that resulted in police intervention, the increases were smaller for boys than for girls. This was true for all family members. Boys conflicts with parents increased by about 1.5%, sibling conflicts increased by .7%, and conflicts with other family members only increased by .2%. Although small, these slight increases are statistically significant for boys and girls, likely due to the large sample sizes.

To summarize, girls use of a weapon decreased as did the level of injury inflicted. Girls' incidents involving no weapons increased, but this increase was about the same amount as the decrease in the use of weapons. Girls and boys conflicts with parents both

increased slightly over the time period, but a higher percentage of girls' incidents involved parents than did boys'.

### ***Multivariate Analysis***

The effect of the characteristics of the incident and arrest laws on the odds of arrest was tested through nested logistic regression models for girls and boys. The first block of covariates added only the main effect of year (divided by ten to make it easier to discern effects and centered to reduced collinearity). The second block of covariates included variables related to the offender or incident including the year of the incident, the offender's age, offender's race, level of injury and weapon use. The third block of covariates added variables associated with the victim including the victim's age, race, and sex, and the victim-offender relationship. The fourth block of covariates added only the two dummy variables for arrest laws (discretionary arrest law is the referent group).

Because of collinearity issues, no interactions involving the race of the victim and the race of the offender could be tested. However, separate models were run for white girls and Black girls and no statistically significant differences were found between races. Therefore, race of the offender and victim were included in one model without interactions. Further, interactions between year and arrest laws, injuries, and weapons were tested but none were found to be significant. However, this could be due to the significant problems with collinearity ( $VIF > 5$ ) when including these interactions in the models. For this reason, interactions were excluded from the final model.

For both boys and girls, the addition of each block of predictors statistically improved the models. Though all the models were statistically significant, the final models were the best fitting models for both girls and boys based on overall improvement of the percentage of correct predictions (considering percentage of correctly predicted events overall, specificity, and sensitivity) and are therefore the only models presented in Table 3.<sup>7</sup> The boys' model and girls' models are presented together in the table, which reports the standardized coefficient, standard error, and log odds [Exp(b)] for each predictor. The Z statistic for the test of significant differences between coefficients for boys and girls is shown in the far right column. Tests for significant difference between coefficients were only performed for predictors that were statistically significant for both boys and for girls in their respective logistic regression models. Statistically significant differences between coefficients are indicated with an asterisk next to the value of the Z score.

These final models are statistically significant for girls ( $X^2=3848.43$ ,  $p=.000$ ) and for boys ( $X^2=6697.99$ ,  $p=.000$ ). For girls, the overall percentage of correct predictions for the final model is 63.0%, which is an improvement over the zero block-level model with no predictors which correctly predicted 55.6%. For boys, the final model correctly predicted 61.6%, which is also an improvement over the 55.0% correctly predicted in the zero block-level model with no predictors. Nagelkerke pseudo  $R^2$  of .13 for girls and .10 for boys should be interpreted with caution as there is no true  $R^2$  statistic calculable in logistic regression. All of the coefficients are statistically significant at  $p=.000$ , unless noted otherwise. Further, all effects discussed are net of the other variables in the model.

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<sup>7</sup> Full nested regression models can be found in the Appendix. Girls' models are presented in Appendix Table 1, and the full models for boys are presented in Appendix Table 2.

**Table 3. Male and Female Logistic Regression Models Predicting Arrests for Assault, 1996-2005**

	GIRLS (N=37,486)			BOYS (N=89,092)			Z=	
	b	S.E.	Exp(B)	b	S.E.	Exp(B)		
Main effect of year								
Year <sup>†</sup>	0.40	0.40	0.04	1.50	0.32	0.02	1.37	1.83
Incident Characteristics								
Offender (White=0)								
Offender's Age <sup>†</sup>	-0.02*	-0.02	0.01	0.99	-0.02	0.00	0.98	0.00
Black	-0.01 <sup>n</sup>	-0.01	0.04	0.99	-0.13	0.02	0.88	2.68
Other-race	1.21	1.21	0.10	3.36	0.77	0.07	2.17	<b>3.56</b>
Injury (None=0)								
Serious	0.47	0.47	0.08	1.60	0.40	0.04	1.49	0.85
Minor	0.33	0.33	0.02	1.39	0.23	0.02	1.26	<b>3.42</b>
Weapon (Intimidation=0)								
Weapon	1.10	1.10	0.05	3.01	0.77	0.03	2.16	<b>6.19</b>
No Weapon	0.86	0.86	0.03	2.37	0.69	0.02	1.98	<b>4.44</b>
Location (Other=0)								
Residence	-0.26	-0.26	0.03	0.77	-0.23	0.02	0.80	-0.99
School	0.28	0.28	0.03	1.33	0.33	0.02	1.40	-1.41
Victim Characteristics								
Victim (White=0, Male=0)								
Victim Age	0.02	0.02	0.00	1.02	0.02	0.00	1.02	0.00
Dummy for Missir	-0.87 <sup>n</sup>	-0.87	0.65	0.42	-1.35	0.40	0.26	0.63
Female	-0.15	-0.15	0.03	0.86	-0.04	0.02	0.96	<b>-3.14</b>
Black	-0.56	-0.56	0.04	0.57	-0.48	0.02	0.62	-1.66
Other-race	0.14 <sup>n</sup>	0.14	0.14	1.15	0.46	0.09	1.58	-1.88
Relationship (Other known=0)								
Mother	0.59	0.59	0.04	1.80	0.66	0.03	1.94	-1.52
father	0.22	0.22	0.07	1.24	0.54	0.04	1.71	<b>-4.12</b>
sister	0.76	0.76	0.06	2.14	0.74	0.04	2.09	0.31
brother	0.66	0.66	0.09	1.94	0.84	0.04	2.31	-1.76
stranger	0.02 <sup>n</sup>	0.02	0.05	1.02	-0.29	0.03	0.75	5.14
Arrest Laws (Discretionary =0)								
Mandatory	0.48	0.48	0.03	1.61	0.48	0.02	1.61	0.11
Pro-arrest	0.21	0.21	0.04	1.24	0.18	0.03	1.19	0.68
Constant	-1.27		0.05	0.28	-1.11	0.02	0.33	
-2LL			47,660.5					
Correctly Predicted			63.0%				61.6%	

All values are statistically significant at p. < .001 unless otherwise noted as below

\*p. < .05, n = not significant

† Variables are centered; year is divided by 10

*Main effect of year.* Each additional year increased the odds of arrest for boys and girls. Although the odds of arrest increase by 37% for boys, girls' odds increase by 50%. The test for of statistical significance between the effect of year for girls and boys was 1.83, just short of the required 1.96 threshold for an alpha of .05.<sup>8</sup> Therefore, although each additional year appears to have a greater effect on the odds of arrest for girls, it is not statistically different from the effect on the odds of arrest for boys.

*Offender and incident characteristics.* Age of the offender has the same effect for girls' and boys', though slight. If the age of the offender increases, the affect on the odds of arrest slightly decrease. For girls, there are no significance differences in the likelihood of arrest between white and Black offenders. But for boys, Black offenders have lower odds of being arrested (.88) than white offenders. However, prior to the introduction of the arrest laws (*see nested models in Appendix Table 1*), the effect of being a black was significant for girls, with Black girls 12% more likely to be arrested. However, once the arrest laws was introduced, the effect became non-significant ( $p=.702$ ). Offenders of other races have increased odds of arrests for boys (2.17) and girls (3.36), but this effect is significantly greater for girls ( $Z=3.56$ ). Thus "other" race girls are three times as likely to be arrested as white girls, while boys of "other" races are about twice as likely to be arrested as white boys.

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<sup>8</sup> Some have suggested that since NIBRS includes all incidents for each jurisdiction included in the analysis it cannot be considered a sample and therefore will not be subject to a standard error (it may be considered the universe of NIBRS incidents, at least for the reporting agencies). However, since I limited the agencies to only those reporting all 12 months for all 10 years, I choose the more conservative viewpoint that my data are indeed a sample and Z tests are therefore warranted.

Although incidents involving serious injuries increased the odds of arrest by about 60% for girls and 49% for boys, there was no statistical difference in the effect between the sexes. However, when incidents involved minor injury, the odds of arrest for girls increased by nearly 40% while boys odds of arrest increased by only 26%. The difference in the effect on the odds was statistically significant ( $Z=3.42$ ).

Incidents involving weapon use showed a similar pattern in the differences between girls' and boys' odds of arrest. The use of any weapon increased the odds of arrest for boys and for girls, however the effect on the odds of arrest was significantly greater for girls. Girls who used any weapon other than their own bodies had three times the odds of arrest whereas boys who used a weapon other than their bodies only doubled their odds of arrest, and this difference was statistically significant ( $Z=6.19$ ). There is also a statically significant difference between boys and girls in the effect on the odds of arrest for no weapons ( $Z=4.44$ ). Girls' odds of arrest are 2.37 if they throw punches or kick while the odds of arrest for boys who do the same are 1.98.

For both boys and girls, incidents occurring at a residence, compared to incidents that happened in other locations besides school, decreased the odds of arrest between 20% - 23%, while incidents occurring at school increased the odds of arrest for girls by 33% and for boys by 40%. However, a test of the difference in the effect of location on the odds of arrest for boys and girls was not significantly different for boys and girls.

*Victim characteristics.* As found for offender's age, victim's age has the same small effect on the odds of arrest for girls and for boys although the effect is slight (+2%). Additionally, both boys and girls were less likely to be arrested when their victim was

a female compared to a male victim. The difference in the effect on the odds for girls (-.15) which resulted in a 14% reduction in the odds of arrest for girls who assault a female, was significantly different ( $Z = -3.14$ ) than the effect on the odds for boys (-.04) which resulted in a 4% reduction in the odds of arrest for boys who assault females.

The effects of the race of the victim on the odds of arrest were also similar for boys and for girls. For both girls and boys who assault a Black victim, as compared to a white victim, their risk of arrest is lower by about 43% for girls, and 38% for boys. The differences between the effects on the odds of arrest are not significantly different for boys and girls. However, compared to assaults against a white victim, an assault against a victim of “other” races increases the odds of arrest for boys (58%) but has no significant effect on the odds of arrest for girls ( $p > .05$ ).

Interesting differences are found for the effects of the relationship of the offender to the victim. For girls, the effects on the odds of arrest were only significant for immediate members of the family, therefore in the final models, I disaggregated only immediate family members. Compared to assaults against other people they know, girls had greater risk of arrest when they assaulted their mother (80%), their father (24%), their sister (114%), or their brother (94%). There was no significant difference in the odds of arrest for girls who assault a stranger vs. anyone else they know outside of their immediate family. However, when boys assault a stranger, their odds of arrest are 25% lower than if they had attacked someone else they know outside their family. Assaulting an immediate family member increased the odds of arrest for boys as well as for girls.

In comparing the differences between the coefficients for girls and boys assaulting immediate family members, the effect on the odds were greater for boys who assaulted their mother (1.94) or their father (1.71), but the only significant difference between the effects on the odds of arrest for boys and girls was for attacks against father. While an assault against any immediate family member increases the odds of arrest compared to assaults against other known persons, the effect of assaulting a father on the odds of arrest is lower for girls than for boys ( $Z=4.12$ ). No other effect of family relationship show a statistically significant difference between boys and girls.

*Arrest laws.* Both girls and boys who live in states with mandatory arrest policies increase their odds of arrest by 61% over youths living in states with discretionary arrest policies. Further, girls who live in states with pro-arrest law increase their odds of arrest by about 24% compared to girls offending in states with discretionary arrest laws. Boys who offend in states with pro-arrest laws increase their odds of arrest by 19%, which is lower than girls increased odds of arrest under the same conditions, and the difference is statistically significant ( $Z = -3.76$ ).

## **DISCUSSION**

Recall that the purpose of the bivariate analyses was to test the possible explanations for girls increasing arrests for assault. The tests for the first possibility, that girls are becoming more violent, included a bivariate analysis of the trends for girls' use of weapons and the seriousness of injuries they inflict. For girls, the percentage of incidents in which they inflicted no injuries increased over the years, while the percentage of incidents involving

serious or even minor injuries decreased. Thus, the percentage of incidents involving any sort of injury declined rather than increased, suggesting that in the terms of the amount of injury they are causing others, girls in this study have not become more violent in over the past 10 years.

When examining girls' weapon use, the percentage of girls' incidents that did not involve a weapon but involved physical fighting increased, yet the percentage of incidents involving the use of a weapon decreased by about the same amount. In other words, the decrease in the percentage of incidents involving weapon use corresponds to the *increase* in the number of incidents involving physical fighting but no other weapon. Thus, there is no evidence that girls are increasing their violence through the use of weapons.

The finding in the logistic regression models of the much stronger effect of on the odds of arrest for girls than for boys, (whether or not a weapon was used), suggests that social control practices are contributing to girls' increased arrests for assaults relative to boys'.

Further, the greater effect on the odds of arrest for girls who get physical but do not use a weapon is consistent with qualitative reports of girls slapping or pushing a parent or guardian, or similar acts of physical aggression that are "charged up" from "unruly behavior" or a "minor in need of supervision" to "assault". It may also be that the increase in assaults involving no weapon stems from incidents involving a friends, acquaintances, or siblings. Considering that the majority of girls' incidents involve a friend or acquaintance, the increase in girls' incidents which do not involve a weapon would likely be against persons in this

category. However, more information would be necessary regarding the context of these events to make such a link.

If we imagine “violent” to be a gun toting or knife wielding assailant, there seems to be no evidence to support this for the girls studied here. The difficulty in labeling girls as more violent based on whether they are wielding guns and knives or if they are slapping or kicking another person suggests that as researchers studying girls’ violence, we seem to lack an established definition of what constitutes violence. The answer then, in regards to whether girls are becoming more violent, seems to depend on how violence is measured or defined.

The evidence is more straight forward for whether girls’ conflicts within the family are increasingly brought to the attention of the police (Explanation 2). First, the majority of assaults committed by both boys and girls in this study were against a friend or acquaintance. However, compared to boys, girls had greater percentages of incidents which involved family members and these percentages increased slightly over the time period for both girls and boys. If we consider this trend in light of girls increased arrests, it is possible that as girls’ arrests diverge in direction or magnitude from boys’ arrest rates, the differences found in family conflicts between boys and girls may contribute to the patterns. Since girls have higher percentages of incidents involving family members, which are increasing slightly more than the already lower percentages for boys, this suggests that we cannot ignore girls’ involvement with family members when trying to understand the nature of girls’ violence. Thus, the victims of girls’ violent behavior, particularly in comparison to the victims of boys’, should be examined further in order to provide a more complete, albeit complex, picture of girls’ involvement in assaults.

The finding of higher percentages of girls' incidents, compared to those of boys', that involve parents would seem to lend some support to qualitative studies which report that parents, particularly mothers are increasing their involvement of the police to control unruly daughter (Davis 2007). Some support for this is found in the multivariate analyses. Girls had greater risk of arrest when the victim was a parent, yet boys had significantly higher odds of arrest for assaults against parents than did girls.

However, it is particularly interesting that for both boys and girls, attacks against *mothers* are associated with greater odds of arrest than attacks against fathers. This seems to suggest a bias towards victims' gender on the part of the police officer who may feel a need to protect a female or "motherhood". It may also reflect a distaste for any act of disobedience towards a mother, whereas the father might be viewed as someone you can "take care of his own", or perhaps a deserving victim. Girls' greater odds of arrest when the victim is a sister, compared to those otherwise known, may also reflect a gender bias since these odds are higher when a girl assaults a brother. Again, police officers may be biased towards male victims of female violence, perhaps believing that males are the stronger party and therefore less threatened by a female attack. This is an interesting possibility that should be examined in future research.

Girls' greater odds of arrest than boys' odds of arrest whether weapons are used or not, or when minor injuries are incurred may be a result of police labeling these girls' behavior as atypical for females. Hill, Harris, and Miller's 1985 theory of status-process decisions posits that the gender of the offender provides cues to gender scripts of typical

behavior. Youths, particularly females, displaying behavior that does not readily fit the available heuristic for that gender is considered atypical and therefore raises concern that future behavior will continue to be unconventional or problematic. Testing Hill et al.'s status-process theory, Sealock and Simpson (1998) found that girls who demonstrate aggression or violence, acts atypical to the female sex-type heuristic, are likely to be judged as atypical for their sex-role and therefore more in need of control than boys who show the same traits or commit the same acts. The results of the multivariate analysis, in particular girls' greater odds of arrest for minor injuries and the use of any weapon support Sealock's and Simpson's findings.

Although some support is found for girls' greater involvement in conflicts with parents, no support was found for the third possibility girls' increasing arrests for assault (Explanation 3). As mentioned previously, some researchers have suggested that because of girls' greater conflicts with family members they will be particularly affected by states' domestic violence arrest laws. Compared to incidents occurring in states that leave arrests decision at the discretion of the responding officer, boys and girls living in states with mandatory arrest laws did have significantly higher odds of arrest, but there was no difference between boys and girls in the effects of arrests laws on the odds of arrests. Although in pro-arrest states, girls did have slightly higher odds of arrest than did boys (about 5% higher for girls), the difference was not statistically significant. However, coupled with girls' greater proportion of incidents involving immediate family members, mandatory arrest laws may make more of an impact on girls' arrests in family conflicts relative to boys'.

Although it has been suggested that girls may be treated more harshly by officers responding to domestic assault complaints, the higher odds of arrests for boys' raises doubts that girls are disproportionately affected by such laws. On the other hand, girls' greater percentages of incidents involving immediate family members may be resulting in more exposure to police intervention and therefore more risk of arrests in those states.

The finding that the odds of arrest for incidents occurring in the home versus "other" locations were about equal for girls and boys seems to be counterintuitive to the suggestion that conflicts in the home are increasing girls' arrests. Both boys and girls were *less* likely to be arrested in these incidents. If girls' greater involvement in family conflicts, relative to boys', increases their exposure to arrest through domestic violence laws and higher odds of arrest for attacks against immediate family members, then the reduced odds of arrest for incidents occurring in the home should work to reduce arrests for girls more so than for boys. Thus, two possible conclusions can be reached. Either the category of "residence" is confounded by the lack of distinction regarding *whose* home or residence, or that there is no evidence for disproportionate arrests for girls and boys committing acts of aggression while in the home. The former is more likely since a residence could be the home of a friend or other relative. Further, an assault that occurs in a residence may not necessarily be committed against a family member. For example, if police were called to a residence where a out-of-hand teen party resulted in a fist fight, the location would be a "residence" but the parties involved were not family members. It is also likely that the owner of a private residence would be less likely to request arrest of guests, however the relationship of the location of the incident to the victims and offenders warrants more scrutiny.

An interesting but unexpected finding was that prior to the introduction of domestic violence laws, Black girls were about 12% more likely to be arrested than white girls. However, after introducing arrest laws into the multivariate models, the odds of arrest for Black offenders decreased for both girls and boys, but effect remained significant only for boys. Thus, domestic violence laws are found to mediate the effect of the race of the offender. In these data, a large percentage of the Black boys and girls in the sample live in states with mandatory arrest laws than in states with pro-arrest or discretionary laws (*see Table 3 and Table 4 in Appendix*). For example, 63.1% of all the Black girls in the sample live in one of the two states that have mandatory arrest laws (South Carolina and Virginia), and 67.7% of the Black boys in the sample live in those two states. Conversely, the majority of white boys and girls live in states with discretionary arrest laws.

Lower odds of arrest for Black offenders, found in previous studies (D'Alessio and Stolzenberg 2003; Eitle, Stolzenberg and D'Alessio 1993), may offer one possible mechanism in which domestic violence laws mediate the effect of the race of the offender. Buzawa and Hotaling (2006) used NIBRS to examine domestic violence arrests and also found that Black offenders were less likely to be arrested than white offenders. Based on evidence they later gathered (by shadowing police officers on domestic violence calls) which indicated that the victim's preference for arrest affects the decision to arrest by officers responding at the scene, Hirschel et al. (2007) suggest that Black victims may be more distrustful of police and be less likely to request that the offender, particularly a family member, be arrested. Some support is found for a reluctance on the part of Black victims to

request an arrest of a black offender and of mistrust of police in general (Sherman 2002; Hutchison, Hirschel and Pesackis 1994).

However, further research is necessary to better understand the mechanism behind the mediating effect of domestic violence laws. This is particularly important as policy makers consider arrest laws in their desire to lower domestic violence rates in their states. As previously shown in Table 1, most states adopted their current domestic violence arrest law over 10 years ago. When reevaluating the effectiveness of these laws, careful consideration should be given to the potential harms. Doing so would require acknowledging the intersectionality of race and gender, and the effect that domestic violence laws have on juveniles involved in intrafamilial conflicts. Is it a coincidence that the jurisdictions reporting to NIBRS that contain the largest number of Black offenders are also the states with mandatory arrest laws? The relationship of the percentage of Blacks in a state to their domestic violence arrest laws needs to be explored further.

One limitation to these findings is that the models are likely underspecified. There are many additional factors that may affect the decision to make an arrest, particularly with juveniles. The demeanor of the offender, evidence of shared injuries, the presence of witnesses, the presence of the offender at the scene when the officer arrives, and past history of calls from the household may also effect arrests, particularly in among officers working in agencies with discretionary and pro-arrest policies at the jurisdictional level. Additionally, unless we know the jurisdictional laws and actual practices of the police at the scene, we can only guess how a police officer might respond. In some cases, victim's preference for arrest

may affect the officer's decision to arrest the offender (Buzawa and Hotaling 2006; Miller 2005), and this cannot be measured with NIBRS data. This sort of important information is difficult to obtain in official data on a large scale level. Therefore, I suggest that future research should consider triangulating official data with field observations to best inform delinquency and family violence researchers on the intricacies of police decision making during domestic violence calls.

As with the UCR data, selection bias would normally be considered since all incidents which do not come to the attention of the police are excluded. However, selection bias should not be an issue in this study. Although NIBRS reports only incident which come to the attention of the police, the analyses test possible explanations for trends reported in UCR data - data which also include only incidents reported to the police. Despite limitations to the study, these results offer researchers some direction to focus future attention, and cast doubt on one of the two possible explanations for the increases in girls' arrests for assault as only weak support is found for any increase in female violence in these data.

## **CONCLUSION**

This paper attempts to shed some light on the feasibility of several possible explanations for the increase in girls' arrests for assaults. There is no evidence that girls are becoming somewhat more violent. The percentage of incidents involving a weapon, and the severity of injury that the girls inflicted decreased for the girls in this study. The suggestion of increased social control as a possible cause of girls' increased arrests for assault is supported by the finding that girls have much greater risk of arrest when they use a weapon

of any sort or inflict any injury. Girls' greater odds of arrest for the incidents involving minor injuries, and for assaults where no weapon was used (other than intimidation) lends support to the belief that girls behavior outside of normative expectations for their gender will be seen as more of a threat and therefore increase their risk of arrest. Additionally, even though mandatory arrest laws were found to affect girls and boys odds of arrest equally, girls' larger number of incidents involving a parent, and the slight increase in these percentages over the years might be contributing to girls' increased arrests for assaults when coupled with arrest laws.

It is possible that in major urban areas, girls' violence may be increasing. However, the arrest trends in these data closely mirrored the national arrests trends found in the UCRs, only the increasing trend in female arrests were even more pronounced in the NIBRS jurisdictions. Since no evidence is found for girls' increasing violence, it is not a plausible explanation for the increases in girls' arrests for assaults. This results from this study suggest that the best way to advance research in this area is to look at the interaction between social control polices and arrest rates.

Identifying the mechanisms behind the mediating effect of domestic violence laws on the effect for the race of the offender is an important next step. Further, an examination of possible relationships between the racial composition of a state and their domestic violence laws is needed. Finally, the evidence for the effects of social control practices on girls' arrests leads to another question that has been relatively unexplored. Once girls are arrested for conflicts within the home, is there disparity between genders and races in their experience

with the juvenile justice system after their arrest? I would suggest that the answer to this question, and the information that could be gained from future research suggested above, will allow researchers and policy makers to best attend to the needs of young boys and girls who become involved in the juvenile justice system.

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## APPENDIX

Appendix Table 1. Girls' Nested Models Predicting Arrest (N=37,486)

	B	S.E.	Exp(B)	B	S.E.	Exp(B)	B	S.E.	Exp(B)	B	S.E.	Exp(B)
Main effect of year												
Year <sup>†</sup>	0.43	0.04	1.54	0.45	0.04	1.57	0.40	0.04	1.50	0.40	0.04	1.50
Incident Characteristics												
Offender (White=0)												
Offender's Age <sup>†</sup>				-0.01*	0.01	0.99	-0.02*	0.01	0.98	-0.02*	0.01	0.99
Black				-0.25	0.02	0.78	0.12	0.04	1.12	-0.01 <sup>n</sup>	0.04	0.99
Other-race				1.16	0.10	3.19	1.22	0.10	3.38	1.21	0.10	3.36
Injury (None=0)												
Serious				0.34	0.07	1.41	0.51	0.08	1.66	0.47	0.08	1.60
Minor				0.26	0.02	1.29	0.31	0.02	1.36	0.33	0.02	1.39
Weapon (No Weapon=0)												
Weapon				1.17	0.05	3.23	1.10	0.05	3.02	1.10	0.05	3.01
Person				0.94	0.03	2.55	0.87	0.03	2.40	0.86	0.03	2.37
Location (Other=0)												
Residence				0.17	0.02	1.18	-0.30	0.03	0.74	-0.26	0.03	0.77
School				0.16	0.03	1.17	0.21	0.03	1.23	0.28	0.03	1.33
Victim Characteristics												
Victim (White=0, Male=0)												
Victim Age							0.02	0.00	1.02	0.02	0.00	1.02
Dummy for Missing							-0.93 <sup>n</sup>	0.65	0.40	-0.87 <sup>n</sup>	0.65	0.42
Female							-0.14	0.03	0.87	-0.15	0.03	0.86
Black							-0.49	0.04	0.61	-0.56	0.04	0.57
Other-race							0.17 <sup>n</sup>	0.14	1.18	0.14 <sup>n</sup>	0.14	1.15
Relationship (Other known=0)												
Mother							0.54	0.04	1.71	0.59	0.04	1.80
father							0.19*	0.07	1.21	0.22	0.07	1.24
sister							0.70	0.06	2.02	0.76	0.06	2.14
brother							0.62	0.09	1.86	0.66	0.09	1.94
stranger							0.03 <sup>n</sup>	0.05	1.03	0.02 <sup>n</sup>	0.05	1.02
Arrest Laws (Discretionary =0)												
Mandatory										0.48	0.03	1.61
Pro-arrest										0.21	0.04	1.24
Constant	-0.23	0.01	0.79	-1.23	0.03	0.29	-1.05	0.04	0.35	-1.27	0.05	0.28
-2LL	51,322.04			49,458.10			48,014.90			47,660.5		
Correctly Predicted	55.8%			59.1%			62.0%			63.0%		

All values are statistically significant at  $p < .001$  unless otherwise noted as below

\* $p \leq .05$ , n = not significant

<sup>†</sup> Variables are centered to reduced colinearity; year is divided by 10

Appendix Table 2. Boys' Nested Models Predicting Arrest (N=89,065)

	B	S.E.	Exp(B)	B	S.E.	Exp(B)	B	S.E.	Exp(B)	B	S.E.	Exp(B)
Main effect of year												
Year <sup>†</sup>	0.37	0.02	1.44	0.36	0.02	1.44	0.32	0.02	1.38	0.32	0.02	1.37
Incident Characteristics												
Offender (White=0)												
Offender's Age <sup>†</sup>				-0.01	0.00	0.99	-0.02	0.00	0.98	-0.02	0.00	0.98
Black				-0.25	0.02	0.78	0.01	0.02	1.01	-0.13	0.02	0.88
Other-race				0.78	0.07	2.18	0.78	0.07	2.17	0.77	0.07	2.17
Injury (None=0)												
Serious				0.28	0.04	1.33	0.43	0.04	1.53	0.40	0.04	1.49
Minor				0.14	0.01	1.16	0.22	0.02	1.25	0.23	0.02	1.26
Weapon (No Weapon=0)												
Weapon				0.71	0.03	2.04	0.77	0.03	2.15	0.77	0.03	2.16
Person				0.69	0.02	1.98	0.70	0.02	2.01	0.69	0.02	1.98
Location (Other=0)												
Residence				0.16	0.02	1.17	-0.27	0.02	0.77	-0.23	0.02	0.80
School				0.27	0.02	1.31	0.25	0.02	1.28	0.33	0.02	1.40
Victim Characteristics												
Victim (White=0, Male=0)												
Victim Age							0.02	0.00	1.02	0.02	0.00	1.02
Dummy for Missing							-1.34	0.40	0.26	-1.35	0.40	0.26
Female							-0.02 <sup>n</sup>	0.02	0.98	-0.04	0.02	0.96
Black							-0.40	0.02	0.67	-0.48	0.02	0.62
Other-race							0.47	0.09	1.59	0.46	0.09	1.58
Relationship (Other known=0)												
Mother							0.61	0.03	1.84	0.66	0.03	1.94
father							0.49	0.04	1.64	0.54	0.04	1.71
sister							0.69	0.04	2.00	0.74	0.04	2.09
brother							0.79	0.04	2.21	0.84	0.04	2.31
stranger							-0.28	0.03	0.76	-0.29	0.03	0.75
Arrest Laws (Discretionary =0)												
Mandatory										0.48	0.02	1.61
Pro-arrest										0.18	0.03	1.19
Constant	-0.20	0.01	0.82	-0.92	0.02	0.40	-0.89	0.02	0.41	-1.11	0.02	0.33
-2LL	119,780.80			119,780.80			116,822.20			115,966.78		
Correctly Predicted	55.1%			58.0%			60.7%			61.6%		

All values are statistically significant at  $p < .001$  unless otherwise noted as below

\* $p \leq .05$ , n = not significant

<sup>†</sup> Variables are centered to reduced colinearity; year is divided by 10

Appendix Table 3. State Percentages of Offenders by Race and Arrest Law, Girls Only

Law	State	Race of Offender			Total
		White	Black	Other	
Mandatory	South Carolina	10.8%	58.2%	2.2%	23.9%
	Virginia	2.9%	4.9%	1.5%	3.4%
Pro-Arrest	Massachusetts	9.8%	2.3%	2.5%	7.6%
	North Dakota	1.6%	0.1%	16.7%	1.5%
Discretionary	Idaho	14.8%	0.6%	18.2%	10.9%
	Iowa	18.5%	14.5%	29.2%	17.5%
	Michigan	36.4%	18.9%	11.0%	31.1%
	Utah	5.2%	0.5%	18.7%	4.1%
	Total	100%	100%	100%	100%

(N=37,606)

Appendix Table 4. State Percentages of Offenders by Race and Arrest Law,

		Race of Offender			
		White	Black	Other	Total
<b>Mandatory</b>					
	South Carolina	11.2%	62.5%	7.4%	25.1%
	Virginia	2.9%	5.2%	1.3%	3.5%
<b>Pro-Arrest</b>					
	Massachusetts	9.2%	1.9%	4.5%	7.2%
	North Dakota	1.6%	0.2%	11.4%	1.3%
<b>Discretionary</b>					
	Idaho	15.6%	0.6%	20.4%	11.6%
	Iowa	19.8%	12.9%	25.7%	18.0%
	Michigan	34.2%	16.0%	13.5%	29.0%
	Utah	5.5%	0.6%	15.7%	4.3%
<b>Total</b>		<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

(N=89,694)