INTERGENERATIONAL OFFENDING: AN ANALYSIS OF FAMILIES IN JAIL

A Thesis in
Criminal Justice

by
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ABSTRACT

The financial and social costs of incarceration are issues of concern, especially when multiple family members are processed through the system. The current study seeks to identify and describe low-risk, medium-risk, and high-risk families within a Pennsylvania County jail. Using official incarceration data, a subsample of individuals admitted to the jail during July to December 2009 was selected as study participants. Next, twenty years of official incarceration data from 1990-2009 were searched in an effort to identify family members of study participants and determine the level of risk for each known family. Finally, this work examines the extent to which families of varying levels of risk are represented among jail admissions during that time period. Similar to the findings of prior research, it was hypothesized that a small percentage of families will account for a large percentage of all admissions to the jail during the study time period (Farrington, Barnes & Lambert, 1996; Farrington, Jolliffe, Loeber, Stouthamer-Loeber & Kalb, 2001). Also, a comparison of various factors (e.g., individual number of admissions to the jail, race, gender, marital status, number of dependents at first admission, religiosity and age at first admission) are used to describe each family risk group. A discussion of the financial and social costs of high-risk families to county system resources and communities is provided.
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Chapter One: Introduction

According to the Department of Justice, 47 percent of all inmates serving time in state penitentiaries have a parent or other close relative who has also been incarcerated (Butterfield, 2002). Likewise, half of all juveniles in custody have a parent or other close relative who has spent time in jail or prison (Butterfield, 2002). These statistics from the Department of Justice confirm what numerous empirical studies have documented over the past several decades: criminal behavior runs in the family (Farrington, Barnes & Lambert, 1996; Farrington, Jolliffe, Loeber, Stouthamer-Loeber & Kalb, 2001; Ferguson, 1952; Putkonen, Ryynanen, Eronen & Tiihonen, 2002; Van de Rakt, Nieuwbeerta & De Graaf, 2008; West & Farrington, 1977). Scholarly research indicates that youth are more likely to exhibit higher levels of criminal stability throughout the life course when they are born into families where aggression and criminal behavior have been typical features of life across generations (Wright, Tibbetts & Daigle, 2008). This intergenerational pattern of familial offending has both important social and financial costs to consider. Victims of crime experience a wide range of harms including, physical injury, mental and emotional trauma, medical bills, and lost wages. The families of victims also experience harms, as well as the families of the offenders. This is especially problematic when considering the frequency with which crime occurs in America today. For instance, Pennsylvania’s violent crime rate increased from 99 per 100,000 residents in 1960 to 417 per 100,000 residents in 2007 (The Disaster Center, 2010). In turn, society suffers because citizens feel less safe in their communities and forfeit increasing amounts of money as taxpayers to ensure their safety. Accordingly, state corrections spending tripled over a twenty-year period from $12 billion in 1987 to $48 billion in 2007 and local corrections spending quadrupled during
that same time period from $6 billion to $24 billion (U.S. Bureau of Justice Assistance, 2011).
Pennsylvania’s population has grown just over seven percent since 1980, while its prison population has grown over 500 percent from about 8,000 prisoners in 1980 to 51,000 prisoners in 2010 (Gilliland, 2011).

A case that illustrates the phenomenon of intergenerational offending is that of the Bogle family (Butterfield, 2002). According to the Oregon Department of Corrections, the cost for incarcerating just five of the twenty-eight convicted members of the Bogle family is nearly three million dollars. This figure does not include trial expenses, time spent on probation or parole and costs if rearrested (Butterfield, 2002). These 28 Bogle convictions span three generations of a family fraught with poverty, abuse, neglect and drug use/abuse (Butterfield, 2002). Although perhaps an extreme example, the Bogle family embodies what has long been established by empirical research; children of criminal parents are at increased risk of becoming criminal themselves (e.g., Farrington et al., 1996; Farrington et al., 2001). Additionally, the costs associated with processing these individuals through the criminal justice system are staggering and potentially preventable.

Keeping people from returning to the criminal justice system is a major correctional goal. However, despite increased corrections spending, a recent study by the U.S. Bureau of Justice Statistics discovered that within three years of their release from prison, 68 percent of state prisoners were rearrested for one or more serious crimes, 47 percent were reconvicted and 52 percent were returned to prison (Cheliotis, 2008). Continuous empirical research has established that serious antisocial behaviors remain relatively stable over time and efforts to prevent an individual from entering the criminal justice system in the first place should be implemented early in the life course (Wright et al., 2008). In other words, chronic and disruptive behavior
early in life leads to frequent and oftentimes serious delinquency and crime over the life course (Campbell, Shaw & Gilliom, 2000; Huesmann, Eron, Lefkowitz & Walder, 1984; Loeber, 1982; Piquero, Farrington, Welsh, Tremblay & Jennings, 2009). It also negatively impacts other realms of life such as education, employment and relationship quality. Due to this strong connection between disruptive behavior in childhood and negative outcomes over the life course and across various realms of life, early intervention programs that have immediate effects on disruptive child behavior are also likely to have long lasting effects on offending (Farrington & Welsh, 1999; Piquero et al., 2009). Research has illustrated that the earlier the intervention the greater the likelihood it will decrease antisocial behaviors throughout the life course (Wright et al., 2008). Thus, it is important to identify these high-risk children early in life in order to disrupt their pathway towards crime.

Additionally, antisocial behaviors exhibited by a child are often entangled with the larger family unit; hence it is recommended that intervention programs target the entire family (Wright, Tibbetts & Daigle, 2008). As evidenced by the Bogle family, many risk factors converge to promote antisocial behavior in this family such as poverty, drugs and inadequate parental management practices. Various effective family intervention programs target known risk factors for the family as a whole in an attempt to lower the number of family members that enter the criminal justice system and also to decrease the recidivism rate for those members of the family already labeled as criminal. For instance, Functional Family Therapy (FFT) is an intervention/prevention program primarily used with adolescents that engages the family as a whole in an effort to increase communication and mutual problem solving among all family members (Loeber & Farrington, 1998). FFT is effective in improving family communication and lowering recidivism of youth with a history of minor delinquency, as well as those with
more chronic behavior problems (Loeber & Farrington, 1998). Recidivism rates for at risk youth ages 11 to 18 have been reduced 25 to 60 percent following FFT (Reinhardt, 2007).

Another family intervention program with promising results is Multi-Systemic Therapy (MST). This intensive family- and community-based program for high risk youth ages 12 to 17 and their families has resulted in youth spending less time in out-of-home placements, fewer arrests, less substance abuse, less aggressive behavior and less criminal involvement (Reinhardt, 2007). Overall, Farrington and Welsh (1999) reviewed 24 evaluations of delinquency prevention programs and found that MST is an effective technique for treating juvenile offenders. Thus, evidence-based initiatives regarding various family-based prevention programs are demonstrating positive outcomes (Farrington & Welsh, 1999; Loeber & Farrington, 1998; Piquero et al., 2009; Reinhardt, 2007).

Consequently, as evidenced by the Bogle family, ignoring the intergenerational pattern of offending is an incredible burden to taxpayers. Just five of the 28 convicted Bogle family members are costing the Oregon Department of Corrections nearly three million dollars (Butterfield, 2002). Clearly, the familial transmission of criminality is a significant burden on public resources. The costs associated with processing an inmate through the criminal justice system (i.e., court costs, housing, medical expenses, etc.) are multiplied by the number of family members in the system and their respective lengths of incarceration. One particular assessment found that taxpayers could potentially save a total of $976,217.81 in crime-related expenses, if just one child is not part of the criminal justice system from age 10 through 25 (Reinhardt, 2007). This is a substantial savings. Given that it is well documented that crime runs in the family (Farrington et al., 1996; Farrington et al., 2001; Ferguson, 1952; Putkonen, et al., 2002; Van de Rakt, 2008; West & Farrington, 1977), it is increasingly essential to pinpoint characteristics of
these high-risk families and to focus on the family unit when intervening early in the life of a child.

Accordingly, the main goal of the current research is to identify and describe high-risk, medium-risk and low-risk families who have been incarcerated in a Pennsylvania county jail\(^1\) during 1990-2009. To do so, a subsample was selected using official incarceration data that included all admissions to the jail from July to December 2009. Then, nearly twenty years (1990-2009) of official incarceration data were searched in an effort to identify family members of study participants and determine the level of risk for each known family. The identification of high-risk families is important because it is costly for the county to process multiple family members (perhaps several times each) through the system and effective early intervention programming could potentially result in substantial savings to the county. Subsequently, the extent to which families of varying levels of risk are represented among jail admissions during this six-month time period is examined. A comparison of various factors (e.g., number of admissions to the jail on an individual level, race, gender, marital status, number of dependents at first admission, religiosity and age at first admission) will be used to describe each family risk group. Overall, it is expected that a small percentage of families will account for a large percentage of all admissions to the jail during the study time period.

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\(^1\)In Pennsylvania county jails are referred to as county prisons, but they operate the same as county jails. Therefore, the term “jail” is used throughout this paper to minimize confusion.
Chapter Two: Literature Review

This chapter includes a comprehensive review of the literature regarding the intergenerational transmission of criminal behavior and delinquency. All of the scholarly research subsequently discussed offers important insights into the familial transmission of criminal behavior from one generation to the next. However, this chapter also reveals an evident oversight in the scholarly research, in that the existing research fails to examine intergenerational offending using an incarcerated population. In this manner, the current research fills a gap in the existing literature. The present chapter commences with a review of numerous family studies concerning the intergenerational transmission of criminality and delinquency.

Family Studies

Family studies examine behavioral similarities among members of the same family to see whether a trait/behavior is transmitted from generation to generation within a family (Lilly, Cullen & Ball, 2007). The intergenerational transmission of a trait/behavior may be due to both genetic and/or environmental factors. Although it is impossible to control for the effects of shared environmental factors within the family using this type of study method, family studies have provided important benchmarks and thresholds of heritability to the study of behavior, particularly antisocial behavior (Plomin, 1990). Using various methodologies, studies from several countries over the past few decades have clearly demonstrated that delinquency and criminality tend to run in the family.

Intergenerational Transmission of Offending in Great Britain

Much of the research regarding the intergenerational transmission of offending originated in Great Britain; thus, it is the natural starting point for a literature review on the topic. For
instance, Ferguson (1952) conducted one of the first major British investigations of the intergenerational transmission of delinquency using a cross-sectional comparison of delinquent versus non-delinquent boys. This study of 1349 Glasgow youth who quit school at the age of 14 showed that 12 percent were convicted of a crime by the age of 18. He then proceeded to demonstrate that the percentage of boys who were convicted increased considerably with the number of other convicted family members. For example: nine percent of boys with no other family member convicted were convicted themselves compared to 15 percent of boys with one other family member convicted, 30 percent of boys with two other convicted family members and 44 percent of boys with three or more other family members convicted. The likelihood of conviction was particularly elevated for boys with convicted fathers (24%), convicted older brothers (33%), and convicted younger brothers (38%). Additionally, Ferguson (1952) was able to establish that having a convicted family member predicted a boy’s probability of delinquency independently of other factors acknowledged to be connected with crime, such as low school attainment, poor housing and an overcrowded household. Accordingly, Ferguson (1952) came to the conclusion that “the influence of another convicted member of the family is at least as great as that of any of the other adverse factors that have been studied” (p. 67).

The Cambridge Study in Delinquent Development (CSDD) is often used when studying intergenerational similarities in criminal behavior among family members. The CSDD is a prospective longitudinal survey of 411 South London males from ages 8 to 48 (Farrington, Coid, & Murray, 2009). Most early analyses of the Cambridge Study report on convictions of all family members through the end of 1973 when the average age of males was 20 (Farrington, Gundry & West, 1975; Osborn & West, 1979; West & Farrington, 1977). These early studies discovered that 48 percent of males with convicted fathers were themselves convicted versus 19
percent of those with fathers that had no convictions (Farrington et al., 1975; West & Farrington, 1977). Convicted fathers were considerably more likely to be married to convicted mothers and the bulk of convicted mothers were married to convicted fathers. Notably, early studies of the CSDD illustrated that, both convicted mothers and convicted fathers were strong independent predictors of male youth’s convictions. In fact, it was revealed that the percentage of boys convicted up to age 20 increased linearly from no convicted parents (18%), to one convicted parent (42%), to two convicted parents (61%) (Farrington et al., 1975; Osborn & West, 1979; West & Farrington, 1977). Additionally, it was discovered that 50 percent of the boys with criminal brothers were convicted compared to 19 percent of the boys with noncriminal brothers.

More recent analyses of the CSDD are based on criminal record searches of the males up to the age of 40 or older and include the criminal records of many of their biological relatives (Farrington et al., 2009). These studies established that a convicted father, mother, brother, or sister were all independently important predictors of a man’s own conviction (Farrington et al., 1996). Additionally, the most current study of the CSDD illustrated significant intergenerational transmission of criminal behaviors (measured as convictions) between three generations of males, as well as between grandmothers and granddaughters (Farrington et al., 2009). Concurrently, same-sex relationships were found to be stronger predictors than opposite-sex relationships, and older siblings were stronger predictors than younger siblings (Farrington et al., 1996). For instance, the risk of conviction for boys with convicted fathers nearly quadrupled in comparison to the risk of conviction for boys with unconvicted fathers, while the risk of conviction for boys with convicted mothers was less than triple that of boys with unconvicted mothers. However, convicted mothers were six times more likely to have a convicted daughter than unconvicted mothers. Also, youth with a convicted older brother or sister were at quadruple
the risk of having a convicted younger sibling, whereas having a convicted younger brother increased sibling risk of conviction threefold and having a convicted younger sister did not quite double the risk of conviction for siblings.

The CSDD also found that having a convicted parent or a convicted older sibling by the child’s 10th birthday were consistently amid the best predictors of later offending (Farrington, 1992). However, having a convicted parent by the child’s 10th birthday was the best predictor of offending of the child independent of all other variables (Farrington, 1992). Furthermore, the CSDD revealed that a small number of families accounted for a disproportionate number of offenses (Farrington et al., 1996). For instance, four families (1%), including 33 persons, were accountable for 448 convictions or 18 percent of all convictions. When the next four most criminally productive families were added, eight families (2%), including 70 persons, were responsible for 692 convictions. Twenty-three families (6%) accounted for half of all convictions and approximately 10 percent of the families were responsible for nearly two-thirds (64%) of all convictions. Therefore, a small number of families were responsible for the majority of convictions, which supports the notion that crime often runs in the family and that a small number of criminal families are placing a substantial burden on society and the criminal justice system.

Rowe and Farrington (1997) recognized that the CSDD found criminal convictions to be highly familial and went on to examine how criminal convictions were transmitted within the families in the CSDD. Specifically, they examined whether the effect of parental convictions on child convictions was direct (genetic) or mediated through the quality of the family environment.

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2 These disproportionalities were only faintly attributable to the size of criminal families, which tended to be larger than average.
(i.e., supervision, child rearing, family size). Their results supported a direct effect of parental convictions on child convictions, without any mediation by family environment (Rowe & Farrington, 1997). In addition, in families with three sons, a mutual influence of one sibling on another appeared which highlights the importance of examining sibling effects in the study of criminal behavior (Rowe & Farrington, 1997).

Similar to the CSDD, other British studies also demonstrate that crime tends to run in the family. For example, Wilson (1987) examined 120 intact Birmingham families with an average of six children per family, including two boys. Approximately half the families (47%) contained at least one convicted parent. Also, 60 percent of convicted mothers were living with convicted fathers, but only 20 percent of convicted fathers were living with convicted mothers. Moreover, within the 56 families containing a convicted parent, 45 percent of the 180 sons in these families were cautioned\(^3\) or convicted, compared to 19 percent of the 203 sons in the remaining 64 families containing no convicted parent.

Murray and Farrington (2005) further discovered that even after controlling for parental criminality, parental incarceration predicted boys’ delinquency in a cohort of working-class males in London. Forty-eight percent of boys who had a parent incarcerated in the first ten years of life were convicted as adults, versus 25 percent of boys who were separated from their parents for other reasons (Murray & Farrington, 2005). While this effect was somewhat reduced after controlling for parental criminality and other childhood risk factors, parental incarceration remained a significant predictor of antisocial and criminal outcomes, even up to the age of 32 (Murray & Farrington, 2005). Likewise, a subsequent replication study conducted in Sweden examined 15,117 children born in the same year (1953) as the English cohort (Murray, Janson &

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\(^3\) Formal police cautions for more serious offenses commonly referred to as list-offenses.
Farrington, 2007). Similar to the results reported by Murray and Farrington (2005), parental incarceration predicted children’s own criminal behavior in Sweden as well. Unlike in England, however, the effects of parental incarceration in Sweden disappeared after statistically controlling for the criminality of the parent (Murray et al., 2007). It has been suggested that this cross-national difference may have been the product of shorter prison sentences in Sweden, more “family-friendly” prison policies, a more welfare-oriented juvenile justice system, a more comprehensive social welfare system, as well as a compassionate public attitude toward crime and punishment (Murray et al., 2007). Comparable to the findings of studies in Great Britain, Scandinavian research has also found that crime tends to run in the family.

**Intergenerational Transmission of Offending in Scandinavia**

Several studies on the familial transmission of offending have also been conducted in Scandinavia. For example, Van de Rakt, Nieuwbeerta, and De Graaf (2008) examined the intergenerational transmission of criminal behavior using data on 4,271 men from the Netherlands Criminal Career and Life Course Study (CCLS), which also included 6,952 of their children. The CCLS contains information on a representative sample of four percent of all criminal cases that occurred in the Netherlands in 1977 (Van de Rakt et al., 2008). Their findings revealed that children of convicted fathers are much more likely to be convicted themselves compared to children whose fathers have never been convicted (Van de Rakt et al., 2008). Furthermore, children of chronic and persistent criminals tend to commit more delinquent acts in all phases of their lives than children of law-abiding fathers (Van de Rakt et al., 2008). For example, approximately 89 percent of children with fathers in the control group belonged to the non-delinquent trajectory group, while about 62 percent of children with fathers in the high-rate persistent group belonged to this non-delinquent trajectory group. Additionally,
results of a later analysis of these same data also showed that the total number of convictions that a father has is undeniably important, and that the exact timing of the offense is also vital to understanding intergenerational transmission of crime (Van de Rakt, Ruiter, De Graaf & Nieuwbeerta, 2010). For example, in the year a father is convicted, his child’s likelihood of being convicted increases considerably and it weakens in subsequent years (Van de Rakt, 2010). Furthermore, the more crimes a father has committed, the longer it takes for the child’s increased likelihood of being convicted to weaken (Van de Rakt et al., 2010). Specifically, if a father is convicted for the fifth time, it takes more than six years for the increased chance of conviction of his children to return to half the original chance level. Similarly, Bijleveld and Wijkman (2009) used conviction data on five generations that spanned the years 1882-2007 to study the transmission of criminality from parent to child. They demonstrated that parental convictions increased the risk of offspring convictions, but only convictions that occurred after the birth of the child. Parental delinquency prior to birth did not lead to increased risk (Bijleveld & Wijkman, 2009). They concluded that exposure to a criminal parent may be more important in explaining intergenerational continuity in convictions than heredity or labeling mechanisms.

Some Finnish studies have also examined the intergenerational transmission of violent offending. One such examination studied criminal and prison records pertaining to the offspring of 36 Finnish homicide recidivists who committed two or more homicides between January 1981 and December 1993 (Putkonen et al., 2002). These authors discovered that the offspring of these homicide recidivists were 24 times more likely to commit a violent crime and up to 17 times more likely to be criminal when compared to a matched control group. More recently, this same group of researchers examined the criminal and prison record of the parents of the 36 Finnish homicide recidivists who committed two or more homicides between January 1981 and
December 1993 (Putkonen, Ryynanen, Eronen & Tiihonen, 2007). They discovered that the parents of homicide recidivist offenders have five times the risk for committing any crime, but the risk for violent offending was not notably increased (Putkonen et al., 2007). The researchers suggested that these results provide evidence of transmission of crime across three generations, as well as the increased risk of crime amid parents of recidivist violent offenders (Putkonen et al., 2007).

In a separate study that examined repeat Finnish homicide offenders from 1995-2004, criminal behavior among offspring was more common than criminal behavior occurring in the general public for both males and females (Repo-Tiihonen, Tiihonen, Lindberg, Weizmann-Henelius, Putkonen & Hakkanen, 2010). All Finnish homicide offenders in the sample had offspring around 26 years of age. Approximately half of all sample offspring had a criminal history and forty-five percent of offspring had a history of violent criminal behavior. Related, the offspring’s crimes against others (e.g., threat, intimidation, deprivation of freedom, breach of domicile) reflected their parent’s own psychopathy (Repo-Tiihonen et al., 2010). Additionally, a grandfather’s mental disorder seemed to increase risk of criminality in offspring, and a grandparent’s alcoholism was significantly associated with an earlier onset of criminal behavior in the offspring of parental offenders (Repo-Tiihonen et al., 2010). Interestingly, male offenders who scored high on the Psychopathy Check-List Revised (PCL-R) had sons with a significantly higher history of vandalistic crimes, in comparison to those who rated medium or low on the PCL-R.

For this study psychopathy was defined by a score of 26 or higher on the Psychopathy Check-List Revised (PCL-R) according to the recommendations for European populations.

Categorization into low (0-19.9), medium (20-20.9), and high (30-40) ratings was made according to the adjusted sum of the PCL-R.
the highest risk of committing crimes, and for that reason shape the most critical group to receive preventative programming during the first few years of life (Rep-Tiihonen et al., 2010).

**Intergenerational Transmission of Offending in the United States**

Numerous studies conducted in the U.S. have also focused on the familial transmission of criminality. Some early research on this topic included a longitudinal study of sons of 524 previous child-guidance clinic patients\(^6\) residing in St. Louis, Missouri in the course of a thirty-year follow-up study, which also included a matched control group (Robins & Lewis, 1966). It was demonstrated that twenty-four percent of the sons were found to have been arrested as juveniles versus only six percent of the sons in the control group (Robins & Lewis, 1966). Furthermore, the most influential relative on the boy’s chances of being arrested was his grandfather. Additional analysis revealed that a collection of other antisocial relatives appeared to predict failure to graduate from high school and arrests for boys from both white-collar and blue-collar homes (Robins & Lewis, 1966). Interestingly, boys from white-collar homes with antisocial relatives appeared to have been more strongly influenced by their relatives’ antisocial behavior than boys from blue-collar homes. Although the number of cases became quite small when divided by class, it was clear that boys in antisocial white-collar families had lower graduation rates and greater arrest records than boys from blue-collar homes with antisocial relatives. Devoid of antisocial relatives, all of the boys from white-collar families completed high school, and just one was arrested. In an effort to improve on this study and extend it to a Black sample of both males and females, Robins, West and Herjanic (1975) identified and located 223 Black men aged 30 to 36 in St. Louis’ public elementary school records. Through

\(^6\) Children were normally referred to the child guidance clinic for antisocial behavior severe enough to lead to their arrests as juveniles and to interfere with their completion of high school.
interviews, the sample was reduced to 76 men involved in 80 relationships with 79 women resulting in 145 children all past the age of 18 (Robins et al., 1975). Juvenile records of parents and children showed similar rates and types of offenses. Parental arrest histories were potent predictors of their children’s delinquency, explaining 50 percent of the variance in both boys’ and girls’ delinquency (Robins et al., 1975). Remarkably, the fathers and sons both had a delinquency rate of 31 percent. Mothers and daughters had similar delinquency rates at 16 percent and 14 percent, respectively. Also, the frequency of offense types remained much the same with theft being the principle offense across both generations (Robins et al., 1975).

Another classic longitudinal study on the intergenerational similarities of criminal behavior evaluated criminal recorders for 506 father-son pairs that had been collected through the Massachusetts Department of Corrections and Department of Probation (McCord, 1977). This information was evaluated to assess whether family links exist in regards to particular types of crimes. It was demonstrated that fathers who committed non-traffic crimes against order, which included begging, vagrancy, nonsupport and bastardy, were more likely to have sons who also committed non-traffic crimes against order (McCord, 1977). In addition, fathers convicted of drunkenness were more likely to have sons who were also convicted for drunkenness (McCord, 1977). Likewise, fathers who committed serious crimes such as larceny or assault were more likely to have sons who also committed these similar serious offenses (McCord, 1977).

In an effort to increase understanding of the processes accounting for intergenerational transmission of aggression, McCord (1991) later compared families in which fathers had been convicted for serious crimes to families in which fathers were not convicted of serious crimes. These analyses revealed that criminal fathers had a greater likelihood of being alcoholic,
aggressive, punitive, absent, as well as more likely than their non-criminal counterparts to be in conflict with their wife (McCord, 1991). Further analyses revealed that unless there was parental conflict and at least one aggressive parent, sons of criminals were no more likely to become criminals than were sons of non-criminals. It was demonstrated that 22 of 27 families with criminal fathers, contained at least one parent displaying uncontrolled aggressiveness. Over two-thirds (73%) of their sons were convicted of an index crime versus 22 percent of the remaining sons of criminal fathers (McCord, 1991). Among the 33 sons of non-criminals having a parent who displayed aggressiveness, 45 percent were convicted of an index crime. This percentage was significantly greater than the 24 percent of the remaining sons of non-criminal fathers who were convicted of an index crime (McCord, 1991). Notably, the results of this study indicated that the protective nature of maternal warmth and competence are particularly salient in reducing the effects of genetic transmission of characteristics that promote antisocial behavior. This led the researcher to tentatively conclude that intervention programming designed to develop competence among parents may be particularly effective with children at high genetic risk of becoming criminal.

The Chicago Youth Development Study examined patterns of family problems and delinquent behavior over time among a male sample of inner-city minority youth (Gorman-Smith, Tolan, Loeber & Henry, 1998). Empirically derived groups were identified and included non-offenders, chronic minor offenders, escalators, and serious chronic offenders (Gorman-Smith et al., 1998). Similar to the results presented by McCord (1991), Gorman-Smith et al. (1998) discovered that serious chronic offenders were more likely than members of the other groups to have families characterized by deviant or criminal behavior, as well as aggressive and/or antisocial beliefs. Families of the serious chronic offenders group were more often
characterized by various problems including disruption, conflict, and lack of parental involvement so extreme at times it legally qualified as neglect (Gorman-Smith et al., 1998). Comparable to these findings, Sampson and Laub (1993) also found a considerable association between the criminal behavior of fathers and that of their offspring in their analyses of the Glueck’s data. However, this association was mediated by the child’s upbringing and level of parental supervision.

A well-known study on the concentration of offending in American families is the Pittsburgh Youth Study (PYS). This prospective longitudinal study of over 1,500 males from Pittsburgh ranging in age from seven to 25, generated very similar results as did the Cambridge Study of Delinquent Development previously discussed. The PYS found that if one relative had been arrested, there was an elevated probability that an additional relative had also been arrested (Farrington et al., 2001). Arrested persons were highly concentrated in families, for example 117 families (8%) included 597 arrested persons or 43 percent of all arrested persons, which averages out to approximately five arrested persons per family (Farrington et al., 2001). The PSY also established that arrests of various family members, including fathers, mothers, siblings, aunts, uncles and even grandparents all predicted the delinquency of sample members (Farrington et al., 2001). However, the strongest predictor of delinquency in sample participants was arrests of the father, which predicted delinquency independently of all other arrested relatives (Farrington et al., 2001). The PSY also found that having a young mother, living in a bad neighborhood and having low levels of guilt may have some influence on the relationship between arrested fathers and delinquent sons.

Thornberry (2005) spearheaded the Rochester Youth Development Study (RYDS) that investigated the influence of parents’ antisocial behavior on the aggressiveness of their young
children. A direct effect of parents’ delinquency on the behavior of their children was discovered. However, for mothers, this relationship was mediated by their parenting approach (Thornberry et al., 2003). For fathers, on the other hand, a direct effect of delinquency on the behavior of their children persisted. Subsequently, Thornberry et al. (2009) also demonstrated that parental antisocial behavior was associated with that of their children as long as the parents had regular contact with their children. Also, the results presented by Coley, Carrano and Lewin-Bizan (2011) support a direct effects model of antisocial behavior in that a fathers’ antisocial behaviors predicted growth in children’s externalizing and internalizing behavior problems, with links stronger among resident-father families (Coley et al., 2011).

In families, environmental resemblance often co-exists with genetic resemblance (Plomin, 1990). Therefore, any behavioral resemblance found between relatives could be the result of shared environmental influences and/or genetic influences. Unfortunately, family studies are not able to decipher between these two types of influences (Plomin, 1990). Thus, twin and adoption studies have been utilized in behavioral genetics research to provide estimates of heritability as well as estimates of environmental effects.

**Twin and Adoption Studies**

Along with family studies, twin and adoption studies have been employed to better understand the etiology of criminal behavior as well as the intergenerational transmission of criminality. These studies help to explain why crime may run in the family by demonstrating that both the genetics and the environment that parents provide to their children may be influencing behavior. Studies have found that most traits, such as IQ, impulsivity, temperament and externalizing behaviors, follow general genetic theory. That is, the more genetically similar
two people are the more behaviorally similar they will be. For example, monozygotic (MZ) twins show the highest concordance rates\(^7\), followed by dizygotic (DZ) twins and full siblings, followed by half-siblings, cousins and then unrelated individuals (Plomin, 1990).\(^8\) This finding provides the standards to which other patterns of correlation or concordance rates are compared (Wright et al., 2008). Results from early twin studies began to establish the importance of genetics across a variety of outcomes, including criminal behavior. For instance, Christiansen (1977) used a sample of 3,586 MZ and DZ twin pairs born between 1881 and 1910 in Denmark to evaluate the etiology of criminality. Utilizing both penal and police records, Christiansen calculated a concordance rate of .35 for MZ twins and .13 for DZ twins, signifying that criminality has a genetic basis. Most twin studies conducted during this era shared this same conclusion (Wright et al., 2008).

Similarly, a review of 13 twin studies regarding the heritability of crime conducted up to 1993 demonstrated that even though twin studies vary widely in terms of the age, gender, country of origin, sample size, determination of zygosity, and the definition of crime, they all showed greater concordance rates for criminality in MZ as opposed to DZ twin pairs (Raine, 1993). Averaging concordance rates across all thirteen studies resulted in concordances of 51.5 percent for MZ twins and 20.6 percent for DZ twins (Raine, 2004). Additionally, the hypothesis that there is greater concordance for antisocial and aggressive behavior in MZ relative to DZ twins has been confirmed in various studies conducted since 1993 (Raine, 2004). Therefore, prior research in this area supports the notion that crime has a heritable component.

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\(^7\) Pairwise concordance represents the proportion of pairs of relatives in which both members have a certain trait or behavior present.

\(^8\) Monozygotic (MZ) twins are identical twins and dizygotic (DZ) twins are fraternal twins.
One advantage of adoption studies over twin studies is that adoption studies more clearly separate out genetic and environmental influences. If offspring separated from their criminal biological parents early in life and raised by prosocial families become criminal at greater rates than foster children whose biological parents were not criminal, this would indicate a genetic influence on criminal behavior (Raine, 2004). A variation of this type of study is the “cross-fostering” method, in which offspring whose biological parents are criminal or noncriminal are raised by parents who are criminal or noncriminal (Raine, 2004). A classic example of this type of adoption study was conducted by Mednick, Gabrielli, and Hutchings (1984). Specifically, these researchers examined 14,427 adoptions that transpired in Denmark between 1927 and 1947, where children were adopted either immediately at birth (25.3%), within the first year of life (50.6%), within the second year of life (12.8%), or after age two (11.3%). Convictions were assessed through court records regarding 65,516 biological parents, adoptive parents and adoptees. Mednick et al. (1984) discovered that when both adoptive and biological parents were noncriminal, meaning neither genetic nor environmental predispositions were present, 13.5 percent of adoptees had a criminal record. This increased to 14.7 percent when only the adoptive parents were criminal, indicating the presence of an environmental effect but not a genetic effect. When only the biological parents were criminal, conviction rates for adoptees increased to 20.0 percent. When both biological and adoptive parents were criminal, meaning both genetic and environmental predispositions were present, adoptee conviction rates increased to 24.5 percent. Moreover, for full siblings raised in separate households, there was a 20 percent concordance rate as opposed to an 8.5 percent concordance rate for nonrelated siblings living in separate households (Mednick et al., 1984). Therefore, the effect of an adopted child having a biological parent that is criminal was associated with a statistically significant increase in the probability of
the adoptee becoming criminal (Mednick et al., 1984). Although this is just one example of an adoption study that indicates criminal behavior has a genetic component, a review of fifteen other adoption studies conducted in Denmark, Sweden and the United States revealed that all but one found a genetic basis to criminal behavior (Raine, 1993).

More recent twin and adoption studies have also established that a broad range of mood disorders, personality disorders and behavioral problems indirectly linked to criminal behavior, are in fact influenced by genes (Plomin, 1990). For instance, using behavioral genetic methodology, Plomin (1990) demonstrated that depression, bipolar disorder and schizophrenia, all predictors of criminal behavior, have a strong genetic influence. Also, Grove, Eckert, Heston, Bouchard, Segal and Lykken (1990) studied 32 sets of identical twins that were raised apart and discovered a concordance rate of 29 percent for antisocial personality disorder, which is similar to rates found in other twin studies. Genetic effects have consistently been found to influence conduct disorder, alcohol dependence and drug dependence (Hicks et al, 2004; Silberg et al., 1996). Using a sample of 542 families with 17-year-old twins from the Minnesota Twin Study, Hicks et al. (2004) examined the family transmission of externalizing disorders in an effort to determine the extent to which the familial transmission of conduct disorder, adult antisocial behavior, alcohol dependence and drug dependence are due to a general versus a disorder specific vulnerability. Their results demonstrated that most familial resemblance on these measures was accounted for by a general vulnerability ($h^2 = .80$), although disorder-specific vulnerabilities were also detected for conduct disorder, alcohol dependence and drug dependence (Hicks et al, 2004). Overall, a review of hundreds of twin and adoption studies has shown that the intergenerational transmission of offending is due to both genetic and environmental factors (Farrington, 2004).
Stability of Antisocial Behavior

Research has shown that the etiology of antisocial behavior is influenced by both genetic and environmental factors. Studies have further examined the stability of antisocial behaviors from early childhood into adulthood. Early aggressive behavior is a considerable risk factor for later adjustment problems, including adult criminal conduct (Wright et al., 2008). Loeber (1982) explains that “early onset of delinquency is predictive of a chronic offense pattern, characterized by a large volume of crimes committed by a small portion of youths” (p. 9). These youths typically have displayed antisocial behavior in school, as well as other settings, prior to their first arrest and tend to engage in more serious crimes in general. Campbell, Shaw and Gilliom (2000) further note in their summary of the literature regarding the stability of problem behavior that “the results of studies of young children with externalizing problems beginning as early as age two or three years indicate moderate to strong continuity when symptoms of disruptive behavior are frequent, relatively severe, and pervasive” (p. 474). Therefore, these and hundreds of other studies demonstrate that the earlier the onset of problem behavior, the higher the likelihood that the problem behaviors will continue over time, and that these behavioral patterns will become frequent and pervasive (Wright et al., 2008).

However, an added essential piece of information concerning the stability of aggressive behavior is that highly aggressive behavior is found both within individuals across settings, as well as within families across generations (Wright et al., 2008). This empirical relationship of highly aggressive behavior being both within individuals across settings and within families across generations has been demonstrated in several studies, such as Glueck and Glueck’s (1950) analysis of two groups of boys (500 delinquents and a matched group of 500 nondelinquents); Farrington’s (1978) investigation of 411 males from his Cambridge Youth Development Study;
and in McCord and McCord’s (1959) examination of Boston youth. The most powerful
evidence thus far comes from the research conducted by Huesmann, Eron, Lefkowitz and Walder
(1984) who examined 600 subjects, their parents, and their children over a 22-year period.
Similar to other studies, they found significant levels of stability in aggressive behavior across
participants and across time. More notably, however, their analysis also demonstrated that
aggressive behavior patterns measured at age eight predicted variation in levels of aggression of
their children 22 years later (Huesmann et al., 1984). Also, the measures of stability were
undeniably stronger across generations than they were across individuals within generations
(Huesmann et al., 1984). Hence, the evidence suggests that higher levels of criminal stability
can be expected from youths born into families where aggression and criminal behavior have
been routine elements of life across generations (Wright et al., 2008).

**Early Prevention/Intervention Programs**

The accumulation of scholarly research indicates that antisocial and/or aggressive
behavior begins early in life, remains stable over time, runs in families and is a key risk factor for
delinquency and crime. Furthermore, chronic antisocial behavior also negatively impacts other
realms of life such as education, employment and relationship quality. However, criminal justice
resources continue to be directed toward punishment and incarceration, rather than early
childhood intervention in an effort to prevent crime (Cohen et al., 2010). In light of the results of
decades of scholarly research and the fact that state prisoners boast a recidivism rate over 50
percent, it makes sense to begin funneling criminal justice resources toward crime prevention at
the individual level. The persistency of untreated antisocial behavior in childhood and the high
costs of chronic offending and violent crime highlight the importance of preventative
interventions (Putkonen et al., 2007).
Early parent training has been advanced as an important prevention/intervention effort in regards to antisocial behavior. Such programs generally postulate that improving the quality of parent-child relations, by providing parents the tools necessary to engage in effective child-rearing, can assist parents and families in preventing antisocial and delinquent behavior in children (Piquero et al., 2009). Research findings indicate that these efforts are effective in reducing behavior problems among young children, as well as delinquency and crime in adolescents and adults (Piquero et al., 2009). Functional Family Therapy (FFT), for example, has been shown to be effective in improving family communication, increasing mutual problem solving skills, and lowering recidivism rates of both youth with a history of minor delinquency, as well as those with more chronic behavior problems (Loeber & Farrington, 1998). Recidivism rates for at risk youth ages 11 to 18 have been reduced by 25 to 60 percent following FFT (Reinhardt, 2007). Another program analogous to FFT that has proven effective is All Children Excel (ACE), which targets high-risk children under the age of ten and their families (Reinhardt, 2007). Upon evaluating the effectiveness of ACE it was found that 35 percent of ACE children re-offended compared to 57 percent of children in the control group (Reinhardt, 2007). Additionally, 86 percent of ACE children had not been charged with another offense 4.5 years after the completion of the program (Reinhardt, 2007).

Furthermore, Farrington and Welsh (1999) reviewed 24 evaluations of delinquency prevention programs⁹ and found that most family prevention/intervention programs were effective in reducing childhood antisocial behavior and later delinquency. In some cases the monetary benefits of the prevention/intervention programs exceeded their monetary costs. The

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⁹ To be included in the review, prevention programs had to include some type of family intervention, an outcome measure of offending or disruptive child behavior, a high quality experimental design and a minimum sample size of 100.
authors concluded that the most promising family-based crime prevention programs tended to include parent education in-home visits, parent management training, child skills training, and preschool intellectual enrichment programs with home visits. More recently, Farrington and Welsh (2003) performed a meta-analysis of the effectiveness of family-based crime prevention programs.10 Similar to their previous study, the researchers found that overall the 40 studies that met their criteria11 had a positive effect on child behavior problems, including reducing antisocial behavior and delinquent involvement (Farrington & Welsh, 2003). Home visiting, daycare/preschool, home/community, and Multi-Systemic Therapy (MST) programs were all generally effective. In addition, the effects persisted in long-term evaluation studies. Their review also indicated that the most effective interventions employed behavioral parent training and the least effective were based in schools (Farrington & Welsh, 2003). Therefore, the most effective family intervention/prevention programs target known risk factors for the family as a whole in an attempt to lower the number of family members that enter the criminal justice system and also to decrease the recidivism rate for those members of the family already labeled as criminal. The cost of these types of prevention/intervention programs is feasibly a fraction of the cost and misery society incurs during the lifetime of a chronically antisocial individual (Loeber, 1982).

**Social and Economic Costs of Intergenerational Patterns of Offending**

There is no doubt that crime can harm individuals on multiple levels, including physically, emotionally, mentally, and/or economically through lost wages, medical costs, and

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10 Prevention programs were carried out in several settings: the home, day/care preschool, parent training, school-based, home/community with older adolescents and multi-systematic therapy.
11 Included studies met the following criteria: (a) the family was the focus of the intervention, (b) there was an outcome measure of delinquency or antisocial child behavior, (c) the evaluation used a randomized experiment, and (d) the original sample size included at least 50 people.
tax revenue (Cohen, Piquero & Jennings, 2010; Reinhardt, 2007). Family members of the individual victims can also suffer the loss of a loved one or the hindering of a family member, and the convicted criminals lose their freedom and their ability to provide for their families (Reinhardt, 2007). This is problematic because the incidence of murder in the United States is as high as one every 22 minutes, and other victimizations such as rape occurs every five minutes, robbery every 49 seconds and burglary every ten seconds (Reinhardt, 2007). The frequency with which crime is occurring in the United States incites fear and anger among many Americans (Reinhardt, 2007). In this way, crime is costly to society as a whole. Citizens feel less safe in their homes and communities and pay increasingly more in tax dollars to fund the ever expanding criminal justice system (Reinhardt, 2007). Cohen et al. (2010) estimate that a career criminal in the United States costs society between 2.1 and 3.7 million dollars over his/her lifetime. According to a 2011 report by the U.S. Bureau of Justice Assistance, state corrections spending has increased from $12 billion in 1987 to $48 billion in 2007, while local corrections spending has increased from $6 billion to $24 billion during the same time period. Even worse, despite increasing corrections expenditures, recidivism rates remain high, with more than half of all offenders released from state prisons returning within three years of their release (Cheliotis, 2008). Since one of the major goals of the criminal justice system is to keep people from returning to the system, and empirical research indicates that not only does antisocial behavior begin early in life and remain stable over time, but it also runs in the family, it is more cost effective to focus on identifying high-risk children early in life in order to divert them from a criminal lifestyle circumventing incarceration all together. Arguably, employing effective early childhood intervention programming such as Functional Family Therapy (FFT) or Multi-
Systemic Therapy (MST) that target known risk factors for the family as a whole have the potential to produce significant social benefits.

**Purpose of Current Study**

The preceding literature review demonstrates a glaring gap in the existing scholarly research regarding the familial transmission of criminal behavior and delinquency; existing research fails to examine intergenerational offending using jail admissions. Prior research predominately examines the intergenerational transmission of criminal behavior using arrests or convictions. Despite this limitation, the prior work does reveal essential insights into the familial transmission of offending. Scholarly research has demonstrated that antisocial or aggressive behavior begins early in life, remains stable over time, runs in families, and is a key risk factor for delinquency and criminality over the life course. In light of these findings, and the fact that over half of all state prisoners are returned to prison within three years of their release (Cheliotis, 2008), examining the intergenerational transmission of criminality in terms of admission/incarceration rates, rather than arrest/conviction rates also has substantial value. The ability to identify high-risk incarcerated families gives counties the opportunity to offer these families the early intervention programming they need to potentially break the cycle of incarceration that exists among their family members. In turn, the corrections system could realize a significant savings from providing high-risk families the services they need to avoid continued episodes of incarceration.

Hence, the main purpose of the current study is to identify and describe high-risk, medium-risk and low-risk families who have been incarcerated in a county jail in Pennsylvania during 1990-2009. To do so, a subsample of study participants were drawn using all admissions
to the jail from July to December 2009. Next, official incarceration data for the years 1990-2009 were searched to determine if family members of study participants have also been admitted to the jail during this time period. Risk categories were then established according to the total number of times a family unit had been admitted to the jail during the years 1990-2009. The identification of these families is important for several reasons. First, the social costs to the victims, the victim’s family, the offender and the offender’s family is of issue, which can be exacerbated due to the intergenerational continuity in offending. Second, citizens residing in socially and economically marginalized communities are disproportionately affected by incarceration (Clear, 2007). Third, from an economic standpoint, this is costly for the county to process multiple family members through the system (often numerous times each) and effective early intervention programming could potentially result in substantial savings to the county. Identification of high-risk families would afford this county the opportunity to assist families in need of early intervention programming in efforts to avoid continued interaction with the corrections system. Subsequently, the extent to which families of varying levels of risk are represented among jail admissions during this six-month time period is examined. Specifically, it is hypothesized that a small percentage of families will account for a large percentage of all admissions to the jail during the study time period. Also, a comparison of various factors (e.g., number of admissions to the jail on an individual level, race, gender, marital status, number of dependents at first admission, religiosity and age at first admission) will be used to describe each family risk group. A discussion of the financial and social costs of high-risk families to county system resources and communities is provided.
Chapter Three: Methodology

Using official incarceration data from a county jail in Pennsylvania, the central purpose of the present study is to identify and describe high-risk, medium-risk and low-risk families confined in the jail at some point during 1990-2009. To this end, a subsample of individuals admitted to the jail during July to December 2009 were selected as study participants. Subsequently, official incarceration data from the years 1990-2009 were systematically searched in an effort to identify family members of study participants ever incarcerated at the jail during this nearly 20 year time period. Thus, the total study sample includes admission histories for the years 1990-2009 for all of the study participants in the subsample, as well as all of their identified family members admitted to the jail 1990-2009. There were a total of 5,638 admissions to the county jail from July through December 2009. Four hundred and forty-three families were identified among the 2,592 coded cases during this six-month period.

The official data were sorted according to admission date and then alphabetically by last name. Numerous variables were used to identify families. Inmate-level variables used to identify families included: inmate number, number of family identifiers (the total number of relatives an inmate provided information regarding), last name, first name, middle initial, affix (e.g. Jr., Sr.), street address, city, state, zip code, birth date, gender, race, marital status, spouse, spousal address, and emergency contact address. Variables depicting family information incorporated relationship type which most often included: mother, father, child, sister, brother, 

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12 The current research project has been approved by the Pennsylvania State University Institutional Review Board (see Appendix).

13 Due to time constraints only 2,592 cases have been coded of the 5,638 total cases for the six month time period. Therefore, the generalizability of this study is limited.
cousin, aunt, friend, grandmother, and grandfather. The relatives’ corresponding last names and/or first names were then listed. Other variables used to identify family members included: number of dependents and emergency contact name.

All cases were examined in a systematic fashion and assigned a code to indicate one of the following: the presence of an incarcerated family member at the jail during 1990-2009, the absence of an incarcerated family member at the jail during this nearly 20 year time period, or the lack of sufficient information to substantiate the presence/absence of an incarcerated family member at the jail during 1990-2009. The process of identifying families began by verifying the study participant’s last name, first name, date of birth, gender, race, and marital status. Then the following variables were investigated: name of spouse, relative type, names of relatives, number of dependents, emergency contact name, aliases and dates admitted to and released from the jail. Each name identified during this investigation of the study participant was searched in the larger data set, starting with the last name of the inmate. These names, if found, were then verified using the following family variables: address of inmate, date of birth, gender, race, relative type and name. Any further names discovered through the verification of the current name were subject to the same search and verification process.

Cases were then coded as either “missing information” or given a unique family ID number. Cases were coded as “missing information” if one of the following occurred: 1) no family member at the jail can be reasonably ascertained, 2) no relative information listed, 3) more information or paperwork is needed to verify that this individual does or does not have a
family member(s) in the jail,\textsuperscript{14} 4) inmate name not in use (information was missing across all other variables), 5) inmate commitment date and release date are the same (this usually meant information was missing across most other variables) and, 6) no first or last name was given. This process resulted in 2,149 of the 5,638 cases being classified as missing cases. Of the remaining 3,489 cases, 1,429\textsuperscript{15} individuals were given a unique family ID number (see Table 1). Specifically, a unique family ID number beginning with one and continuing consecutively to 443 was assigned to each study participant and their respective identified family members. All admissions to the jail during 1990-2009 were included in the current analysis for study participants and their identified family members. Then, families were collapsed into high-risk, medium-risk, and low-risk categories based on the total number of times each family was admitted to the jail during 1990-2009. The cutoffs were determined through frequency distributions and based on a 33 percent cut-off. In sum, identifiers are used to determine the family unit and then the total number of times a family was admitted to the jail during the years 1990-2009 determines each incarcerated family’s level of risk. Further analysis was completed comparing families of all three risk levels based on key characteristics: gender, race, marital status, religion, number of dependents at first admission, age at first admission and number of admissions to the jail at the individual level.

\textsuperscript{14} Due to time constraints the additional information or paperwork needed from the jail to verify whether particular individuals did or did not have family members at the jail was not included in the current analysis.
\textsuperscript{15} Of the 1,429 individuals given a unique family ID, 233 of them were study participants admitted to the jail July to December 2009 and 1,196 were identified family members of study participants ever admitted to the jail 1990-2009.
Table 1: Study Subsample

<table>
<thead>
<tr>
<th></th>
<th>Number of Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Admitted to the Jail</td>
<td>5,638</td>
</tr>
<tr>
<td>(July – December 2009)</td>
<td></td>
</tr>
<tr>
<td>Total Coded Cases (July –</td>
<td>2,592</td>
</tr>
<tr>
<td>December 2009)</td>
<td></td>
</tr>
<tr>
<td>Cases Coded as “Missing</td>
<td>2,149</td>
</tr>
<tr>
<td>Information”</td>
<td></td>
</tr>
<tr>
<td>Total Number of Individuals</td>
<td>1,429</td>
</tr>
<tr>
<td>from 1990-2009 who were given</td>
<td></td>
</tr>
<tr>
<td>Unique Family ID</td>
<td></td>
</tr>
<tr>
<td>Total Number of Families</td>
<td>443</td>
</tr>
<tr>
<td>Identified</td>
<td></td>
</tr>
</tbody>
</table>

For the purpose of the current study, family is operationalized as one or more of the following: blood relatives, half blood relatives (i.e. children with only one parent in common), those who are married, their children and extended family (e.g., aunts, uncles, cousins, grandparents, grandchildren), as well as those who have children in common but were never married, are separated, or divorced and their extended families. The 443 identified families in the current study contain 1,429 individuals of which 1,384 indicated their gender and race. Specifically, 22 percent of the study sample was female and 75 percent were male. Further, 72 percent of the sample were Black, 16 percent White, 8 percent Hispanic, 0.1 percent American Indian and 0.9 percent indicated other (see Table 2). Race was then collapsed into White (0) and non-White (1) and it was established that 16 percent of study participants were White compared to 81 percent who were non-White.

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16 According to the U.S. Census Bureau, the population of this Pennsylvania County in 2010 was 72% White, 18% Black, 7% Hispanic, 3% Asian and 0.2% American Indian. Consistent with national patterns, Blacks are grossly overrepresented in this county's jail population.
Table 2: Racial Distribution of Study Participants

<table>
<thead>
<tr>
<th>Race</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>71.9</td>
</tr>
<tr>
<td>White</td>
<td>16.1</td>
</tr>
<tr>
<td>Hispanic</td>
<td>7.9</td>
</tr>
<tr>
<td>Other</td>
<td>0.9</td>
</tr>
<tr>
<td>American Indian</td>
<td>0.1</td>
</tr>
</tbody>
</table>

Of the 1,429 individuals in the subsample, 1,282 indicated their religious affiliation upon their initial admission to the jail. Of those reporting a religion in the subsample the majority (58%) indicated that they were Protestant while the remaining 42 percent identified with another religion (see Table 3). The measure of religion was subsequently collapsed into those who reported having a religious affiliation upon their initial admission (1) versus those who reported no religious affiliation (0). Approximately 9 percent of the 1,234 valid cases in the subsample reported no religious affiliation, while 78 percent reported having a religious affiliation.

The age of individuals at first admission was reported for 1,418 cases of the 1,429, and ranged from 14 to 77 years of age with a mean of 28.98 and a standard deviation of 10.52 (see Table 4). The number of dependents at first admission was recorded for 1,369 individuals and ranged from 0 to 21 with a mean of 1.58 and a standard deviation of 2.03. Marital status at first booking was documented for 1,331 individuals as follows: 66 percent single and 34 percent other, which includes married, divorced, separated and widowed individuals (see Table 4). The frequency with which each of the 1,429 individuals was admitted to the jail ranged from 1 to 25 times with a mean of 4.13 and a standard deviation of 3.44. The number of times each of the 443 families was admitted to the jail ranged from 1 to 70 with a mean of 13.31 and a standard deviation of 10.73 (see Table 5).
Table 3: Religious Affiliation of Study Participants

<table>
<thead>
<tr>
<th>Religion</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protestant</td>
<td>57.70</td>
</tr>
<tr>
<td>Catholic</td>
<td>12.50</td>
</tr>
<tr>
<td>None</td>
<td>8.60</td>
</tr>
<tr>
<td>Muslim</td>
<td>4.80</td>
</tr>
<tr>
<td>Unknown</td>
<td>3.40</td>
</tr>
<tr>
<td>Jehovah Witness</td>
<td>0.90</td>
</tr>
<tr>
<td>Other</td>
<td>0.60</td>
</tr>
<tr>
<td>Jewish</td>
<td>0.30</td>
</tr>
<tr>
<td>Buddhist</td>
<td>0.20</td>
</tr>
<tr>
<td>Seventh Day Adventist</td>
<td>0.20</td>
</tr>
<tr>
<td>Moorish American</td>
<td>0.10</td>
</tr>
<tr>
<td>Hindu</td>
<td>0.10</td>
</tr>
<tr>
<td>Mormon</td>
<td>0.10</td>
</tr>
<tr>
<td>Rastafarian</td>
<td>0.10</td>
</tr>
<tr>
<td>Orthodox</td>
<td>0.10</td>
</tr>
<tr>
<td>Atheist</td>
<td>0.10</td>
</tr>
</tbody>
</table>

Table 4: Marital Status of Study Participants

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>66.3</td>
</tr>
<tr>
<td>Married</td>
<td>12.2</td>
</tr>
<tr>
<td>Divorced</td>
<td>6.5</td>
</tr>
<tr>
<td>Separated</td>
<td>4.8</td>
</tr>
<tr>
<td>Unknown</td>
<td>2.3</td>
</tr>
<tr>
<td>Common Law</td>
<td>0.8</td>
</tr>
<tr>
<td>Widowed</td>
<td>0.3</td>
</tr>
</tbody>
</table>
Table 5: Descriptive Statistics for Age and Number of Dependants at First Booking, as well as the Number of Admissions to the Jail at the Individual and Family Level

<table>
<thead>
<tr>
<th>Variable</th>
<th>Valid Cases (N)</th>
<th>Range</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of individuals at first admission</td>
<td>1,418</td>
<td>14 - 77</td>
<td>28.98</td>
<td>10.52</td>
</tr>
<tr>
<td>Number of dependents at first admission</td>
<td>1,369</td>
<td>0 - 21</td>
<td>1.58</td>
<td>2.03</td>
</tr>
<tr>
<td>Number of admissions at individual level</td>
<td>1,429</td>
<td>1 - 25</td>
<td>4.13</td>
<td>3.44</td>
</tr>
<tr>
<td>Number of admissions at family level</td>
<td>1,429</td>
<td>1 - 70</td>
<td>13.31</td>
<td>10.73</td>
</tr>
</tbody>
</table>

Measures

The measures used to describe the families included in the current study are number of admissions to the jail at the family level, number of admissions to the jail on an individual level, race, gender, marital status, number of dependents at first admission, religiosity and age at first admission. Following the identification of family risk levels, some of the data were collapsed into two categories for ease of comparison across family risk levels. In particular, Race was measured as a dichotomous variable where 0 = White and 1 = non-White (e.g., Black, Hispanic, American Indian and other). Gender was measured as a dichotomous variable where 0 = female and 1 = male. Marital status was also measured as a dichotomous variable where 0 = married (includes common law marriages) and 1 = not married (e.g., single, divorced, separated or widowed). Religiosity was also dichotomized where 0 = religious (all individuals who identified
with a specific religion at first admission) and 1 = non-religious (individuals who reported having no religious affiliation, or claimed to be Atheist upon their initial admission). Number of admissions to the jail at the individual level, number of admissions to the jail at the family level, number of dependents at first admission and age at first admission are all measured as continuous variables.

**Plan of Analysis**

First the data are collapsed into high-risk, medium-risk and low-risk families based on frequency statistics and a 33 percent cut-off. Next, the seven variables of interest (e.g., age at first admission, gender, race, religion, marital status, number of dependents at first admission and number of admissions to the jail at the individual level) are analyzed using One way ANOVA in an effort to further examine each of the three family risk levels.
Chapter Four: Results

To determine if a small percentage of families in the study accounted for a large percentage of the total admissions to the jail, data were sorted by number of admissions to the jail per family unit and frequency statistics were performed. Families include study participants and all identified family members ever admitted to the jail 1990-2009. Families were then collapsed into high-risk, medium-risk and low-risk families based on a 33 percent cut-off. Specifically, families with one to seven total admissions to the jail were classified as low-risk, families with eight to 14 total admissions were classified as medium-risk, and families with 15 or more total admissions to the jail were classified as high-risk families. Next, the total number of high-risk family admissions for the subsample (3,544) was divided by the total number of admissions (5,895) and it was discovered that high-risk families were responsible for 60% of all sample admissions to the jail. To further test the hypothesis, the high-risk subsample families that accounted for the top six percent of admissions to the jail were identified. Then, the total number of admissions for the top six percent of high-risk families (1,135) in the subsample was divided by the total number of subsample admissions (5,895). Specifically, 26 families (6% of subsample families) were responsible for 19 percent of all sample admissions to the jail. Next, the total number of admissions for the top ten percent of high-risk families (1,704) in the subsample was divided by the total number of subsample admissions (5,895). Particularly, 45 families (10% of subsample families) were responsible for 29 percent of all sample admissions to the jail.

When the total number of admissions for study participants in high risk families (908) was divided by the total number of admissions for study participants alone (1,497), high-risk study participants accounted for 61% of all study participant admissions.
Subsequently, families of all three risk levels were then compared based on number of admissions to the jail on an individual level, race, gender, marital status, number of dependents at first admission, religiosity and age at first admission using One-way ANOVA. The results of these analyses are displayed in Table 6. In terms of the racial composition of each of the three family risk levels, the findings indicate that high-risk families were predominantly non-White. Specifically, high-risk families were 94 percent non-White, versus medium-risk families who were 78 percent non-White and low-risk families who were 68 percent non-White. These racial differences across the three levels of family risk were statistically significant (p<.001). In regards to gender, all risk levels were comprised of over 75 percent males. Although high-risk families contained slightly more females in comparison to the other two risk categories, this difference was not statistically significant. Particularly, high-risk families were 76 percent male, while medium-risk families were 79 percent male and low-risk families were 78 percent male.

In terms of marital status, the analysis revealed that high-risk families include more single persons versus married persons. Particularly, 88 percent of individuals in the high-risk category were single, compared to 85 percent in the medium-risk families and 72 percent in the low-risk families. These differences across the three family risk categories were statistically significant (p<.05). Also, the number of dependents at first admission increased steadily from one dependent for low-risk families to 1.5 dependents for medium-risk families and two dependents at first admission for high-risk families. This variation across levels of family risk was statistically significant (p<.001). With regard to religious position, 92 percent of high-risk families reported a religious affiliation at first admissions, compared to 87 percent of medium risk families and 90 percent of low-risk. These differences, however, were not statistically significant.
Lastly, the Oneway ANOVA regarding age at first admission revealed that individuals in high-risk families were initially admitted to the jail at a slightly younger age than low-risk families. These differences across family risk categories were not statistically significant. However, further analyses, using a two-tailed independent sample t-test, revealed that when the high and medium family risk categories were combined and compared to the low-risk family category, the differences across the two family risk levels was statistically significant (p<.05).

Table 6: Results of Oneway ANOVA Analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>Low-risk (1-7)</th>
<th>Medium-risk (8-14)</th>
<th>High-risk (15+)</th>
<th>F Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admissions at individual level</td>
<td>2.15 (1.40)</td>
<td>3.92 (2.88)</td>
<td>5.20 (3.96)</td>
<td>100.94***</td>
</tr>
<tr>
<td>non-White</td>
<td>.68 (.47)</td>
<td>.78 (.41)</td>
<td>.94 (.24)</td>
<td>63.31***</td>
</tr>
<tr>
<td>Male</td>
<td>.78 (.42)</td>
<td>.79 (.41)</td>
<td>.76 (.43)</td>
<td>.55</td>
</tr>
<tr>
<td>Not married</td>
<td>.82 (.39)</td>
<td>.85 (.35)</td>
<td>.88 (.33)</td>
<td>3.05*</td>
</tr>
<tr>
<td>Number of dependents at first admission</td>
<td>1.06 (1.68)</td>
<td>1.51 (2.07)</td>
<td>1.87 (2.11)</td>
<td>17.37***</td>
</tr>
<tr>
<td>Age at first admission</td>
<td>30.00 (11.15)</td>
<td>28.47 (10.08)</td>
<td>28.81 (10.46)</td>
<td>2.10</td>
</tr>
<tr>
<td>Religious affiliation</td>
<td>.90 (.30)</td>
<td>.87 (.34)</td>
<td>.92 (.27)</td>
<td>3.75</td>
</tr>
</tbody>
</table>

*p <.05; ***p <.001
Chapter Five: Discussion

Summary of Current Analysis

The present study identified and described high-risk, medium-risk and low-risk families incarcerated in a Pennsylvania county jail during 1990-2009. The current analysis employed a subsample selected from official incarceration data including all admissions to the jail July to December 2009. Then, twenty years of official incarceration data from 1990-2009 were searched to identify family members of study participants and determine the level of risk for each known family. The extent to which families of varying levels of risk in the subsample were represented among jail admissions during the six-month study time period was then examined. Specifically, it was demonstrated that high-risk incarcerated families in the subsample accounted for 60 percent of all sample admissions to the jail during the study time period. Additionally, six percent of subsample families were responsible for 19 percent of all sample admissions to the jail and 10 percent of subsample families were responsible for 29 percent of all sample admissions to the jail.

Next, a comparison of various factors (e.g., number of admissions to the jail on an individual level, race, gender, marital status, number of dependents at first admission, religiosity and age at first admission) was used to describe family risk categories. It was revealed that high-risk families incarcerated at the jail contained predominately males who were admitted five or more times and were slightly younger than individuals in low-risk families upon initial admission to the jail. Moreover, high-risk families were overwhelmingly non-White, predominately single (versus married, separated, divorced, or widowed), and contained individuals with more dependents than low-risk and medium-risk families. The results of the
present study are aligned with much of the prior literature and are discussed in greater detail below.

**Explanations for the Concentration of Offending in Families**

There are at least six explanations provided in the literature as to why offending tends to be concentrated in particular families and transmitted from one generation to the next. These include: 1) familial exposure to various risk factors, 2) assortative mating, 3) direct and mutual influences of family members on one another, 4) environmental mechanisms, 5) genetic mechanisms, and/or 6) official bias within the system (Farrington, 2004). These possible explanations are in no way mutually exclusive of one another. First, the intergenerational continuities in exposure to various risk factors, such as poverty, disrupted families, teenage parenting, and grossly disadvantaged neighborhoods can potentially explain the familial transmission of offending (Farrington, 2004). The Bogle family featured in the introduction exemplifies this explanation. Twenty-eight members of the Bogle family, spanning three generations fraught with poverty, abuse, neglect and drug use/abuse are convicted felons in the State of Oregon (Butterfield, 2002). Additionally, findings from scholarly research also support this explanation. For instance, Gorman-Smith et al. (1998) found that families of serious chronic offenders were more often characterized by problems such as family disruption and conflict, as well as lack of parental involvement. The results of the Pittsburgh Youth Study (PYS) also suggest that having a young mother and living in a bad neighborhood influences the link between arrested fathers and delinquent sons (Farrington et al., 2001). Similarly, one of the main conclusions of the Cambridge Study of Delinquent Development (CSDD) was that a collection of factors in the family environment including, poverty, large family size, parental disharmony, poor-child rearing and parental criminality leads to an assortment of antisocial features when
children become adults, criminality being one of them (West and Farrington, 1977). Therefore, the intergenerational transmission of offending could be part of a larger cycle of deprivation and antisocial behavior (Farrington, 2004).

A second explanation may be that female offenders tend to reproduce with males who are also offenders, a phenomenon referred to as assortative mating (Farrington, 2004). The CSDD demonstrated that “children with two criminal parents were disproportionately antisocial” (West & Farrington, 1977, p.122). In particular, it was revealed that the percentage of boys convicted up to age 20 increased linearly from no convicted parents (18%), to one convicted parent (42%) to two convicted parents (61%) (Farrington et al., 1975; Osborn & West, 1979; West & Farrington, 1977). Two main processes have been distinguished in regards to assortative mating (Rowe & Farrington, 1997). One is called social homogamy, which means that convicted persons choose one another as mates due to social and physical proximity (e.g., they occupy the same schools, clubs or bars). The other process is called phenotypic assortment, which means that potential partners examine one another’s personality and traits and choose partners similar to themselves. There are findings to support both of these explanations. For example, the CSDD showed that convicted fathers were considerably more likely to be married to convicted mothers and the bulk of convicted mothers were also married to convicted fathers (Farrington et al., 1975; West & Farrington, 1977). Likewise, Wilson (1987) examined 120 intact Birmingham families with an average of six children per family and found that 60 percent of convicted mothers were living with convicted fathers.

Another explanation has to do with direct and mutual influences of family members on one another (Farrington, 2004). For instance, it could be that younger male siblings imitate the antisocial behavior of older male siblings. This explanation for the intergenerational
transmission of offending has received some empirical support. For example, Reiss and Farrington (1991) found that approximately 20 percent of boys with brothers close to them in age were convicted for a crime committed with their brother. Also, in a separate examination of families in the CSDD, a mutual influence of one sibling on another was revealed in families with three sons (Rowe & Farrington, 1997). However, co-offending by parents with their children was particularly uncommon among families in the CSDD. As such, intergenerational mutual influences on offending appear to be a less plausible explanation (Farrington, 2004). There was no evidence that children were directly encouraged or taught to commit crime by their parents; in fact, a criminal father typically disapproved of his son’s offending (West & Farrington, 1977).

A fourth explanation may be that environmental mechanisms mediate the effect of a criminal parent on a child’s offending (Farrington, 2004). Significant support for this explanation can be found in prior research. For instance, in the PYS it was suggested that arrested fathers often had delinquent sons because they tended to get young women pregnant, lived in poor neighborhoods and used child-rearing techniques inadequate in developing a strong conscience in their children (Farrington et al., 2001). Likewise, the CSDD suggested that “poor parental supervision was one link in the causal chain between criminal father’s and delinquent sons” (West & Farington, 1977, p. 117). McCord (1991) also found that sons of criminals were no more likely to become criminal than were sons of non-criminals, unless there was parental conflict and at least one aggressive parent. Similarly, Gorman-Smith et al. (1998) discovered that serious chronic offenders were more likely than members of other groups to have families characterized by deviant or criminal behavior, as well as aggressive and/or antisocial beliefs. Furthermore, Sampson and Laub (1993) found that after controlling for environmental family
factors such as poor supervision, harsh or erratic discipline, parental rejection, low attachment, and large family size, maternal and paternal deviance did not predict a boy’s delinquency.

A fifth explanation to the intergenerational transmission of offending suggests that genetic mechanisms may mediate the effect of a criminal parent on a child’s offending. In agreement with this explanation, twin studies have demonstrated that identical twins are more concordant in their offending than are fraternal twins (Christiansen, 1977; Raine, 1993); which suggests that genetic factors influence criminal behaviors. It has been argued, however, that the greater behavioral similarity found among identical twins could reflect their greater environmental similarity (Farrington, 2004); yet, several studies have discounted this assertion. Also, adoption studies demonstrate agreement with a genetic mechanisms explanation, because they consistently show that the offending of adopted children is significantly related to the offending of their biological parents (Mednick et al., 1984; Raine, 1993). It has been argued that Mednick et al. (1984) and other comparable adoption studies are unable to address environmental influences that could also explain similarity in behavior (Gottfredson & Hirschi, 1990). Yet, a compelling study by Grove et al. (1990) addresses this particular criticism by comparing the concordance rates of identical twins reared together and identical twins reared apart. Grove et al. (1990) found that heritability was 41 percent for childhood conduct disorder and 29 percent for adult antisocial personality disorder, rates similar to other twin studies. This design shows that genetic factors are at least partially responsible for the intergenerational transmission of offending. Today, biosocial studies have focused on the question of how genetic propensities interact with the environment to produce criminal and offending behavior.

Lastly, official bias against known criminal families could also help to explain why offending tends to be concentrated in particular families (Farrington, 2004). This explanation
suggests that criminal parents tend to have delinquent children because police and court officials are biased against criminal families. Boys with convicted fathers, at all levels of self-reported delinquency in the CSDD, were more likely to be convicted themselves than boys with un-convicted fathers (West & Farrington, 1977). Robins et al. (1975) found that parental arrest histories were potent predictors of their children’s delinquency, explaining 50 percent of the variance in both boy’s and girl’s delinquency. Similarly, Osborn and West (1979) found that the mere existence of a parental record, regardless of how dated the record was or minor the charges were, was a major determinant of the probability of a son’s delinquency. These findings suggest that some labeling process may have been at work. However, other explanations for the link between criminal fathers and delinquent sons in the CSDD exist. For example, boys with criminal fathers had higher self-reported delinquency scores and higher teacher and peer ratings of bad behavior as well (West & Farrington, 1977). Furthermore, the results of other studies provide stronger support for explanations of intergenerational continuity in offending wherein exposure to a criminal parent is more important than official labeling or purely genetic factors (Bijleveld & Wijkman, 2009). For example, Bijleveld and Wijkman (2009) found that children of parents who had been convicted exclusively before their birth had no increased risk of delinquency. Only children of parents who were convicted subsequent to their birth were at an increased risk of being delinquent themselves (Bijleveld & Wijkman, 2009). Therefore, it is difficult to determine which of the proposed explanations is most essential in explaining why offending tends to be concentrated in particular families.

**The Current Study Findings and Prior Literature**

Although the findings of the current study are unable to provide conclusive support for any of these explanations with regard to incarcerated families at the jail, it is likely that they are
all operating on some level to explain the concentration of offending in sample families. One of
the many interesting findings of the present study is that high-risk families at the jail contained
significantly more dependents in comparison to the other family risk categories. Such findings
suggest that high-risk criminal families tend to be larger in size than low or medium risk
families. Prior research has demonstrated that large family size is a fairly strong and highly
replicable predictor of delinquency (Farrington, 2004). In the CSDD, having four or more
siblings by the age of ten doubled a boy’s risk of being convicted as a juvenile (West &
Farrington, 1973). Large family size predicted self-reported delinquency as accurately as
convictions in the CSDD (Farrington, 1992). In fact, it was the most important independent
predictor of convictions up to age 32 in a logistical regression analysis. Furthermore, fifty-eight
percent of boys from large families in the CSDD had been convicted at age 32 (Farrington,
1993). Similarly, Sampson and Laub (1993) found in their reanalysis of the Glueck data that
family size was the only background factor\(^{18}\) to retain a consistent significant effect on
delinquency when family dimensions of discipline, supervision and attachment were controlled
for.

There are several potential explanations as to why large family size tends to increase a
child’s risk of delinquency. In general, the amount of parental attention that can be given to a
child decreases as the number of children in a family increases (Farrington, 2004). Moreover, as
the number of children in a family increases the household tends to become overcrowded,
leading to increased frustration, irritation and conflict within the home (Farrington, 2004). This
hypothesis is supported by the CSDD, which demonstrated that large family size did not predict
delinquency for boys living in less crowded homes (West & Farrington, 1973). Specifically,

\(^{18}\) Background factors included: residential mobility, family size, crowding, family disruption, mother’s
employment, family SES, foreign-born, father’s deviance and mother’s deviance.
large family size did not predict delinquency for boys living in homes with two or more rooms than there were children in the household (West & Farrington, 1973). This finding indicates that overcrowded households may be the principal link between large family size and increased risk of delinquency. However, other interesting theories have been proposed such as large families contain more later-born children, which tend to be more delinquent (Farrington, 2004). Also, the analysis of a self-reported delinquency survey in Seattle concluded that the most plausible intervening causal mechanism was exposure to delinquent siblings (Farrington, 2004).

Another compelling finding of the current study is that high-risk families incarcerated at the jail were overwhelmingly non-white. This finding is consistent with the fact that imprisonment is a far more common experience among minorities (Clear, 2007). According to Clear (2007), prison populations have grown mostly due to the incarceration of ever-increasing numbers of young minority men from impoverished neighborhoods. Black men are seven times more likely to go to prison than White men. In the last 25 years, Black high-school dropouts have been almost five times more likely to be incarcerated than White high-school dropouts, and this difference in incarceration rate continues to grow. If current incarceration rates remain stable, nearly one-third of all Black males born annually will go to prison at least once in their lifetime (Clear, 2007). Predominantly, disparate drug laws have been cited as the main reason for this differential rate of incarceration. Nevertheless, the concentration of imprisonment among young Black men from urban areas is so extreme today that it is assumed such men have a criminal record, which fosters resentment (Clear, 2007). The forces of economic disparity have further divided the geography of urban areas creating a racially segregated residential pattern (Clear, 2007). In 1990, at the national level, 25 percent of poor Blacks lived in concentrated poverty neighborhoods, compared to only 3 percent of Whites (Sampson, 2004).
According to the results of one study, Blacks do not live in ecological equality to Whites when it comes to economics and family organization in any of the more than 100,000 cities in the United States (Sampson & Wilson, 1995).\(^{19}\) These drastically high levels of incarceration among residents of disadvantaged urban communities exacerbate an already intolerable level of racial inequality (Clear, 2007). The concentration of imprisonment among young men from impoverished urban areas has grown to such a height that it is now considered to be a core life experience (Clear, 2007). It is possible that the high rate of imprisonment among poor urban Black males is due to elevated levels of intergenerational offending among minority families, compared to White families. Future research should explore possible variations that may exist in the levels of familial offending across various racial and ethnic groups.

In terms of the age of family members at first admission, the present study found that individuals in high- and medium-risk families were initially admitted to the jail somewhat earlier than individuals from low-risk families. The Federal Bureau of Prisons (2012) specifies that the average inmate in the United States is 39 years old, and Clear (2007) indicates that young men enter prison at an average age of 29 and are released for the first time at an average age of 32. Consistent with this the current study discovered that persons in high- and medium-risk families were first admitted to the jail slightly earlier than the average at about 28.5 years of age. Conversely, low-risk family members were initially admitted to the jail at about 30 years of age, which is slightly later than the average.

On the other hand, the current study found no statistically significant variation in gender across family risk levels. All family risk levels were over 75 percent male. This is consistent

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\(^{19}\) Sampson and Wilson (1995) searched for cities where the proportion of blacks living in poverty was equal to or less than whites, and where the proportion of black families headed by a single parent was equal to or less than whites.
with the fact that males have been incarcerated at much higher rates than females throughout history. Women have always been radically underrepresented in prison populations in the United States (Johnson, Dobrzanska & Palla, 2005). Although drug laws have contributed to the increase in the number of prison-bound men and women, men are still incarcerated much more frequently than women (Clear, 2007). Thus, a gap in the literature regarding the patterns of offending in females has ensued. Much of the research regarding the intergenerational transmission of offending focuses on males, but the explanations for the intergenerational patterns of offending in males may differ substantially from explanations of intergenerational patterns of offending in females. Even with the accelerated growth in incarceration rates for women in America they currently represent less than seven percent of the overall prison population in the United States (Johnson et al., 2005). The current subsample was 75 percent male and 20 percent female.

The results of the present study also indicate that high-risk families at the jail contain predominately single persons, as opposed to married, separated, divorced or widowed persons. This is consistent with the research findings of Sampson and Laub (1993) that looked at a sample of 188 ever-married men in their reanalysis of the Gluecks data. Specifically, they discovered that men with close ties to their spouses at ages 25-32 had significantly lower levels of crime than men with inharmonious relationships. They concluded that marital attachment is an important factor in explaining later adult involvement in crime, independent of prior levels of crime (Sampson & Laub, 1993). This finding aligns with their theory of age-graded informal social control, which posits among other things that informal social bonds in adulthood to family and employment explain changes in criminality over the life course regardless of early childhood tendencies.
One final noteworthy finding of the present study concerns religious affiliation at first booking across the family risk categories. Proponents of Hirschi’s (1969) social control theory posit that persons conform to societal norms because they form attachments to others, develop goal aspirations, become involved in conventional activities and acquire a respect for the law. Under this assumption an individual who reports a religious affiliation upon initial admission to prison would arguably be less likely to commit crime and persons who claim no religious affiliation would arguably be more likely to be further involved in criminal activities. The current study found no significant variation across risk categories with regard to religious affiliation. In fact, high-risk families contained slightly more individuals who reported a religious affiliation than low-risk families (92 and 90 percent, respectively). However, this finding could have been affected by the small number of respondents who reported no religious affiliation. A better indicator would have been to ask offenders their level of religiosity (e.g., how often did you attend religious services) because reporting an affiliation with a religious group is by no means equal to active participation therein.

**Limitations**

There are several limitations to the current study that should be addressed. First, the use of official data has some shortcomings. The data was collected for agency purposes and therefore do not necessarily contain the accuracy or operationalization desired for research purposes. Also, since the official data were collected over a twenty year period there may have been changes in the recordkeeping procedures. Second, if the definition of a particular code provided by the jail was unknown the data was classified as “other”. Therefore, trends in the data across risk categories may have been weakened.
Third, due to time constraints only about half of all cases in the six month time period were coded. This limits the generalizability of the study and may have biased some of the results due to the small size of the subsample used for analysis. Fourth, the definition of “high-risk”, “medium-risk”, and “low-risk” is somewhat problematic. Specifically, the number of total times a family was admitted to the jail was used as the measure of risk because the data did not provide the total number of family members who had reached the age of majority for each known family. Therefore, the percentage of family members over the age of 18 admitted to the jail was impossible to establish and risk is calculated based on the number of family members in the system (not the total number of family members).

**Policy Implications**

The identification of high-risk families is important for various reasons. First, the social costs to the victims, the victim’s family, the offender and the offender’s family is of concern, particularly in light of the frequency with which crime occurs in the United States today. Second, citizens residing in socially and economically marginalized communities are disproportionately affected by incarceration (Clear, 2007). The individual effects of having been incarcerated are well-documented and include, but are not limited to: difficulties finding and maintaining employment, decreases in earning potential, decreases in the likelihood of marriage, and a greater likelihood of suffering from a variety of medical and psychological problems (Clear, 2007). This is significant ecologically as well, because the ubiquity of prison touches nearly everyone in impoverished neighborhoods (Clear, 2007). Many mothers are raising children whose father’s have a prison record in socially and economically marginalized communities, which alone puts these children at elevated risk. In this way, the cycle of incarceration perpetuates itself (Clear, 2007). Third, from an economic standpoint, it is costly
for the county to process multiple family members through the system (often numerous times each). According to the Oregon Department of Corrections, the cost for incarcerating just five of the twenty-eight convicted members of the Bogle family is nearly three million dollars (trial expenses, time spent on probation or parole and costs if rearrested not withstanding) (Butterfield, 2002). Thus, the social and economic costs associated with crime are potentially exacerbated by the intergenerational continuity in offending. The current study found that the high-risk subsample families alone were responsible for 60 percent of all sample jail admissions. Effective early intervention programming could potentially result in substantial savings to the county. Specifically, one assessment found that taxpayers could potentially save a total of $976,217.81 in crime-related expenses, if just one child is not part of the criminal justice system from age 10 through 25 (Reinhardt, 2007). Prevention and intervention programs could target criminal parents, possibly before they are parents (e.g. in schools), and should focus on child and family risk factors (e.g. disrupted families, teenage parenting, and grossly disadvantaged neighborhoods) that potentially influence the intergenerational transmission of offending between criminal parents and delinquent youth. Currently, some of the most promising programs include parent education in home visits, a combination of parent management training and child skills training, and pre-school intellectual enrichment programs with home visits (Farrington & Welsh, 1999). For example, Functional Family Therapy (FFT) is an intervention/prevention program primarily used with adolescents that engages the family as a whole in an effort to increase communication and mutual problem solving among all family members (Loeber & Farrington, 1998). Recidivism rates for at risk youth ages 11 to 18 have been reduced 25 to 60 percent following FFT (Reinhardt, 2007). Another similar program, All Children Excel (ACE) targets high-risk children under ten and their families (Reinhardt, 2007).
A study regarding the effectiveness of ACE found a re-offense rate of 35 percent for ACE children versus 57 percent for the control group (Reinhardt, 2007). Also, 86 percent of ACE children had not been charged with another offense 4.5 years after the completion of the program (Reinhardt, 2007). Likewise, Farrington and Welsh (2003) performed a meta-analysis of the effectiveness of family-based crime prevention programs and found that overall the 40 studies that met their criteria had a positive effect on child behavior problems, including reducing antisocial behavior and delinquent involvement. Additionally, the effects persisted in long-term evaluation studies.

**Conclusions**

The present study indicates that a relatively small number of high-risk families may be responsible for a large volume of jail admissions. Specifically, high-risk incarcerated subsample families in the current study were responsible for 60 percent of all sample jail admissions. Also, the current research specified several possible characteristics of high-risk (e.g. criminal) families. In particular, high-risk families incarcerated at the jail contained individuals who were admitted five or more times and were slightly younger than individuals in low-risk families upon initial admission. Moreover, the majority of high-risk families contained non-White males, predominately single (versus married, separated, divorced, or widowed), and accountable for two or more dependents. While the current study does not explain the progression of intergenerational patterns of offending, it does identify and describe low-risk, medium-risk and high-risk families at a county jail in Pennsylvania. Identification of high-risk families affords this particular county in Pennsylvania the opportunity to assist families in need of early intervention programming in efforts to avoid continued interaction with the corrections system.
Helping high-risk families avoid potentially frequent episodes of incarceration could translate into a significant savings for this county.
References


Date: January 10, 2012

From: Beth A. McKee, Compliance Coordinator

To: Danielle L. Boisvert

Subject: Results of Review of Continuing Progress Report - Full (IRB #32777) Secondary Data Approval Expiration Date: January 9, 2013
"High Risk Families: A Cost/Benefit Analysis of County Incarceration and Treatment"

The Continuing Progress Report for your study was reviewed and approved by the Institutional Review Board (IRB). By accepting this decision, you agree to obtain prior approval from the IRB for any changes to your study. Unanticipated participant events that are encountered during the conduct of this research must be reported in a timely fashion.

If your study will extend beyond the above noted approval expiration date, the principal investigator must submit a completed Continuing Progress Report to the Office for Research Protections (ORP) to request renewed approval for this research.

On behalf of the IRB and the University, thank you for your efforts to conduct research in compliance with the federal regulations that have been established for the protection of human participants.

Please Note: The ORP encourages you to subscribe to the ORP listserv for protocol and research-related information. Send a blank email to: L-ORP-Research-L-subscribe-request@lists.psu.edu

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cc: