

## ABSTRACT

### CLASSIFYING VIOLENT OFFENDERS AND GANG MEMBERS: A CONSIDERATION OF CHILDHOOD VARIABLES AND FUTURE TIME PERSPECTIVE

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Research suggests there are various types of violent offenders, but little research has explored how factors linked to violence perpetration, such as childhood variables and future time perspective, may distinguish between offenders. These factors have also been linked to gang membership, but again, little research has explored how they distinguish between gang members and non-gang members. The current study investigated how delinquency, academic attainment, parents' criminal histories, relationship with parents, and future time perspective may differentiate between the different subtypes of violent offenders as well as differentiate gang members from non-gang members. This study employed archival data from a sample of 200 men sentenced to a term of probation. Multiple logistic regression was used to examine the relationships between the variables of interest and offender subtype (family only, non-family only, generally violent). Multiple logistic regression was also used to examine the relationship between the predictor variables and gang membership. Results suggested delinquency during childhood played a role in distinguishing gang members from non-gang members. There were no other significant associations between childhood predictor variables and perpetrator subtype or gang membership. Findings underscore the importance of developing interventions for gang involvement that focus on preventing criminal activity at an early age (i.e., delinquent behavior). Results also emphasize the need for future research to explore other variables that may better

predict violence perpetration and gang involvement, such as substance use and problem-solving abilities.

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CLASSIFYING VIOLENT OFFENDERS AND GANG MEMBERS: A  
CONSIDERATION OF CHILDHOOD VARIABLES  
AND FUTURE TIME PERSPECTIVE

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## CHAPTER 1

### STATEMENT OF THE PROBLEM

In 2011, 6.98 million American men and women were involved in the adult correctional system (U.S. Department of Justice, 2012). That means 1 in 34 adults in the United States were incarcerated in a jail or prison, on parole, or on probation, with approximately 1 in every 50 adults being supervised through either probation or parole (U.S. Department of Justice, 2012).

Violent crime, which may be directed towards either family members or non-family members, constitutes a substantial portion of the offenses resulting in involvement in the criminal justice system. According to the U.S. Department of Justice (2010), approximately 23% of all crimes perpetrated in 2008 were violent crimes. Of that 23%, approximately 6.4% of violent crimes were completed violence, 16.4% were attempted/threatened violence, approximately 2.5% involved rape/sexual assault, 8% were classified as robbery, and just under 58% were simple assaults. The remaining 8% were not accounted for.

A subtype of violent crime, family-related violence, is a substantial contributor to individuals becoming involved in the criminal justice system. According to the U.S. Department of Justice (2006), family violence accounted for 33% of violent crimes documented by the police, with about half of those crimes occurring between spouses. Additionally, 4% of all individuals in the United States who were prosecuted for violent crimes were prosecuted for domestic violence, with 90% of those individuals being convicted.

In 1997, there were approximately 500,000 men and women in state prisons for violent crime, and 15% of those involved crimes against a family member. It has been estimated that, in the United States, between \$5.8 billion (National Center for Injury Prevention and Control, 2003) and \$12.6 billion (World Health Organization, 2011) are spent annually to cover physical healthcare, mental healthcare, and loss of workplace productivity associated with domestic violence.

Gang violence also contributes substantially to violent crime in the United States. According to the National Gang Intelligence Center (2011), gangs are responsible for about 48% of all violent crime in the United States. The U.S. Department of Justice estimates that, in the United States, there are approximately 1.4 million active gang members in street gangs, outlaw motor cycle gangs (OMGs), and prison gangs. This figure represents a 40% rise in membership since 2009, suggesting that, if the trend continues, gang membership and gang violence could become increasingly problematic in years to come (National Gang Intelligence Center, 2011).

Taking into account academic performance, delinquency, parents' criminal histories, one's relationship with his parents, and future time perspective (FTP; i.e., the length of one's focus on the future), the first aim of the current study was to identify the variables that may differentiate violent offenders (i.e., family only, non-family only, generally violent). Identifying factors that distinguish types of violence perpetration is important in clarifying mechanisms that contribute to violence. Thus, if underlying contributors to aggression are better understood, specific interventions can be developed to preempt violent offending.

A second aim of the study was to examine the relationships between the aforementioned variables (i.e., academic performance, delinquency, parents' criminal histories, one's relationship

with his parents, FTP) and gang membership, a specific context in which violence is commonplace. Lastly, the relationship between perpetrator subtype (i.e., family only, non-family only, generally violent) and risk of re-offending, as determined by law enforcement documentation, was examined. More specifically, individuals' perpetrator classifications were studied to determine their value in predicting risk of re-offending, as measured by a comprehensive, quantitative measure of recidivism risk, which includes consideration of offender attributes, including education, employment, social support, substance use, and mental health.

### Violent Crime

According to the Bureau of Justice Statistics (2014a), violent crime is comprised of four types of illegal activities: (1) murder, (2) rape/sexual assault, (3) robbery, and (4) assault. Murder occurs when one individual unlawfully and intentionally ends another individual's life. Rape/sexual assault include a number of circumstances. The Bureau of Justice Statistics (2014c) explains that rape/sexual assault occur when some type of sexual contact occurs without the overt consent of one party. An individual may be forced to engage in sexual contact through either psychological coercion or physical force, but the use of force is not required for something to be considered sexual assault/rape (Bureau of Justice Statistics, 2014c). For instance, if an individual is intoxicated, underage, asleep, developmentally disabled, or otherwise incapacitated, he/she cannot give consent, thus sexual contact would statutorily constitute rape/sexual assault (Bureau of Justice Statistics, 2014c).

The third type of violent crime, as outlined by the Bureau of Justice Statistics (2013) is robbery. Robbery involves taking, or attempting to take, something belonging to someone else,

without permission. Frequently, robbery involves the use of force and/or psychological intimidation (Bureau of Justice Statistics, 2013).

Finally, assault is defined as someone physically attacking or threatening to attack another individual (Bureau of Justice Statistics, 2014b). Simply putting someone in fear of a physical assault constitutes assault. For instance, if someone approaches another individual with a gun and tells him that he is going to shoot, that would constitute assault—even if he does not actually fire the weapon. As long as the individual has the immediate physical capability to act upon his threat, the event would be considered an assault. That is, physical force is not required for an event to be considered assault (Assault, 2014).

### Family Violence

Intra-familial violence comprises a significant proportion of violent crime documented by the police each year in the United States (Durose et al., 2005). Family violence occurs when an individual intentionally harms a member of his/her family. That family member may be a spouse, parent, child, former intimate partner, step-parent, step-child, or extended family member.

Family violence has always been viewed as distinct from other forms of interpersonal violence (Gelles, 1974, 1987; Hepburn, 1973; Laslett, 1973; Lystad, 1986; Straus, 1973). Some researchers believe family violence is unique because it is highly dependent upon contextual factors (e.g., Berkowitz, 1962). Gelles and Straus (1979) propose family violence is distinct because of a wide variety of factors, including time spent together, likelihood of engaging in activities prone to conflict, intensity of conflicts, feeling entitled to influence others' behavior,

the belief that family conflicts should not be discussed outside the home, and relatively high levels of stress within familial relationships. Taken together, these characteristics proposed by Gelles and Straus (1979) increase the likelihood of experiencing conflict and subsequent violence between family members. If family violence is, in fact, distinct from other forms of interpersonal violence, this may mean family violence involves a unique subset of perpetrators. That is, individuals who perpetrate family violence may differ from individuals who perpetrate violence against non-family members, and thus, a unique set of predictors may be able to distinguish family violence perpetration from other types of violent offending.

An abundance of research suggests gang membership is related to an increase in violent behavior (Peterson, Taylor, & Esbensen, 2004; Taylor, Peterson, Esbensen, & Freng, 2007). Although a great deal of research has been conducted examining rates of intrafamilial violence in the general population, little research has investigated the rate of intrafamilial violence among gang members. Only one known study has looked at rates of intrafamilial violence in gang members, and this study focused on dating violence perpetration. Gover, Jennings, and Tewksbury (2009) found over 28% of gang members reported perpetrating physical violence against a partner, whereas approximately 8.7% of participants with no gang affiliations reported physical dating violence perpetration.

The figure proposed by Gover and colleagues (2009) is notably lower than the figures typically proposed for rates of dating violence in the general population (e.g., 37%; White & Koss, 1991), possibly because the sample was relatively young, with the average age of participants being 16 years-old. Also plausible is that other research may not take into account the difference in rates of violent offending between gang members and non-gang members. In

other words, research that includes gang members in estimates of rates of dating violence perpetration may inflate the average. That is, rates of overall dating violence may tend to be lower if gang members were not included, as research has shown they tend to aggress against partners more frequently than non-gang members. It should be noted that, if the rates of perpetration for both groups were combined in the study by Gover and colleagues (2009), the rates of violent offending would be consistent with those found in the literature.

### Gang-Related Violence

In the United States, gangs are a major source of violent crime—both against family members and non-family members. According to the U.S. Department of Justice (n.d.), a gang can be defined as a group of three or more people who identify by adopting a group identity to create intimidation and engage in criminal activity. Additionally, the group seeks to enhance or maintain its power, reputation, and/or resources. The group may also possess some or all of the following characteristics: (1) rules for joining and operating within, (2) holding meetings on a recurring basis, (3) providing protection for its members, (4) seeking to exercise control over a specific location/region, and (5) having an identifiable structure. Gang members may be involved in a number of illegal activities, including vandalism, threats and intimidation, extortion, theft, vehicle theft, burglary, robbery, assault, homicide, kidnapping, human trafficking, alien smuggling, prostitution, and drug trafficking (U.S. Department of Justice, n.d.).

Defining “gang” is one of the many challenges associated with gang-related research. Ball and Curry (1995) explain the lack of a consistent definition makes it difficult to compare research as well as maintain consistent records of gang involvement and gang behavior. As

summarized by Bjerregaard (2002), there is a great deal of disagreement between researchers as to how to define gang membership. Bjerregaard (2002) suggests self-identification may be a central issue in identifying gang members because gang members often being hesitant to self-identify due to fear of repercussions from the gang, such as physical assault or death (Papachristos, 2009). Notwithstanding this reluctance of gang members to self-identify, there seems to be a consensus amongst gang researchers that self-identification as a gang member may be the most important aspect of gang membership (Harris, 1988; Zevitz & Takata, 1992). These researchers propose that allowing individuals to classify themselves as gang members when speaking to researchers and/or law enforcement officials helps avoid the issue of confounding the definition of a gang with gang-related behaviors. Bjerregaard (2002) explored the construct validity of gang membership and found individuals who self-identified as gang members were significantly more likely than others to report their gang had the characteristics often associated with traditional street gangs. Additionally, a strong positive relationship between self-identification and criminal behavior was identified. In the present study, gang membership was determined through participants' self-reported gang membership, as had been done in previous research (e.g., Bjerregaard, 2002; Craig, Vitaro, Gagnon, & Tremblay, 2002).

### Subtypes of Violent Offenders

One approach in the area of family violence has been to try and identify typologies of intimate partner violence (IPV). The majority of research looking at classification of violent offenders has been conducted looking at subtypes of perpetrators related to husband-to-wife violence (e.g., Holtzworth-Munroe & Stuart, 1994; Holtzworth-Munroe, Meehan, Herron,



Rehman, & Stuart, 2000) as opposed to general violence perpetrators. Many typologies of IPV perpetrators have been proposed. However, only categories of general violence perpetration are relevant to this thesis, thus, typologies focused exclusively on husband-to-wife violence will not be discussed.

Shields, McCall, and Hanneke (1988) conducted a study looking at men who had been convicted of violent crimes. The authors found three distinct patterns of violence: “family only,” “non-family only,” and “generally violent.” Men falling into the “family only” category were only violent toward family members, including the spouse, prior spouses, children, parents, in-laws, and extended family members. The “non-family only” category consisted of individuals who were only aggressive towards non-family members, and there was no indication these individuals were ever aggressive with family members. Finally, individuals included in the “generally violent” category were aggressive toward both family and non-family members. Ultimately, 24.7% of individuals were classified as “family only,” 28.2% were classified as “non-family only,” and 47.1% were classified as “generally violent.”

In their study exploring different types of violent offenders, Shields and colleagues (1988) discovered that men who perpetrate violence solely against family members typically have more stable relationships and lifestyles (e.g., tend to be middle-class) than men who are generally violent. This is consistent with previous research finding generally violent men tend to have been unsuccessful in school, are typically dissatisfied with their jobs, and are frequently less educated and make less money than their wives (O’Brien, 1971).

Gondolf, Mulvey, and Litz (1990) conducted a similar study and also found those involved only in family violence were often more likely to be employed, more likely to live with

others, and less likely to report alcohol abuse and suicidal ideation than individuals who were only violent against non-family members. The authors also found generally violent individuals typically perpetrated violence more frequently than individuals who “specialized” in only one form of violence.

Research has indicated that the motivation behind aggression may differ between types of offenders. For instance, Shields and colleagues (1990) found men who perpetrated only against family members tended to use violence as a way of dealing with stress and conflict within the family, whereas generally violent individuals’ frequent use of violence across many different situations appeared to reflect underlying beliefs about the acceptability of violence or a lack of skills necessary to deal with conflict non-violently. This pattern may exist because it is more costly for men with stable lifestyles (i.e., family only perpetrators) to use violence than for individuals with less stable lifestyles, a concept known as “stake in conformity” (Toby, 1957).

Essentially, stake in conformity is the notion that individuals who have strong ties to society are at a decreased likelihood of perpetrating violence because they do not want to jeopardize their social standing by risking their reputation, arrest, or legal repercussions. Research has indicated academic attainment is directly tied to stake in conformity, with high levels of academic attainment being associated with a lower likelihood of perpetrating violence—especially against non-family members (Sherman, Smith, Schmidt, & Rogan, 1992; Toby, 1957). In other words, individuals with high academic attainment may be more aware of the future consequences than other offenders and, as a result, may be more likely to be classified as family only offenders. The association between academic attainment and family only offending may be a result of violence perpetrated against family members being easier to conceal

than violence perpetrated against others, and in fact, partners may plan an active role in concealing violence to maintain their own reputation or to protect their partner (Straus, 2007).

The relationship between academic attainment and family only offending coincides with the notion of future time perspective (FTP), which as described later, has been linked to violence perpetration. FTP is considered the degree to which one focuses on the future as well as how far into the future one projects (Wallace, 1956). That is, individuals with a high degree of FTP give their future plans more consideration, and/or think further ahead further, than individuals with a low degree of FTP.

Most research suggests that one's FTP is relatively stable over time (e.g., Jones, Banicky, Pomare, & Lasane, 2004; McInerney & McInerney, 2002). In other words, most researchers view FTP as trait-like as opposed to state-like (Jones et al., 2004; Keough, Zimbardo, & Boyd, 1999; Lewin, 1951, Strathman, Gleicher, Boninger, & Edwards, 1994; Zimbardo & Boyd, 1999). Others have proposed, however, that FTP may change as the result of personal experiences (Zaleski, 2005). Additionally, some researchers propose that FTP may, in fact, vary between contexts (e.g., Öner, 2001). For instance, women tend to be more future-oriented with regard to relationships and families than they are in other areas of life, such as work (Sakalli-Ugurlu, 2003).

It is also believed FTP is influenced by culture (Jones, 1994; McInerney, 2004). For example, in Western cultures, time perspective is emphasized during schooling through encouraging children to plan for future careers and work towards attaining those desired careers (McInerney & McInerney, 2002). Zaleski (2005) posits that FTP may also be affected by historical trends. For instance, the way that adolescents today view their future career options

now may be much different from the way adolescents viewed them a hundred years ago, when they were more likely to take over a family business.

FTP is associated with attention, decision-making, and actions in multiple realms (Strathman & Joireman, 2005). Research has also tied FTP to violent offending, such that individuals with limited FTP may be more prone than individuals with a high degree of FTP to act aggressively (Ferguson, 2006; Price, 2009), possibly because they are less likely to consider the more distal consequences of their actions (Joireman et al., 2003). In the case of family only offenders, these individuals may consider the consequences of violent offending against non-family members (i.e., they exhibit a high degree of FTP) and decide to target only family due to potential ramifications of perpetrating against others (e.g., arrest, publicity, loss of a job; Sherman et al., 1992; Toby, 1957).

FTP may also be influenced by one's circumstances, which could explain the relationship between FTP and one's tendency to associate with violent organizations (i.e., gangs). McCabe and Barnett (2000) found that individuals who are of low income status are typically focused on immediate needs, such as a source of income, whereas individuals who are of higher socioeconomic status tend to focus more on long-term goals, such as romantic relationships and/or family. Research has indicated that individuals who join gangs are most often of low socioeconomic status (Miller, 1958). Accordingly, it is plausible that they may exhibit relatively limited FTP, or be focused more on ways to satisfy immediate needs, such as through the use of violence.

### Offender Classification Based on Risk of Recidivism

Not only have violent offenders been classified based upon their choice of victims, but also on the basis of their risk of recidivism. The use of standardized assessment measures to determine one's risk of recidivism has grown substantially in recent years (Bonta & Cormier, 1999). Individuals who are convicted of perpetrating violent crimes and are incarcerated, on parole, or on probation are frequently classified to help correctional agencies determine an offender's risk of recidivism (Flores, Lowenkamp, Smith, & Latessa, 2006). Classification of offenders based upon risk of recidivism is important not only for predicting recidivism, but also aiding in housing decisions, establishing level of supervision, and determining appropriate intervention strategies (Flores, Lowenkamp, Holsinger, & Latessa, 2006). These classifications systems take into account an array of factors that have been shown to predict re-offending (e.g., employment, interpersonal relationships, finances, substance use). Most often, offenders are classified as "minimum," "low-medium," "high-medium," or "maximum" risk of re-offending (Andrews & Bonta, 2000).

Perpetrator subtype (i.e., family only, non-family only, generally violent) may have implications for one's recidivism risk. In their study of perpetrator characteristics, Gondolf and colleagues (1990) found generally violent men tend to perpetrate violence more frequently than family only or non-family only perpetrators. Although Gondolf and colleagues (1990) explored the ability of perpetrator subtype to predict frequency of violence, they did not evaluate risk of recidivism, specifically. To expand upon past research, this study explored whether the type(s) of violence one perpetrates (i.e., perpetrator subtype) predicts risk of re-offending, as determined by a comprehensive measure of recidivism risk completed by law enforcement.

## Theories of Violence

Because it is a pervasive problem, a large number of theories have been proposed to explain aggression. For the purposes of this study, only the theories directly relevant to the primary hypotheses will be discussed. In addition to the theories described in detail below, there are theories focused on the relationship between genetics and aggression, which could be considered relevant to the current study, which explores the concordance between parents' criminality and children's criminality. Research suggests aggression has a genetic component, likely due to the evolutionary benefits (e.g., being able to protect offspring, intra-sexual competition for a mate; Maynard Smith et al., 1988).

Multiple studies have explored the interplay between genetics, environment, and aggression. For instance, Cloninger, Sigvardsson, Bohman, and von Knorring (1982) conducted a study comparing adulthood aggression in twins who were adopted at birth by family members versus twins adopted at birth by non-family members. The authors found most variability in aggression was explained by genetic predispositions, which has since been corroborated by a plethora of additional research (e.g., Caspi et al., 2002; de Boer, van der Vegt, & Koolhaas, 2003; Guo, Roettger, & Cai, 2008). Cloninger and colleagues (1982) noted that, in addition to genetic factors, postnatal environment explained a small percentage of the variance in aggression.

Similar to Cloninger et al. (1982), Barnes and Jacobs (2013) conducted a study investigating the link between aggression and genetics. The authors found that genetics explain about half of all variance in adult antisocial behavior, with most other variance being explained by non-shared environment. Barnes and Jacobs (2013) also found that individuals with a genetic

predisposition towards violence are most likely to exhibit aggression when living in low SES conditions and/or areas with high rates of violent crime. Based on the information available regarding genetics and aggression, it would be expected that, in the present study, parents' criminal behavior would be significantly positively related to probationers' criminal behavior.

Emerging research has begun to delve further into the link between aggression and genetics through exploring specific genes that may play a role in aggression. For example, the low MAOA activity allele has been shown to predict aggression (Caspi et al., 2002; Alia-Klein et al., 2008) as well as gang membership and weapon use (Beaver, DeLisi, Vaughn, & Barnes, 2010). Although the present study considered the relationship between parents' and children's criminal behavior, information regarding probationers' genetic information, and thus, genetic theories will not be discussed further.

One theory that has been applied to aggression is social learning theory (Bandura, 1971; 1973; 1978). With respect to aggression, this theory posits violence is initially learned in childhood through modeling and reinforcement. Support for this model comes from studies demonstrating that witnessing a model perpetrate violence and be rewarded for that violence (i.e., fighting stops, perpetrator gets what he/she wants) is an important learning mechanism and is directly related to future violence perpetration (Mihalic & Elliott, 1997).

Essentially, the social learning theory lends support to the notion children learn through watching violent models, and they learn violence may be reinforced. Thus, the social learning theory supports the idea that parents' criminal histories and the quality of a man's relationship with his parents could predict subsequent violent behavior through learning about the

acceptability of violence. If a child watches his parents act violently and receive reinforcement for the violence, that child may learn aggression is an acceptable problem-solving strategy.

Social learning theory has also been applied to gang membership and subsequent gang-related violence. According to social learning theory, individuals may become involved in gangs because they are exposed to individuals who are, themselves, gang members and engage in gang-related activities (Walsh & Hemmens, 2008). Walsh and Hemmens (2008) propose that, through this exposure to gang-related activities, individuals learn that the behaviors associated with gang membership are acceptable, and they may learn violence is an appropriate way to deal with conflict.

Multiple studies have examined the role of social learning theory in gang membership and results suggest that gang members learn that violence is an acceptable problem-solving strategy. Results of these studies also indicate individuals often join gangs as a source of protection. Peterson and colleagues (2004) conducted a study of adolescents in six different U.S. cities. The authors found that between 28% and 57% of self-identified gang members reported joining a gang for protection against violence. Essentially, gang members reported seeing others, including family members and peers, join gangs and subsequently be reinforced for doing so by receiving protection and social support. Similarly, Decker and Van Winkle (1996) surveyed gang members from St. Louis and found 86% reported protection was a motivating factor for joining a gang, and many gang members joined after someone they knew did so. Miller (2001) interviewed female gang members and females who were not involved with gangs. The author found the majority female gang members joined to avoid victimization by peers and escape violence perpetrated by family members.



The notion that gang members become involved in gangs to avoid victimization by both peers and family members supports the relationships between one's relationship with his parents and parents' criminal histories. If a child is living with parents who have a violent history, or if that child has a poor relationship with his parents—one that may involve verbal or physical abuse—it seems logical he may become involved in a gang as a way to receive protection from those abusive relationships and learn from other gang members various methods (i.e., aggression) to manage those relationships.

The General Aggression Model (Anderson & Bushman, 2002; Anderson & Carnagey, 2004; Anderson & Huesmann, 2003), or the GAM, is closely tied to social learning theories. Essentially, the GAM takes into account how different inputs mediate the relationship between a stimulus and the ultimate outcome of the situation (e.g., aggressive behavior, constructive behavior; Joireman, Anderson, & Strathman, 2003). Supporters of the GAM posit aggression is dependent upon how an individual interprets environmental cues, his/her expectations, and his/her existing knowledge or beliefs (DeWall, Anderson, & Bushman, 2011). Specifically, the GAM focuses on the person and the specific situation (i.e., an "episode"), which consists of one social interaction (Anderson & Bushman, 2002).

As an example of an "episode," consider a situation in which a man is confronted by his wife about not cleaning up after himself. He has friends at their home when she confronts him. Being confronted is the stimulus, whereas the wife and the man's present situation (i.e., having friends at the house) would be the inputs. He might feel embarrassed and emasculated after his wife addresses his behavior, and consequently, he may verbally or physically lash out at her. His

cognitions and emotions would be considered routes; his appraisal of the situation and his subsequent behavior(s)—whether thoughtful or impulsive—would be the outcomes.

The GAM proposes that aggressive acts can be evaluated using four dimensions: (1) the degree of hostility present; (2) automaticity; (3) the degree to which the ultimate goal of the perpetrator is to attain revenge, and (4) the degree to which the perpetrator considers consequences (Anderson & Bushman, 2002; Anderson & Carnagey, 2004; Anderson & Huesmann, 2003). Proponents of this model argue it provides an optimal conceptualization of violence because aggressive acts typically involve multiple components (i.e., a perpetrator has multiple motivations), and the GAM eliminates the dichotomy (i.e., is aggression only proactive or only reactive?) found in other models of aggression.

One strength of the GAM is its inclusion of multiple factors that contribute to violence perpetration, which coincides with this study's hypothesis that multiple variables may contribute to identification of perpetrator subtype and gang membership. Regarding specific hypotheses, the GAM supports the relationship between parental criminality and one's relationship with his parents. More specifically, the GAM supports the idea that individuals' consideration of the potential outcomes of their violence may be based upon various inputs, such as seeing parents reinforced for aggression or being told by parents violence is acceptable. Likewise, the GAM directly addresses the degree to which one considers the future consequences of his actions, which supports the notion that FTP may predict violence perpetration as well as involvement in organizations that condone violence (i.e., gangs).

Another model, the information processing model, has been proposed to explain general aggression perpetration (Huesmann, 1988). This model centers on the idea that children learn

aggressive scripts, which guide behaviors. Scripts are cognitive schema individuals construct to organize information. Scripts provide individuals with a way of explaining how events typically happen, how they should respond to those events, and what outcomes various behaviors may produce (Hanson, 2007). The more rehearsed a script is (i.e., the more something has been observed), the more accessible that script will be in the future. These scripts eventually become fixed, and the aggressive behavior may persist into adulthood. Individuals may learn these scripts through observation and/or practice engaging in behaviors that are consistent with these scripts. Ultimately, one develops a set of cognitive scripts that emphasize aggressive responses to stimuli, thus resulting in aggressive behavior. For instance, a child who has seen his father repeatedly use violence to resolve a dispute with his mother may view violence as a normative way to resolve conflicts and, consequently, may be likely to implement violence as a problem-solving strategy in his own life. In the information processing model, attention is significant because it determines what information someone chooses to process and act on.

The information processing model lends support to the relationship between delinquency, parents' criminal history, and gang membership. If a child observes parents engaging in violent behavior or the child engages in violent behavior early in life (e.g., is delinquent), the child may develop the propensity to respond to a variety of situations with violence as he grows older due to the development of cognitive scripts that emphasize violence. Subsequently, the child may begin to associate with other individuals who engage in similar behaviors, thus increasing the likelihood he will gravitate towards gang activity.

Dodge (1986) describes a social cognitive model of aggression similar to the information processing model. The social cognitive model of aggression assumes the process of aggression

does not end at the point at which the actor engages in aggressive behavior. Instead, the process continues because the actor must examine the effects of his/her behaviors on the target of the violence in order to determine whether or not the desired consequences are being obtained. If not, future behavior must be adapted.

Dodge suggests individuals come to various situations with unique experiences and capabilities. When confronted with a set of social cues, individuals interpret that information based on their unique predispositions, or thoughts and emotions at the present time. The first step in the process involves social cues being encoded. For instance, consider the example that was discussed previously about a man whose wife confronted him about not cleaning up after himself. If the man interpreted her statement as intended to embarrass or emasculate him, he would be more likely to respond aggressively than if he interpreted her statement as her simply trying to maintain a clean home. Further, he may be inclined to interpret her statement as the former rather than the latter if, in the past, she had made statements aimed at intentionally embarrassing him in front of others.

Dodge (1986) posits that encoding of information must be efficient—that is, organized and logical. After encoding has occurred, the individual must interpret information based on past experiences in order to develop an understanding of the cues. Once meaning has been associated with the cues, the individual must consider potential responses. Dodge proposes aggressive, or deviant, responses may be the result of inadequate skill sets or poor processing of the event. Once a behavior has been decided upon, the individual enacts that behavior.

As an example, consider a child who grew up with an aggressive dog and encounters a dog standing and staring at him on the street. This child may be likely to attribute the dog's

behavior to an aggressive disposition because of his past experiences. If encoding is not organized and logical, he may miss attending to other relevant information, such as the two children standing near the dog and the dog's tail wagging, which would suggest the dog is not aggressive. If he only attends to information supporting his existing thoughts that dogs are aggressive, there is an increased likelihood he will respond as though the dog is dangerous.

The social cognitive model of aggression and the information processing model are similar in that they both focus on an individual's interpretation of a given situation. However, the models outline different methods of interpretation. The information processing model portrays humans as relatively mechanical, or computer-like, in their processing. That is, an individual attends to a stimulus, interprets what is occurring based on past and present information and beliefs, and stores information he deems relevant. Based on those steps, the individual then determines his response to the stimulus. Take, for example, a child who has the internalized belief that it is important to be a good athlete. That child may be more prone to attend to and encode athletic or sports-relevant scripts and engage in physical activity than a child who has not internalized the belief that sports are important.

The social cognitive model, comparatively, focuses on the importance of observing others' behavior; seeing the sequence of events that occurs before, during, and after their behavior; and if the observer desires similar consequences, he may replicate the actor's behaviors in the future. For instance, a child might see his sibling attend sports practice and receive a meal at his favorite restaurant afterwards. In the future, the child may choose to attend sports practice, too, because he expects to receive the same reinforcement as his sibling for that behavior.

The social cognitive model of aggression supports the relationship between childhood experiences—namely, parents’ criminal histories—and violence perpetration. Research suggests criminal behavior—violent or non-violent—may reflect a deviant lifestyle, or a lifestyle that places little importance on acting in socially acceptable ways (Sampson & Lauritsen, 1990; Skol-Katz, Dunham, & Zimmerman, 1997; Wallers, 1990). This means that, even if a child’s parents did not perpetrate violence but engaged in criminal activity, the child may learn through observing his parents that rule-breaking, including violence perpetration, is acceptable.

For example, consider a child who is told at school it is not okay to steal, but both his parents are thieves. Despite being told stealing is wrong, he may perceive stealing and other rule-breaking, including violence, as acceptable, because he watched his parents break the rules and receive reinforcement (i.e., they get new possessions). Thus, he may be at an increased likelihood of engaging in criminal activity, including violence, in the future.

A relationship between FTP and violent offending is also supported by the social cognitive model of aggression, as the model places emphasis on encoding and interpreting situations based upon one’s own experiences and disposition. For instance, if an individual values working towards long-term goals, he will be more likely to consider the consequences of his actions when interpreting a novel situation and determining his course of action. Accordingly, he may be less likely than an individual with a low degree of FTP to engage in general violence perpetration, as he considered the possible consequences.

As an example, consider a teenager who aspires to be a police officer. One day, this teenager gets into an argument with his girlfriend. He recalls hearing his friends discuss shoving their partners to get them to stop arguing, but he also recalls his father hit his mother and later

end up in jail (i.e., his father was not reinforced). Ultimately, the teenager considers aggression as a way to stop the argument, but he also considers that, if he is arrested, this could prevent him from eventually becoming a police officer, and he does not act aggressively towards his girlfriend. In this situation, the teenager exhibited a high degree of FTP and, consequently, was able to avoid engaging in violence that might have had long-term consequences.

Hirschi (1969) proposed the social bond theory, which is a general theory of delinquency focused on social interactions and societal norms. Hirschi posited that, to fully understand delinquency, we must first understand why some people do *not* engage in delinquent behavior. There are four elements that predict whether or not one will engage in delinquent behavior: (1) attachment to significant others, (2) commitment to traditional behaviors, (3) involvement in traditional activities, and (4) beliefs in moral values of society. Hirschi believes individuals who have prosocial attachment to others are less likely to engage in delinquency than individuals who do not exhibit prosocial attachment to others. Likewise, individuals who are committed to and involved in prosocial activities (e.g., academic success, acquisition and maintenance of employment) are at a low likelihood of engaging in delinquency. Finally, belief in society's laws is associated with low levels of delinquency. Essentially, Hirschi proposes strong bonds to society are associated with low levels of delinquency.

Hirschi's theory supports the notion that delinquency, academic achievement, parents' criminal histories, and relationships with parents would predict violence perpetration because these factors indicate commitment to traditional activities and interpersonal attachment. For instance, a poor relationship with parents may suggest a lack of attachment to significant others, which according to Hirschi, is associated with an increased likelihood of criminal activity.

Similarly, poor academic performance, coming from a family that engages in criminal behavior, and engaging in criminal behavior during childhood suggest a lack of involvement in activities typically viewed as moral and prosocial.

The routine activity theory (Cohen & Felson, 1979) is an ecological perspective on criminal behavior and focuses less on societal norms than social bond theory. Routine activity theory proposes crime is relatively unaffected by social causes (e.g., poverty) and, instead, is dependent upon opportunity. That is, the presence of a motivated offender, a target, and the absence of a guardian (e.g., parents, siblings, peers) interact to predict criminal behavior.

The notion that a poor relationship with parents is associated with violent offending is supported by routine activity theory. Individuals who have poor relationships with parents may be lacking supervision and, thus, have more opportunity to engage in criminal behavior and may even engage in criminal activity as recreation because they are bored (Osgood, Wilson, O'Malley, 1996). Osgood and colleagues (1996) posit it is also plausible a poor relationship with parents could be associated with a lack of consequences for criminal behavior because parents may not be enforcing rules. Considering routine activity theory and the potential motivation to engage in crime as recreation, it is plausible that having a poor relationship with parents would predict general violence perpetration, as individuals may develop the propensity to engage in crime—and violence—as a form of thrill-seeking or ways to cope with boredom.

While the routine activity theory is focused on situational variables, the general theory of crime (Gottfredson & Hirschi, 1990) is focused on easily obtaining gratification. This theory postulates crime provides easy and immediate gratification as compared to law-abiding behavior, which may be more difficult to adhere to and not provide instant gratification. Gottfredson and



Hirschi propose individuals who are likely to engage in criminal behavior are also likely to engage in other undesirable behaviors, such as drug use, smoking, risky sexual behavior, and alcohol consumption, to receive immediate gratification. The authors propose “enduring criminality,” or a propensity towards criminal behavior, persists because of low self-control, which increases the odds individuals will be unable to resist easy and immediate gratification. The general theory of crime points to a stable pattern of behavior, which calls into question other theories of criminal behavior, such as the social bond theory, which connect crime and social processes that do not occur until after childhood (e.g., commitment to education, entering the job market).

FTP appears to be a major component of the general theory of crime; if individuals are concerned with receiving easy and instant gratification, they appear to be exhibiting a low level of FTP because they are focused on relatively immediate goals/consequences. Based on the general theory of crime, it seems reasonable to say individuals who exhibit a low degree of self-control may also exhibit a low degree of FTP, as they are focused on the immediate as opposed to the future, and there is some research support for a relationship between low self-control and criminal behavior (Pratt & Cullen, 2000).

In general, the immediate consequences of aggression tend to be reinforcing and may increase the perpetrator’s belief that similar behavior will result in similar outcomes in the future (Mihalic & Elliott, 1997; Riggs & O’Leary, 1989). For instance, a wife may stop “nagging” her husband after he hits her, or a man at a bar may stop challenging another man if he is hit. Furthermore, the perpetrator may feel a sense of power or feel a sense of being in control of the situation (Felson & Messner, 2000). However, the long-term consequences of those behaviors

are often not reinforcing (e.g., the perpetrator is arrested, relationships are ended). Therefore, individuals with a low degree of FTP may be likely to be more generally violent because they are influenced by the immediate rewarding aspects of aggression and not the long-term negative consequences of their aggression.

As with general violence, several theories have been proposed to explain family violence, specifically. Family systems theory (Elbow, 1977; Giles-Sims & Straus, 1983; Steinmetz & Straus, 1974) emphasizes the imbalance in resources, exchange transactions, and status between family members. That is, there are often power imbalances within families, such as between a husband and wife. For instance, one family member may be less educated than other. This power differential may precipitate abuse within the relationship because one individual feels the need to prove his/her intelligence, or one individual may feel because he/she is more educated, he/she has the right to control the other's behavior (Finkelhor, 1981; Pagelow & Pagelow, 1984). Furthermore, a husband may feel his wife is not obedient or does not appreciate what he does for her and feels the need to exert his power, possibly in the form of violence. Likewise, a wife may feel she is not being treated with respect, and she may feel the need to exert her power through the use of violence.

The pro-feminist theory (Dobash & Dobash, 1979; Straus, 1980; Yllö & Bograd, 1988) posits IPV—specifically, the abuse of the wife by the husband—occurs because men are attempting to exert power over women. Dobash and Dobash (1979) explain that, historically, men have exerted power over women. The authors explain a man's domination of his wife is often viewed as a “right,” and this can lead to an acceptance of husband-to-wife violence and a hesitancy of outside individuals to intervene in familial violence. According to the pro-feminist

theory of aggression, domestic violence occurs in the context of a patriarchal society in which men must exert their power over women to maintain control (Ivvy & Todd, 2000).

### Predictors of Violence Perpetration

As discussed above, many models have been put forth to explain why individuals may act aggressively. These models may be applied to multiple types of violence, including family violence, gang violence, and general violence. There has been a great deal of research conducted that supports these models from which the proposed relationships in the current study were derived.

#### Academic Performance

Educational variables have been shown to predict adulthood violence perpetration (Hinshaw, 1992). Fergusson and Lynskey (1998) conducted a prospective study looking at the relationship between behavior problems in childhood and psychosocial outcomes in adulthood. The authors found a significant negative relationship between academic performance and juvenile criminal offenses, including violent offenses, such that adolescents who did less well in school were involved in a higher number of crimes.

This pattern has been noted in children as young as elementary school-aged (Johnson, McGue, & Iacono, 2005; Vitaro, Brendgen, & Tremblay, 1999). For instance, Johnson and colleagues (2005) utilized a sample from the Twin Family Study based in Minnesota to explore the relationship between disruptive behavior and academic performance. Academic performance was assessed using parent and teacher reports of children's performance in school; disruptive

behavior was assessed based upon parents' and teachers' reports of problematic behaviors (e.g., being involved in arguments in class). The authors found that, in general, children who performed well academically were less likely to exhibit disruptive behaviors at home or at school than children who performed poorly in school.

Reinke, Herman, Petras, & Ialongo (2008) conducted a longitudinal study in which they classified children with various patterns of academic and behavior problems. The authors collected data from 678 children and families when the children were entering first grade. Data on early behavior problems (e.g., fights, harming others) were collected as well as data about academic performance, as measured by the Comprehensive Test of Basic Skills. Six years later, data were collected on participants' deviant peer affiliation, suspensions, conduct problems (per teacher reports), and grades. The authors found a distinct group of children who exhibited co-occurring academic and behavior problems. This group was found to experience more long-term negative outcomes, including affiliation with deviant peers and an elevated risk for conduct problems, including violence towards peers.

Academic performance has been shown to predict violence perpetration, and research has suggested that it is also associated with the type of violence one perpetrates. For instance, Gondolf and colleagues (1990) conducted a study looking at characteristics that distinguish individuals who perpetrate violence against family members from individuals who perpetrate only against non-family members. The authors found that stronger academic performance was typically associated with only perpetrating violence against family members, whereas individuals who exhibited poorer academic performance were more likely to perpetrate only against non-family members or to perpetrate against both family and non-family members.

### History of Delinquent Behavior

In addition to academic performance, delinquency during childhood has been shown to predict violence in adulthood (Hinshaw, 1992). According to the U.S. Department of Justice (2014), delinquent behavior occurs when juveniles, or individuals under the age of 18, engage in illegal behavior ranging from minor fights to aggravated assault. For instance, Boyle, O’Leary, Rosenbaum, & Hassett-Walker (2008) conducted a study in which they attempted to discriminate between groups of violent men. The authors found that, among other variables, generally violent men are characterized by a history of delinquent behavior, including aggression. This finding is consistent with other research, which has demonstrated a link between delinquency during childhood and adulthood violence perpetration (Curry, 2000; Hill, Howell, Hawkins, & Battin-Pearson, 1999; Esbensen & Huizinga, 1993; Lahey, Miller, Gordon, & Riley, 1999; Thornberry & Krohn, 2003).

For example, Craig et al. (2002) explored behavior profiles of violent adolescents. The authors assessed violence through the Peer Evaluation Inventory (Pekarik, Prinz, Leibert, Weintraub, & Neale, 1976). In this assessment, students are asked to nominate a classmate who best fits each of 35 items (i.e., “those who always get in trouble,” “those who are too shy”). Delinquency was assessed using the Self-Reported Delinquency Questionnaire (Biron, Caplan, & LeBlanc, 1975). The authors found that delinquency was related to peers’ ratings of behaviors perceived, by them, to be aggressive.

Other research has demonstrated similar relationships between childhood delinquency and externalizing behaviors such as fighting. For instance, Hill and colleagues (1999) conducted a study looking at childhood risk factors for violence. The authors collected data about

neighborhood, family, academic, and peers factors between the ages of 10 and 12. Participants' violence was assessed through interviews between the ages of 13 and 18. Hill and colleagues found that individuals who engaged in delinquent behaviors between the ages of 10 and 12 were more likely to report engaging in violent behaviors between the ages of 13 and 18.

A history of delinquent behavior has been shown to be associated with violent offending, and it has also been demonstrated to be associated with the type of violence one perpetrates. Although no known study has looked at whether delinquency specifically predicts Shields' and colleagues (1990) typologies of violent offenders, research has shown that a high degree of delinquent behavior during childhood tends to predict general violence perpetration in adulthood (Leve & Chamberlain, 2005). Holzworth-Munroe and Stuart (1994) conducted a study exploring the various types of male batterers and differences among them. The authors noted that men who were generally violent typically had a more extensive history of delinquent behavior than men who only perpetrated violence against an intimate partner.

#### Parents' Criminal Histories

Not only have individual characteristics been linked to adult violence perpetration, but so too have family characteristics. One variable that has been linked to violent offending in adulthood is parents' criminal histories. Research has shown that parents' criminal history may predict violent behavior in children. For instance, Murray and Farrington (2005; 2008) found that parental imprisonment predicts delinquent behaviors from childhood up to the age of 32. Similarly, Wildeman (2010) found that paternal incarceration was associated with an increased propensity for physical aggression in boys but not in girls. In fact, research has shown that

parents' imprisonment predicts a variety of problems in children, including depression, hyperactivity, aggression, withdrawal, regression, clinging behavior, sleep problems, eating problems, truancy, and poor academic performance (Boswell & Wedge, 2002; Johnston, 1995; Kampfner, 1995; Sack, Seidler, & Thomas, 1976; Sharp & Marcus-Mendoza, 2001; Skinner & Swartz, 1989; Stanton, 1980).

Parent incarceration is not necessary for children to experience adverse reactions to parents' criminal involvement. For example, research has shown that arrests, alone, are associated with negative outcomes for children. A parents' arrest may contribute to family instability because children are forced to live with various caregivers (Stanton, 1980), possibly resulting in a child being subject to insufficient care (Johnston & Carlin, 1996). Phillips, Erkanli, Keeler, Costello, and Angold (2006) found that parental involvement in the criminal justice system resulted in children being considered an "at risk" group for delinquency and, eventually, becoming involved with the criminal justice system, themselves.

In addition to research showing that parents' criminal histories predict children's aggression later in life, there is also one study suggesting that parents' criminal histories may be associated with the type of violence their children perpetrate. Odgers and colleagues (2007) conducted a study looking at subtypes of offenders and childhood variables that distinguish those subtypes. The authors found that individuals who reported having parents with criminal backgrounds were significantly more likely than other individuals to be classified as generally violent.

### Relationship with Parents

Research looking at predictors of violent offending in adulthood has also found a link between one's relationship with parents and violence perpetration in adulthood. For instance, Lyons-Ruth (1996) conducted a study looking at attachment and aggression problems in children. The author found that poor attachment between a primary caregiver and a child (i.e., disorganized attachment patterns, controlling attachment patterns) predicted a child's aggressive behavior later in life. This finding is consistent with prior research showing that aggressive behavior is more strongly related to disorganized or controlling attachment patterns than it is to other attachment problems (Greenberg, Speltz, & DeKlyen, 1993; Hubbs-Tait et al., 1991; Lyons-Ruth, Alpern, & Repacholi, 1993).

Multiple studies have shown that relationship with parents, more broadly, can predict aggressive behavior. Bowers, Smith, and Binney (1994) conducted a study looking at the association between family relationships and aggression. The authors recruited children between the ages of 8 and 11 from middle schools. Family relationships were assessed using four measures: the Family Relations Test (Bene & Anthony, 1957), the Parenting Style Questionnaire (Bowers et al., 1993), the Family Systems Test (Gehring & Wyler, 1986), and the Separation Anxiety Test (Klagsbrun & Bowlby, 1976). Aggression was assessed by teaching participants about bullying behavior (e.g., pushing others, hurting others) and then asking students to identify which of their peers they viewed as bullies. Bullying (i.e., aggression) was then turned into a continuous variable, with the percentage of classmates who labeled the student as a bully representing the continuous variable for bullying. Results suggested that children who were violent towards peers in school were less likely to have a father at home than were children who



were either victimized at school or were not involved in any violence. Likewise, children who acted aggressively towards peers were less likely to be monitored by mothers than were other children.

Additional research has shown that authoritarian parenting techniques, such as physical discipline, in addition to hostile/rejecting parenting predict aggressive behavior, possibly through the development of emotional dysregulation and the formulation of a poor self-image (Christine-Mizell, 2003; Curtner-Smith et al., 2006; Espelage, Holt, & Henkel, 2003; Lee, 2010). In fact, research has supported the notion that attachment plays an important role in aggressive behavior that persists into adulthood. For instance, Dutton, Saunders, Starzomski, & Bartholomew (1994) conducted a study looking at the relationship between attachment and spousal abuse. The authors recruited men convicted of domestic violence against a female partner, who were referred to treatment. The authors administered measures of attachment, as well as anger, jealousy, and trauma-related symptoms, which have been shown to significantly positively predict spousal abuse. Results indicated a significant negative relationship between secure attachment and the aforementioned predictors of spousal abuse, such that men who exhibited signs of secure attachment were less likely to endorse feeling angry, feeling jealous, or experiencing symptoms of trauma, while men who exhibited less healthy forms of attachment, such as fearful attachment, were more likely to experience anger, jealousy, and symptoms of trauma. As will be described below, many of the foregoing predictors have also been linked to gang membership.

There is empirical evidence for an association between quality of relationship with parents and the type of violence perpetrated. Gorman-Smith, Tolan, Sheidow, and Henry (2001)

conducted a longitudinal study looking at the role of familial characteristics in aggressive behavior. The authors found that poor parenting practices (e.g., authoritarian parenting techniques, harsh discipline) were associated with children being classified as generally violent, whereas specific types of violence perpetration (i.e., family only, non-family only) were associated with more effective parenting practices (e.g., authoritative parenting techniques, fair punishment). Likewise, the authors found that family cohesion (i.e., emotional support, effective communication, shared beliefs, organization) differentiated perpetrator subtype, such that individuals whose families were identified as more cohesive were more likely to perpetrate either family only or non-family only violence, whereas individuals whose families were identified as being less cohesive were more likely to be generally violent.

### Predictors of Gang Membership

#### Academic Performance

As with violent offending, research has linked both individual characteristics and family characteristics to gang membership. For instance, there is research supporting a strong relationship between poor academic performance and gang membership, such that poorer academic performance is related to an increased likelihood of gang membership (Craig et al., 2002; Hill et al., 1999). Similarly, a low degree of commitment to school (Thornberry & Krohn, 2003), and low academic aspirations (Bjerregaard & Smith, 1993; Hill et al., 1999; Thornberry & Krohn, 2003) are associated with gang membership.

Esbensen, Huizinga, and Weiher (1993) conducted a prospective study exploring predictors of delinquent behavior. The authors recruited approximately 1,500 male and female

children between the ages of 7 and 15, and their families, from low-income neighborhoods. The researchers followed the families for two years. At the time of recruitment, parenting and parental attachment were assessed based upon children's reports during an interview. Perceptions of children were obtained following parent, peer, and self-reports about children's behaviors. Results indicated that negative labeling at an early age (i.e., being identified as a "trouble maker" or a poor student by teachers) predicted gang membership at a future time.

Similarly, Hill and colleagues (1999) found that being identified as having a learning disability predicted gang membership. In their longitudinal study using data from the Seattle Social Development Project, the authors examined how risk factors between the ages of 10 and 12 predicted gang involvement between the ages of 13 and 18. Data were obtained annually through structured interviews from multiple sources, including parents, teachers, and participants' self-report. Data were also obtained using court and school records. Results of the study revealed a significant relationship between academic ability and gang membership, such that individuals who demonstrated less success in school were more likely to join a gang than those participants who displayed the ability to perform well academically.

### History of Delinquent Behavior

Childhood delinquency has been shown to predict gang membership, such that individuals who engage in childhood delinquency are at an increased risk for joining a gang (Battin, Hill, Abbott, Catalano, & Hawkins, 1998). Hill and colleagues (1999) conducted a study that explored risk factors for gang involvement using data from the Seattle Social Development Project. The authors measured multiple variables, including family, academic, peer, and

individual variables, including delinquency (e.g., violence, weapon use), which was assessed through interviews. Gang membership was based on participants' self-reported gang membership during interviews. Hill and colleagues found that participants who engaged in delinquent behavior were significantly more likely to report being in a gang than individuals not engaging in delinquent behavior

Likewise, Hill, Lui, and Hawkins (2001) employed data from the Seattle Social Development Project, a longitudinal study, to investigate precursors of gang membership. Results suggested that youth who engaged in aggression, oppositional behavior, and inattentive/hyperactive behaviors (i.e., displayed delinquent behaviors) were significantly more likely to join a gang and remain in the gang for at least one year than individuals who did not exhibit those behaviors.

### Parents' Criminal Histories

Case and Katz (1991) conducted a study exploring the effects of family and neighborhoods on disadvantaged youth. The authors used data collected during the 1989 NBER Boston Youth Survey. In the survey, families from three low-income areas of Boston were randomly selected to be called and interviewed. Parents' criminal backgrounds and youth's gang involvement were all based on self-report of the parents. Results suggested that parents' criminal behavior significantly predicted youth's gang involvement and subsequent criminal activity. That is, children who had parents with criminal backgrounds were significantly more likely than children whose parents did not have criminal backgrounds to be affiliated with a gang.

Similarly, Fleisher and Krienert (2004) conducted a study looking at how family factors may predict gang membership in teenagers. The authors used data from a multi-year field study in which gang membership was assessed using participants' self-report, and parental criminal history was assessed using children's reports of parents' arrests. The authors found that parents' criminal history significantly predicted teenagers' decisions to join a gang.

### Relationship with Parents

Multiple studies have indicated that there is a strong negative relationship between poor relationships with parents and gang membership (Eitle, Grunkel, & Van Grundy, 2004; Thornberry & Krohn, 2003). That is, for males, the poorer one's relationship to his parents, the greater the likelihood of gang involvement. Research has shown that poor attachment to parents, including disorganized and avoidant attachment patterns, predicts gang membership (Eitle et al., 2004; Thornberry & Krohn, 2003).

Likewise, multiple studies have indicated that low parental supervision predicts gang membership (Hill et al., 1999; Lahey, Gordon, Loeber, Stouthamer-Loeber, & Farrington, 1999; Thornberry & Krohn, 2003). For example, Lahey et al. (1999) conducted a prospective study exploring predictors of gang involvement. Data were collected based upon interviews that were conducted with each participant asking about gang involvement. Interviews were also conducted with parents, teachers, and the participants to assess antisocial behaviors. The authors recruited boys who were in 7<sup>th</sup> grade and followed them for six years. Results suggested that a lack of parental supervision at baseline predicted future entry into a gang.

## Future Time Perspective

As previously discussed, FTP refers to the degree to which one focuses on the future (Wallace, 1956). While FTP has been investigated for its relationship with violence perpetration in adulthood, the impact of FTP has also been studied as a variable present in children and adolescents. Research has suggested that delinquent youth tend to have more limited FTP than non-delinquent youth (Barndt & Johnson, 1955; Davids, Kidder, & Reich, 1962; Stein, Sarbin, & Kulik, 1968). For instance, Stein and colleagues (1968) investigated the relationship between delinquency and FTP. The authors compared youth who had a history of delinquent behavior to a group of youth with no criminal record. FTP was assessed based upon participants' responses as to the likelihood that a list of 36 various events would happen to them in the future. Results showed a significant relationship between delinquency and foreshortened FTP. That is, youth with a history of delinquent behavior were significantly more likely than youth with no history of delinquent behavior to indicate that they thought negative events would occur in the future, and they were more likely to indicate that they had not thought about future events.

Likewise, Trommsdorff and Lamm (1980) conducted a study looking at institutionalization and future orientation in both delinquents and non-delinquents. The authors compared three groups: inmates in a juvenile prison (i.e., institutionalized delinquents), delinquents on probation (i.e., non-institutionalized delinquents), and a group of adolescents who had never been in trouble with the law. Participants were given a list of potential future events—both positive and negative—and they were asked to rank the probability that each would occur in their lives. The authors found that, compared to the non-delinquent participants, delinquent

youth had a relatively short FTP, and they anticipated negative future events more frequently than positive future events.

Similar to Trommsdorff and Lamm (1980), other studies have established a relationship between the valence of one's FTP and behavioral outcomes. Borowsky and colleagues (2009) found that adolescents who anticipated an early death were more likely to engage in risky behaviors, such as substance use, suicide attempts, aggression, and risky sexual behaviors. Consequently, adolescents who anticipated an early death were, in fact, more likely to suffer various negative outcomes, including HIV/AIDS, arrests, and death. Likewise, McDade, Chyu, Duncan, Hoyt, Doane, and Adam (2011) conducted a longitudinal study exploring predictors of chronic disease. The authors found that adolescents who had more positive FTP (e.g., anticipated attending college) were more likely to engage in healthy behaviors, such as eating well, exercising, and refraining from substance use, at a five-year follow-up than adolescents who did not view their future positively.

In his book, Garbarino (1999) discussed the relationship between FTP and subsequent violence and gang involvement. He reviewed the extant research on gang violence and incorporated his experience as a psychologist who had worked with numerous youth serving time for committing violent crimes. Garbarino proposed that youth who exhibit limited FTP may be less motivated to attend school or delay gratification. Often, this lack of future goals and subsequent lack of motivation may result in a variety of maladaptive behaviors, such as excessive money spending, or more serious behaviors, such as substance use, violent crime, and/or gang involvement.

In general, research has suggested that having a relatively long FTP has many benefits, including a decreased likelihood of perpetrating violence. For instance, focusing on the future (as opposed to dwelling on the past) helps to reduce negative emotions (Boninger, Gleicher & Strathman, 1994). According to Holman and Zimbardo (2003), individuals who focus on the future are better able to cope with negative events than individuals who tend to focus on the present. Likewise, Holman and Zimbardo (2003) also found that individuals with increased FTP are more willing to work hard and better able to cope with negative life events than individuals with shorter FTP.

FTP is also related to obtaining positive future outcomes and avoiding negative outcomes (Boyd & Zimbardo, 2005). Zimbardo, Keough, and Boyd (1997) found that individuals who have an extended FTP are less likely to engage in risk-taking behaviors than individuals who have a foreshortened FTP. For example, individuals who focus on the present instead of the future often exhibit impulse control problems, such as substance use and gambling (Hodgins & Engel, 2002; Keough et al., 1999; Levy & Earlywine, 2004.) Oyserman and Markus (1990) conducted a prospective study looking at the relationship “possible selves” (i.e., future goals) and delinquency. The authors interviewed youth between ages 13 and 16 regarding their future goals. Three months later, those same youth were interviewed and asked about delinquent behavior. The results indicated that individuals who exhibited a low degree of FTP were more likely to become delinquent than individuals who exhibited a high degree of FTP.

Similarly, Joireman, and colleagues (2003), conducted a study exploring the link between FTP and aggression in a sample of college students. The authors administered validated measures of sensation seeking, impulsivity, and individuals’ focus on immediate consequences



of their behavior. The authors found that individuals high in FTP were less likely to act aggressively than others only when they anticipated that their aggression would carry future consequences; if there was no concern about negative consequences related to aggression, aggressive behavior did not vary significantly between individuals high in FTP and individuals low in FTP.

More recent research has found that there is a relationship between FTP and IPV. For instance, Ferguson (2006) conducted a study exploring the relationship between FTP and impulsivity as they relate to intimate partner violence. Participants were recruited from a treatment program for domestic abuse. FTP was evaluated using the Zimbardo Time Perspective Inventory (ZTPI; Zimbardo & Boyd, 1999), the Consideration of Future Consequences Scale (Strathman et al., 1994), and the Future Time Perspective Scale (Carstensen & Lang, 1996), whereas impulsivity was assessed using the Barratt Impulsiveness Scale (Barratt, 1975). The author found a significant negative relationship between FTP and impulsivity, such that individuals who displayed limited FTP were more likely to act impulsively—especially in the context of partner violence perpetration.

Likewise, Price (2009) looked at the relationship between IPV and FTP in a sample of college students. FTP was assessed using the ZTPI (Zimbardo & Boyd, 1999), and IPV was assessed using the Revised Conflict Tactics Scale (CTS-2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996). If an individual endorsed any item on the physical aggression subscale of the CTS-2, he was classified as violent. Results suggested that individuals who were classified as violent scored significantly lower on the ZTPI than did individuals who were classified as non-

violent, suggesting that individuals with relatively low FTP are more likely than individuals who exhibit more FTP to perpetrate physical violence.

### FTP as a Predictor of Treatment Success

Not only has limited FTP been linked to problematic behaviors, but FTP has been employed as a potential intervention strategy to address problematic behaviors. Chubick, Boland, Witherspoon, Chaffin, and Long (1999) found that female inmates with increased FTP were more likely to complete vocational training programs than females with shorter FTP. Similarly, Epel, Bandura, and Zimbardo (1999) found that high FTP was associated with shorter periods of homelessness and increased enrollment in training programs for homeless individuals.

The studies discussed above suggest that FTP may be an important factor in violence perpetration. Lacking focus on future goals or anticipating negative future events are among the potential etiological factors driving this relationship. If individuals do not have positive future goals to guide behavior, it may result in failing to consider the consequences of behavior—particularly aggressive behavior—thus resulting in an increased propensity towards violence.

Markus (1986) proposed the notion of possible selves (PSs), which is directly related to one's FTP. According to Markus, a PS can be defined as the way in which an individual thinks about his/her potential and the future; it involves selves we would like to become, could become, and are afraid of becoming. In other words, PSs are “a cognitive manifestation of enduring goals, aspirations, motives, fears, and threats.” PSs serve to connect self-concept and one's motivation and are the direct result of social comparisons.

Markus explains that PSs serve two functions. The first is to provide a means to an end pattern for future behavior. That is, PSs help determine future behavior because individuals are motivated to achieve their ideal PS. Secondly, PSs provide a context for current behavior, which helps assign current behaviors meaning. In other words, individuals can interpret their own behavior and assign meaning to that behavior based on PSs.

As with FTP, research has linked PSs to delinquency. For instance, individuals who cannot construct prosocial PSs or feel they do not have control over obtaining PSs that are satisfying may seek other ways to define themselves, such as engaging in risky behaviors (e.g., drug use, criminal behaviors; Hirschi, 1969; Sutherland & Cressey, 1978). This link between PS and delinquency may exist because adolescents without a positive PS may have little motivation to engage in prosocial behaviors, and this persists into adulthood.

Oyserman and Markus (1990) propose that PSs, alone, are not enough to prevent delinquency. Instead, the others propose that individuals may need specific ideas and conceptions related to their PSs. In their study, the authors asked 238 adolescents (ages 13-16) to describe their future selves during an interview with a researcher. Adolescents were recruited from four locations: (1) public schools; (2) community placement programs, which served as an alternative to juvenile probation; (3) group homes for delinquents, which are utilized after probation and community interventions had been shown to be ineffective in reducing delinquent behavior; and (4) state training facilities, which housed adolescents deemed dangerous to society based upon criminal histories. The authors found that non-delinquent youth exhibited a balance between PSs and fears for the future. Conversely, as delinquent behavior increased, the balance

between fears and PSs became more one-sided, such that, as delinquent behavior increased, adolescents were at an increased risk of focusing only on fears and not on PSs.

### Overview of the Current Study and Hypotheses

To date, no known study has investigated whether FTP, in combination with childhood characteristics, may predict subtypes of violent offenders or, for that matter, whether FTP, in combination with childhood characteristics, is associated with gang membership. Howell and Egley (2005) proposed that multiple variables, including delinquency, academic performance, and family variables (e.g., parental attitudes towards their child's aggression) interact to predict gang involvement and subsequent violence. However, they did not consider the role of FTP in violence perpetration, and they did not include a classification of perpetrator subtype.

While previous research has identified multiple predictors of violent offending, the current study built on past research and theory by examining which of those predictors differentiated family only, non-family only, and generally violent offenders. The current study also examined whether or not FTP, along with childhood variables, predicted gang membership. Multiple logistic regression was employed to explore the relationship between parents' criminal histories, delinquency, academic performance, and FTP and whether those variables were associated with perpetrator subtype as well as gang membership in a sample of men on probation. Finally, the current study utilized a multiple logistic regression to explore how perpetrator subtype predicted an offender's risk of recidivism.

### Perpetrator Subtype

In reviewing the current literature, it appears that only one of the study variables—academic success—distinguishes family only offenders from non-family only offenders. The proposition that academic success may differentiate these offenders is supported by social bond theory, or the idea that individuals with ties to society and investment in stereotypically prosocial activities may be at a decreased likelihood of perpetrating violence—especially against non-family members. As previously discussed, this difference between perpetrating against family versus non-family may be due to “stake in conformity.” That is, individuals with ties to society through educational attainment could be at the greatest risk of perpetrating against only family because familial violence is often more easily concealed than violence directed toward non-family members (Straus, 2007). As a result, it is easier for family only offenders than non-family only or generally violent offenders to preserve reputations, jobs, and overall social standing (Sherman et al., 1992; Straus, 2007). Therefore, academic success was expected to differentiate family only offenders from non-family only and generally violent offenders.

Social bond theory support the relationship between delinquency and violence perpetration in that individuals who are involved in stereotypically traditional activities are at a low likelihood of engaging in criminal behavior because they are receiving reinforcement through prosocial activities (Leve & Chamberlain, 2005). Furthermore, research has suggested individuals who display a high degree of delinquency are likely to perpetrate violence against both family and non-family in adulthood (Holzworth-Munroe & Stuart, 1994). Consequently, it was expected delinquency would differentiate generally violent offenders from other offenders.

FTP has also been linked to violent offending, with research suggesting a low degree of FTP is associated with generally violent offending (Joireman et al., 2003). This is consistent with the General Aggression Model and the general theory of crime, which suggest a broad range of criminal behaviors are reflective of a low degree of FTP, whereas more targeted forms of violence (as found in family only and non-family only offenders) are associated with a higher degree of FTP. Thus, FTP was expected to differentiate family only and non-family only offenders from generally violent offenders.

Parental criminal involvement has also been associated with general violence perpetration, and this coincides with social learning theory, which proposes individuals learn behavior from models (e.g., parents). The relationship between parents' criminal involvement and violence perpetration is also supported by the information processing model, which proposes individuals learn behavior through witnessing parents' behaviors and developing scripts for how to behave in a variety of situations. Notably, research suggests parental criminality—even if non-violent—may reflect a deviant lifestyle that has little regard for prosocial behavior and it is plausible this attitude is passed to children (Sampson & Lauritsen, 1990; Skol-Katz et al., 1997; Wallers, 1990). Additional research has revealed a relationship between a high degree of parental criminality and being classified as generally violent (Odgers et al., 2007). Consequently, it was anticipated a high degree of parental criminal history would predict generally violent offenders because parents' criminal behavior may have conveyed to children it is acceptable to break rules, including becoming violent towards others; this may then have been generalized to a variety of settings, including both familial and non-familial.

Having a poor relationship with one's parents has also been shown to predict general violence perpetration (Osgood et al., 1996). This is consistent with the routine activity theory, which proposes the absence of a parental figure predicts aggression. Further, family systems theory proposes individuals who do not have relationships with their parents may be more likely than individuals who do not have relationships with their parents to be classified as generally violent. Poor attachment to parental figures, which can be reflected in a lack of contact between children and parents, is associated with general violence perpetration in adulthood (Dutton et al., 1994; Gorman-Smith et al., 2001), possibly due to a lack of oversight and consequences for antisocial behavior in adulthood or a lack of emotional support that persists into adulthood. Accordingly, it was anticipated relatively poor relationships with parents (i.e., little contact with parents) would distinguish generally violent offenders from family only and non-family offenders.

Based upon the aforementioned evidence, the following hypotheses were proposed (see Table 1 for a summary of hypotheses one, two, and three):

1. It was hypothesized family only offenders would be characterized by relatively good academic performance, relatively good relationships with parents, relatively low parental criminality, relatively low childhood delinquency, and relatively high FTP.
2. It was hypothesized non-family only offenders would be characterized by relatively poor academic performance, relatively good relationships with parents, relatively low parental criminality, relatively low childhood delinquency, and relatively high FTP.

3. It was hypothesized generally violent offenders would be characterized by poor academic performance, relatively poor relationships with parents, relatively high parental criminality, relatively high childhood delinquency, and relatively low FTP.

Table 1

Proposed Qualitative Descriptor of Each Predictor Variables for All Perpetrator Subtypes

<b>Perpetrator Subtype</b>	<b>Academic Performance</b>	<b>Delinquency</b>	<b>Future Time Perspective (FTP)</b>	<b>Parents' Criminal Histories</b>	<b>Relationship with Parents</b>
Family Only	Good Academic Performance	Low Delinquency	High FTP	Low Criminal History	Good Relationship
Non-Family Only	Poor Academic Performance	Low Delinquency	High FTP	Low Criminal History	Good Relationship
Generally Violent	Poor Academic Performance	High Delinquency	Low FTP	High Criminal History	Poor Relationship

### Gang Membership

Research has linked academic attainment to gang membership, such that low academic attainment significantly predicts gang affiliation (Craig et al., 2002; Hill et al., 1999). This is supported by the general theory of crime, which posits individuals engage in criminal behavior because they are seeking a relatively easy and immediate means of gratification. Similarly, social bond theory proposes a lack of involvement in “traditional” activities is associated with criminal behavior. Thus, it was reasonable to predict that individuals’ performance in school



would differentiate gang members from non-gang members, with poor performance in school predicting gang membership.

Delinquency and gang membership have been linked, and this relationship is also supported by social bond theory. That is, delinquency likely reflects an individual's lack of commitment to societal norms and, consequently, may be prone to engage in criminal behavior. Furthermore, research has revealed a high level of delinquency is associated with an increased likelihood of gang membership (Battin et al., 1998). Thus, it was plausible to expect a high degree of delinquency would predict gang membership, whereas a low degree of delinquency would predict non-gang members.

Research has indicated a relationship between FTP and gang membership, which is supported by the General Aggression Model and the general theory of aggression. Broadly speaking, both theories suggest individuals engage in criminal behavior because they are focused on immediate gratification as opposed to long-term consequences of behavior (which in the case of aggression, are generally negative). Accordingly, it was logical to expect individuals who displayed a high degree of FTP would be less likely to be gang members.

One's relationship with his parents has also been linked to gang membership. These relationships are supported by family systems theory, which proposes individuals with absent parental figures (i.e., less contact with parents) are at an increased likelihood of engaging in criminal behavior (Hill et al., 1999; Thornberry & Krohn, 2003). Based upon previous research and family systems theory, it was reasonable to expect that one's relationship with his parents would differentiate gang members from non-gang members, with poorer relationships predicting gang membership.

Finally, parents' criminal histories have been linked to gang membership (Fleisher & Krienert, 2004), and this is supported by social learning theory and the information processing model. In general, both models suggest children learn from personal experience as well as observing others, including parents. Consequently, it was anticipated parents' criminal histories would differentiate gang members from non-gang members, with more extensive parental criminal histories predicting gang membership.

Based upon the aforementioned evidence:

4. It was hypothesized gang membership would be characterized by a relatively poor relationship with parents, relatively poor academic performance, relatively high parental criminality, relatively high delinquency, and relatively low FTP.

#### Offender Risk of Re-offending

Gondolf and colleagues (1990) conducted one of the few studies examining the relationship between perpetrator subtype and risk of re-offending. They found generally violent men tend to perpetrate violence more frequently than family only or non-family only offenders. However, no known research has investigated how perpetrator subtype may predict one's risk of re-offending. After testing the study's primary hypotheses, a third multinomial logistic regression was run to assess the relationship between perpetrator subtype and offender risk status. Because there is limited research looking at this relationship, the analysis was exploratory in nature. However, the plausibility of this relationship is supported by the social bond theory, which proposes strong bonds to society and commitment to socially-acceptable activities decrease the likelihood one will engage in criminal behavior; general violence perpetration could

be interpreted as a lack of ties to society and traditional activities. Thus, while it was anticipated that perpetrator subtype would predict offender risk status, no directional hypotheses regarding this relationship were proposed.

## CHAPTER 2

### METHOD

#### Participants

Before data were retrieved, it was determined how many participants would be required to achieve adequate power. Research looking at the relationship between childhood delinquency and adulthood violence perpetration has indicated a medium effect size ( $r = .33$ ; Boyle et al., 2008). Research has also indicated a small to medium effect size for the relationship between academic performance and violent offending ( $d = .18-.35$ ; Johnson et al., 2005). Research looking at the association between an individual's relationship with his parents and adulthood violence perpetration has indicated effect sizes ranging from small to large ( $\eta^2 = .01-.11$ ; Espelage et al., 2003). No known study has reported effect sizes for the relationship between parents' criminal histories and children's adulthood aggression. However, Murray and Farrington (2009) detected a significant relationship between parents' criminality and children's violence perpetration with a sample size of 411.

Studies looking at the relationship between delinquency and gang membership have indicated a large effect size ( $r = .12-.27$ ; Battin et al., 1998). Conversely, research exploring the relationship between academic performance and gang membership has suggested a small to medium-size effect ( $r = .20$ ; Hill et al., 1999). Hill and colleagues (1999) also reported a small effect size for the relationship between parents' criminal histories and gang membership

( $r = .13$ ) as well as a small effect size for the relationship between one's relationship with his parents and gang membership ( $r = .07-.12$ ).

One known study has reported on the effect size associated with the relationship between FTP and violent offending. Price (2009) reported a medium-size effect for the relationship between individuals' FTP and subsequent violence perpetration ( $\eta^2 = .04 - .08$ ). Although Gondolf and colleagues (1990) suggested that there was a significant relationship between FTP and gang membership, no known study has explored the magnitude of the relationship. Likewise, there is no empirical estimate available for the magnitude of the relationship between delinquency and FTP. However, Trommsdorff and Lamm (1980) reported a significant association between delinquency and FTP with a sample size of  $N = 90$ . Additionally, no known study has reported on the magnitude of the relationship between academic performance and FTP. Still, Craig et al. (2002) reported a significant relationship between academic performance in childhood and adulthood violence perpetration ( $N = 142$ ). No known study has explored either the relationship between parents' criminal histories and children's aggression in adulthood or the relationship between one's relationship with his parents and FTP.

To determine the sample size necessary for the multinomial logistic regression analyses that were employed to test the study's primary hypotheses, a power analysis was conducted using G\*Power 3.1 (Faul, Erdfelder, Lang, & Buchner, 2007). A small effect size was assumed, as the magnitude of relationships within the proposed models vary greatly. To achieve power = .80 to detect a small effect size ( $d = .20$ ) with an alpha = .05, the recommended sample size was  $N = 199$ . Consequently, a sample size of 200 was collected.

The current study was archival in nature, so once sample size was determined, probation records were retrieved for men who completed a term of probation through a Midwestern

probation department between 2012 and 2014. Probation officers at the probation department collected these data during intake interviews in which the probationer and probation officer were present in a private office. The interviews were generally completed in two to four, 60 minute-long appointments. All probation officers received standardized training through the probation department regarding how to complete the structured interviews before they were allowed to administer them to probationers.

Only the records of men who were at least 18 years of age at the time of the interview and had at least one conviction for a violent crime were eligible for inclusion in the study. Because the data were archival and anonymous, men were not asked permission for their data to be included in the study. Strict procedures were enforced to ensure that participants' identities remained anonymous. Before anyone other than the primary investigator was able to access them, records were de-identified using the Safe Harbor method of de-identification outlined by the U.S. Department of Health and Human Services (2015). This method required removal of identifiers of the individual or individual's relatives (i.e., names, addresses, dates, phone numbers, account numbers, social security numbers, vehicle identifiers, medical records, biometric identifiers, photographs, and any other unique identifying characteristics) before data could be utilized for research purposes.

The mean age of the sample was 31.17 ( $SD = 11.53$ ). Of the 200 men included in the current study, 57.5% were Caucasian, 23.5% were African American, 12.2% were Hispanic, 1.8% were biracial, 0.5% were Asian/Pacific Islander, and 4.5% did not report their racial identity. Regarding each participant's highest level of educational attainment, 12.2% of the sample reported having a GED, 19.5% had a high school diploma, 32.6% had taken college courses, 9.5% had a college degree, and 26.2% had no GED or high school diploma. Sixty-one

men (27.6%) were employed full-time, 12.7% were employed part-time, 8.1% were not in the labor force due to a disability, and 47.1% were unemployed. Sixty-two percent of the sample had never been married, 12.2% were currently married, 13.6% were divorced, 6.8% were separated, 0.9% were widowed, and 4.5% did not report their marital status. Demographics for each outcome group (i.e., family only offenders, non-family only offenders, generally violent offenders, gang members, and non-gang members) are shown in Table 2.

Table 2  
Demographic Characteristics for Each of the Outcome Groups

	Perpetrator Subtype			Gang Membership	
	Family Only	Non-Family Only	Generally Violent	Gang Member	Non-Gang Member
<b>Number</b>	40	127	33	43	157
<b>Mean Age</b>	32.05	29.64	35.94	28.74	31.84
<b>Race</b>					
Caucasian	28	71	20	10	109
African American	10	36	4	20	30
Hispanic	2	16	8	11	15
Biracial	0	3	1	2	2
Asian/Pacific Islander	0	1	0	0	1
<b>Marital Status</b>					
Married	6	13	7	6	20
Never Married	22	93	15	30	100
Divorced	7	14	8	4	25
Separated	5	6	2	2	11
Widowed	0	1	1	1	1
<b>Current Employment Status</b>					
Full-time	12	36	8	9	47
Part-time	5	18	4	6	21
Disability/Not in Labor Force	6	8	4	0	18
Unemployed	17	65	17	28	71

(Continued on following page)

Table 2 (continued)

<b>Education Level</b>					
GED	5	18	4	11	16
High School Diploma	9	28	4	8	33
College Courses	12	44	10	8	58
College Degree	2	12	5	2	17
No GED or High School Diploma	11	25	10	14	32
No Education Level Reported	1	0	0	0	1

### Measures

All variables of interest were assessed using the adult intake records at the probation department.

#### Demographics Questionnaire

Information regarding age, gender, ethnicity, education, income, and marital status was collected from the intake forms that individuals completed with their probation officers. Questions about age and gender were used to ensure participants' eligibility for inclusion in the current study. (See Appendix A for a copy of measures). Questions about age, gender, and current relationship status were used to ensure participants' eligibility for study participation.

#### Perpetrator Subtype

Probationers' perpetrator subtype was determined based upon the crimes each individual had been *convicted* of and against whom the crime was perpetrated. To find this information, coders evaluated each probationer's criminal history, as found in his intake packet. This



methodology was consistent with previous research, which has utilized participants' history of violent offending to classify perpetrators (e.g., Shields et al., 1988).

If a participant was convicted of a violent crime and was never convicted of a violent crime against a family member, that individual was classified as a "non-family only" perpetrator.

According to the Illinois General Assembly (2012), violent crimes include:

First degree murder; second degree murder; voluntary manslaughter; involuntary manslaughter/reckless homicide; drug-induced homicide; kidnapping; aggravated kidnapping; unlawful restraint; aggravated unlawful restraint; forcible detention; child abduction; luring of a minor; trafficking in persons/involuntary servitude/related offenses; criminal sexual assault; aggravated criminal sexual assault; predatory criminal sexual assault of a child; criminal sexual abuse; aggravated criminal sexual abuse; indecent solicitation of a child; sexual exploitation of a child; custodial sexual misconduct; sexual misconduct with a person with a disability; assault; stalking; robbery; aggravated assault; battery; aggravated battery; battery of an unborn child/aggravated battery of an unborn child; abuse or criminal neglect of a long term care facility resident/criminal abuse or neglect of an elderly person or person with a disability; criminal transmission of HIV; vehicular endangerment; compelling confession or information by force or threat; hate crime; ritual mutilation; ritualized abuse of a child; female genital mutilation; sexual conduct or sexual contact with an animal; endangering the life of health of a child; drug induced infliction of harm to a child athlete; and hazing.

If criminal records indicated an individual was convicted of at least one violent crime perpetrated against a family member, and the individual was never convicted of a violent crime against a non-family member, the individual was classified as a "family-only" perpetrator.

Family members included: spouse/significant other, children, parents, grandparents, and/or siblings, which is consistent with Shields and colleagues' (1988) method of classification. In addition to the violent crimes listed above, crimes perpetrated against a family member may include unwanted sexual relations within families and any "domestic" violent crime listed above. Finally, if a participant were convicted of both a violent crime against a non-family member and a violent crime against a family member, he was classified as a "generally violent" perpetrator.

### Future Time Perspective

FTP was assessed using information about clients' goals for the future. On their intake paperwork, participants were asked to list all of their future goals. A continuous variable for FTP was created by adding up the total number of future goals a participant reported, as has been done in prior research (e.g., Lang & Carstensen, 2002).

### Gang Involvement

Gang involvement is difficult to assess because gang members are often reluctant to self-identify to law enforcement or anyone they perceive as associated with law enforcement (Peterson et al., 2004). This is likely due to the structure of gangs, which are dominated by loyalty, honor, and the threat of violence for engaging in behaviors that could be viewed as disloyal to the gang. For instance, in 2008, a member of the Crips gang was shot and killed by other Crips members in Brooklyn, New York after it was rumored he was assisting Federal authorities (New York Field office, 2015). Reporting gang involvement may be viewed as jeopardizing the sanctity of the gang and, thus, individuals who report involvement or disclose information about gang-related activities may fear retribution in the form of physical assault or

death—even if they do not disclose the specific gang with which they are affiliated (Papachristos, 2009).

Despite hesitancy of gang members to self-identify, most research assesses gang involvement using only self-report. That is, participants are most often asked whether or not they are—or have ever been—part of a gang (e.g., Curry, 2000; Esbensen & Huizinga, 1993; Peterson et al., 2004). As Peterson and colleagues (2004) explain, using one item (“Are you a gang member?”) to identify individuals with gang affiliations is conservative and may underestimate the number of individuals who are gang involved.

The operationalization of gang involvement in this study coincided with that of previous research (e.g., Curry, 2000; Peterson et al., 2004), but to minimize possible underestimation, the current study utilized law enforcement information pertaining to the gang involvement of each probationer. Gang involvement was assessed using the intake questionnaire that probationers and probation officers complete when an individual is first sentenced to a term of probation. The question asked, “Do you belong to any gangs?” The response to this question was based upon the probationer’s response and information included in the probationer’s FBI background check. If there was any indication that the individual was a gang member or had ever been a gang member, he was coded as being a gang member; if there was no indication that the individual was ever part of a gang, he was coded as not being a gang member. This method should be an improvement over the one-question approach since it also takes into account law enforcement records about an individual’s gang involvement. Thus, this method may be less likely to underestimate gang membership because it does not rely solely on self-identification.

### Parents' Criminal Histories

During probationers' intake appointment(s), they were asked whether or not either of their parents had a criminal record. If so, they were asked to disclose each parent's criminal history. A continuous variable was created to represent each parents' criminal history, such that the higher the number of arrests, the more extensive a parent's criminal history. Then, the father and mother's criminal histories were added together to create a single continuous variable to represent both parents' criminal histories. For the purposes of this study, both violent and non-violent crimes were included in the parents' criminal history variable, which is consistent with previous research (e.g., Odgers et al., 2007; Phillips et al., 2006).

Assessing parents' criminal records using a structured interview—and including both violent and non-violent criminal activity—is consistent with methodology used in current literature on parents' criminal behavior. For instance, Thompson and Harm (1994) used structured interviews to assess for parents' criminal records. Likewise, Hungerford (1993) used interviews and arrest records to assess parents' criminal behavior and incarceration. Phillips and colleagues (2006) conducted a study exploring the effects of parental involvement with law enforcement on children's behavior. To assess parental criminal behavior, the researchers conducted a structured interview during which they asked adolescents about their parents' arrest records.

### Relationship with Parents

During intake interviews, each probationer was asked about the frequency of contact with each of his biological parents. Although there is evidence to suggest parental figures in a child's life—even if they are not biologically related to the child—can buffer against negative outcomes

(e.g., substance use, risky sexual behavior, criminal behavior), research has shown that a biological parent's behavior may be more influential in a child's life than a non-biological parental figure (e.g., Wildeman, 2010). For instance, Sampson, Raudenbush, and Earls (1997) found the number of biological parents present in a child's life is associated with a variety of outcome variables, with less parental involvement predicting an increase in criminal behavior later in life. This finding was consistent regardless of who raised the child.

Based on support for the influence of a biological parent in a child's life, and consistent with previous research (e.g., Wildeman, 2010), only relationship with biological parents was evaluated; other primary caregivers such as grandparents, foster parents, etc. were not included as part of this variable. A continuous variable was created to represent one's relationship with his biological parents based upon the number of times each year a participant is in contact with his biological parents either through speaking on the telephone or seeing them in person. If a participant had no contact with his parents, his data was used, but his relationship with parents was entered as "0." The higher the number, the stronger one's relationship with his parents was considered to be.

The intake questions that probation officers ask about parent-child relationships are only focused on the present. Thus, an assessment of parent-child relationships during childhood is unavailable. However, research suggests that the nature of attachment between parents and children remain relatively consistent throughout one's lifespan (Ainsworth, 1985; Bowlby, 1977), which would suggest that assessing parent-child relationships in adulthood may, in fact, provide a relatively accurate depiction of a parent-child relationship in childhood as well.

Evaluating relationship with parents based on the frequency of contact is a relatively new method. Most prior research looking at parent-child relationship uses measures of parenting

styles (e.g., Bowers et al., 1994, Greenberg et al., 1991; Lyons-Ruth, 1996; Lyons-Ruth et al., 1993). For example, Lyons-Ruth (1996) conducted a study investigating attachment between a child and parent and subsequent aggression. To evaluate the relationship between parent and child, the authors administered a measure of parenting style, which was intended to reflect on the type of attachment between the two. Likewise, Bowers and colleagues (1994) conducted a study looking at familial relationships and aggression. In order to assess familial relationships, the authors administered a questionnaire regarding parenting style as well as a measure regarding how various members of the family interact.

Wahler (1980) conducted a study looking at parent-child relationships and subsequent behavior problems. The author used self-reported contacts with children as a way to quantify the quality of parent-child relationships. Although the frequency of contact is not always employed as a measure of parent-child relationships when researching aggressive behavior, research has shown that parents and children who have frequent contact typically have stronger, more supportive relationships than parents and children who do not contact one another as frequently (Belsky, 1990; Lye, 1996). As such, evaluating parent-child relationships based upon the frequency of contact should provide a rough indicator of the quality of the parent-child relationships.

### Academic Performance

During their intakes, participants were asked about their high school GPA. Academic performance was based upon a participants' GPA, such that a higher number represents more academic success. This technique for assessing academic performance is consistent with prior

research, which has often used GPA to quantify academic performance (e.g., Fergusson & Lynskey, 1998; Hinshaw, 1992; Johnson et al., 2005, Vitaro et al., 1999).

### History of Delinquency

During their intakes, probationers were asked to report all criminal convictions—violent and non-violent—prior to the age of 18. The probation officer verified this information using the probationer’s FBI background check, which includes a record of all juvenile criminal convictions. A continuous variable was created to represent a history of delinquency based upon the number of juvenile convictions, such that a higher number represented a more extensive history of delinquency.

This technique is comparable to methodology in other studies that investigated delinquency (e.g., Craig et al., 2002; Hill et al., 1999). For instance, Hill and colleagues (1999) conducted interviews asking about delinquent behavior during childhood. Similarly, Esbensen and Huizinga (1993) conducted interviews with participants and asked about delinquent behaviors (e.g., assault, robbery).

### Offender Risk of Re-offending

The Level of Service Inventory—Revised (LSI-R; Andrews & Bonta, 2000) is a 54-item survey most often completed in correctional centers, halfway houses, and jails. The LSI-R is used to predict the risk of recidivism/the likelihood of rehabilitation success. It is completed by probation officers who have undergone training to administer the measure. The LSI-R assesses offender attributes and contextual variables that have been shown to predict long-term outcomes

in criminal offenders. Items on the measure are completed using “yes” or “no” responses. The LSI-R is comprised of 10 subscales: (1) criminal history, (2) education/employment, (3) financial, (4) family/marital, (5) accommodation, (6) companions, (7) leisure/recreation, (8) alcohol/drug problems, (9) emotional/personal, and (10) attitudes/orientation.

The LSI-R was normed on a sample of men and women from correctional centers in the United States and Canada as well as probationers and parolees from the United States. Research has shown that the LSI-R significantly predicts future incarceration ( $r = .28$ ; Flores et al., 2006). Holsinger, Lowenkamp, and Latessa (2003) found the LSI-R exhibits high internal consistency ( $\alpha = .88$ ). Additional research has shown that the LSI-R significantly predicts new arrests across genders and minority groups ( $r = .18$ ; Holsinger et al., 2003; Holsinger, Lowenkamp, & Latessa, 2006).

### Procedure

The study used data that were collected at a Midwestern probation department. Men who completed a term of probation were at least 18 years of age were eligible for inclusion in the study. Participants were selected from the probation department’s database. In order to keep participants’ identities anonymous, all records were de-identified per the Safe Harbor method (U.S. Department of Health and Human Services, 2015) before coders accessed them. In order to keep data anonymous, all identifying information outlined in the Safe Harbor method was blacked out, and the primary investigator made paper copies of all participants’ files using a copy machine at the probation department before the files were given to the coders.



The 200 most recently closed male cases of individuals with at least one conviction for a violent crime were used in this study. To obtain the 200 cases used in the current study, a total of 408 cases were examined; 120 files were precluded from inclusion because the intakes had not been completed, likely due to the probationer being incarcerated or transferred to another county for probation supervision; 65 files were precluded from inclusion because the individuals had no violent criminal convictions; and 23 files were precluded from inclusion because they were part of pre-trial supervision—not probation, which is post-sentence. All measures were completed during meetings between the participant and his probation officer at the probation office. Because data were archival, de-identified, and aggregated, precluding any possibility of identifying individuals, participants were not compensated for their participation, and permission was not sought from probationers to use the data.

Information about individuals' criminal offenses required coding. That is, the specific crime(s) needed to be identified, and the victim(s) also needed to be identified in order to properly classify participants. FTP and relationship with parents were also coded. To do this, two undergraduate student coders were used. In order to ensure that both of the coders were classifying participants in a similar manner, they were trained by the investigator. The current study employed coding guidelines provided by Cicchetti and Sparrow (1981), which outline how to code data that has already been collected using an interview format. Although Cicchetti and Sparrow applied their guidelines to research with children, the nature of the data and data collection procedures in their research are similar to those in the present study. Consistent with the approach employed by Cicchetti & Sparrow (1981), during training, coders were asked to code ten files that had been previously coded by the primary investigator. These ten files were randomly selected from files closed within the past two years, and they were not included in the

primary analyses. Reliability checks on these 10 files indicated 100% agreement between raters (Cohen's kappa = 1.0) on all variables.

As previously discussed, the primary investigator retrieved, copied, and de-identified the 200 most recently closed cases of individuals who had served a term of probation for a violent offense. Using sequential overlapping reliability coding (Neuendorf, 2002), coder 1 coded files 1-105, and coder 2 coded files 95-200. After all of the study participants' files were coded, files 95-105 were used for an inter-rater reliability check. Reliability was calculated for all study variables by computing Cohen's kappa (Cohen, 1960) as well as percentage agreement (Hsu & Rield, 2003; Streiner & Norman, 1995). Using this technique, kappa values of .81 or greater reflect "very good" agreement between coders, values between .80 and .61 reflect "good" agreement, and values between .60 and .41 reflect "moderate" agreement (Altman, 1991). Inter-rater reliability was assessed, and the results are displayed in Table 3. Percentage agreement between the two coders ranged from 90-100%. Additionally, all kappa coefficients were greater than .81, which suggests "very good" reliability between coders on all study variables (Altman, 1991).

Table 3

Reliability Coefficients and Percentage Agreement between Coders

	<i>n</i>	% Agreement	Kappa
Academic Performance	10	90	.836
Delinquency	10	90	.836
Future Time Perspective	10	90	.836
Gang Membership	10	100	1.00
LSI-R	10	100	1.00
Number of Parents Deceased	10	100	1.00
Parents' Criminal Histories	10	90	.836
Perpetrator Subtype	10	90	.836
Relationship with Parents	10	90	.836

## Analyses

Before conducting any statistical analysis examining the study's primary hypotheses, the study's independent variables were analyzed; means, standard deviations, range, and inter-correlations were calculated (see Table 4).

Table 4  
Descriptive Statistics for All Predictor Variables

Variables	1	2	3	4	5	6
1. Academic Performance	1					
2. FTP	.099	1				
3. Delinquency	-.061	-.096	1			
4. Parents' Criminal Histories	-.195*	-.062	.089	1		
5. Relationship with Parents	-.063	-.063	.129	.043	1	
6. LSI-R	-.146	-.106	.245*	.132	-.038	1
Minimum	0	0	0	0	0	5
Maximum	4	3.67	5.62	4	730	40
<i>N</i>	189	200	200	200	199	157
<i>M</i>	2.39	1.50	0.75	0.45	285.98	21.87
<i>SD</i>	0.82	0.79	1.17	0.77	277.87	8.09

*Note.* \* $p < .01$ ; the maximum values for FTP and delinquency are not whole numbers because those variables contained outliers, which were adjusted accordingly.

Outliers were identified by computing Mahalanobis Distances. Using this technique, data points with atypical distances from the multidimensional mean of the distribution are identified, while taking into account the multidimensional variance of that distribution (Wicklin, 2012). A point is considered an outlier if the probability associated with its Mahalanobis Distance is less than or equal to 0.001. Four cases were identified as outliers, and they were replaced with the mean plus three standard deviations (Rousseeuw & Croux, 1993); two outliers were replaced for delinquency, and two outliers were replaced for FTP.

Prior to testing the study's primary hypotheses, individuals were classified based upon perpetrator subtype (family only, non-family only, generally violent) and gang membership (gang member, non-gang member). Ultimately, 40 individuals were classified as family only, 127 were classified as non-family only, and 33 were classified as generally violent. Forty-three individuals were classified as gang members, and 157 were classified as having no gang affiliation.

To test the study's primary hypotheses, data from all probationers were subject to a series of multiple logistic regression models. These analyses were conducted using SPSS (Version 21; IBM, 2012). Multiple logistic regression has several advantages over other statistical methods, the first being it makes no assumptions of normality, linearity, or homogeneity of variance for the independent variables (Bayaga, 2010; Tabachnick, Fidell, and Osterlind, 2001). This is important when working with a sample whose data will likely be skewed or groups will be unequal, as with the sample employed in the present study. Furthermore, when using multiple logistic regression, independent variables can be continuous, independent variables do not need to be unbounded, and it is not assumed error terms will be normally distributed (Bayaga, 2010; Tabachnick et al., 2001).

## CHAPTER 3

### RESULTS

To test the first, second, and third hypotheses, a multinomial logistic regression was run that included delinquency, academic performance, parents' criminal histories, relationship with parents, FTP, and perpetrator subtype, while controlling for deceased parents as to not mistake one having deceased parents for one having no contact with parents. It was hypothesized high academic performance, good relationships with parents, low parental criminality, low childhood delinquency, and high FTP would predict family only offenders. It was also hypothesized poor academic performance, good relationships with parents, low parental criminality, low childhood delinquency, and high FTP would predict non-family only offenders. Finally, it was hypothesized poor academic performance, poor relationships with parents, high parental criminality, high childhood delinquency, and low FTP would predict generally violent offenders.

The multinomial logistic regression comparing perpetrator subtypes in terms of the predictor variables was not significant,  $\chi^2(12, N = 165) = 11.59, p = 0.48$  (see Table 5).

Table 5

## Multiple Logistic Regression Model Predicting Perpetrator Subtype

	Family Only Perpetrator			Non-Family Only Perpetrator		
	Odds Ratio	95% Confidence Interval	P-Value	Odds Ratio	95% Confidence Interval	P-Value
Academic Performance	1.12	0.61, 2.07	0.71	1.08	0.65, 1.79	0.76
Relationship with Parents	1.00	1.00, 1.00	0.08	1.00	1.00, 1.00	0.14
Parental Criminality	0.86	0.42, 1.74	0.67	1.14	0.65, 2.01	0.65
Delinquency	0.69	0.41, 1.15	0.16	1.05	0.74, 1.48	0.80
FTP	0.81	0.42, 1.56	0.53	1.01	0.59, 1.75	0.97

*Note.* Generally violent perpetrator is reference category.

That is, there was no evidence to reject the null hypothesis, which stated there is no difference in utility between the model without predictor variables and the model with predictors. Ultimately, the first three hypotheses were not supported, as academic performance, relationship with parents, parents' criminal behavior, delinquency, and FTP did not differentiate between types of perpetrators.

To test the fourth hypothesis, a multinomial logistic regression was run that included delinquency, academic performance, parents' criminal histories, relationship with parents, FTP, and gang membership, while controlling for deceased parents. It was hypothesized poor academic performance, poor relationships with parents, high parental criminality, a high degree of childhood delinquency, and low FTP would predict gang membership.

The multinomial logistic regression comparing gang members to non-gang members in terms of the predictor variables was significant,  $\chi^2(6, N = 165) = 14.64, p = 0.023$  (see Table 6).

Table 6

## Multiple Logistic Regression Model Predicting Gang Membership

	Odds Ratio	95% Confidence Interval	<i>P</i> -Value
Academic Performance	1.11	0.70, 1.74	0.66
Relationship with Parents	1.00	1.00, 1.00	0.43
Parental Criminality	0.75	0.48, 1.16	0.19
Delinquency	0.70	0.52, 0.92	0.01
FTP	1.67	0.98, 2.86	0.06

*Note.* Gang member is reference category.

That is, the existence of a relationship between the predictors and gang membership was supported. Because the model was significant, the relationships between specific predictor variables and gang membership were examined, as directed by Bayaga (2010). When broken down, delinquency was the only statistically-significant predictor of gang membership ( $p = 0.012$ ), with FTP trending towards significance ( $p = 0.062$ ). Essentially, individuals who displayed a high degree of delinquency during childhood were 3.50 times more likely to endorse gang affiliation than individuals with a low degree of delinquent behavior during childhood.

According to Bayaga (2010), when a multivariate model is found to be significant, the utility of the model (i.e., the accuracy of classification) must be evaluated. The benchmark for utility of a model is typically a 25% percent improvement over the rate of accuracy that it attainable by chance alone (White, 2014). The proportional by chance accuracy was computed to be 67.76%. Although the model was statistically-significant, the classification accuracy rate was 78.20% (see Table 7), which does not reach the 84.70% threshold necessary to be considered useful.

Table 7

Classification Accuracy of Predictors in Differentiating Gang Members from Non-gang Members

Observed	Predicted		
	No	Yes	Percent Correct
No	144	6	96.0%
Yes	35	3	7.9%
Overall Percentage	95.2%	4.8%	78.2%

Finally, a multinomial logistic regression was run to examine the relationship between offender risk status and perpetrator subtype. It was anticipated offender risk status would significantly differentiate between perpetrator subtypes. However, no specific predictions about directionality were made. Results suggested the multinomial logistic regression comparing perpetrator subtypes in terms of LSI-R score was not significant,  $\chi^2(2, N = 157) = 4.74, p = 0.094$  (see Table 8).

Table 8

Multiple Logistic Regression Model Predicting Perpetrator Subtype Using LSI-R Score

	Family Only Perpetrator			Non-Family Only Perpetrator		
	Odds Ratio	95% Confidence Interval	<i>P</i> -Value	Odds Ratio	95% Confidence Interval	<i>P</i> -Value
LSI-R Score	0.94	0.88, 1.00	0.68	0.95	0.90, 1.00	0.04

*Note.* Generally violent perpetrator is reference category.



## CHAPTER 4

### DISCUSSION

The purpose of this study was to investigate predictors of gang membership and violence perpetration in a sample of men sentenced to a term of probation. Regarding perpetrator subtypes, it was proposed: (1) family only offenders would be characterized by good academic performance, good relationships with parents, low parental criminality, low childhood delinquency, and high FTP; (2) non-family only offenders would be characterized similarly on all variables except for academic performance, which was expected to be poorer; and (3) generally violent offenders would be characterized as different on all variables with the exception of academic performance, which was not expected to differentiate them from the non-family only offenders. These hypotheses are summarized in Table 1. Fourth, it was proposed gang members would be characterized by poor relationships with parents, poor academic performance, high parental criminality, high delinquency, and low FTP. Finally, it was anticipated recidivism risk would predict perpetrator subtype, but no specific hypotheses about this relationship were proposed.

#### Delinquency is Associated with Gang Involvement

Only one of the study's primary hypotheses was partially supported in that the results demonstrated a significant relationship between delinquency and gang involvement. That is, a high degree of delinquency significantly differentiated gang members from non-gang members, who tended to report lower levels of delinquency. This relationship is consistent with prior

research showing youth who engage in delinquent behavior are at an increased risk of joining and remaining in a gang when they are adolescents and/or adults (Battin et al., 1998; Hill et al., 1999; Hill et al., 2001).

Possibly the simplest explanation for this relationship is that past behavior is the best predictor of future behavior. That is, an individual who engages in criminal behavior during childhood is likely to engage in criminal behavior in adulthood, perhaps because no intervention was implemented to curb problematic behavior early in life. This is supported by previous research looking at criminal behavior, which suggests criminal activity often continues throughout one's lifetime (Thornberry & Krohn, 2003).

This has important implications for reducing gang violence, with the most obvious implication being that effective interventions for children who exhibit a high degree of delinquent behavior could be developed and incorporated into school curricula. Also possible, classes could be established in schools located high-risk and/or high-crime areas. Based upon findings from the current study, delinquency appears to be a factor that effectively predicts those who may be at the greatest risk of joining a gang later in life, thus, those youth with a history of delinquent behavior may be most likely to benefit from intervention prior to gang involvement.

#### Unsupported Hypotheses

Although not statistically-significant, a relationship between FTP and gang involvement was trending towards significance. Garabino's (1999) proposition regarding a relationship between FTP and gang involvement is in line with this finding. The potential relationship between FTP and gang involvement suggests individuals who have multiple future goals may be less likely to become involved in gang activity than individuals who report fewer future goals.

As previously discussed, results of the present study suggest delinquency predicts gang involvement. This relationship indicates a need for interventions, or classes, that target youth with a history of delinquency or youth who are at an increased risk of engaging in delinquent behavior. The finding that a low degree of FTP may be related to gang involvement has implications for those specific interventions. For instance, activities focused on helping youth develop a sense of FTP can be incorporated into the classes. These activities could focus on identifying long-term goals and helping children develop a plan for how to obtain those goals. Accordingly, youth may develop a higher degree of FTP, which findings suggest may serve as a protective factor against gang involvement. It may also be advantageous to explicitly teach youth to consider the possible future consequences of actions by posing questions such as, “How do you want this situation to turn out?” or “Where do you see this leading you in the future?”

Ultimately, results from the current study did not support the proposition that academic performance could distinguish between the types of violence individuals perpetrate, which is contrary to prior research (e.g., Gondolf et al., 1990). Furthermore, findings do not support the notion of “stake in conformity” (Toby, 1957), or the idea successful individuals have more to lose than others by perpetrating general violence. It is possible academic performance did not differentiate between perpetrator subtypes because there were not enough men in each category of perpetrator to detect a small effect for academic performance. Likewise, it is possible there was not enough variability in academic performance to detect differences between individuals.

Additionally, results did not support a relationship between academic performance and gang membership. Previous research has identified a relationship between academic performance and gang membership, such that poorer academic performance is associated with an increased likelihood of gang membership (e.g., Craig et al., 2002; Hill et al., 1999); however,

results of the present study did not support such an association. It is plausible gang members and non-gang members did not significantly differ with regards to academic performance because they came from similar backgrounds, despite differences in regard to gang affiliation. Research suggests individuals involved in the criminal justice system, as a whole, are less educated than individuals not involved in the system (Uggen & Manza, 2002; Weeks & Widom, 1998). Thus, although individuals were not affiliated with a gang, it does not necessarily mean they had more or better educations or had more privileged upbringings than gang members.

One's relationship with his parents was also explored as a potential predictor of perpetrator subtype. Prior research has indicated poor relationships with parents are associated with general violence perpetration, whereas good relationships with parents are associated with more specific forms of violent offending (e.g., family only, non-family only; Goram-Smith et al., 2001). Results of the present study did not indicate a link between relationship with parents and perpetrator subtype, which is inconsistent with prior research findings. It is plausible this relationship was not supported because the valence of the relationship was not captured through employing frequency of contact as a measure of relationship quality.

In contrast to previous research (e.g., Eitle et al., 2004; Thornberry & Krohn, 2003), the present study did not support the proposition that having frequent contact with one's parents may serve as a protective factor for preventing gang involvement. It is plausible this relationship was not supported because the current study did not ask about parents' gang involvement. Children may have good relationships with parents, who are also involved in gangs, thus possibly increasing the likelihood of the child joining a gang. Conversely, other children may have poor relationships with parents who are not involved in gangs, but because they feel they are lacking social support, may choose to join a gang. Ultimately, it is possible children may have good

relationships with criminal parents, thus making relationship with parents a non-significant predictor of gang membership because it is not only the quality of the relationship that is important in determining gang membership, but it is also the type of parents with whom the child has a relationship.

No significant relationship was found between parental criminality and perpetrator subtype. Previous research has found a significant relationship between parental criminality and perpetrator subtype, such that children who had parents with a criminal background were significantly more likely than other individuals to be classified as generally violent (Odgers et al., 2007). It is possible this relationship was not detected in the present study because, as will be discussed later, probationers may have been unaware of parents' criminality, or they may have been hesitant to disclose parents' criminal convictions.

Similarly, previous research has indicated a relationship between parents' criminal activity and gang membership; children whose parents had criminal records were significantly more likely to join a gang than children whose parents did not have criminal records (Case & Katz, 1991; Fleisher & Krienert, 2004). This relationship was not supported in the current study. It is possible parents' criminal activity was not a significant predictor of either perpetrator subtype or gang involvement because children were unaware of parents' criminal involvement. For instance, a child may have a poor relationship with his parents, which results in little or no contact with parents. Consequently, he may be unaware of the full extent of his mother and father's criminal convictions

Previous research has shown delinquency to be another predictor of the type of violence an individual perpetrates. Specifically, prior research had indicated that a high degree of delinquency predicts general violence perpetration (Holzworth-Munroe, 1994; Leve &

Chamberlain, 2005). However, results of the current study found no relationship between delinquency and perpetrator subtype. As previously mentioned, it is plausible that no relationship was detected because there were not enough men in each group of perpetrator to detect an effect for delinquency.

Although previous research has not explicitly explored the relationship between FTP and gang membership, there is evidence to support the proposition the two may be associated. For instance, the General Aggression Model proposed by Anderson and Bushman (2002) would predict a relationship between FTP and perpetrator subtype, such that individuals who display a high degree of FTP may be more prone to perpetrate specific types of violence (e.g., family only, non-family only) as opposed to general violence because the consideration of violence is dependent upon multiple factors, one of which is the consideration of possible future consequences. However, the current study did not find evidence to support this relationship, as FTP did not significantly distinguish between perpetrator subtypes.

Finally, results did not support the idea that perpetrator subtype significantly predicts risk of recidivism (i.e., LSI-R score). No prior research has explored this relationship, so it is plausible no relationship between recidivism risk and perpetrator subtype exists. It is also possible that certain characteristics included in the LSI-R, such as substance use or past criminal convictions, may predict perpetrator subtype, but the scale in its entirety does not predict the type of violence one perpetrates.

#### A Rationale for Null Findings

Cronbach and Meehl (1955) propose several interpretations for null findings: (1) “the test does not measure the construct variable,” (2) “the theoretical network which generated the

hypothesis is incorrect,” and (3) “the experimental design failed to test the hypothesis properly.” Each of the points made by Cronbach and Meehl likely provides a plausible explanation as to why the hypothesized relationships in the present study were not supported.

Regarding Cronbach and Meehl’s first point, it is plausible several of the assessment measures included in the present study did not assess the intended constructs. For instance, relationship with parents was evaluated using probationers’ self-reported contacts with parents. Prior research has supported the notion that the number of contacts with parents is reflective of relationship quality (Belsky, 1990; Lye, 1996). Still, no measure of valence was included, so it was inferred that quantity was equivalent to quality of the relationship. Furthermore, relationship with parents was assessed in adulthood. While this is consistent with methods used in previous research (e.g., Ainsworth, 1985; Bowlby, 1997) suggesting relationships are consistent throughout the lifespan, it is possible that circumstances and/or relationships changed, which may lead to contact not necessarily being reflective of the relationships between children and parents earlier in life. Furthermore, although prior research has employed adulthood contact with parents as a measure of relationship quality (e.g., Lye, 1996), it is clearly not as good of a measure of attachment as asking children about their relationships with parents during childhood.

Another problem may lie in how parents’ criminality was assessed. It is possible probationers were ashamed and did not want to report their parents’ criminal backgrounds. As mentioned earlier, it is also plausible probationers did not know of their parents’ complete criminal backgrounds—especially if they have relatively poor relationships or little contact with parents. Still, it is possible parents engaged in a high number of criminal activities but were never caught and/or convicted, thus this behavior was not reported when probationers were asked about parents’ criminal convictions.

As with parents' criminal behavior, it is possible probationers were not caught engaging in delinquent activity. Thus, when asked to report criminal convictions prior to the age of 18, they reported no convictions although they had engaged in criminal behavior. It is also plausible they simply did not report these convictions in an attempt to portray themselves more favorably to their probation officers, which research has shown is relatively common in a criminal population (Paulhus, 1998). However, the current study attempted to minimize this problem by having probation officers review each probationers' criminal background.

Considering FTP, it is possible individuals did not report all of their goals, as the prompt was broad (i.e., "What are your future goals?"), and it may have been inferred goals were only supposed to be probation-specific (e.g., successfully complete probation, graduate from drug and alcohol treatment). Furthermore, evaluating the number of one's future goals does not capture the valence of future goals. That is, it is possible probationers have future goals that are not prosocial in nature and, thus, may not be associated with positive outcomes, as was assumed in the present study.

In the current study, perpetrator subtype was assessed by evaluating probationers' criminal backgrounds and self-report. Using criminal convictions is a technique that has been used in prior studies to assess parents' criminality and participants' criminal histories (e.g., Phillips et al., 2006; Shields et al., 1988). However, if the probationer chose not to inform his probation officer of these convictions, they may have gone undetected. Likewise, it is possible that certain convictions went unreported because they occurred out of state and were not noted during the background search. Consequently, it is possible some participants' were classified incorrectly with regard to perpetrator subtype due to missing past convictions.



Similarly, gang involvement was assessed using probationers' self-report in conjunction with a background investigation. It is plausible probationers would choose not to report their gang involvement in order to portray themselves in a more positive light. Thus, if their gang activity was not flagged in the background investigation, gang involvement may have gone undetected.

An additional problem in assessing construct variables may have been the study's reliance on retrospective self-report data. Probationers were asked to recall important information that happened during childhood which, given the average participant age of 31 years, was substantially long ago. Research suggests that retrospective data often include multiple recall errors, possibly due to faulty memories or individuals attempting to recall past events positively (Golden, 1992). Thus, it is possible some of the data included in the study was not accurate due to errors in recall.

It is also possible that participants did not respond accurately because they did not see the value in doing so, or they were unable to recall certain information. It is difficult to evaluate whether or not inaccurate responding occurred in the present study. Data were examined to identify unusual response patterns (i.e., the data was examined for outliers), but if participants were providing inaccurate responses that were not in an obvious pattern, it is unlikely these responses would be detected.

Similarly, it is possible probationers did not want to be forthcoming because they were attempting to portray themselves favorably, which was previously discussed as it relates to problems measuring construct variables. In considering study design, it is possible that it would have been more beneficial to obtain data through means other than self-report, as research has indicated that honest responding often depends upon perceived consequences of and the degree

of personal disclosure involved in honest responding (Del Boca & Noll, 2000). Considering this population's involvement with the criminal justice system, it is possible individuals were afraid of the potential consequences of admitting to delinquency, violence perpetration, and gang involvement. (e.g., more stringent probation conditions, more frequent office visits), thus they did not respond honestly.

Reluctance to respond honestly may have resulted in underreporting of criminal histories (parents' and probationers'), delinquency, and gang involvement. If probationers did not report behaviors honestly, this may explain the low variability in criminal histories, delinquency, and gang involvement. It is difficult to identify whether or not participants were uncomfortable responding to certain questions and chose to underreport certain behaviors, and it is also difficult to discern the accuracy of probationers' responses in reflecting their true experiences. Along the same lines, it is possible that individuals with fewer instances of violence perpetration were more likely to be included in the study due to the increased likelihood of being sentenced to a term of probation, whereas individuals with more extensive violent histories may be more likely to be sentenced to a term of incarceration.

Another explanation for the study's dearth of findings, one based on Cronbach and Meehl's (1955) second proposition, is the possibility that the theoretical network, on which the study was based, is incorrect. That is, it is possible the predictor variables included in the current study do not play a key role in distinguishing between perpetrator subtypes or distinguishing gang members from non-gang members. For example, drug and alcohol use may have a larger influence on one's behavior than childhood variables. Research has indicated that drug and/or alcohol use significantly increases the likelihood of perpetrating violence (Chase, Treboux, &

O'Leary, 2002; Luthra & Gidycz, 2006; O'Keefe, 1997). Likewise, prior research has indicated a significant relationship between drug/alcohol use and gang membership (Battin et al., 1998).

Additional research has suggested violence perpetration is associated with problem-solving capabilities, such that individuals who are less able to problem-solve are at an increased likelihood of engaging in violence (Luthra & Gidycz, 2006; Riggs, O'Leary, & Breslin, 1990). Along the same lines, research suggests problem-solving abilities are also associated with gang membership; individuals who are less able to engage in flexible and prosocial problem-solving strategies are at an increased likelihood of joining a gang (Hill et al., 1999). Essentially, it is possible other variables, including substance use and problem-solving abilities, are more influential in determining violence perpetration and gang involvement than the variables included in this study.

Considering Cronbach and Meehl's (1955) third proposition, it is possible the study design did not test the hypotheses and did not accurately identify relationships between variables. As previously mentioned, it is plausible that self-report data was problematic due to unintentional recall errors or intentional inaccurate reporting. It is also possible that differences between probation officers affected data collection. This method was used because it allowed for access to a population that is difficult to recruit, but several drawbacks to this approach should be noted. Although all officers received the same training, it is possible some officers were more invested than others in conducting the intake interviews. For instance, some officers may have been more motivated than others to ensure there was no missing data in the interview packets. Likewise, some officers may have been better than others at asking follow-up questions to clarify probationers' responses and/or obtain more information related to each of the items included in the intake packets. It is also possible data collection was affected by differences in experience,

such as one officer having completed a large number of intakes and knowing which information often requires follow-up as opposed to another officer who had less experience. Considering all of the potential interpretations for the study's null findings, it seems that problems assessing the construct variables provide the most reasonable explanation for the study's lack of findings.

### Future Directions

Future research should seek to gather longitudinal data or collect data from external sources to confirm participants' responses, which would address potential problems with retrospective self-report. Obtaining data in this manner would allow researchers to corroborate participants' self-report and gather information from additional sources that may be more accurate than the information gathered directly from participants. Furthermore, longitudinal data would eliminate retrospective reporting, which would provide researchers with the ability to infer causation among the relationships between childhood variables, FTP, violence perpetration, and gang involvement.

Additionally, upcoming research should seek to recruit individuals based upon gang membership, possibly through probation departments in areas with higher rates of gang involvement. This method of recruitment would serve as a way to ensure larger, relatively equal group sizes, which would allow for group comparisons, sufficient power to detect relationships of all effect sizes, and more potential variability within and between groups. Using a more diverse sample of individuals with a wider range of experiences regarding academic performance, parents, criminal histories, gang involvement, and FTP may have yielded different results as well as increased generalizability of the findings. It is possible that the range of experiences was relatively similar and, therefore, unrepresentative of the population. Similarly,

if the sample used in the present study was relatively homogenous, it is possible it was significantly different from samples obtained in other studies, thus resulting in different findings than previous research in regards to predictors of violent offending and gang involvement.

Notably, seven of the nine theories addressed in the present study are based on sociological theory. During the course of the current research, it became evident there are many psychological theories available to predict violence but few that lend support to predictions about the *types* of violence one will perpetrate.

Sociological theories of violence tend to focus on the role of environment in one's decision to perpetrate violence. Similarly, sociological theories typically incorporate environment in predicting the types of violence one perpetrates. Psychological theories, however, appear broader and seem to emphasize environment and psychological processes in predicting aggression; however, they do not take into consideration variables necessary to predict specific forms of aggression. Adding more detailed information to current psychological theory may improve the ability of those theories to predict specific forms of violence, as was necessary in the current study. The ability of psychological theories to predict specific forms of violence would also allow for psychologists to tailor interventions to target the specific forms of violence.

A seemingly obvious deficit in psychological theory regarding aggression involves psychopathology. Psychopathology, or mental illness, is central to the field of psychology, yet no known psychological theory of aggression incorporates mental illness, which could prove useful in predicting specific forms of violence. Take, for example, an individual diagnosed with a psychotic disorder. This individual may be unable to regulate his behavior in the same way as a mentally healthy individual. Thus, the individual suffering from psychosis may be more likely

to become generally violent because he does not have the capacity to restrict aggression to certain settings (e.g., only with his spouse).

Similarly, personality disorders may be useful in predicting the types of violence one perpetrates. For instance, an individual with a diagnosis of Antisocial Personality Disorder (ASPD) may be more likely to engage in violent offending than someone without that diagnosis, as individuals with this diagnosis tend to exhibit a lack of remorse for unlawful behaviors and are frequently irritable and aggressive towards others (American Psychiatric Association, 2013).

Refining current psychological theory so that it may predict specific forms of violence is imperative because predicting which types of violence one may perpetrate can aid in the development of interventions geared towards reducing aggression. Accordingly, future researchers should seek to formulate psychological theories of violence focused on explaining why individuals may choose to perpetrate certain forms of violence as opposed to only predicting whether or not they will engage in violence.

As previously discussed, it is important to improve current psychological theory as it relates to predicting specific forms of violence. However, it is also important to note the possibility there may not be a set of psychological factors that are able to predict specific acts of violence; some crime is random, impulsive, and/or based on opportunity. Take, for example, a college student who is at a party and discovers another student who is intoxicated and unconscious. The man, himself, is intoxicated, and he sexually assaults the unconscious student. Usually, this individual may not be inclined to engage in violence. However, the opportunity presented itself, and a typically law-abiding individual engaged in violent behavior.

## Implications

Despite the study's limitations, findings from the current study have several implications for men involved in the criminal justice system. First, when compared to individuals with a low degree of FTP, it is possible that individuals who exhibit a high degree of FTP not only consider future consequences of their behavior but are better able to conceptualize long-term goals and formulate prosocial ways to attain those goals as opposed to less socially-acceptable activities (i.e., gang involvement).

Results of the present study underscore the importance of developing interventions geared towards curbing delinquent behavior as a way to prevent gang involvement. This may suggest that efforts should be focused primarily on helping children develop a sense of self, engage in prosocial behaviors, and working to foster problem-solving abilities.

Considering the results of the present study, it is also important to look for additional factors that may play a role in differentiating perpetrator subtypes as well as gang members from non-gang members, such as problem-solving abilities and substance use. Ideally, longitudinal data should be collected, which could track changes in behavior (e.g., violence perpetration, gang involvement) and the development of problem-solving strategies and substance use. Using longitudinal data, research would be able to observe behavioral changes in individuals as environmental variables change (e.g., peers, criminal activity, parents' behavior). Also beneficial, longitudinal data could shed light on the conundrum of whether FTP affects activities such as delinquency and academic performance or whether those activities affect FTP.

Ultimately, results from the present study may lead to several different conclusions. It is possible childhood variables do not play a role in predicting perpetrator subtype or gang involvement and, instead, adulthood variables may be more useful in predicting these groups. If

this is the case, future research should explore other variables, such as substance use and problem-solving abilities.

It is also plausible methodological shortcomings, such as recruitment methods and relatively low variability in experiences, affected the study's findings. Perhaps the most likely explanation for the study's null findings is that one or more of the constructs included in the study was measured incorrectly, in which case future research should work towards including a wider variety of validated measures to constructs related to FTP, parents' criminal histories, and relationship with parents. Future research on violent offending and gang involvement should seek to recruit a more diverse sample of probationers, which would allow for comparisons between several groups of perpetrators as well as comparisons between varying groups of gang-members and non-gang members. Being able to make these comparisons would allow for more statistical power in identifying potential relationships between predictor variables and violent offending as well as gang membership.

In closing, while clinicians and developers of intervention programs work to identify individuals who are most at-risk of violent offending, the fields of psychology and criminal justice may benefit from research that examines how childhood delinquency, FTP and additional variables (e.g., substance use, problem-solving abilities) may identify those who are most at-risk of becoming violent. By differentiating between gang members and non-gang members using delinquency and FTP, findings from the present study emphasized the importance of considering precursors of adulthood criminal behavior that can be incorporated into interventions to target youth. If high risk individuals can be reliably identified, it would be possible to develop more specific interventions for these individuals, possibly reducing the rates of violent offending. Ultimately, if research continues to explore variables that predict violent offending, more



complex interventions may eventually be developed to prevent violent offending, and in turn, may also thwart the growth of street gangs, which have grown exponentially over recent years and contribute substantially to violent crime in the United States.

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APPENDIX A

DEMOGRAPHIC QUESTIONS FROM “ADULT INTAKE FORM”

1. DOB: \_\_\_\_\_
2. Age: \_\_\_\_\_
3. Sex: \_\_\_\_\_
4. Race: \_\_\_\_\_
5. Marital Status:
  - a. Never Married
  - b. Married      How long?
  - c. Divorced
  - d. Widowed
  - e. Separated
6. Present Employment Status:
  - a. Full-time
  - b. Part-time
  - c. Unemployed
  - d. Not in labor force
7. Pay: \_\_\_\_\_
8. Attending School:
  - a. No
  - b. Part-time
  - c. Full-time
9. High School:
  - a. Grad year
10. College/Other Grad Year: \_\_\_\_\_

APPENDIX B

VARIABLES OF INTEREST FROM “ADULT INTAKE FORM

1. What are your future goals? \_\_\_\_\_
2. What types of grades did/do you receive in school? \_\_\_\_\_
3. Were you ever arrested before the age of 17? If so, list below. \_\_\_\_\_
4. Do you have any prior adult convictions? If so, list below. \_\_\_\_\_
5. Are you involved in a gang? If so, what gang? \_\_\_\_\_
6. Father's police record: \_\_\_\_\_
7. Mother's police record: \_\_\_\_\_
8. How often are you in contact with your parents? \_\_\_\_\_
9. Your version of the offense: \_\_\_\_\_

APPENDIX C

LEVEL OF SERVICE INVENTORY—REVISED (ANDREWS & BONTA, 2000)



Each item below is completed by indicating “yes” or “no.”

### Criminal History

1. Any prior adult convictions
2. Two or more prior convictions
3. Three or more prior convictions
4. Three or more present offenses
5. Arrested under age 16
6. Ever incarcerated upon conviction
7. Escape history from a correctional facility
8. Ever punished for institutional misconduct
9. Charge laid or probation/parole suspended during prior community supervision
10. Official record of assault/violence

### Employment/Education

11. Currently unemployed
12. Frequently unemployed
13. Never employed for a full year
14. Ever fired
15. Less than regular grade 10
16. Less than regular grade 12
17. Suspended or expelled at least once

Education/Employment, Financial, Family/Marital

18. Participation/performance
19. Peer interactions
20. Authority interactions
21. Financial problems
22. Reliance upon social assistance
23. Dissatisfaction with marital or equivalent situation
24. Non-rewarding, parental
25. Non-rewarding, other relatives
26. Criminal—family/spouse

Accommodation, Leisure/Recreation, Companions

27. Accommodation unsatisfactory
28. Three or more address changes last year
29. High crime neighborhood
30. Absence of recent participation in an organized activity
31. Could make better use of time
32. A social isolate
33. Some criminal acquaintances
34. Some criminal friends
35. Few anti-criminal acquaintances
36. Few anti-criminal friends

### Alcohol/Drug Problem

- 37. Alcohol problem, ever
- 38. Drug problem, ever
- 39. Alcohol problem, currently
- 40. Drug problem, currently
- 41. Law violations
- 42. Marital/family
- 43. School/work
- 44. Medical
- 45. Other indicators

### Emotional/Personal, Attitudes/Orientation

- 46. Moderate interference
- 47. Severe interference, active psychosis
- 48. Mental health treatment, past/ever
- 49. Mental health treatment, present
- 50. Psychological assessment indicated
- 51. Supportive of crime
- 52. Unfavorable toward convention
- 53. Poor, toward sentence
- 54. Poor, toward supervision