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Correlates and Consequences of Pre-Incarceration Gang Involvement among Incarcerated
Youthful Felons

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ABSTRACT

Objective: The primary aim of the study is to document the prevalence and variation in types of pre-incarceration gang membership among a sample of incarcerated felons. The second goal is to consider if and how pre-incarceration gang involvement affects institutional behavior.

Materials and Methods: This study builds on the existing literature by considering if and how different types of pre-incarceration gang involvement effect prison misconduct. This relationship is examined while controlling for attitudinal measures and pre-prison social characteristics that may condition entrance into gangs and involvement in serious prison misconduct. The study includes a sample of 504 youthful adults incarcerated in a large Midwestern state in 1996.

Results: The results highlight that there is a high degree of variation in pre-incarceration gang involvement. Moreover, involvement in different types of gangs also is a significant predictor of prison misconduct. Individuals involved in organized/criminal gangs at the point of incarceration experienced significantly more serious misconduct reports than their non-gang counterparts, but similar findings were not evident for those involved in unorganized gangs.

Conclusions: Even among a relatively serious population of youthful adult offenders, pre-incarceration gang involvement is uncommon. Pre-incarceration involvement in organized gangs represents a significant risk factor for prison misconduct.

Researchers have long sought to understand the salience of gang involvement. Much of this research was designed to determine if there is something unique about the gang experience or if youth gangs are merely one of many similar “faces” to delinquency (Battin-Pearson, Thornberry, Hawkins, & Krohn, 1998; Bjerregaard, 2002; Curry, 2000; Decker & Curry, 2000; Klein & Maxson, 2006; Thornberry, Krohn, Lizotte, & Deborah, 1993). Individuals involved in gangs tend to begin their delinquent/criminal careers earlier (Huff, 1996), experience higher levels of violent victimizations (Decker & Van Winkle, 1996), have accelerated levels of participation in the most serious forms of delinquency, experience greater number of incarceration periods, and are generally more problematic when incarcerated (Battin, Hill, Abbott, Catalano, & Hawkins, 1998; Griffin, 2007; Griffin & Hepburn, 2006; Klein & Maxson, 2006; Thornberry, Krohn, Lizotte, Smith, & Tobin, 2003). However, Esbensen, Winfee, He, and Taylor (2001) suggest that not all gang involvement is the same. While gang involvement functions as a general risk factor for adolescent and adult criminality, there is also important variability in these experiences that is explained by theoretically specific risk factors.

The current research will compliment the growing body of literature on prison gang involvement by measuring the prevalence of pre-incarceration gang involvement, the extent to which traditional correlates of gang involvement remain significant at later points in the life-course, and how pre-incarceration gang involvement affects institutional behavior. The existing literature generally takes one of two approaches when analyzing questions of gang membership. Studies either consider features of gang membership during adolescence and it’s effects on delinquency, or prison gang membership and it’s impact on misconduct. Few researchers have fully considered the prevalence of gang membership in the period immediately preceding incarceration and its relationship to prison misconduct. Gang membership is presumed to be

higher among young adult offenders involved in serious crime (Harrell, 2005), yet the extent to which this is the case is not clear.

Using a sample of youthful incarcerated felons, the current research analyzes correlates and consequences of pre-incarceration gang involvement. This research moves beyond the traditional “binary” (gang vs. nongang membership) measure of gang involvement to better understand dimensions of pre-incarceration gang involvement. Much of the existing literature has focused on the effects of gang membership during early stages in the life-course, namely adolescent years. Since continued gang membership has been generally found to be rare (Thornberry, et al., 2003), the prevailing wisdom is that membership at later stages in the life-course may become muted by other more stage-salient risk factors (Lizotte, Krohn, Howell, Tobin, & Howard, 2000). Respondents, all of whom were in their late teens and early twenties, were queried about their gang involvement while on the streets prior to the current incarceration period.

This research will also consider the effects of pre-incarceration gang membership on prison behavior, namely serious misconduct reports. Understanding how pre-incarceration characteristics and behaviors affect prison environments can assist prison administrators implement management strategies strategically targeted at specific clients near the point of incarceration. As Fleisher and Decker (2001) argue, gang affiliation mitigates the effectiveness of traditional compliance tools and techniques used in correctional institutions. Gang involved inmates may be more inclined to use violence and other forms of predatory crime to establish power, obtain privilege, and settle disputes (Camp & Camp, 1985).

Despite the importance for correctional management, there is no general agreement as to the prevalence of gang membership or the characteristics of gang members entering into

correctional institutions. Although other researchers have explored the effect of gang membership on misconduct, little research has been conducted to consider how the nature of pre-incarceration gang involvement affects behavior, and even fewer studies have controlled for attitudinal measures and pre-prison social characteristics relate prison misconduct. Together, these analyses are designed to broaden the scope of gang research and provide insight for gang and corrections-based policy.

BACKGROUND

Gang Membership

Street gangs have been a substantial area of inquiry since the early part of the twentieth century. Prior research has consistently found gang involvement to be one of the most salient predictors of delinquency, particularly violent crime, among adolescents (Battin-Pearson, et al., 1998; Bjerregaard, 2002; Curry, 2000; Decker & Curry, 2000; F. A. Esbensen, Winfree, He, & Taylor, 2001; Klein & Maxson, 2006; Thornberry, et al., 1993). Gang involved youth commit more violence, property crime, and drug crime than their non-gang involved counterparts. Gang involvement facilitates delinquency by creating social norms that support crime/delinquency, direct access to similarly minded individuals, and an increased “need” for violence to help members defend themselves against increased likelihood of victimization (Decker & Van Winkle, 1996; Thornberry, et al., 1993). Consistent with theories of differential association, gangs can provide the motivation and opportunity for deviance (Huff, 1998). Gang involvement, particularly sustained involvement (Thornberry, et al., 2003), further separates already marginalized youth from pro-social institutions such as schools and the legitimate labor market (Curry & Decker, 2003).

Multiple causal roles have been identified that link gang membership to deviant behavior. Gang membership has been shown to intensify delinquent behavior in ways that exceeds the simple effects of association with delinquent peers (Lizotte, Tesoriero, Thornberry, & Krohn, 1994; Watkins, Huebner, & Decker, 2008). Esbensen and Huizinga (1993) found that gang members self-report two to three times more delinquency, even when controlling for association with non-gang delinquent peers and prior delinquency. Similarly, both gang and non-gang high risk youth often indicate comparable levels of delinquency before the former join gangs, but

entrance into gangs often results in increased levels of delinquency, a greater diversification in delinquency, and more involvement in predatory violence (Decker & Van Winkle, 1996).

Although the gang literature is well studied compared to other substantive areas of criminology, many areas remain underdeveloped. Methodologically, gang membership is often handled in binary “yes/no” terms without fully deciphering the impacts of more discrete types or levels of membership. There is reason to believe, however, that there is variability in types of gang membership among research subjects. Using a sample of approximately 6,000 middle school students, Esbensen, Winfree, He, and Taylor (2001) found that young people generally recognize different levels or types of gang involvement. For example, while 17% reported “ever” being in a gang, only 2% considered themselves to be “core” gang members. The authors also found that gang membership tends to have a temporal quality and lack of permanence for many respondents. Of the 17% that reported “ever” being in a gang, only 9% reported “current” gang membership. This suggests gang membership is a fluid status, and it is likely the case that many young people float in and out of gangs during early periods of exposure. This violates the presumption that members cannot get out of gangs once they join. While many members desist from gang involvement early in the life-course, a smaller but likely notable number remain involved with gangs later into early adulthood.

Esbensen and colleagues (2001) reported that multiple typologies of gang members could be differentiated based on theoretically relevant self-control and social learning theory variables. For example, “core” gang members were more likely to report association with and commitment to delinquent peers, neutralization of violence, and fewer pro-social values. The researchers also identified a significant positive relationship between type of gang membership and all measures

of self-reported delinquency including status offense, minor offenses, property offenses, personal offenses, drug sales, drug use and total delinquency (pg. 119).

The existing literature has also not fully considered the salience of gang membership over later points in the life-course. Much of the research has included samples of adolescents in their early-to-mid teen years, many from middle-schools or samples of at-risk adolescents. It remains unclear if distinct types of gang membership remain valid discriminators among gang members at later points in life. There is some evidence that the salience of gang membership may change as subjects age. Lizotte et al. (2000), for example, found that after controlling for the contemporaneous and lagged influence of risk variables, current gang membership had a substantial effect on gun carrying in adolescence but dissipated in adulthood. Watkins et al. (2008, p. 688) also found that gang membership was a significant predictor of gun carrying among juvenile detainees but not adults. It is plausible that the effects of gang membership are specific to different points in the life-course. This relationship, however, is not clear. The current research considers correlates and consequences of pre-incarceration gang involvement on a sample of young incarcerated adult offenders.

Gangs and Institutional Behavior

The existing gang literature has also not adequately explored the affects of pre-incarceration gang involvement on prison behavior but instead tends to consider the affects of *prison gang involvement* on misconduct exclusively. The relationship between gang affiliation and prison violence, however, appears more nuanced. Gaes, Wallace, Gilman, Klein-Saffran, and Suppa (2002) found that prison misconduct is associated with levels gang embeddedness and affiliation with specific gangs. Similarly, Huebner (2003) found that individuals who reported involvement in more organized prison gangs more likely to assault staff and other

inmates. This is important because it implies gang membership itself is not the most critical consideration, but aspects of the involvement itself. We suggest that *prison* gang involvement and misconduct are likely functions of background factors such as *pre-incarceration* gang involvement, something that researchers have generally not considered. Individuals who associated with gangs on the streets, particularly with organized gangs, may be more likely to join gangs while in prison, become more deeply embedded in prison gangs, and engage in more serious forms of prison misconduct as a function of gang involvement. While this research is not able to account for *prison* gang involvement, it does represent a new contribution to the literature by analyzing how pre-incarceration gang involvement effects prison misconduct.

Pre-incarceration involvement in gangs may help explain how individuals navigate their prison experiences. Irwin (1980) argued that inmates did not enter prison *tabula rasa* or as a “blank slate,” instead pre-prison experiences and socialization influence how one copes and forms social groups in prison. Gang identification is likely a central element of self-identification that is imported into the prison environment coloring interactions with the environment, staff, and other inmates (Fleisher and Decker, 2001). Early and sustained exposure to gangs, both pre-and-post incarceration, provides accompanying folklore that helps members frame the meaning of incarceration and coping strategies for survival. The stigmatization of incarceration and resulting alienation from traditional society may enhance gang involvement whereby incarcerated men search for self-respect and affiliation with similarly situated individuals. The cultural expectations of both imprisonment and gang involvement , reward hypermasculine behavior and group loyalty that can perpetuate prison gang membership (Clemmer, 1940; Sykes, 1958; Wacquant, 2000). The current research compliments much of this previous work by Fleisher and Decker (2001), Gaes et al. (2002), Griffin and Hepburn

(2006), Huebner (2003), and others who have noted the relationship between prison gang involvement misconduct by determining if gang involvement near the point of incarceration also helps explain prison misconduct.

CURRENT STUDY

Sample

Data for the current study were collected as part of a larger research project examining patterns of firearm acquisition and use by incarcerated youthful offenders in a Midwestern state. The prison population in the study state was approximately 40,000 at the time of the study and nears 50,000 today (Sabol, West, & Cooper, 2009). Participation was limited to inmates who were between the ages of 17 and 25 and had been incarcerated for less than eighteen months as of June 1996, the date of original data collection.¹ The sampling frame was designed to better understand the relationship between pre-prison experiences and correctional outcomes among young, incarcerated males. In total, 504 individuals were included in the study sample.² Participation in the research was on a voluntary basis and subjects were provided no incentives for their participation.

Research Design

Data were collected from surveys administered to subjects between June and August 1996. Surveys were administered to small groups of inmates in classrooms or other approved meeting areas. Research staff read all survey items and responses to the subjects in the small group settings to aid in the completion of the surveys. Research staff also provided assistance to subjects in completing the surveys when necessary. The survey included a variety of response sets including questions about employment history, self-reported involvement in crime, patterns of gun acquisition and use, involvement in drug use and sales, involvement of family and friends

in crime, attitudes toward crime, prior criminal victimization, and involvement in gangs. Data on misconduct reports were obtained from official court records. The data sources were linked through inclusion of personal identifiers that were included in all data sets.

VARIABLES

Dependent Variables

The dependent variable, *gang involvement*, represents pre-incarceration gang involvement. In order to better explore the heterogeneity in gang membership and criminal behavior, gang involvement was subdivided into three groups: no gang membership, involvement in an unorganized gang, and involvement in an organized/criminal gang. The coding scheme is consistent with the work of Ball and Curry (1995) who suggest that gang membership should be identified in terms of the weakening of normative ties, not solely the presence of violence. As such we separate offenders based on self-reported classification of gang involvement prior to the period of incarceration. The types include “0” for no gang involvement before prison, “1” for “unorganized” gang involvement whereby men reported involvement in gangs prior to imprisonment that did not attempt to control or direct criminal behavior, and finally “2” for those involved in “organized/criminal” gangs that had rules or codes for carrying guns and the gang was organized to commit crime. In total, 64% (n=325) of respondents reported no gang involvement, 19% (n=94) reported disorganized gang involvement, and 17% (n=85) reported organized gang involvement (see Table 1). Additional information on measures used in the current study is included in Appendix A.

The second dependent variable, *serious prison misconduct*, represents the count of total misconduct reports for serious offenses (assaultive behavior, possession of weapons, possession of dangerous contraband including narcotics, and escape attempts) each subject sustained during

the first two years of incarceration.³ The two year time period was identified in order to provide a uniform time at risk, and recent research suggests that the early years of incarceration represent the largest risk for misconduct (see Griffin and Hepburn, 2006). The number of serious misconduct reports ranged from 0-53 with an average of 2.63. Approximately 28% (n=141) of the subjects sustained zero serious misconduct reports at all during the study period and 27% experienced three or less misconduct reports .

Independent Variables

A number of demographic measures were included in the models as controls (see Table 1). The first demographic variable, *nonwhite*, represents the percentage of inmates classified as either African-American or Hispanic. In total, 53% of the sample was non-white.⁴ *Age* represents inmate age in years at the time of incarceration for the instant offense. The mean age of the sample was approximately twenty years with a minimum age of 17 and maximum age of twenty-five. The relatively young age of the population is to be expected as the population was drawn specifically to include youthful offenders. Prior research has generally found that gang involved youth begin their delinquency careers earlier than their non-gang counterparts, ultimately engage in more crime over the life-course, and are involved in serious violent behavior (Thornberry, et al., 1993). With this in mind, a negative relationship is hypothesized between age at incarceration and type of gang involvement.

INSERT TABLE 1 ABOUT HERE

The analysis also accounts for pre-incarceration factors that may affect both selection into gangs and predisposition to prison misconduct. *Education* reflects the last year of completed schooling at or near the time of arrest for the instant offense. Like employment status, these data were obtained from the pre-sentence report. Education is an important control as academic achievement has been found to be a strong predictor of gang involvement (Thornberry, Huizinga, & Loeber, 2004), and men with limited educational backgrounds are also more likely to be imprisoned at some point in their life (Arum & Beattie, 1999). On average, the sample completed less than ten years of formal education. The analysis also includes a measure of family dysfunction, particularly *family prior incarceration*, as a risk factor for type of gang involvement. Prior research has long established that characteristics of family environment to be among the most important risk factors for involvement in delinquency and gangs (Decker & Curry, 2000; Decker & Van Winkle, 1996; Hill, Howell, Hawkins, & Battin-Pearson, 1999; Howell & Egle, 2005). *Prior family incarceration* is a dichotomous (0=no; 1=yes) variable and represents if any family members were previously incarcerated/locked up for possessing a gun or using a gun to commit a crime. In total, 23% reported that one or more of their family members had been incarcerated in the past.

In addition to employment and education status, features of pre-incarceration criminal behavior are also included. The variables *drug buyer* and *drug seller* are measures of involvement in the drug industry in the time preceding incarceration for the current offense and were collected as part of the inmate survey (see Appendix A for additional details). Respondents were asked, “While on the street, how often did you sell drugs?” and “While on the street, how often did you purchase drugs?” Responses were coded as ordinal scales that included 0=“never,, 1=“once/twice in my lifetime,” 2=“few times a year,” 3=for “few times a month,” 4=“once a

week,” and 5=“almost every day.” Higher values represent more frequent involvement. The respondents reported greater involvement in drug buyer behavior (\bar{x} =3.45) than drug selling behavior (\bar{x} = 2.96) (see Table 1). Similar to the drug measures, *gun carrying behavior* represents frequency of gun carrying in the time preceding incarceration. Respondents were asked, “While on the street, how often did you carry a firearm?” Responses included 1=“never”, 2=“once in a while”, and 3=“every day.” This measure was recoded as a binary variable where 1=any gun carrying behavior and 0=no gun carrying behavior.

In addition to measures of criminal involvement, the analysis included two risk factors traditionally found to be predictive of gang involvement in samples of adolescent youth: *delinquent friends/peer associations* and *delinquent attitudes*. *Delinquent friends/peer associations* is a three-item scale composite measure. The measure was designed to capture peer involvement in gun behavior and includes: “When on the street, how often do your friends carry guns?”, “How many of your friends sell guns?”, “How many of your friends have been arrested for possession or use of a gun in a crime?”. Responses included 0=“none,” 1=“some,” 2=“most,” and 3=“all.” It is important to note this is a relatively serious form of peer delinquency, not just general criminal violations. The individual items were summed to reflect a single indicator (\bar{x} =4.19; α =.75).

The delinquent attitudes measure is a four-item factor score designed to gauge deviant norms, and these data were collected as part of the inmate survey. The indicators include: "It is ok to shoot someone who doesn't belong in the neighborhood," "It is ok to shoot a person if they disrespect you," "It is ok to shoot a person if they have done something to hurt you," and "It is ok to shoot a person if that's what it takes to get something you want.” Respondents could 1=“strongly disagree,” 2=“disagree,” 3=“agree,” 4=“strongly agree.” One factor was extracted

from the analysis (eigenvalue > 1.0) with sufficient scale reliability ($\alpha = .88$). Consistent with previous research, individuals with involvement in organized gangs are hypothesized to report higher levels of *delinquent attitudes*. Farrington (1985, 1989), for example, reported aggressive attitudes to be a consistent predictor of delinquency and violence. Decker (1996) and Decker and Van Winkle (1996) similarly reported gang-involved individuals generally perceive violence as acceptable for resolving conflict.

The final independent variable was designed to measure the socio-economic characteristics of the offender's residential community at the time of arrest. *Concentrated disadvantage* is a five-item factor score created using 2000 census data, at the place level, and includes the proportion of individuals who were: on public assistance, below the poverty level, unemployed, black, and living in female headed households. The analysis resulted in the extraction of one factor (eigenvalue >1.0) with sufficient scale reliability ($\alpha=.76$).

ANALYTICAL STRATEGY

The analyses proceed in two phases. First, bivariate and multinomial regression models are used to describe the prevalence and predictors of gang involvement among the sample. The next models predict counts of serious prison misconducts using Poisson regression.

Bivariate Analysis

Results from the bivariate comparison of means are presented in Table 1. The table depicts a comparison of means for each independent variable and prison misconduct variable for the full sample and each subsequent type of gang involvement. Analysis of variance (ANOVA) was used to determine significant mean differences.

INSERT TABLE 1 ABOUT HERE

The data presented in Table 1 show significant differences in the number of serious misconduct reports and gang involvement. Individuals in organized gangs sustained the highest average number of serious misconduct reports (\bar{x} = 3.44), followed by those in unorganized gangs (\bar{x} = 2.79) and men with no gang involvement (\bar{x} = 2.38). *Age at incarceration* was significantly related to type of gang involvement. Individuals involved in unorganized and organized gangs were significantly younger at point of incarceration than their non-gang counterparts. Measures of criminal involvement in the period prior to incarceration were significant predictors of gang involvement and were in the expected direction. Gang involved individuals, for example, reported significantly higher involvement in pre-incarceration *drug buying* and *drug selling*. Levels of both were highest among those in organized gangs (\bar{x} = 4.30; \bar{x} = 3.96) compared to those in unorganized gangs (\bar{x} = 3.84; \bar{x} = 3.66). *Gun-carrying behavior* was a significant predictor of organized/criminal gang involvement (\bar{x} = 2.75) compared to unorganized gang involvement (\bar{x} = 2.46) and no gang involvement (\bar{x} = 2.75). *Delinquent friends* and *delinquent attitudes* were also significant predictors of gang involvement in the positive direction. Respondents in organized/criminal gangs reported significantly higher values for delinquent friends (\bar{x} = 5.99; \bar{x} = .81) compared to the other two groups.⁵ The remaining independent variables were not significantly related to gang involvement.

Multivariate Analysis – Gang Involvement

Multinomial logistic regression (MLR) was used to differentiate between individuals in terms of pre-incarceration gang involvement (see Table 2).⁶ Similar to binary logistic regression, the multinomial model simultaneously contrasts the effects of each independent

measure on different categories of the dependent variable. One category of the dependent variable is excluded as the reference category against which comparisons are drawn (Long, 1997). This analysis was designed to consider if risk factors traditionally used to predict gang involvement among younger adolescents and more diverse populations (e.g., general populations and at-risk samples) are also significant predictors among an older, incarcerated sample of felons. For ease of interpretation, results in each column of Table 2 can be interpreted similar to a logistic regression where no gang involvement is the reference category (see Long, 1997). Therefore, positive coefficients indicate greater odds of inclusion in the identified category and negative coefficients reduced odds compared to the “no gang involvement” reference category.

INSERT TABLE 2 ABOUT HERE

The findings from Table 2 indicate the identified risk factors were not significantly related to unorganized gang involvement prior to incarceration. While the risk factors were in the expected direction, none reach statistical significance. This indicates that the risk factors do not sufficiently discriminate non-gang involved individuals from those involved in organized street gangs. Similarly, factors such as race, age at incarceration, education, family incarceration, concentrated disadvantage, drug involvement, and gun carrying behavior were not significantly correlated with involvement in organized street gangs. The two remaining independent variables, delinquent peers and delinquent values were significantly related to organized street gang involvement. Individuals involved in organized street gangs reported significantly more association with delinquent peers and delinquent values. This indicates that even among a relatively serious snapshot of offenders, individuals involved in organized gangs

have significantly greater exposure to delinquent friendships and show greater proclivity to use violence to settle disputes. This finding is consistent with existing literature which links entrenchment in gangs to association with delinquent peer networks (F. A. Esbensen, et al., 2001; Thornberry, Lizotte, Krohn, Farnworth, & Jang, 1994). In addition to friendship networks, delinquent attitudes were significantly associated with organized/criminal gang involvement. Those involved in organized/criminal gangs were more inclined to report seeing violence as an acceptable way to resolve disputes. In contrast, the remaining independent variables did not reach statistical significance; this is noteworthy as the variables identified have previously been found to be highly predictive of gang involvement.

The goal of the next phase of the analysis is to consider the role of pre-incarceration gang membership on serious prison misconduct net of the previously identified risk factors (see Table 3). A series of stepwise Poisson models were estimated to identify the significance of the independent variables on serious misconduct, net gang involvement. The findings presented in Model 1 include all independent variables absent pre-incarceration gang involvement. Among the demographic variables, both nonwhite and age at incarceration were significant predictors of pre-incarceration gang involvement. Nonwhite inmates and men incarcerated at younger ages experienced significantly more serious misconduct reports. Similarly, education was also significant and negative. Those with less formal education sustained significantly more serious misconduct reports. Community-level concentrated disadvantage was also a significant and positive predictor of serious misconduct reports suggesting that inmates from more economically disadvantaged communities were more likely to be involved in misconduct in prison. Family incarceration did not reach statistical significance. Among the variables measuring criminal involvement before the period of incarceration, gun carrying behavior was the only significant

predictor, but in the negative direction. Those with histories of gun carrying sustained significantly less misconducts. Similar to the bivariate analysis, drug buyer and seller status were not significant. The two remaining risk factors, delinquent friends and delinquent attitudes were both significant and positive.

INSERT TABLE 3 ABOUT HERE

Model 2 includes two measures for pre-incarceration gang involvement (“unorganized gang” and “organized/criminal” gang involvement). The category denoting “no gang involvement” category was excluded as the reference category. The model behaves similarly to Model 1 (see Table 3). Both nonwhite and age at incarceration remained significant. The magnitude and direction of the coefficients also remained constant across models. Similar results were also evident for the remaining variables. Like model 1, education and concentrated disadvantage, gun carrying, delinquent friends, and delinquent attitudes all remained significant predictors of serious misconduct reports. Thus, inclusion of the pre-incarceration gang involvement measures did not substantially change the effect of the original variables in the model. The organized/criminal gang measure was significantly and positively associated with serious prison misconduct. The relationship was not maintained for the gang involvement measure.

DISCUSSION AND CONCLUSIONS

The current study was designed to consider if risk factors traditionally associated with gang membership among adolescents predict involvement among older, incarcerated offenders. In many ways, the existing literature is largely silent on this question. Assuming gang

involvement in adolescence to be substantively important during a period of critical cognitive and social development (Thornberry, et al., 2003), it is plausible that these relationships are unique to this developmental period. That is, the salience of gang involvement is specific to a particular developmental period. This, by extension, implies that continued involvement in latter periods may not matter or be muted by other co-occurring risk factors that exist at heightened levels for crime “persisters” (Blumstein, Farrington, & Moitra, 1985; Moffitt, 1993).

Findings from the current research suggest that one third of the sample reported gang involvement prior to incarceration. Keeping in mind that this research was conducted in the mid-1990s when gangs were argued to be responsible for the rise in serious violent crime, it is important to note that the majority of younger incarcerated felons in fact were *not* involved in gangs at the period prior to their incarceration period. This finding is similar to prior research that finds that gang involvement is generally most common during early adolescence and few continue membership into early adulthood (F.-A. Esbensen, Deschenes, & Winfree, 1999; F. A. Esbensen & Huizinga, 1993). In another perspective, the fact that one third of the sample *did* report gang involvement is also noteworthy, especially when one considers the various types of individuals who ultimately go to prison. Although prisons disproportionately draw from urban environments where gangs, guns, and drugs are more prevalent, they also include a wider cross-section of individuals. Equally as important, these findings indicate that those involved in gangs were almost equally disbursed between unorganized and organized/criminal gangs; therefore, pre-incarceration gang involvement also varies. This finding provides the conceptual justification to subsequently understand the risk factors for different types of gang involvement, but also to consider how pre-incarceration gang involvement explains institutional behavior.

As anticipated, pre-incarceration gang involvement is also strongly associated with self-reported behavior while on the street. Gang-involved subjects included in this study reported significantly greater levels of crime involvement in the time period preceding incarceration including drug sales, drug buying, and gun carrying behavior. Moreover, prevalence was higher for those in organized/criminal gangs compared to unorganized gangs. The bivariate data also indicate that gang involvement is associated with, not surprisingly, greater exposure to increased levels of delinquent/crime involved friends and significantly increased levels of delinquent attitudes. Taken together, these results support the conclusion that gang involvement can facilitate association among individuals with highly delinquent attitudes and prior crime involvement, both of which in turn may increase the groups capacity to facilitate crime (Curry & Decker, 1997; Thornberry, et al., 1993). Moreover, this relationship is partially understood as a function of features of gangs themselves. That is, not all gang involvement is the same.

If individuals can be differentiated not only in terms of their involvement in gangs but also in terms of the involvement in different *types of gangs*, it becomes important to understand how background risk factors discriminate different types of involvement. The findings (see Table 2) indicate that with the exception of association with delinquent peers and delinquent attitudes, none of the independent variables were significantly related to type of pre-incarceration gang membership. Yet even among this sample of incarcerated felons, the findings indicated those involved with pre-incarceration in organized/criminal gangs reported significantly greater involvement with delinquent peers and delinquent attitudes compared to those with no gang association and those involved in unorganized gangs. Many of the remaining bivariate relationships evident in Table 1, however, washed out in the multivariate analysis. This implies that the saliency of other risk factors is muted by these two more dominate risk factors.

Although many of the background risk factors were not significantly related to pre-incarceration gang involvement, many were significantly correlated with serious forms of institutional misconduct. Youthful offenders involved in gangs during their time on the streets have more lengthy histories of prison misconduct, but such effects were specific to the *type* of gang involvement. Those involved in organized/criminal gangs sustained significantly more serious misconduct reports than those not involved in gangs. These findings should not be surprising as those involved in organized gangs also were more likely to report attitudes favorable toward violence and delinquent friendship networks, two factors that are also predictive of serious misconduct reports. These findings echo those of Griffin and Hepburn (2006) who also found gang involvement to be a significant predictor of prison misconduct. These findings build on this general pattern by establishing that pre-incarceration gang involvement, particularly in organized/criminal gangs, may help explain how individuals behave in prison environments. It is likely that those with pre-incarceration involvement in organized gangs might engage in misconduct in an effort to build respect in prisons (Fleisher & Decker, 2001), something often seen as critical to minimizing future victimization. This research also provides evidence that not all gang involvement is the same. As Ball and Curry (1995) note, normative features of particular gangs help explain differential levels of violence and other forms of crime across gangs. Future research should consider the relationship between administrative control decisions such as segregation strategies and how these may influence misconduct outcomes (Huebner, 2003; Useem & Reisig, 1999).

Findings from this research are also important in terms of what is *not* significant in addition to what *is* significant. Most of the risk factors generally found to be predictive of gang involvement were not significant among this sample of incarcerated felons. Family

incarceration, for example, was hypothesized to be a predictor of gang involvement. Removal of family members from the lives of young people for extended periods of time can be among a variety of stressors that cause problems in the lives of young people (McCubbin, Needle, & Wilson, 1985). Moreover, exposure to crime-involved family members may also result in modeling behavior on the part of young people. Finally, exposure to crime through other family members may also affect other deviants, particularly gang involved individuals. For this sample, however any such effects do not vary across levels of gang involvement. This finding stands in contrast to previous work by Thornberry et al. (2003), Howell and Egley (2005), and Esbensen et al. (2001) all of whom reported similar background measures to be significant predictors of gang membership among younger individuals. In addition, groups could not be differentiated based on pre-incarceration criminal involvement. Regardless of gang status, the groups reported similar levels of drug buying, drug selling, and gun carrying behavior. These findings are in contrast to that of Esbensen and colleagues (2001) who found that individuals involved in more organized, formal gangs were more deviant. It is likely that as those involved in serious crime age into early adulthood, the predictive nature of traditional criminological risk factors for gang involvement lessen.

The lack of statistical significance is likely a reflection of the nature of the study population. The study participants are, by definition, a high-risk sample of youthful offenders. With a few notable exceptions, it is possible that young, serious offenders may largely look the same in terms of theoretically relevant risk factors regardless of gang status. What becomes theoretically important to consider is the impact of life-course specific developmental issues. In many ways it is not surprising to learn that family and educational influences may be strongest during early developmental stages. There are social and cognitive processes that occur during

adolescence that make these particularly relevant domains of risk (Elliot & Menard, 1996; Farrington, 1992, 1995; Flannery, Huff, & Manos, 1998; Lahey, Gordon, Loeber, Stouthamer-Loeber, & Farrington, 1999). Their importance, however, may diminish over time as these domains no longer have such saliency, but may diminish over time as these influences wane. Overall, more research on gang memberships using more diverse adult samples may be useful.

Findings from this research also support the conclusion that relationships between delinquent attitudes, friendship networks and gang involvement remains stable across the life-course. Individuals reporting “high gang” involvement reported significantly higher levels of delinquent friends and delinquent attitudes when compared to respondents in the remaining two dependent variable conditions. For many, the violence associated with continued membership remains a central feature of gang life, even into adulthood (Fortune, 2004). Although most gangs are not exclusively or even predominately criminal enterprises (Klein, 1971; Klein & Maxson, 2006), violence and threats of violence remain central to continued gang membership (Decker & Van Winkle, 1996). Older members who have developed “street credibility” as tough, violent, and willing to engage violence at a moment’s notice often find their status challenged less often and violence less necessary as their reputation precedes them (Shelden, Tracy, & Brown, 2004). Yet a willingness to use violence is central to the street “code” that dominates many urban neighborhoods (Anderson, 1999). Taken together, delinquent attitudes and friends create social frameworks for which crime and violence is normative (Decker & Van Winkle, 1996) or at least not uncommon.

These findings present some evidence that gang involvement is not merely important from a retrospective (pre-incarceration) understanding of risk factors but also important from the perspective of prison environments. Prior research has found that gang involved inmates pose

significant security challenges in prisons (DeLisi, Berg, & Hochstetler, 2004; Griffin, 2007; Griffin & Hepburn, 2006). DeLisi et al. (2004) found gang involvement to be one of the most salient predictors of prison misconduct, although the effects were somewhat less than other risk factors such as age at incarceration and prior incarceration. Griffin and Hepburn (2006) reported that gang affiliation during early years of confinement was one of the strongest correlates of violent prison misconducts, net other individual risk factors. In the current research, the effects on prison misconduct were most apparent for those with high gang involvement.

Findings from this research should be considered in terms of several of the limitations in the overall research design. The sample selected for this research was relatively narrow snapshot of offenders identified at a particular point in time. In fact, the sample was specifically selected to focus on recently convicted youthful offenders. The sampling design may limit the applicability of these findings to a wider cross-section of offenders. Moreover, since the sample represents a conviction cohort, it is unclear if these findings would remain for similarly situated youthful offenders arrested in more contemporary time periods. Future researchers are encouraged to explore similar questions with additional cohorts of research subjects.

An additional limitation to this research is the measurement of gang involvement. The questions, for example, measured characteristics of gang involvement at or near the time of arrest. Future researchers are encouraged to not only assess pre-incarceration gang involvement, but to also understand post-incarceration gang involvement. It would be valuable to understand how pre-incarceration experiences with gangs are reconciled through prison gang involvement as recommended by Griffin and Hepburn (2006). For some, prison is a predictable stepping stone in an otherwise extensive criminal career. Prison may result in desistance from gang involvement or it may merely function to intensify preexisting ties. This process is important

both in terms of theory development but also in terms of public policy. Future researchers are also encouraged to consider other risk factors such as criminal history, and prior periods of incarceration. Both may be important in understanding gang involvement and prison misconduct.

The findings from the current research have important policy implications, particularly as it relates to the management of jails and prisons and reentry efforts. The idea that gang-involved individuals pose security threats to prisons is not new. Recognizing the significance of gang involvement, many correctional institutions have specific efforts geared toward segregating gang members and other “security threat groups (STG’s)” in order to identify and contain the problem. Griffin (2007), however, argues prisons managers must move beyond simply segregating and applying oppressive control strategies but instead focus on providing meaningful interventions. It is unclear what proportion of actual gang members would avail themselves of intervention/rehabilitative services while incarcerated, but recent evidence from California suggest merely attempting to “contain” the problem sometimes leads to disastrous outcomes and violence (Stateman, 2009). Research that explores how individuals with varying types of gang membership differ on theoretically salient risk factors offers the potential to help inform the development of group-specific intervention modalities.

In addition, the effects of gang membership extend beyond prisons walls. Huebner et al. (2007), for example, reported pre-incarceration gang involvement to be one of the strongest predictors of recidivism, among a sample of released inmates. Braga, Piehl, and Hureau (2008) similarly found gang involvement to be a significant predictor of recidivism for violent offenses. Scholars have argued that gang membership can hinder the development of a “prosocial identity” upon release from prison making positive reintegration more difficult (Braga, et al., 2008;

Huebner, Varano, & Bynum, 2007). Thus, it seems appropriate to expand our understandings about gang involvement hinders reentry efforts.

In building on this research, scholars are encouraged to more fully explore the more discrete processes that push individuals in and out of gangs, particularly within the prison environment. The “risk factor” approach to criminological research has identified a core group of variables that are consistently predictive of delinquency. Moreover, there is a growing body of evidence on interactions between risk factors, the effects of cumulative risk over the life-course, and the relative impact of certain risk factors at different points in the life-course. What remains unclear are the processes that underlie these relationships. McGloin (2007, p. 233) argued, for example, “we cannot ignore that gangs and gang members are embedded within multiple layers of context, and this complexity can shed light on the processes that generate behavior” (see Hughes, 2006). It is noteworthy, for example, that nearly two-thirds of the sample in the current study reported no gang membership although most came from communities with substantial gang problems. It would be useful for future research to give a voice to the mechanisms that bring individuals in and out of gangs in an effort to better devise “tactics [that] can disrupt, ameliorate, or address [these processes] in a productive manner (McGloin, 2007, p. 234)

REFERENCES

- Anderson, E. (1999). *Code of the street*. New York: W.W. Norton & Company.
- Arum, R., & Beattie, I. R. (1999). High school experience and the risk fo adult incarceration. *Criminology*, 37, 515-540.
- Ball, R. A., & Curry, G. D. (1995). The logic of definition in criminology: Purposes and methods for defining "gangs". *Criminology*, 33, 225-245.
- Battin-Pearson, S., Thornberry, T. P., Hawkins, J. D., & Krohn, M. D. (1998). *Gang membership, delinquent peers, and delinquent behavior*. Washington, DC.
- Battin, S. R., Hill, K. G., Abbott, R. D., Catalano, R. F., & Hawkins, J. D. (1998). The contribution of gang membership to delinquency beyond delinquent friends. *Criminology*, 36, 93-116.
- Bjerregaard, B. (2002). Self-definitions of gang membership and involvement in delinquent activities. *Youth & Society*, 34, 31-54.
- Blumstein, A., Farrington, D. P., & Moitra, S. (1985). Delinquency careers: innocents, desisters, and persisters. In M. Tonry & N. Morris (Eds.), *Crime and Justice: An Annual Review of Research* (Vol. 6, pp. 187-219). Chicago, IL: University of Chicago Press.
- Braga, A. A., Piehl, A. M., & Hureau, D. (2008). *Controlling violent offenders released to the community: An evaluation of the Boston Reentry Initiative*. Cambridge, MA.
- Camp, G. M., & Camp, C. G. (1985). *Prison gangs: Their extent, nature, and impact on prisons*. Washington, DC.
- Clemmer, D. (1940). *The Prison Community*. Boston: Christopher Publishing House.
- Curry, G. D. (2000). Self-reported gang involvement and officially recorded delinquency. *Criminology*, 38, 1253-1274.
- Curry, G. D., & Decker, S. H. (1997). What's in a name?: A gang by any other name isn't quite the same. *Valparaiso University Law Review*, 31, 501-514.
- Curry, G. D., & Decker, S. H. (2003). *Confronting gangs*. Los Angeles, CA: Roxbury.
- Decker, S. H. (1996). Collective and normative features of gang violence. *Justice Quarterly*, 13, 243-264.
- Decker, S. H., & Curry, G. D. (2000). Addressing key features of gang membership: Measuring the involvement of young members. *Journal of Criminal Justice*, 28, 473-482.
- Decker, S. H., & Van Winkle, B. (1996). *Life in the gang: family, friends, and violence*. Cambridge: Cambridge University Press.
- DeLisi, M., Berg, M. T., & Hochstetler, A. (2004). Gang members, career criminals and prison violence: further specification of the importation model of inmate behavior. *Criminal Justice Studies*, 17, 369-383.
- Elliot, D. S., & Menard, S. (1996). Delinquent friends and delinquent behavior: temporal and developmental patterns. In J. D. Hawkins (Ed.), *Delinquency and Crime* (pp. 28-67). New York: Cambridge University Press.
- Esbensen, F.-A., Deschenes, E. P., & Winfree, L. T. J. (1999). Differences between gang girls and gang boys: Results from a multisite survey. *Youth & Society*, 31, 27-53.
- Esbensen, F. A., & Huizinga, D. (1993). Gangs, drugs, and delinquency in a survey of urban youth. *Criminology*, 31, 565-589.

- Esbensen, F. A., Winfree, L. T., Jr, He, N., & Taylor, T. J. (2001). Youth Gangs and Definitional Issue: When is a Gang a Gang, and Why Does It Matter? *Crime Delinquency*, 47, 105-130.
- Farrington, D. P. (1985). Predicting self-reported and official delinquency. In D. P. Farrington & R. Tarling (Eds.), *Prediction in criminology* (pp. 150-173). Albany, NY: State University of New York Press.
- Farrington, D. P. (1989). Early predictors of adolescent aggression and adult violence. *Violence and Victims*, 4, 79-100.
- Farrington, D. P. (1992). Explaining the beginning, progress and ending of antisocial behavior from birth to adulthood. In J. McCord (Ed.), *Facts, framework, and forecasts* (Vol. 231-252). New Brunswick, NJ: Transaction Publishers.
- Farrington, D. P. (1995). The development of offending and antisocial behaviour from childhood: key findings from the Cambridge Study in Delinquent Development. *Journal of Child Psychology and Psychiatry*, 36, 929-964.
- Flannery, D. J., Huff, C. R., & Manos, M. (1998). Youth gangs: a developmental perspective. In T. P. Gullotta, G. R. Adams & R. Montemayor (Eds.), *Delinquent violent youth* (9 ed., pp. 175-204). Thousand Oaks: Sage Publications.
- Fleisher, M. S., & Decker, S. H. (2001). Overview of the challenge of prison gangs. *Corrections Management Quarterly*, 5, 1-9.
- Fortune, S. (2004). Prison gang leadership: traits identified by prison gangsters. *Journal of Gang Research*, 11, 25-46.
- Fowler, F. J. (1984). *Survey research methods*. Thousand Oaks, CA Sage.
- Fox, J. (1991). *Regression diagnostics* (Vol. 79). Thousand Oaks: Sage Publications.
- Gaes, G. G., Wallace, S., Gilman, E., Klein-Saffran, J., & Suppa, S. (2002). The Influence of Prison Gang Affiliation on Violence and Other Prison Misconduct. *The Prison Journal*, 82, 359-385.
- Griffin, M. L. (2007). Prison gang policy and recidivism: Short-term management benefits, long-term consequences. *Criminology and Public Policy*, 6, 223-230.
- Griffin, M. L., & Hepburn, J. R. (2006). The Effect of Gang Affiliation on Violent Misconduct Among Inmates During the Early Years of Confinement. *Criminal Justice and Behavior*, 33, 419-466.
- Harrell, E. (2005). *Violence by gang members, 1993-2005*. Washington, DC.
- Hill, K. G., Howell, J. C., Hawkins, J. D., & Battin-Pearson, S. R. (1999). Childhood risk factors for adolescent gang membership: results from the Seattle Social Development Project. *Journal of Research in Crime and Delinquency*, 36, 300-322.
- Howell, J. C. (2003). *Preventing and reducing juvenile delinquency*. Thousand Oaks: Sage.
- Howell, J. C., & Egley, A. J. (2005). Moving risk factors into developmental theories of gang membership. *Youth Violence and Juvenile Justice*, 3, 334-354.
- Huebner, B. M. (2003). Administrative determinants of inmate violence: A multilevel analysis. *Journal of Criminal Justice*, 31, 107-117.
- Huebner, B. M., Varano, S. P., & Bynum, T. S. (2007). Gangs, guns, and drugs: Recidivism among serious, young offenders. *Criminology and Public Policy*, 6.
- Huff, C. R. (1996). The criminal behavior of gang members and nongang at-risk youth. In C. R. Huff (Ed.), (2nd ed.). Thousand Oaks, CA: Sage Publications.
- Hughes, L. A. (2006). Studying youth gangs: The importance of context. In J. F. Short & L. A. Hughes (Eds.), *Studying youth gangs*. Lanham, MD: Alta Mira Press.

- Klein, M. W. (1971). *Street gangs and street workers*. Englewood Cliffs, NJ: Prentice Hall.
- Klein, M. W., & Maxson, C. L. (2006). *Street gang patterns and policies*. New York: Oxford University Press.
- Lahey, B. B., Gordon, R. A., Loeber, R., Stouthamer-Loeber, M., & Farrington, D. P. (1999). Boys who join gangs: a prospective study of predictors of first gang entry. *Journal of Abnormal Child Psychology*, 27, 261-276.
- Lizotte, A. J., Krohn, M. D., Howell, J. C., Tobin, K., & Howard, G. J. (2000). Factors influencing gun carrying among young urban males over the adolescent-young adult life course. *Criminology*, 38, 811-834.
- Lizotte, A. J., Tesoriero, J. M., Thornberry, T. P., & Krohn, M. D. (1994). Patterns of adolescent firearms ownership and use. *Justice Quarterly*, 11, 51-74.
- Long, J. S. (1997). *Regression Models for Categorical and Limited Dependent Variables*. Thousand Oaks, CA: Sage.
- McCubbin, H. I., Needle, R. H., & Wilson, M. (1985). Adolescent health risk behaviors: Family stress and adolescent coping as critical factors. *Family Relations*, 34, 51-62.
- McGloin, J. M. (2007). The continued relevance of gang membership. *Criminology & Public Policy*, 6, 231-240.
- Moffitt, T. E. (1993). Adolescence-limited and life-course-persistent antisocial behavior: a developmental taxonomy. *Psychological Review*, 100, 674-701.
- Sabol, W. J., West, H. C., & Cooper, M. (2009). *Prisoners in 2008*. Washington, DC.
- Shelden, R. G., Tracy, S. K., & Brown, W. B. (2004). *Youth gangs in American society* (3rd ed.). Belmont, CA: Wadsworth Publishing.
- Stateman, A. (2009). California's prison crisis: Be very afraid. In *Time*.
- Sykes, G. (1958). *The Society of Captives: A Study of a Maximum Security Prison*. Princeton, N.J.: Princeton University Press.
- Thornberry, T. P., Huizinga, D., & Loeber, R. (2004). Causes and correlates studies: Findings and policy implications. *Juvenile Justice*, 9, 3-19.
- Thornberry, T. P., Krohn, M. D., Lizotte, A. J., & Deborah, C.-W. (1993). The role of juvenile gangs in facilitating delinquent behavior. *Journal of Research in Crime and Delinquency*, 30, 55-87.
- Thornberry, T. P., Krohn, M. D., Lizotte, A. J., Smith, C. A., & Tobin, K. (2003). *Gangs and delinquency in developmental perspective*. New York: Cambridge.
- Thornberry, T. P., Lizotte, A. J., Krohn, M. D., Farnworth, M., & Jang, S. J. (1994). Delinquent peers, beliefs, and delinquent behavior: a longitudinal test of interactional theory. *Criminology*, 32, 47-79.
- Useem, B., & Reisig, M. D. (1999). Collective Action in Prisons: Protests, Disturbances, and Riots. *Criminology*, 37, 735-760.
- Wacquant, L. (2000). The New 'Peculiar Institution': On the Prison as a Surrogate Ghetto. *Theoretical Criminology*, 4, 377-389.
- Watkins, A. M., Huebner, B. M., & Decker, S. H. (2008). Patterns of Gun Acquisition, Carrying, and Use Among Juvenile and Adult Arrestees: Evidence from a High-Crime City. *Justice Quarterly*, 25, 674 - 700.

Appendix A. Variable descriptions.

Variable	Description
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Gang Involvement and Prison Behavior

Dependent Variable	
Gang Involvement	Tricotomous measure. Final coding: 0=respondents were not a member of a gang when on the street; 1=involvement in unorganized gang; 2= involvement in organized gang that had rules/codes that made individuals carry a gun and/or gang organized members to commit crime.
Serious Misconduct	Count of serious misconduct tickets sustained during first two years of incarceration
Independent Variables	
NonWhite	Dichotomous variable: 1=nonwhite; 0=white.
Age	Age at time of incarceration.
Family Incarceration	Dichotomous variable reflects a prior incarceration for any gun-involved offense. Respondents were asked, "Have any of your family members ever been incarcerated or locked up for possessing a gun or using a gun to commit a crime?" A value of "0" reflects "No," and "1" "yes."
Concentrated Disadvantage	Composite measure of percent county residents on public assistance, percent below poverty line, percent unemployed, percent black, and percent living in female headed household. One factor extracted with a chronbach's alpha of .76
Drug Buyer	Ordinal level variable that measures status as drug buyer at time of arrest. Respondents asked, "When on the street, how often did you purchase drugs?" Responses include: (0) Never purchased drugs; (1) Once/twice in lifetime; (2) Few times a year; (3) Few times a month; (4) Few times a week; (5) Almost every day.
Drug Seller	Ordinal level variable that measures status as drug dealer at time of arrest. Respondents asked, "When on the street, how often did you sell drugs?" Responses include: (0) Never purchased drugs; (1) Once/twice in lifetime; (2) Few times a year; (3) Few times a month; (4) Few times a week; (5) Almost every day.
Gun Carrying Behavior	<i>Gun carrying behavior</i> represents frequency of gun carrying in the time preceding incarceration. Respondents were asked, "While on the street, how often did you carry a firearm?" Variable coded as "1" if any indication of gun carrying behavior, and "0" for no gun carrying behavior.
Delinquent Friends	Three-item additive scale includes measures of friend involvement in firearm carrying and use. The indicators include, "When on the street, how many of your friends carry firearms?," "How many of your friends sell guns?," and "How many of your friends have been arrested for possession or use of a gun in a crime?" The responses included: 0="None," 1="Some," 2="Most," 3="All." Items were summed to make a composite measure.
Delinquent Attitudes	Four item factor including: "It is ok to shoot someone who doesn't belong in the neighborhood," "It is ok to shoot a person if they disrespect you," "It is ok to shoot a person if they have done something to hurt you," and "It is ok to shoot a person if that's what it takes to get something you want." Responses include: (1) Strongly disagree; (2) disagree; (3) agree; (4) strongly agree. One factor extracted with chronbach's alpha of .88.

Table 1. Bivariate analysis

	Total Sample (n=504)		No Gang Involvement (n=325)		Unorganized Gang Involvement (n=94)		Organized Gang Involvement (n=85)		<i>Mean Comparison Tests</i>	
	Mean	Std. Dev	Mean	Std. Dev	Mean	Std. Dev	Mean	Std. Dev	<i>f</i>	<i>Sig.</i>
Misconducts (Serious Offenses)	2.63	4.32	2.38	4.15	2.79	3.67	3.44	5.45	2.11	0.12
Nonwhite	0.53	0.50	0.54	0.50	0.48	0.50	0.56	0.50	0.77	0.46
Age at Incarceration*	20.50	1.81	20.71	1.83	20.15	1.71	20.09	1.78	6.12	0.00
Education (Years Completed)	9.97	1.28	10.02	1.28	9.95	1.23	9.81	1.30	0.96	0.38
Family Prior Incarceration	0.23	0.42	0.22	0.41	0.22	0.42	0.28	0.45	0.79	0.46
Drug Buyer*	3.45	1.87	3.11	1.95	3.84	1.68	4.30	1.31	17.24	0.00
Drug Seller*	2.96	2.12	2.50	2.13	3.66	1.94	3.96	1.69	24.18	0.00
Gun Carrying Behavior*	1.12	0.89	0.91	0.90	1.38	0.82	1.62	0.65	29.37	0.00
Delinquent Friends*	4.19	2.52	3.53	2.51	4.84	2.16	5.99	1.80	41.86	0.00
Delinquent Attitudes*	0.00	0.96	-0.27	0.81	0.20	0.99	0.81	0.98	41.86	0.00
Concentrated Disadvantage	2.46	1.96	2.41	1.95	2.61	2.04	2.51	1.92	0.38	0.68

* Groups significantly different $p < .001$

Table 2. Multinomial logistic regression (Pre-Incarceration Gang Involvement)

	Unorganized Gang Involvement†			Organized Gang Involvement†		
	B	Std. Error	Odds Ratio	B	Std. Error	Odds Ratio
Constant	-0.54	1.78		-1.72	2.01	
<i>Demographic Characteristics</i>						
Nonwhite (reference=white)	0.51	0.27	1.67	0.08	0.31	1.09
Age at Incarceration	-0.10	0.07	0.91	-0.05	0.09	0.95
<i>Other Background Factors</i>						
Education	0.04	0.10	1.04	-0.02	0.12	0.78
Family Incarceration (reference=1)	-0.04	0.30	0.96	-0.30	0.32	0.75
Concentrated Disadvantage	0.05	0.07	1.05	-0.10	0.08	0.90
<i>Pre-Incarceration Criminal Involvement</i>						
Drug Buyer	-0.01	0.08	1.01	0.11	0.11	1.11
Drug Seller	0.15	0.08	1.16	0.04	0.09	1.04
Gun Carrying Behavior (reference=1)	-0.63	0.36	0.53	-0.76	0.55	0.47
<i>Other Risk Factors</i>						
Delinquent Friends	0.07	0.07	1.07	0.31**	0.10	1.37
Delinquent Attitudes	0.24	0.16	1.27	0.72***	0.16	2.05
<i>Model Statistics</i>						
Chi-Square	139.2					
Degrees of Freedom	20					
Nagelkerke R^2	0.29					

† Reference category is "No Gang Involvement"

** p<.01; ***p<.001

Table 3. Multivariate Analysis of Prison Misconduct (Poisson Distribution)

	Model 1		Model 2	
	B	Std. Error	B	Std. Error
Constant	2.79***	0.38	2.72***	0.38
<i>Demographic Characteristics</i>				
Nonwhite (reference=white)	0.34***	0.06	0.34***	0.06
Age at Incarceration	-0.05**	0.02	-0.04**	0.02
<i>Other Background Factors</i>				
Education	-0.14***	0.02	-0.13**	0.03
Family Incarceration (reference=1)	-0.07	0.07	-0.07	0.07
Concentrated Disadvantage	0.08***	0.02	0.08***	0.02
<i>Pre-Incarceration Criminal Involvement</i>				
Drug Buyer	-0.01	0.02	-0.01	0.02
Drug Seller	0.01	0.02	0.01	0.02
Gun Carrying Behavior	-0.28***	0.08	-0.29**	0.08
<i>Other Risk Factors</i>				
Delinquent Friends	0.04*	0.02	0.03*	0.02
Delinquent Attitudes	0.14***	0.03	0.12**	0.03
<i>Gang Involvement (reference = no gang involvement)</i>				
Unorganized Gang Involvement(Binary)			0.10	0.08
Organized Gang Involvement (Binary)			0.21**	0.08

* p<.05; **p<.01; ***p<.001

¹ Although the data are nearly 15 years old, it represents a cohort of individuals incarcerated near the “epidemic” of gang problems in the United States (Howell, 2003).

² The department of corrections identified 929 eligible inmates meeting the criteria identified. From that list, 525 individuals agreed to participate in the research study for a response rate of 57%. An additional twenty-one individuals were excluded from the final analysis due to substantially incomplete surveys. While there is no absolute standard for a minimum response rate, the study response rate raises some potential concerns with selection bias. For example, Fowler (1984) recommends use of the 75% standard that is generally recognized by the Office of Management and Budget as the target response rate for federal research initiatives. Although concerns remain with possible selection bias, supplementary analyses revealed that, apart from age, there is little difference between the study sample and the statewide institutional population in terms of race, ethnicity, and instant offense.

³ Misconduct data was collected several years after the original surveys were administered. For purposes of this analysis, the data was limited to the first two years of incarceration.

⁴ The sample included 235 African American and 34 Hispanic men. Data on ethnicity were not collected separately from information on race. The small sample of Hispanic men precluded sub-group analysis by Hispanic ethnicity.

⁵ Measured using Bonferroni post-hoc tests.

⁶ Multicollinearity diagnostic tests were run on all multivariate models and the findings indicate no problems. None of the variance inflation factor (VIF) scores exceed the 5.0 general standard (Fox, 1991, p. 12).