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**THE CONTRIBUTION OF GANG MEMBERSHIP TO DELINQUENCY
BEYOND THE INFLUENCE OF DELINQUENT PEERS**

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INTRODUCTION AND BACKGROUND

Gang membership intensifies delinquent behavior. From the earliest to the most recent investigations, criminologists have consistently found that, when compared to non-gang members, gang members are far more involved in delinquency, especially serious and violent delinquency. Associating with delinquent peers also contributes to delinquency. Indeed, peer delinquency is one of the strongest predictors of delinquency that researchers have identified. But the effect of belonging to a gang has not been separated from the effect of simply associating with delinquent peers.

Some gang researchers have suggested that gang membership constitutes a qualitatively different experience than merely associating with delinquent peer groups. Joan Moore, for example, states that "...gangs are no longer just at the rowdy end of the continuum of local adolescent groups—they are now really outside that continuum" (1991:132). Klein makes a similar point: "...street gangs are something special, something qualitatively different from other groups and from other categories of law breakers" (1995:197). Although these and other gang researchers view gangs as "qualitatively different," until recently, no study had attempted to disentangle the influence of gang membership from the effects of delinquent peers on involvement in delinquency.

This past year, under funding from the Office of Juvenile Justice and Delinquency Prevention (OJJDP), the Seattle Social Development Project and the Rochester Youth Development Study both answered the question, "Does gang membership contribute to delinquency above and beyond the influence of associating with delinquent peers?"

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Findings from the two projects are presented below, beginning with brief overviews of each study and the methods used.

SEATTLE SOCIAL DEVELOPMENT PROJECT

Project Overview

The Seattle Social Development Project (SSDP) is a longitudinal study guided by the social development model (Catalano and Hawkins, 1996). The study has followed a multiethnic urban sample of 808 children since they entered the fifth grade in 1985. The sample includes nearly equal numbers of males ($n=412$) and females ($n=396$). Slightly less than half identified themselves as European Americans (46%). African Americans (24%) and Asian Americans (21%) also made up substantial portions of the sample. The remaining youths were Native American (6%) or of other ethnic groups (3%). Forty-six percent of respondents' parents reported a maximum family income under \$20,000 per year in 1985, and over half of the sample (52%) participated in the National School Lunch/School Breakfast Program at some point in the fifth through seventh grade, indicating that they came from families in poverty. The analyses presented in this Bulletin are based on surveys conducted when youths were age 13 (654), age 14 (778), and age 15 (781). Data were obtained from the youths, as well as King County court records.

Methods

Two analysis strategies were conducted with the SSDP data to determine whether gang membership contributes to delinquency above and beyond associations with delinquent peers. In the first set of analyses, the sample was divided into three groups: Gang Members, Youths with Delinquent Peers, and Youths with Non-Delinquent Peers, as defined below.

- **Gang Members**—respondents who indicated that they were a member of a gang in the past year and who identified the gang by name.
- **Youths with Delinquent Peers**—respondents who were not members of a gang in the survey year but who reported that two or more of their three best friends had been arrested or done things that could get them in trouble with the police.
- **Youths with Non-Delinquent Peers**—respondents who were not members of a gang in the survey year and who reported that fewer than two of their three best friends had been arrested or done things that could get them in trouble with the police.

These three groups were then compared on various measures of delinquency and substance use to determine whether significant differences exist between the groups on their rates of offending. The respondent's Individual Offense Rate (IOR), which is the actual frequency of committing the offenses listed below, is used as the measure of delinquency and substance use.

Violent IOR—Self-Report	Hitting teacher, hitting to hurt, picking a fight, using force to get things, throwing objects
Violent IOR—Court Report	Simple assault, aggravated assault, hit and run, murder, threat, robbery, sex offense, disorderly conduct, using a weapon
Non-Violent IOR—Self-Report	Taking something worth more than \$50, taking something worth between \$5 and \$50, breaking into a house, destroying property, graffiti, selling illegal drugs
Non-Violent IOR—Court Report	Arson, reckless arson, burglary, larceny, motor-vehicle theft, trespassing, prostitution, stolen property, selling illegal drugs
General IOR—Self-Report	Combined self-reported violent and non-violent items
General IOR—Court Report	Combined court-reported violent and non-violent items
Drug Selling	Past year frequency
Alcohol Use	Past month frequency
Binge Drinking	Past month incidence of drinking five or more drinks in a row
Marijuana Use	Past year frequency
Illicit Drug Use	Past year frequency of using crack, other forms of cocaine, amphetamines, tranquilizers, sedatives, narcotics, psychedelics

Results

The analysis was done cross-sectionally (comparing age 15 group status with age 15 outcomes) as well as longitudinally (comparing age 14 group status with age 15 outcomes). Results from the cross-sectional comparison at age 15 are presented in Figures 1, 2 and 3. Results from the longitudinal comparison are similar to the cross-sectional results and are therefore not presented. Figure 1 presents the mean past year Individual Offense Rates for self-reported delinquency measures; Figure 2 presents court-recorded delinquency measures. Figure 3 presents the mean past year rates for self-reported substance use and selling measures. An asterisk has been placed next to those variables for which gang members had significantly higher mean delinquency rates than youths with delinquent peers.

Figure 1. Mean Past Year Self-Reported Individual Offense Rates (IOR) at age 15 for Gang Members and Youths with Delinquent Peers

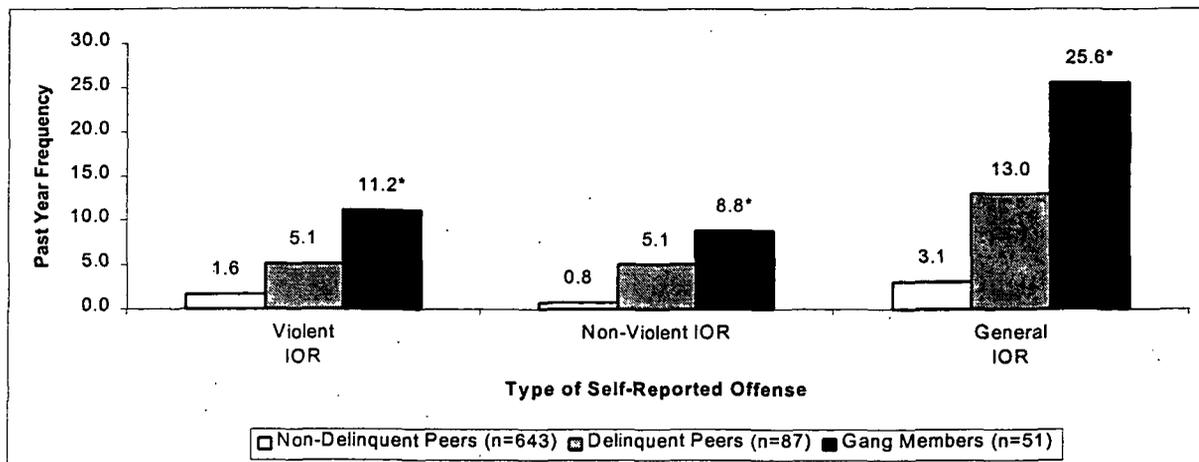


Figure 2. Mean Past Year Court-Recorded Individual Offense Rates (IOR) at age 15 for Gang Members and Youths with Delinquent Peers

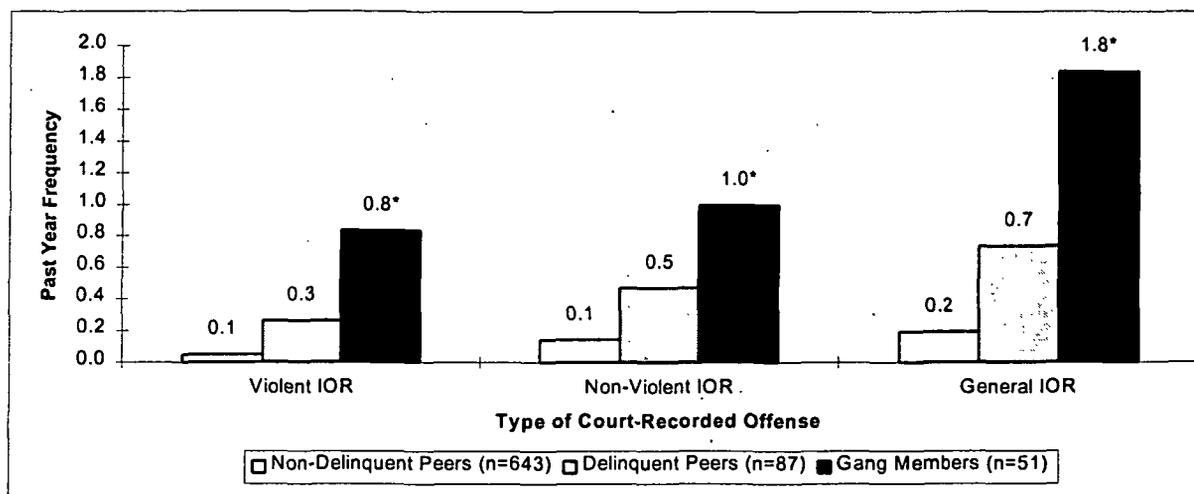
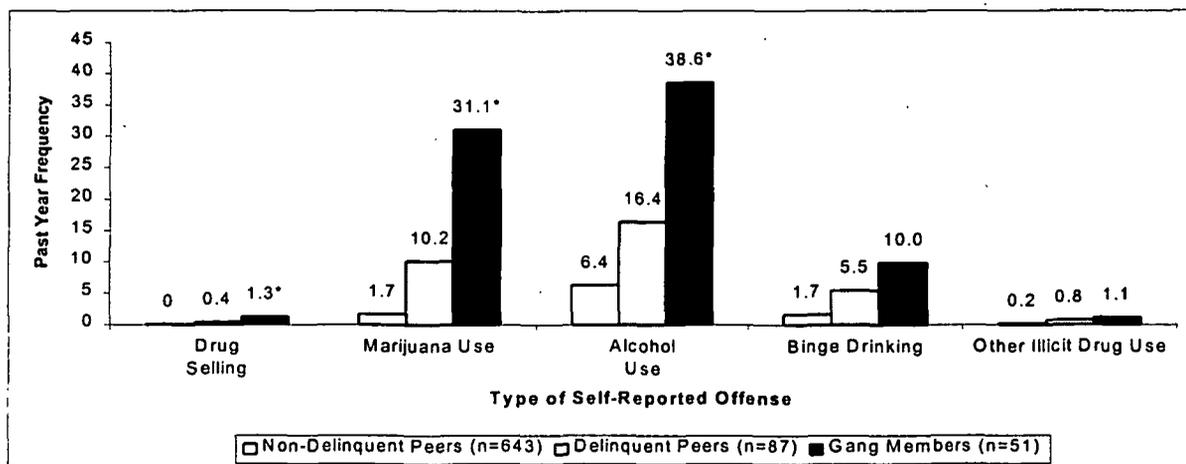


Figure 3. Mean Past Year Self-Reported Substance Use and Selling Rates at age 15 for Gang Members and Youths with Delinquent Peers.



* An asterisk indicates that Gang Members are significantly higher than Youth with Delinquent Peers (t-test, p<.05)

A consistent pattern of offending was found across the three status groups for all 11 delinquency and substance use measures. Youths with non-delinquent peers had the lowest rates of offending; youths with delinquent peers had higher rates; and gang members had the highest rates of offending on all measures of delinquency and substance use. For example, as can be seen in Figure 1, youths with non-delinquent peers committed an average of 1.6 self-reported acts of violent delinquency in the past year, while youths with delinquent peers committed an average of 5.1 violent acts, and gang members committed more than 11 violent acts in the past year. For this analysis we were most interested in comparing the offense rates of gang members to those of non-gang youths with delinquent peers. We therefore conducted t-tests to determine whether observed differences in offending between gang members and non-gang youth with delinquent peers were statistically significant. Significance tests confirmed that gang members had significantly higher offense rates on nine of the 11 delinquency and substance use measures. Age 15 gang members committed significantly more of the following acts of delinquency and substance use than youth with delinquent peers (indicated by an asterisk in Figures 1, 2 and 3):

- Self-reported acts of violent, non-violent and general delinquency
- Court-reported acts of violent, non-violent and general delinquency
- Drug selling
- Marijuana use
- Alcohol consumption

In summary, gang membership is associated with more participation in various delinquent and substance use behaviors even when compared with youths with delinquent peers. It would thus appear that gang membership does contribute to delinquency over and above associations with delinquent peers. However, increased delinquency rates among gang members may be due in large part to associations with their own delinquent peers. The first analysis did not control for the potential effects of the gang member's own delinquent peers.

The second analysis strategy therefore employed structural equation modeling to examine the impact of gang membership on delinquency, controlling for associations with delinquent peers. In this analysis, the effect of gang membership on self- and court-reported delinquency at age 15 was modeled, controlling for the proportion of delinquent peers at ages 14 and 15, as well as prior delinquency at age 13. If gang membership provides a unique contribution to delinquency above and beyond that made by

associations with delinquent peers and prior delinquency, then the path coefficients leading from gang membership to delinquency should be significant in the causal models presented in Figures 4 and 5.

Figure 4. Structural Equation Model: Self-Reported General Delinquency as Outcome Measure

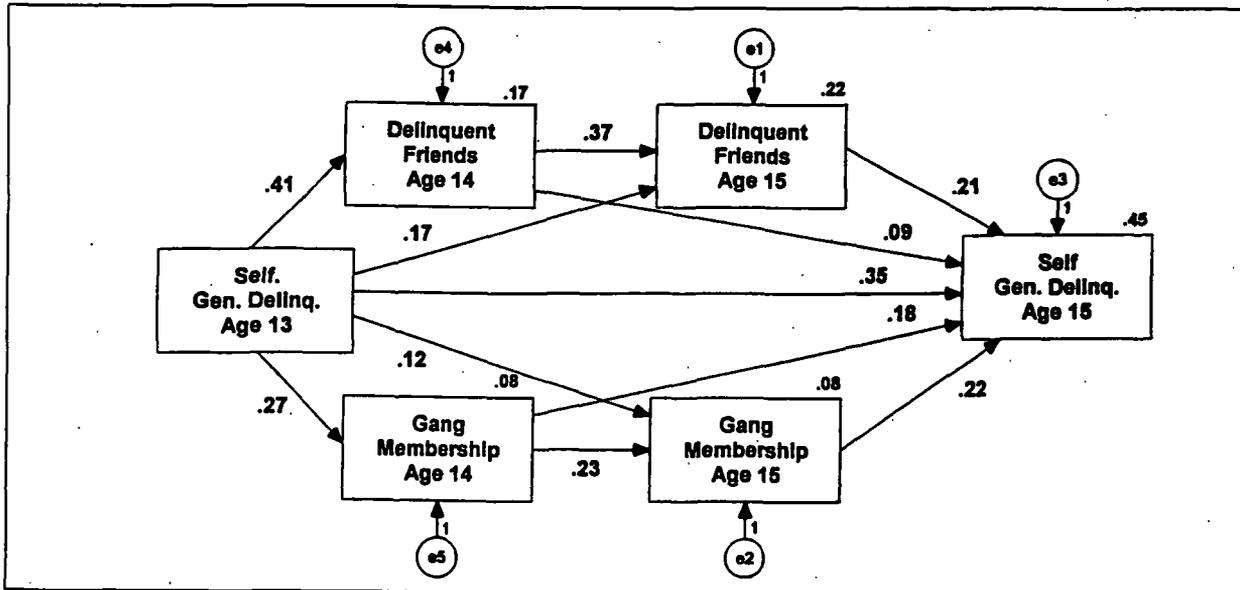
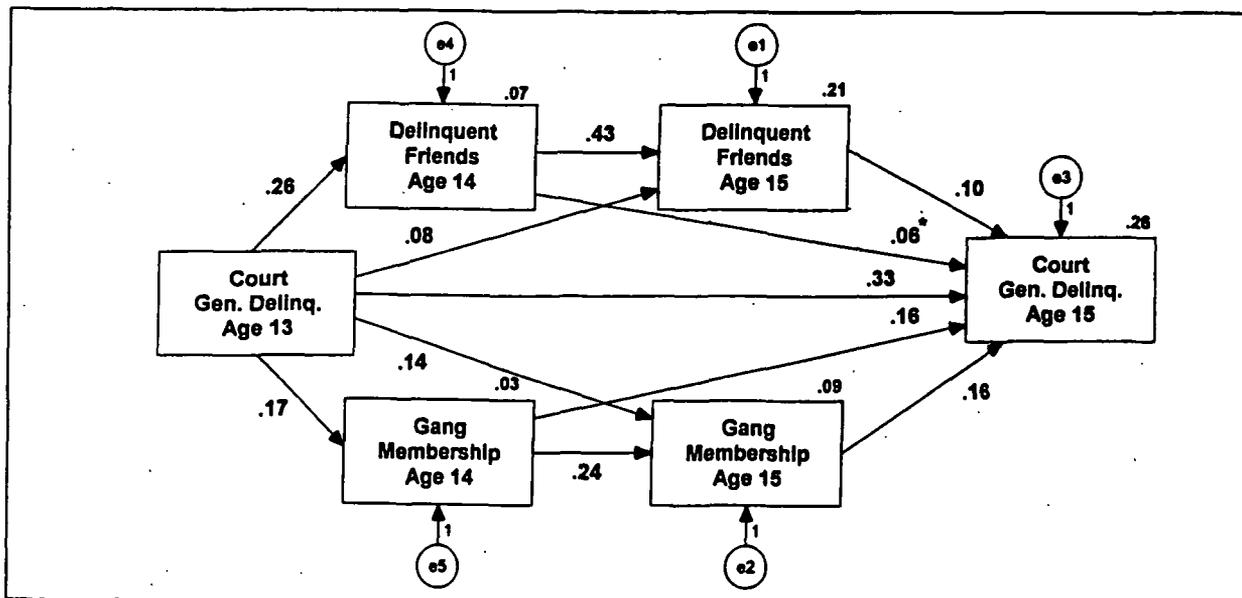


Figure 5. Structural Equation Model: Court-Recorded General Delinquency as Outcome Measure



* All path coefficients are significant at $p < .05$ or better, with the exception of those marked by an asterisk. The R^2 (explained variance) for each predicted variable is reported in the upper right hand corner of the square. Goodness-of-fit measures indicate acceptable fitting models.

Structural equation modeling revealed that gang membership contributed to delinquency above and beyond associations with delinquent peers and prior delinquent behavior. As seen in Figure 4, the path from gang membership at ages 14 and 15 to self-reported general delinquency at age 15 was significant and direct, even when the proportion of delinquent peers and prior delinquency were included in the model (path coefficients of .18 and .22, respectively, $p < .01$). Similar patterns were found for court-recorded delinquency, as shown in Figure 5.

Overall, respondents in the Seattle Social Development Project who are gang members always had the highest rates of delinquency and substance use. For 9 of the 11 delinquency and substance use measures gang members had significantly higher rates than youths with delinquent peers. Additionally, structural equation modeling revealed that gang membership contributed to delinquency, even after accounting for the effects of delinquent peers and prior delinquency.¹

ROCHESTER YOUTH DEVELOPMENT STUDY

Project Overview

The Rochester Youth Development Study (RYDS) is a longitudinal study of the development of delinquency and drug use, guided by interactional theory (Thornberry, 1987) and social network theory (Krohn, 1986). The study has followed a sample of 1,000 urban adolescents, initially selected in 1988 when they were in either the seventh or eighth grades of the Rochester, New York public schools. They have been followed until the present when they are 22 years of age on average. Seventy-five percent of the sample is male and 25% is female. The sample is composed primarily of minority group members: 68% African American, 17% Hispanic (overwhelmingly Puerto Rican), and 15% white. Although the sample overselected youth at elevated risk for serious delinquency, the results presented here are weighted to represent the entire population of 7th and 8th grade students in the Rochester public schools.

Methods

Over the course of the middle school and high school years, each student was interviewed at six-month intervals. The data analyzed in this Bulletin are taken from the

¹ A complete description of these analyses can be found in Battin, Hill, Abbott, Catalano and Hawkins (forthcoming in *Criminology*).

fourth interview when the subjects were 14.9 years old, on average. Age 15 is near the peak age of involvement for both gang membership and involvement in delinquency.

An analysis strategy similar to that employed with the SSDP data is used to examine the RYDS data. First, the sample is divided into those respondents who indicated that they were a member of a youth gang during the six-month time period since the previous interview (gang members) and those who were not (non-members). Second, those respondents who were not gang members during this period were then divided into four quartiles based on their scores on the delinquent peer associations scale. On this scale, each respondent reports how many of his or her peers were involved in eight delinquent activities using a 4-point response scale ranging from "none of them" to "most of them." The lowest quartile contains 25% of the respondents who have the least deviant, most prosocial peers; the highest quartile represents respondents who have the most deviant, least prosocial peers. The five groups of respondents are compared on four measures of the incidence of self-reported delinquency and involvement in drugs (described below). Comparisons are made first for males then for females.

Self-Reported Delinquency Indices	
General Delinquency	32-item index of past year frequency ranging from running away from home to assault with a weapon (includes measures of violent delinquency and drug use)
Violent Delinquency	Past year frequency of assault with a weapon, assault without a weapon, throwing objects at people, robbery, rape
Drug Selling	Past year frequency of selling marijuana and hard drugs
Drug Use	Past year use of marijuana, inhalants, LSD, cocaine, crack, heroin, angel dust, tranquilizers, downers, uppers

Results

The data in Figure 6 compare the male gang members with non-members in terms of the incidence of general delinquency, violent delinquency, drug sales, and drug use. For the non-gang members, respondents who score higher on the associations with delinquent peers scale have higher offense rates for all four types of offenses. More importantly, however, respondents who are gang members always have the highest rates of offending.

Figure 6. Mean Past Year Self-Reported Delinquency Rates at age 15 for Gang Members and Non-Members With Delinquent Peers: Males. (Non-members are divided into quartiles of association with delinquent peers.)

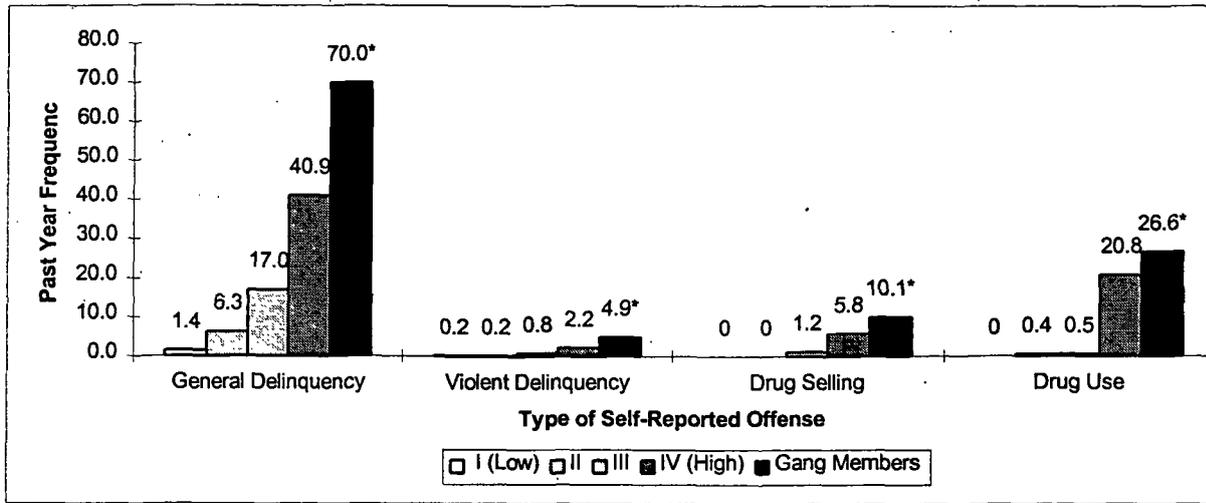
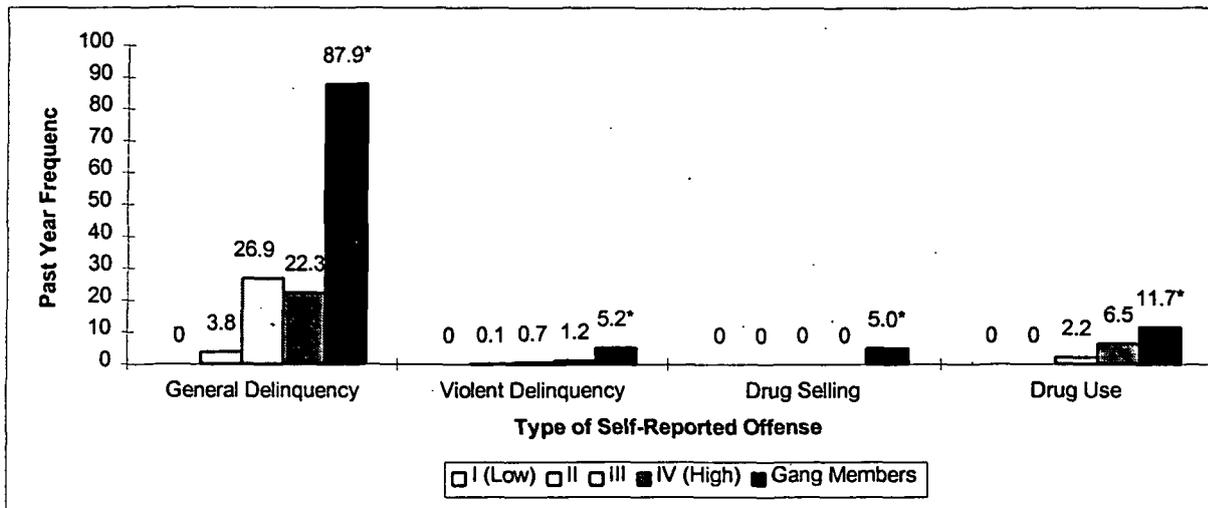


Figure 7. Mean Past Year Self-Reported Delinquency Rates at age 15 for Gang Members and Non-Members With Delinquent Peers: Females



* An asterisk indicates that Gang Members are significantly higher than Non-Members in the highest quartile of association with delinquent peers (t-tests, $p < .05$)

The results of the comparison of offense rates between the gang members and non-gang members with delinquent peers in Rochester provide a strikingly similar picture to that obtained with the Seattle data. Although associating with delinquent peers is related to offense rates, being a member of a gang facilitates delinquency over and above that effect. For example, for violent delinquency for the male respondents, there is an increase in the level of offending across the four categories of non-gang members, from .20 for those with few delinquent peers to 2.2 for those who have the highest level of

association with delinquent peers. But, the mean for gang members, 4.9, is twice as high. This is significantly different from the mean for the non-gang members in the highest quartile of delinquent peers. This pattern is also observed for general delinquency, drug sales, and drug use.

Figure 7 presents the same relationships for female respondents. Female involvement in delinquency and drugs is lower than male involvement and, as a result, the patterns are a little less consistent here, especially for the non-gang members. The most important comparison, however, is between the female gang members and non-members in the highest quartile. In all cases, the gang members report significantly higher involvement scores as compared to the non-members. There is a particularly striking effect for drug sales where, among the female respondents, only the gang members sell drugs.

To provide a more rigorous examination of whether gang membership has an effect on offense rates over and above associations with delinquent peers, we examine a multivariate equation in which several variables in addition to gang membership are used to predict violent delinquency. These additional variables are included in the equation to examine the possibility that gang members have elevated rates of violence not because of a gang facilitation effect, but because of the accumulation of risk in their backgrounds. It may not be gang membership that brings about the observed increase in violence; the increase may instead be caused by risk factors that are related to gang membership and to delinquency. The antecedent variables are drawn from different domains and are among the strongest risk factors for gang membership and for violent delinquency. They include family poverty level, parental supervision, commitment to school, experiencing negative life events, prior involvement in violence, and associating with delinquent peers. The risk factors are measured at the wave prior to the year of gang membership. The analysis is limited to males because of the relatively small number of female gang members at later waves.

The results in Table 1 suggest that even when family poverty level, parental supervision, commitment to school, experiencing negative life events, prior involvement in violence, and associating with delinquent peers are held constant, gang membership exerts a strong impact on the incidence of violent behavior. The standardized coefficient for gang membership is .28, approximately the same magnitude of coefficients observed

for prior violence (.27). Indeed, gang membership has the largest impact on violent behavior of any of the variables included in the equation.²

Table 1. The Impact of Gang Membership and Control Variables on the Incidence of Self-Reported Violence, Males Only (Standardized OLS Regression Coefficients)

Risk Factors	Self-Reported Violence at Year 2 (logged)^a
Gang Membership	.28*
Family Poverty Level	-.06*
Parental Supervision	-.04
Commitment to School	-.02
Negative Life Events	.12*
Prior Violence	.27*
Delinquent Peers	.06
R²	.34
n	484
^a Year 2 violence combines data from Waves 4 & 5; risk factors are from Wave 3.	
*p < .05.	

Summary

Although research has consistently found that gang members, as compared to non-members, are more involved in serious and violent delinquent offenses, the effect of belonging to a gang has not been separated from the effect of simply associating with delinquent peers. Longitudinal data from both the SSDP and the RYDS provide strong and consistent evidence that being a member of a gang increases the rates of involvement in a variety of deviant behaviors over and above the impact of having delinquent peers. Indeed, gang membership significantly predicts violent delinquency even when other predictors of both delinquency and gang membership are controlled.

The consistency and strength of the results within each project are convincing evidence concerning the impact of gang membership on deviant behavior. Even more impressive, however, is the consistency of the results across the two projects. The SSDP and the RYDS are conducted in cities that differ in their histories and demographic makeup. For example, the majority of RYDS respondents are African American (68%), while the modal category for SSDP is European Americans (46%). The projects also used somewhat different measures and include somewhat different variables in the multivariate equations. Yet both projects come to the same fundamental conclusion. The fact that both projects generated results that lead to the same interpretation increases our confidence that the observed effect of gang membership on involvement in delinquency is not unique to one city or to one ethnic group.

² More detailed information on these results can be found in Thornberry (forthcoming) and in Thornberry and Krohn (forthcoming). In the latter report more refined measures of highly delinquent peer groups (e.g., using deciles rather than quartiles) generate results a little more muted than those reported here.

Implications for Theory and Practice

- **There are national implications from the two studies.** The consistency of results and conclusions obtained in the two studies which were conducted in two diverse communities suggest that similar dynamics are likely to be operating in other areas.
- **Gang membership has an independent contributing role in the etiology of delinquency over and above other risk and protective factors.** These findings point to the tremendous importance that street gangs have for understanding the dynamics of delinquency, especially serious and violent delinquency.
- **Preventing youths from joining gangs holds promise for preventing and reducing crime and substance use.** Since gangs have such a major effect on delinquent behavior, even over and above that of associations with delinquent peers, prevention efforts aimed at reducing delinquency and substance use should seek to prevent and reduce gang involvement.

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