YOUTH GANG INVOLVEMENT AND DELINQUENCY[1]

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ABSTRACT

This paper presents results on the relationship between involvement in youth gangs and delinquency among inner-city minority, adolescent males. Delinquency is measured from official records and self-report. Rasch modeling and scale construction are employed to derive interval-level variables measuring gang involvement and delinquency. Contingency tables are used to describe ideal typical patterns of gang involvement and delinquency for the two populations of adolescents. Based on exploratory multiple regression analyses, separate models are developed for Hispanic and African American respondents. Two-stage least squares and path modeling in LISREL are used to build statistically acceptable path models of gang involvement and delinquency using ethnic-community-specific sets of exogenous variables. For both populations, gang involvement is a significant predictor of delinquent behavior. For Hispanics, age, two self-esteem measures, a measure of anomie, and exposure to drug distribution in the community are statistically significant exogenous variables. For African Americans, exposure to gang influences in school and family, and social exposure to drug distribution are statistically significant exogenous variables. The percentages of the variation in gang involvement explained by the models are 38.8% for Hispanic youths and 32.3% for African American youths. The percentages of the variation in delinquency explained by the models are 37.7% for Hispanic youths and 27% for African American youths.

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For many, youth gangs and delinquency have become synonymous. This has not always been the case. Though delinquent and criminal gangs were certainly included, the 1,313 gangs studied by Frederick Thrasher (1927) were not necessarily criminal. Thrasher's gang grew out of the childhood play group, lived in the interstitial niches of the social world, and thrived on conflict. Doc and Willam F. Whyte's (1943) other Corner Boys were more involved in bowling, a drama club, and even local politics than in illegal activity. The change comes in the fifties. For Cohen (1955), gangs are explicitly delinquent groups. Specifically defining the gang as a group with a criminal focus has been attributed by Hagedorn (1988) to Klein (1971). Spergel (1964) describes gangs as one among several varieties of delinquent subculture and describes youth gangs that vary in social structure and function across neighborhood settings. For Suttles (1968), gangs are part of the social order of impoverished neighborhoods. Curry and Spergel (1988) explicitly examined the ecological distributions of gang and non-gang crime. Here, we use the **Socialization to Gangs** data base to examine the relationship between gang involvement and delinquency for individual-level data on two populations of minority inner-city males.

Socialization to Gangs Data

The **Socialization to Gangs** data set was constructed in 1987 by surveying all attending male students in the sixth through eighth grades at four middle schools from the Humbolt Park area of Chicago. The data set consists of 139

Hispanic students[2] and 300 African American students. Survey data was supplemented with information from police records and school disciplinary and other records. Taking a survey of school children is always subject to the requirements of parental consent and attendance. Akers, Krohn, Lanza-Kaduce, and Radosevich (1979) describe a similar sampling process. However, they did not obtain a sample of strictly inner-city minority youths. More detailed description of the data-gathering process and comparisons of survey respondents with all same-grade enrollees in the four schools is provided in Spergel and Curry (1988). A more recent and more comprehensive analysis of this data appears in Curry and Spergel (1990B). In this paper, we examine patterns of involvement in youth gangs and juvenile delinquency separately for Hispanic and African American youths. It is important to note that there are no significant differences between the Hispanic and African American youth in this data set in age (12 to 15) or in grade in school.

Measuring Gang Involvement

Two separate seven-item scales for measuring gang involvement have been developed elsewhere (Spergel and Curry 1988; Curry and Spergel 1990). These scales have been shaped and tested by the logit-based procedures of Rasch modeling (Rasch 1980; Wright and Stone 1979; Wright, Congdon, and Rossner 1988; Wright and Masters 1982). Table 1 presents the gang involvement items with each item's frequency by ethnicity. The results of fitting a Rasch model onto these items is shown in Table 2. The Rasch modeling procedure provided

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[2] We do not distinguish between Puerto Rican and Mexican students in our study, but we know from school and census records that the breakdown between Puerto Rican and Mexican students for the community is approximately fifty-fifty. Hispanic students were given the option of answering the survey in Spanish or English.

us with the rationale for dropping one item from each set of measures. An extended legitimation of this scale is presented in Curry and Spergel (1990A). Based on prior analysis, we know that it is legitimate to treat the GANGIT items as additive on the basis of empirical and mathematical analysis. Just as importantly, our decision to use these items to measure gang involvement is theoretical and grounded in the research literature on youth gangs.

Table 1. Frequency of Gang Involvement Scale Elements by Ethnicity.

	Hispanic	Black	
Advantage in Gang Membership	37 (26.6%)	104 (34.7%)	
Hangout with Gang Members	38 (27.3%)	112 (37.3%)	*
Gang Member Friends	22 (15.8%)	46 (15.3%)	
Flash Gang Signs	11 (7.9%)	54 (18.0%)	**
Wear Gang Colors	43 (30.9%)	82 (27.3%)	
Deviancy with Gang Members	22 (15.8%)	66 (22.0%)	
Attacked in Gang Incident	1 (0.7%)	20 (6.7%)	***
Attacker in Gang Incident	4 (2.9%)	11 (3.7%)	

Note: Chi-square Test of Homogeneity Significance * -.05 ** -.01
*** Fisher's Exact Test Significant at 0.01 level.

Table 2. Rasch Modeling Results for Gang Involvement Scale Items by Ethnicity.

Hispanics		Blacks	
Gang Involvement Item	Calibration	Gang Involvement Item	Calibration
Wear Gang Colors	-1.52	Hangout with Gang Members	-1.27
Hangout with Gang Members	-1.29	Wear Gang Colors	- .67
Advantage in Gang Membership	-1.24	Deviancy with Gang Members	- .32
Gang Member Friends	- .43	Gang Member Friends	- .02
Deviancy with Gang Members	- .43	Flash Gang Signs	.21
Flash Gang Signs	.45	Attacked in Gang Incident	1.24
Attacker in Gang Incident	1.54	Attacker in Gang Incident	1.94
Attacked in Gang Incident	Dropped	Advantage in Gang Membership	Dropped

Measuring Delinquency

Just as we developed a measure for gang involvement, we use official and self-reported measures for delinquency to generate a single interval-level measure of delinquency. We enter the values one or zero for each of the six variables arrested once, arrested twice or more, any school discipline report, any self-reported violence, any self-reported property offense, and any self-reported substance abuse. The frequencies of each item by ethnicity are shown in Table 3. African American youths are significantly more likely to have a

single arrest and significantly more likely to have a school discipline record. The computerized modeling procedure reveals that all of the six

Table 3. Delinquency Scale Items by Ethnicity.

	Hispanic	African American
Multiple Arrests	4 (2.9%)	17 (5.7%)
One Arrest	9 (6.5%)	49 (16.3%) **
School Discipline	13 (9.4%)	67 (22.3%) ***
Self-Reported Property	27 (19.4%)	69 (23.0%)
Self-Reported Substance Abuse	32 (23.0%)	62 (20.7%)
Self-Reported Violence	53 (38.1%)	142 (47.3%)

* Significant at 0.05 level.
** Significant at 0.01 level.
*** Significant at 0.001 level.

Table 4. Rasch Modeling Results for Delinquency Items by Ethnicity.

	Hispanic	African American
Multiple Arrests	2.14	1.90
One Arrest	1.10	.39
School Discipline	.58	-.14
Self-Reported Property	-.60	-.19
Self-Reported Substance Abuse	-.94	.00
Self-Reported Violence	-2.28	-1.94
Mean Delinquency Score	0.99	1.35 **
Correlation with GANGIT	0.62	0.48

** Significant at 0.01 level.

variables can be regarded as fitting a Rasch model and can therefore be summed to form a delinquency scale. Table 4 presents the Rasch modeling results and the mean scores on our delinquency scale by ethnicity. The different ordering of the items for the two subpopulations is indicative of different patterns ofdelinquency. In comparative ranking, substance abuse is more common among Hispanic youths than is property crime or school discipline problems. As measured here, delinquency is significantly higher among early adolescent African American males than early adolescent Hispanic males. The correlation between delinquency and gang involvement is highly significant for both Hispanics and African Americans, though the relationship is somewhat stronger among Hispanic youths.

Patterns of Gang Involvement and Delinquency

Table 5 presents the distributions of our gang involvement and delinquency measures for Hispanic and African American respondents. If we ignore those respondents who have no gang involvement and no delinquency, the modal category for each measure for each subpopulation is 1.

Using this finding, we generate the three-fold table that is Table 6. Our respondents are classified as having some gang activity if they have a score of one on our gang involvement measure. Our respondents are classified as having high gang activity if they have a score of two or more on the gang involvement measure. Respondents with a score of one on our delinquency scale are classified as displaying some delinquency. Respondents with a score of two or more on the delinquency scale are classified as displaying a comparatively high level of delinquency.

Table 5. Distribution of Respondents on Gang Involvement and Delinquency Scales.

	Hispanic		African American	
Score	GANGIT	Delinquency	GANGIT	Delinquency
0	50 (36.0%)	62 (44.6%)	108 (36.0%)	91 (30.3%)
1	37 (26.6%)	35 (25.2%)	85 (28.3%)	86 (28.7%)
2	30 (21.6%)	27 (19.4%)	53 (17.7%)	73 (24.3%)
3	14 (10.1%)	13 (9.4%)	29 (9.7%)	33 (11.0%)
4	4 (2.9%)	0 (0.0%)	16 (5.3%)	11 (3.7%)
5	2 (1.4%)	2 (1.4%)	7 (2.3%)	5 (1.7%)
6	2 (1.4%)	0 (0.0%)	0 (0.0%)	1 (0.3%)
7	0 (0.0%)	---	2 (0.7%)	---
Mean	1.27	0.99	1.30	1.35
Standard Deviation	1.33	1.12	1.39	1.24

Table 6. Categorical Structure for Analyzing Relationship Between Gang Involvement and Delinquency.

	No Delinquency	Some Delinquency	High Delinquency
No Gang Activity	A	B	C
Some Gang Activity	D	E	F
High Gang Activity	G	H	I

Table 7 collapses subsets of the theoretical categories in Table 6. Categories B and C constitute a category of special interest in that they are youths who are delinquent but have no gang involvement. We label them non-gang delinquents in Table 7. Given the correlations between gang involvement

and delinquency noted above, categories D and G are also of special interest. These youths are involved in gang activity but not in delinquency. We label them gang non-delinquents. Category I, respondents with high delinquency and high gang involvement, are the central targets of most contemporary gang prevention and intervention policy. We feel that we can safely label them gang delinquents. Categories E, F, and H constitute intermediate classifications of respondents whom we lump into a group of youths with moderate degrees of involvement in gang delinquency.

Table 7. Breakdown of Respondents by Involvement in Gang Delinquency.

	Hispanics	African Americans	Total
None	42 (30.2%)	49 (16.3%)	91 (20.7%)
Non-Gang Delinquents	8 (5.8%)	59 (19.7%)	67 (15.3%)
Gang Non-Delinquents	20 (14.4%)	42 (14.0%)	62 (14.1%)
Some Gang Delinquency	41 (29.5%)	82 (27.3%)	123 (28.0%)
Gang Delinquents	28 (20.1%)	68 (22.7%)	96 (21.9%)

An examination of Table 7 reveals only two major differences across our ethnic subpopulations. First, there are nearly twice as many Hispanic respondents as African Americans proportionately who have neither gang involvement nor delinquency scores. Second, delinquents who are not involved in gangs are much more rare among Hispanic respondents. Approximately 14 percent of respondents of both ethnic subpopulations show some involvement in youth gangs but no delinquency.

Path Models of Gang Involvement and Delinquency

The LISREL computer program (Joreskog and Sorbom 1986) is used to construct a fitted two-staged least squares model of gang involvement and delinquency as measured by our two scales and subsets of exogenous variables for the Socialization.

Hispanic Respondents. Figure 1 shows the model for 107 of our 139 Hispanic respondents (with cases with missing values removed). The parameter values shown are standardized partial regression coefficients (betas). Age is significantly related to gang involvement and especially delinquency for Hispanic respondents.

The variable named ANOMIE in the figure is the difference between aspirations and expectations with respect to completing college. (The originial measure is taken from Spergel (1967)). Its salience in the model in the absence of the comparable variable for completing high school may represent the deflated career importance of a high school diploma even in a city where only half of all youths graduate from high school.

The two measures of self-esteem hold a uniquely important place in the model. (A description of the derivation of these two self-esteem measures as well as a family-based measure of self-esteem can be found in Curry and Spergel (1990B)). School-based self-esteem and peer-based self-esteem are, in general, positively and significantly related. School-based self-esteem is negatively related to gang involvement and delinquency, while peer-based self-esteem is positively related to gang involvement and delinquency. The final important variable that drug dealers hang out in the community in places where the youth hangs out underscores the link between the visibility of drug

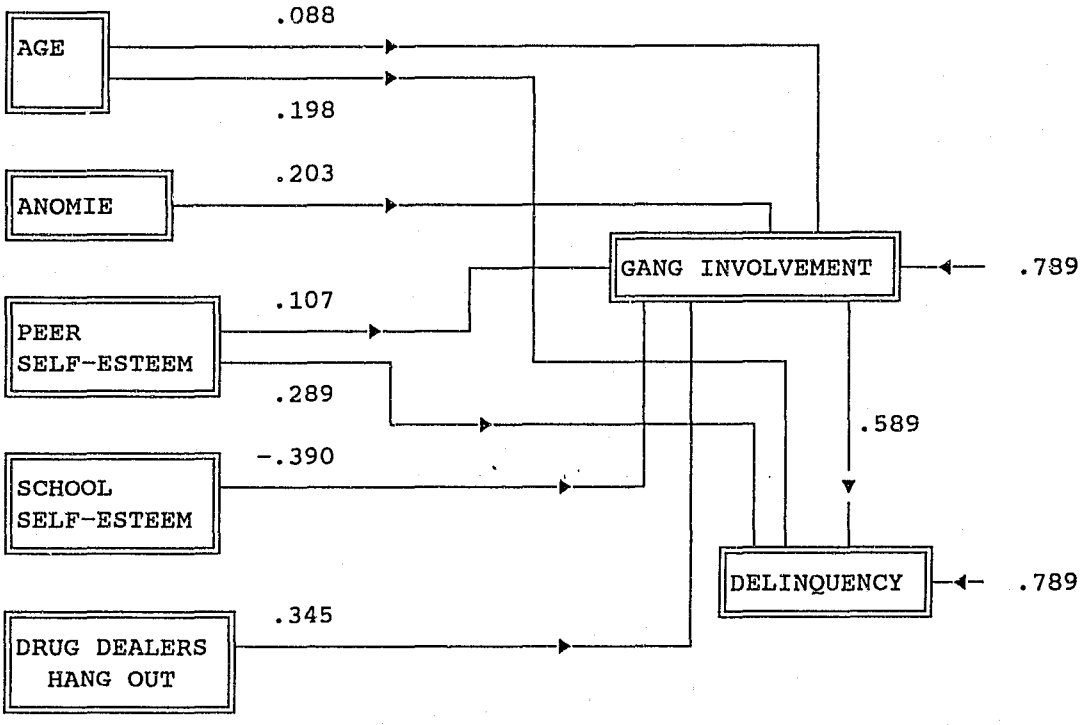
trafficking in the community environment and both gang involvement and delinquency.

The chi-square goodness of fit is a measure of whether a comparison of the variance-covariance matrix for the complete set of variables in the model as a generated by the structure of the model is significantly different from the observed variance-covariance matrix generated by the data. If the probability of the chi-square statistic were less than 0.05, it would have been necessary to reject the hypothetical model in Figure 1 at the 0.05 level of statistical significance. Our result that the probability of our model is 0.486 indicates that our model cannot be rejected at the 0.10 level of statistical significance and shows it to fit the data relatively well.

It is important that we were not able to fit a model that contains a reciprocal effect of delinquency on gang involvement that cannot be rejected at the 0.01 level of statistical significance. Not only is the fit of this model statistically supportable, but the parameters included account for 38.8 percent of the variation in gang involvement and 37.7 percent of the variation in delinquency.

African American Respondents. A comparable model is constructed for 291 of our 300 African American respondents in Figure 2. Two variables measuring numbers of gang members in a youth's school class reflect the ecological context of gang visibility especially as manifested in the school environment. Their role in the model are indicative of the collective power of ganging as an epidemiological phenomenon in the milieu of the African American youth's social setting. The link between the presence of a drug-using subculture and gang involvement among African American youths is shown by the appearance in

Figure 1. Structural Equation Model of Gang Involvement and Delinquency for Hispanic Respondents (n = 108)



Chi-Square Measure of Goodness of Fit = 2.39 Probability = 0.49

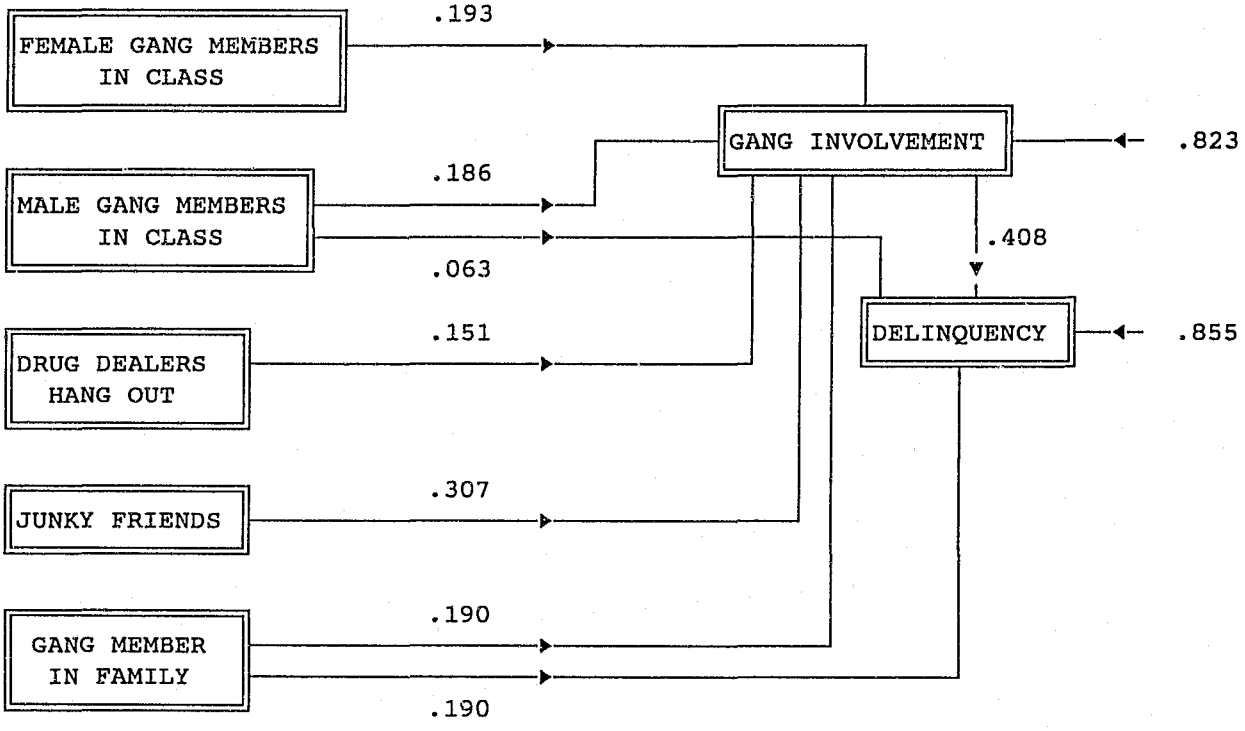
Endogenous Variable	R-Square
Gang Involvement	0.388
Delinquency	0.377

the model of drug dealers' hanging out in the youth's setting and perception of friends who are drug users.

The final variable that is completely absent in the model of gang involvement in the Hispanic community is the tie to gangs through the youth's family. Such ties are important predictors of both gang involvement and level of delinquency even when level of gang involvement is controlled.

Again the fit of the model is quite good in a statistical sense. Again there is no room in the model for a reciprocal effect of delinquency on gang involvement. The level of predictability of the two endogenous variables is relatively good. The R squared statistics for gang involvement and delinquency respectively account for 32.3 percent and 27 percent of their variation.

Figure 2. Structural Equation Model of Gang Involvement and Delinquency for African American Respondents (n = 291)



Chi-Square Measure of Goodness of Fit = 3.04 Probability = 0.385

Endogenous Variable	R-Square
Gang Involvement	0.323
Delinquency	0.270

Conclusions

Our concern has been the construction of models relating youth gang involvement and delinquency. In order to accomplish this task, we have used Rasch modeling to construct an interval-level measure of delinquency to complement previously derived scales for gang involvement. Differences in patterns of gang involvement for Hispanics and African American youths are theoretically based in the literature on both life in the underclass (Wilson 1987; Campbell 1984) and patterns of gang involvement (Curry and Spergel 1988). While our empirical findings support the use of different sets of scale items for Hispanics and African Americans, the use of the same sets of items in delinquency scales is also supported. For the two ethnic subpopulations, we find that gang involvement and delinquency are significantly and positively correlated.

The exogenous variables for our models are selected from variables associated with the major institutions of young adolescence -- the family, the school, and the peer group. The sets of exogenous variables that predict delinquency and gang involvement vary considerably across the two models. We construct an ideal typical categorical structure for the relationship between gang involvement and delinquency. Of the ideal types that we hypothesize, the non-gang, non-delinquent adolescent male is a more common occurrence among Hispanics. The non-gang delinquent is an infrequent occurrence among Hispanics, being more prevalent among African Americans.

An important hypothesis is which behavior comes first delinquency or gang involvement. Most authors concur that the process must to some degree be reciprocal (Spergel 1990). We do not have in the data being analyzed here the kind of longitudinal information necessary to test this hypothesis. In

several of the analyses above, we use recursive regression models to predict delinquency while controlling for gang involvement. Our purpose is to use the strength of regression to control for the institutional or quasi-institutional role of the gang as an intervening variable between other social scientific variables and delinquency. We do not assume that gang involvement (especially as measured here) always precedes involvement in delinquency. The chronological sequence of gang involvement and delinquency is a process that we hope to investigate as longitudinal data becomes available.

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