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ABSTRACT

This study examines the relative influence of peer and parenting behavior on changes in adolescent gang involvement and gang-related delinquency. An ethnically diverse sample of 300 urban ninth-grade students was recruited and assessed on 8 occasions during the school year. Analyses were conducted using hierarchical linear modeling. Results indicate that, in general, adolescents decreased their level of gang involvement over the course of the school year. However, the average level of gang delinquency remained constant over time. As predicted, adolescent gang involvement and gang-related delinquency were most strongly predicted by peer gang involvement and peer gang delinquency, respectively. The effect of parenting, however, was more complicated and differed by ethnicity. The effect of parenting was particularly salient for black/African American adolescents. (Author/SLD)

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Precursors of Gang Involvement among Ninth Grade Students: A Longitudinal Investigation

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This study examines the relative influence of peer and parenting behavior on changes in adolescent gang involvement and gang-related delinquency. An ethnically diverse sample of 300 ninth grade students was recruited and assessed on 8 occasions during the school year. Analyses were conducted using hierarchical linear modeling. Results indicated that, in general, adolescents decreased their level of gang involvement over the course of the school year. However, the average level of gang delinquency remained constant over time. As predicted, adolescent gang involvement and gang-related delinquency were most strongly predicted by peer gang involvement and peer gang delinquency, respectively. The effect of parenting, however, was more complicated and differed by ethnicity. The effect of parenting was particularly salient for Black/African American adolescents.

INTRODUCTION

Research on risk factors for gang-related behavior has generally focused upon community level and intraindividual risk factors such as poverty and self-esteem. There has been less emphasis on the risk factors that exist within family and peer networks. Many of the studies which have been conducted in this area have typically been cross-sectional, making it difficult to distinguish risk factors for gang-related behavior from consequences of gang behavior. **The purpose of this study is to investigate the relative influences of peer and parenting behavior on adolescent gang-related behavior using longitudinal data.** This study examines two aspects of gang-related behavior: minor gang involvement and gang-related delinquency. It is expected that while peer behavior will be the most significant predictor of gang-related behavior, parenting will also have a unique effect. Furthermore, it is expected that the effect of parenting will differ for youth from different ethnic backgrounds.

METHOD

Participants:

- 300 ninth grade students from a public high school in an urban, Southeastern city:
 - 54% were Hispanic-American
 - 25% were Black/African-American (includes students from Caribbean countries)
 - 21% were White/Other

Procedure:

- Participants were administered a survey at the beginning of the school year (**pretest**) and then again every 3 to 4 weeks for the remainder of the school year (**7 follow-up surveys**).
- The participation rates for the follow-up surveys ranged from 72.7% to 84.7%. Over 70% of the original sample completed six or more follow-up surveys.
- Participants were paid \$10 for completing the initial survey and \$1 for each follow-up survey.
- Due to the sensitive nature of several of the survey questions, no identifying information (e.g., name, birthdate) was collected about the participants. Instead, each participant created a private "password" which was used on all surveys.

Measures

Dependent variables:

At each follow-up assessment, participants were asked to rate the frequency of their participation in the following activities over the previous 3-week period:

- Gang Involvement:
 - Hanging out with a gang
 - Wearing gang colors on purpose
 - Flashing gang hand signs on purpose
- Gang Delinquency:
 - Spray painting gang symbols
 - Taking part in a fight representing a gang
 - Selling drugs for a gang

*Items adapted from the *Gang Membership Inventory* (Pillen & Hoewing-Roberson, 1992).

Independent variables (measures at pretest):

- Peer Behavior:
 - Peer gang involvement
 - Peer gang delinquency
- Parenting:
 - Behavioral control¹
 - Lax parenting²
 - Psychological control²
 - Warmth²

¹*Patterns of Decision-Making Questionnaire* (Steinberg, 1987)

²*Child Report of Parental Behavior Inventory* (Schaefer, 1965)

Analyses

- Primary analyses were conducted using hierarchical linear modeling (HLM), a multilevel procedure that permits modeling change over time on an individual basis.
- HLM allows one to essentially model the slope and intercept for each individual participant, in other words, the initial level of gang-related behavior at the start of the study and the degree of change in gang involvement over time.
- **In this study, we are specifically interested in HLM analyses modeling the slope, in other words, those which examine the effect of peer and parenting behavior upon change in gang-related behavior over time and the degree to which ethnicity and parenting influence this relationship.**

RESULTS

- The first step in the analyses involved estimating the average levels of gang involvement and gang delinquency at the beginning of the study (i.e., grand mean intercept) and the degree

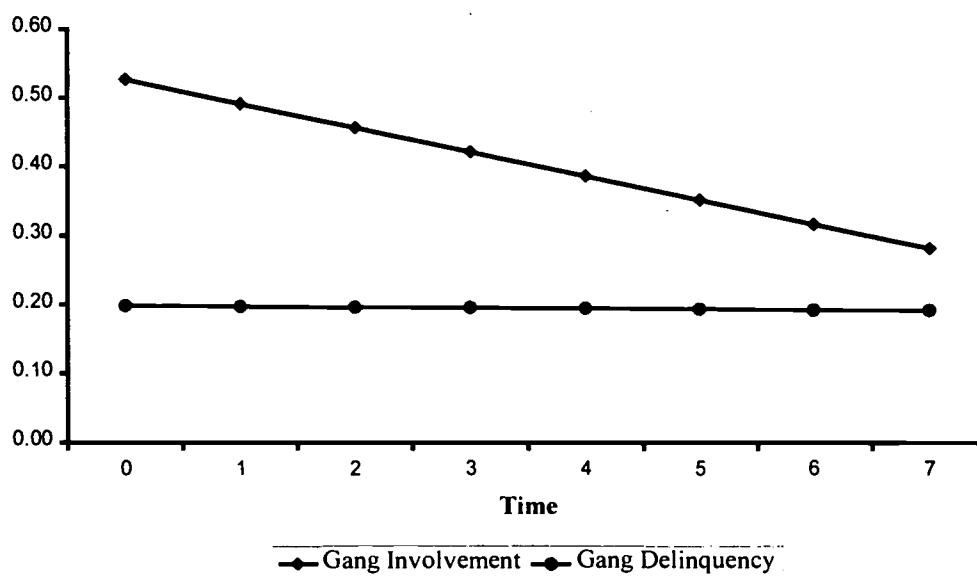
and rate of change in those behaviors over the course of the school year (i.e., grand mean slope).

- HLM analyses examining gang involvement indicated that the grand mean intercept was significantly different from zero ($\gamma_{0J} = .526$, $z = 13.84$, $p < .001$). The grand mean slope was also significantly different from zero in the negative direction ($\gamma_{1J} = -.035$, $z = 5.83$, $p < .001$).

That is, on average, students decreased their level of minor gang involvement over the course of the school year (see Figure 1).

- HLM analyses examining gang delinquency indicated that while the average level of gang delinquency at the beginning of the school year differed significantly from zero ($\gamma_{0J} = .198$, $z = 7.07$, $p < .001$), the grand mean slope did not ($\gamma_{1J} = -.001$, $z = 0.20$, $p = .841$). **That is, the average level of gang delinquency for the entire sample remained constant over the school year** (see Figure 1).
- Across students there was significant variation in both initial levels of gang involvement and gang delinquency and rates of change in these activities.

Mean Growth Curve



Peer Behavior

Gang Involvement:

- Peer gang involvement was significantly related to initial level of gang involvement [$X^2(1) = 92.416$, $p < .001$] and to change in gang involvement over time [$X^2(1) = 6.023$, $p = .014$]. However, the direction of these effects differed.
 - **Adolescents who reported having greater numbers of gang-involved peers at pretest showed higher levels of gang involvement themselves at the beginning of the study** (γ

= .253, $z = 9.73$, $p < .001$) but greater decreases in gang involvement over time ($\gamma = -.012$, $z = 2.40$, $p = .016$).

Gang Delinquency:

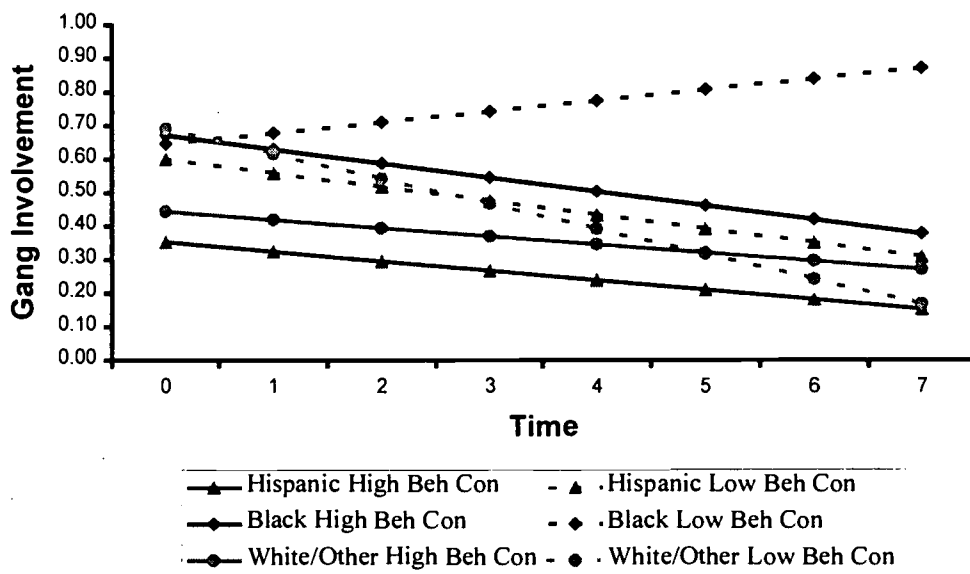
- Peer gang delinquency was a significant predictor of initial gang delinquency [$X^2(1) = 51.785$, $p = .001$] and change in gang delinquency over time [$X^2(1) = 5.078$, $p = .024$]. Again, the direction of the effects differed.
 - Higher levels of peer gang delinquency were related to higher levels of adolescents' own gang delinquency at the beginning of the study ($\gamma = .156$, $z = 7.80$, $p < .001$) but were related to decreases in gang delinquency over time ($\gamma = -.009$, $z = 2.25$, $p = .024$).**

Behavioral Control

Gang Involvement:

- Higher levels of behavioral control were associated with lower levels of initial gang involvement, even after controlling for peer gang involvement [$X^2(1) = 4.414$, $p = .036$].
- Behavioral control was related to differences in rates of change among the three ethnic groups [$X^2(2) = 5.828$, $p = .054$].
 - Behavioral control had no effect upon the slope for Hispanic and White/Other students.**
 - Higher levels of behavioral control were related to decreases in gang involvement over time for Black students (see Figure 2).**

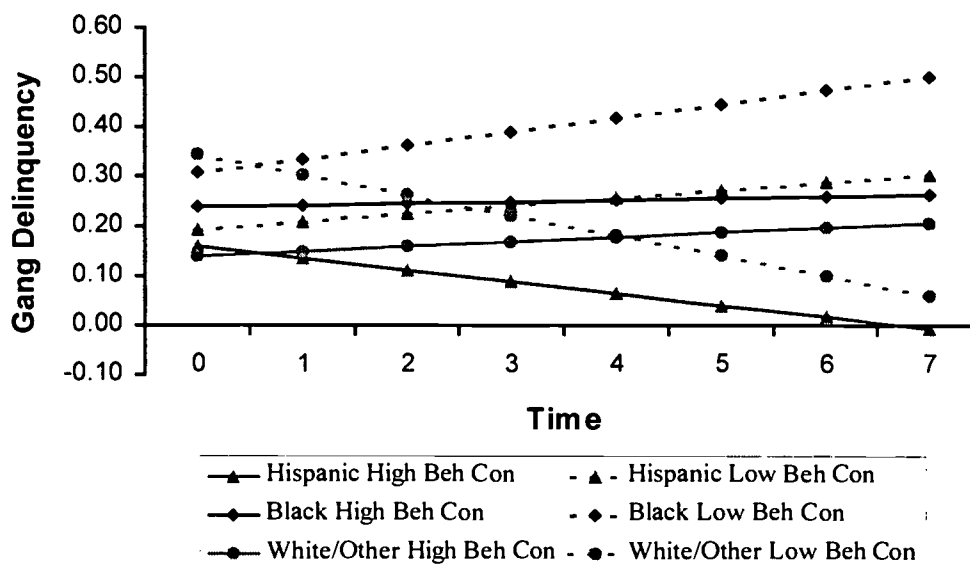
Effect of Behavioral Control



Gang Delinquency:

- There was a marginally significant, negative relationship between behavioral control and initial level of gang delinquency after controlling for peer gang delinquency [$X^2(1)=2.931$, $p=.087$].
- Again, ethnicity influenced the relationship between behavioral control and the slope [$X^2(2)=7.499$, $p=.024$]:
 - **Higher levels of behavioral control were marginally related to relative decreases in gang delinquency for Hispanic and Black students but were related to increases among White/Other students** (see Figure 3).

Effect of Behavioral Control

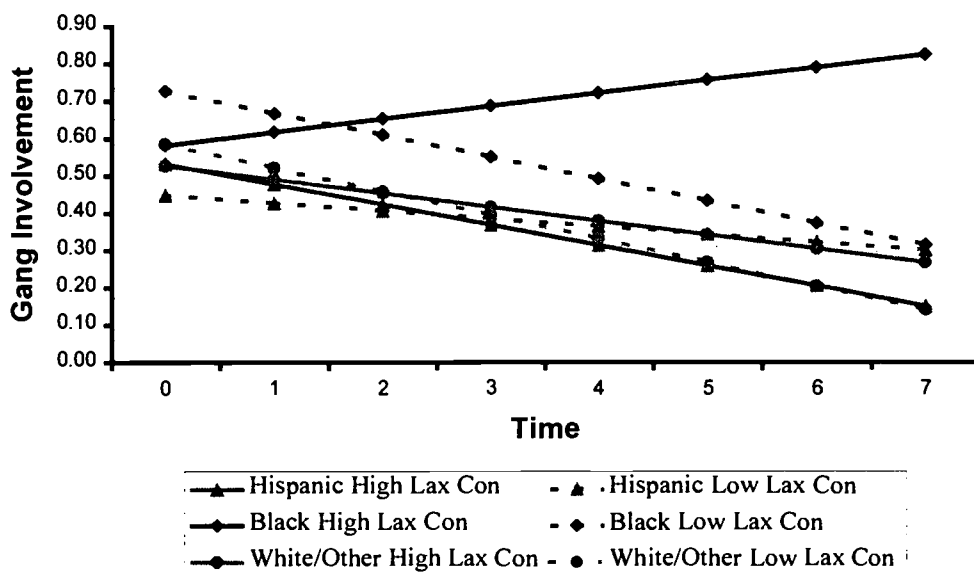


Lax Parenting

Gang Involvement:

- The effect of lax control upon initial levels of gang involvement, after controlling for peer gang involvement, was not significant [$X^2(1)=0.111$, $p=.739$].
- Lax control was related to differences in rates of change in gang involvement among students from different ethnic backgrounds [$X^2(2)=6.909$, $p=.032$].
- **Lax parenting had no impact upon the slope for Hispanic and White/Other students but was related to increases in gang involvement over time among Black students** (see Figure 4).

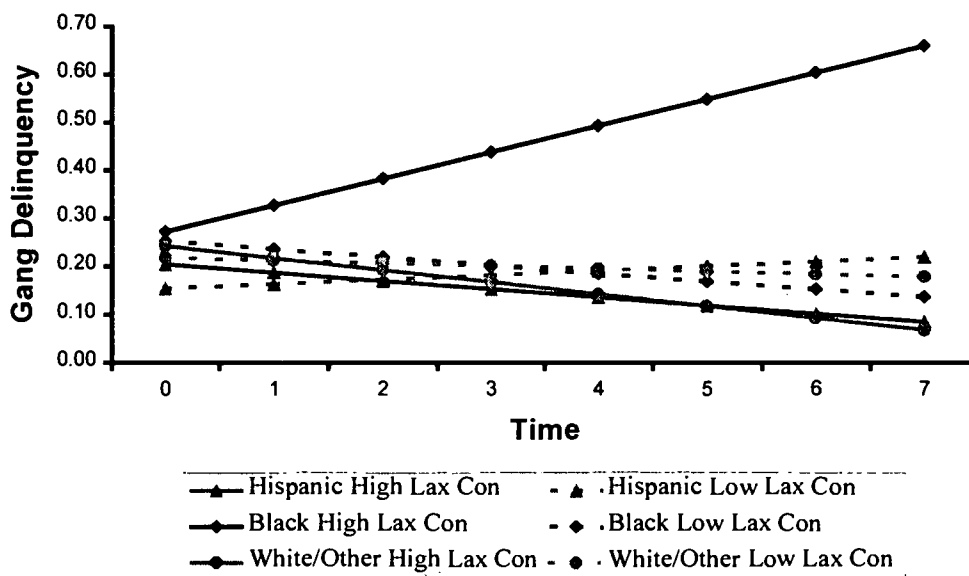
Effect of Lax Parenting



Gang Delinquency:

- Lax parenting was unrelated to initial levels of gang delinquency after controlling for peer gang delinquency [$X^2(1)=0.166$, $p=.684$].
- Lax parenting was differentially related to change in gang delinquency over time depending upon ethnicity [$X^2(2)=6.545$, $p=.038$]: **Lax control had no effect upon the slope for Hispanic and White/Other students but was related to increases in gang delinquency for Black students** (see Figure 5).

Effect of Lax Parenting

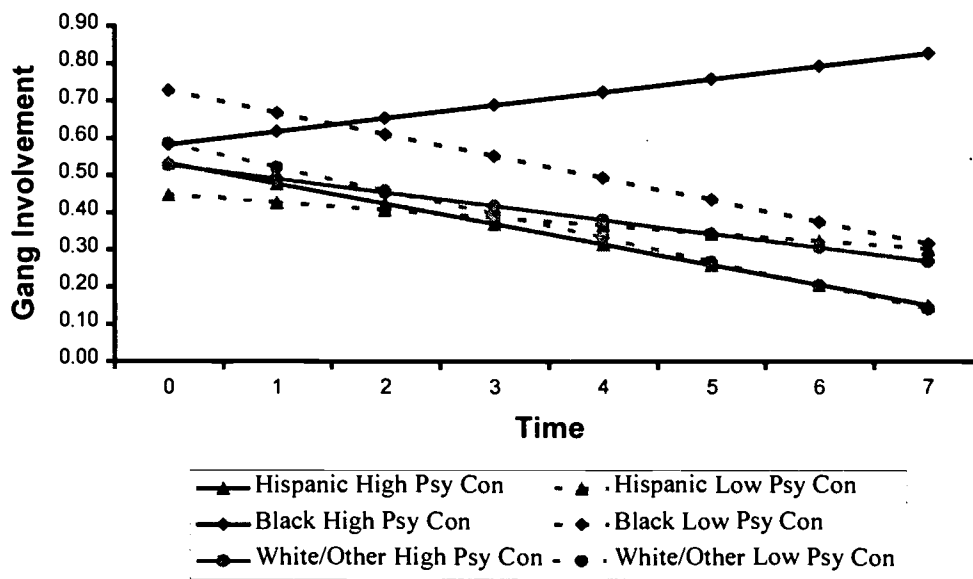


Psychological Control

Gang Involvement:

- Psychological control was unrelated to initial levels of gang involvement after controlling for peer gang involvement [$X^2(1)=1.412, p=.235$] but was differentially related to change in gang involvement over time depending upon ethnicity [$X^2(2)=8.373, p=.015$]:
 - **Higher levels of psychological control had minimal effect upon the slope Hispanic and White/Other students but were related to increases among Black students** (see Figure 6).

Effect of Psychological Control



Gang Delinquency:

- There was no relationship between psychological control and initial gang delinquency after controlling for peer gang delinquency [$X^2(2)=0.003, p=.956$].
- There was a marginally positive relationship between psychological control and change in gang delinquency [$X^2(1)=2.710, p=.100$]. **Higher levels of psychological control were related to increases in gang delinquency over time, regardless of ethnicity.**

Warmth

Gang Involvement:

- Parental warmth was found to have a significant impact upon initial levels of gang involvement even after controlling for the effect of peer gang involvement [$X^2(1)=6.776, p=.009$]. **Higher levels of parental warmth were associated with lower levels of initial gang involvement for adolescents from all ethnic backgrounds.**

- No significant relationship was found between warmth and change in gang involvement for youth from any ethnic background [$X^2(2)=2.641$, $p=.267$].

Gang Delinquency:

- HLM analyses also indicated a significant relationship between parental warmth and initial gang delinquency [$X^2(1)=5.531$, $p=.019$] as well as a marginally significant relationship with change in gang delinquency over time [$X^2(1)=3.140$, $p=.076$].
- **Higher levels of parental warmth were associated with lower initial levels of gang delinquency but were related to increases in gang delinquency over time. However, this modest decrease over time does not offset the much lower initial levels.**
- There were no significant interactions between parental warmth and ethnicity.

DISCUSSION

- The negative slope of gang involvement indicates that, for most youth, participation in minor gang activities (i.e., flashing gang hand signs) may be transient. Participation in delinquent gang activities (i.e., fighting, selling drugs), however, remained relatively stable over time, suggesting that youth who are involved in these activities may be at substantially higher risk of having long-term behavior and legal problems.
- As expected, higher levels of peer gang involvement and peer gang delinquency were related to higher initial levels of gang involvement and gang delinquency, respectively. However, peer behavior was inversely related to rate of change over time. That is, adolescents who reported greater numbers of gang-involved peers showed greater decreases in their own gang involvement over the course of the school year. A similar relationship existed with respect to gang delinquency. Although this may seem counterintuitive, it reflects the substantial impact of peer problem behavior on initial levels of gang behavior. In effect, the modest decline over time did not compensate for the much higher initial levels.
- As expected, parenting had a significant influence on gang-related activities after controlling for peer behavior. Parenting predictors of initial levels of gang involvement and gang delinquency included behavioral control and warmth. Specifically, higher levels of behavioral control and warmth were related to lower initial levels of gang behavior.
- Parenting predictors of changes in gang behavior, however, varied according to ethnicity. The role of parenting was particularly salient for Black/African American students, for whom higher levels of behavioral control and lower levels of lax parental control were related to better behavioral outcomes over time while higher levels of psychological control predicted worse behavioral outcomes.
- These results point to the importance of analyses modeling both the intercept and slope. As these results have shown, teenagers who show the same absolute levels of gang-related behavior at any given time may actually be headed in very different directions. Furthermore, certain risk factors may have different, even opposite, effects upon initial status and change.



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