

“Deterrability” Among Gang and Nongang Juvenile Offenders: Are Gang Members More (or Less) Deterrable Than Other Juvenile Offenders?

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Abstract

This study investigates the effect of the threat of legal sanctions on intentions to commit three types of offenses with a representative sample of 744 officially adjudicated youth with varying histories of offenses and gang involvement. In a departure from previous research, the authors find small severity effects for property crimes that are not negated by past offending experience, morality, or anticipated loss of respect from adults or peers. Gang members appear to be vulnerable to the effects of certainty of punishment for vehicle theft. These results challenge the current crime policy of increased reliance on punishment to deter gang crime but suggest that increasing gang members' certainty of apprehension might hold some promise for reduction of some gang crime.

Keywords

gangs, deterrence, youth crime, future offending, crime policy

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Over the past three decades, public policy on gang membership and gang crime overwhelmingly has emphasized suppression and deterrence over prevention and intervention (Decker, 2003; Greene & Pranis, 2007; Klein & Maxson, 2006). Typical law enforcement antigang strategies meant to increase apprehension and prosecution include enhanced or saturation patrols in gang neighborhoods, specialized intelligence and operations units, multiagency collaborations and task forces, vertical prosecution, and increased use of civil abatement strategies like gang injunctions (Greene & Pranis, 2007; Katz & Webb, 2006; Maxson, Hennigan, & Sloane, 2005).

California led the nation in implementing gang-specific legislation that increased sentences for crimes committed by gang members and established new penalties for gang recruitment and witness intimidation in concert with moves toward more punitive sanctions for youthful offending more generally. In 1989, the California legislature passed the Street Terrorism Enforcement and Prevention Act. This bill defined a "criminal street gang" in California law and provided sentencing enhancements for "gang" crimes stipulated in the statute. In 2000, 62% of California voters supported the passage of ballot measure Proposition 21, which further increased gang crime penalties, required convicted gang member registration, and increased penalties for certain violent offenses, while also reducing the age wherein juveniles could be tried in adult court, changing the types of probation available for juvenile felons, and reducing juvenile confidentiality protections (California Legislative Analyst's Office, 2002).

On the national level, one half of states have laws that provide for enhanced penalties for gang-related crime (National Youth Gang Center, 2008). The U.S. Senate has passed S. 456 and the House is currently considering H.R. 1582, the Gang Abatement and Prevention Act (2007). Its stated purpose is to

increase and enhance law enforcement resources committed to investigation and prosecution of violent gangs, to deter and punish violent gang crime, to protect law-abiding citizens and communities from violent criminals, to revise and enhance criminal penalties for violent crimes, and to expand and improve gang prevention programs. (p. 1)

This bill would enact a national definition of criminal street gang and gang crime and establish federal penalties of imprisonment for gang crimes for life (murder, kidnapping), 30 years (any other serious violent felony), 20 years (other violent felony), or 10 years (any other offense).

Although increasing prison sentences may also reflect goals of incapacitation or retribution, we assert that the assumption of the effectiveness of

deterrence from increased apprehension, prosecution, and punishment are the foundation of popular support for these antigang crime policies. The common grasp of deterrence principles and their ready application to antigang response is noted by Greene and Pranis (2007):

The purpose of suppression is to reduce gang-related activity by current gang members, and to reduce the number of people who choose to participate in gangs, by providing for swifter, severer, and more certain punishment. The guiding assumption is that, in the words of Malcolm Klein, “the targets of suppression, the gang members and potential gang members, will respond ‘rationally’ to suppression efforts [and] will weigh the consequences of gang activity, redress the balance between cost and benefit, and withdraw from gang activity.” (p. 71; citing Klein, 1995, p. 160).

Klein issues a major challenge to proponents of deterrence-based gang responses. The well-documented, negative influence of delinquent peers on youth behavior (Haynie, 2001; Warr, 2002) is powerful in gangs, and the “decision” to engage in criminal activity is further affected by status threats and affiliation challenges, group cohesiveness, protection and loyalty norms, and other group processes (Klein & Maxson, 2006). Indeed, the spontaneous and chaotic nature of much gang violence (Maxson, 1998) contradicts an image of the rational, calculating gang youth, weighing the certainty and severity of potential punishments for gang crime.

Given the pervasive patterns of suppression policies and the considerable body of scholarly work on deterrence, the lack of empirical assessments of deterrence processes among gang members is surprising. Our work aims to address this gap between public policy and social research. Specifically, we investigate whether there is empirical support for the viability of deterrence among gang members as compared to other youthful offenders. This article seeks to examine the common wisdom (Klein & Maxson, 2006) of policy makers that gang members’ and young offenders’ perceptions of the certainty and severity of punishment for crimes are related to their intentions to commit these crimes in the future.

Street Gangs and Deterrence

Few studies have directly assessed deterrence processes among gang members. Watkins, Huebner, and Decker (2008) considered demographic and perceptual correlates that might affect gun behaviors such as possession, carrying, and use

among juvenile and adult arrestees. They found that gang membership was particularly influential among juveniles and appeared to overwhelm any impact of perceptual deterrence. Past gang research suggests that social processes within gangs might subvert deterrence efforts or, in fact, backfire. Gangs have oppositional cultures, representing "an institutionalized rejection of the values of adult authority" (Moore & Vigil, 1989, p. 31; see also accounts in Fleisher, 1998; Klein, 1993, 1995; Short & Strodtbeck, 1965). Moreover, by focusing special attention on gangs, crime policies may inadvertently increase the status associated with gang membership and solidify youth identification with the group that elicits such attention by authorities (Klein, 1995).

Gang researchers have observed that the norms of street gangs are explicitly antisocial (Esbensen, Winfree, He, & Taylor, 2001; Fleisher, 1998; Hill, Howell, Hawkins, & Battin-Pearson, 1999). Esbensen and colleagues determined that gang members expressed less guilt and mobilized more techniques of neutralization for committing deviant behaviors than did other youth (Esbensen & Deschenes, 1998; Esbensen & Huizinga, 1993). Further, gang dynamics and norms actively encourage members to participate in violence and crime (Decker, 1996; Klein, 1995; Vigil, 1998). Decker and Van Winkle's (1996) interviews of 99 active street gang members in St. Louis illustrate how deeply the norms of violence rest in the consciousness of these youth. When asked to offer recommendations for the most effective ways of responding to gangs, the modal response (25/99) included some form of violence, several on the order of "kill us all."

Street gang members' motivation to commit crimes is rooted in group norms and supported by their social identity apart from the individuals' own perceptions or inclinations. From the point of view of group dynamics, regardless of the deterrent influence of legal sanction threats on juvenile offending in general, among gang members the threat of legal sanctions or even social sanctions is likely to be discounted. Strong collective social identities such as gang membership have a powerful and pervasive influence on individuals' perceptions and behaviors (Tajfel & Turner, 1986; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), and for gangs, the collective norms motivate members to challenge rather than defer to threats of legal sanctions.

The predictive power of perceptual deterrence on intentions to offend in the near future among gang members is contrasted here with other youthful offenders' intentions. We expect that gang members are more likely to report the intention to offend in the future, an expectation borne from a long line of research indicating higher involvement in criminal activity (see Klein & Maxson, 2006, for discussion of how this finding holds for different samples, geographic locations, gang definitions, and offending indicators). The issue

that engages us here is whether these intentions are influenced by deterrence processes differently for gang offenders than for nongang offenders. In light of the research depictions of oppositional culture and group process within gangs, it is predicted that deterrence, including certainty and severity of punishment, will be less predictive of future offending among gang youth than among nongang youth.

Past Deterrence Research

The principles of deterrence (i.e., swiftness, certainty, and severity of punishment, as they relate to criminal offending) have been researched for more than 30 years. An early review by Williams and Hawkins (1986) concluded that many cross-sectional studies found support for the certainty component of deterrence but mostly failed to find a severity effect.¹ However, a review by Paternoster (1987) concluded that “support for the deterrent effect of perceived certainty is most likely to be found in those studies that are methodologically weakest” (p. 186). He noted that deterrence effects detected among bivariate correlations are reduced dramatically, or disappear completely, with more sophisticated models and with the inclusion of other important predictors of crime. Klepper and Nagin (1989) concurred that panel design studies generally find that neither perceived certainty nor severity are significant predictors of crime and that extralegal factors like informal sanctions, socialization, and moral considerations are the best predictors of crime.²

More recently, Pratt, Cullen, Blevins, Daigle, and Madensen (2006) reported the results of a meta-analysis of 40 empirical studies on deterrence effects (certainty, severity, a composite of certainty and severity, and nonlegal sanctions). These scholars systematically assessed the conditioning effects for the sample, model specification, and research design characteristics in these 40 studies. Heretofore, these potential effects were the subject of extensive debate in the deterrence literature. Their five main conclusions bear repeating here (Pratt et al., 2006, pp. 283-286):

1. The mean effect size between deterrence variables and crime are “modest to negligible” (typically between 0 and -0.20).
2. Deterrence effect sizes are substantially reduced and often eliminated in multivariate models.
3. Deterrence effect sizes fluctuate according to methodological practices across studies, especially sampling of college students versus general samples and controls for competing theories and past criminal offending.

4. Certainty of punishment is the most consistently supported deterrence domain and tends to be most predictive of white-collar offenses.
5. The threat of nonlegal sanctions are fairly robust predictors, suggesting the promise of combining deterrence theory with other (self- or informal) control theories.

The results of the Pratt et al. (2006) analysis provide a wonderful opportunity to take stock of our understanding of the conditions under which the threat of legal sanctions influences criminal behavior. Their review highlights a major omission in this empirical literature: No assessment of the effects of deterrence domains of certainty, severity, or nonlegal sanctions was possible for juvenile offenders because too few studies were available (see their Table 13.2).

Deterrence research has relied heavily on testing high school and undergraduate students. The findings from these samples may not readily generalize to serious, delinquent youth (Foglia, 1997; Paternoster & Iovanni, 1986). Similarly, Green (1989a, p. 171) argued that studies that test the general population may “misinterpret” the deterrent effect because they include individuals who were unlikely to engage in illegal behavior. There have been a few studies that utilize seriously delinquent populations. Piliavin, Thornton, Gartner, and Matsueda (1986) used previously incarcerated adults, known drug users, and high school dropouts and found no effect of the risk of sanctions on behavior for these groups. Watkins et al. (2008) concluded from their investigation of juvenile and adult arrestees that adults were more receptive to deterrence messages and that, among juveniles, the deterrent impact of risk of arrest or punishment lessens as youth become more experienced with violent subcultures. Matsueda, Kreager, and Huizinga (2006) utilized analyses of the longitudinal Denver Youth Survey of high-risk youth to identify modest effects of perceived certainty of arrest on offending. Finally, Foglia (1997) tested a sample of inner-city high school students and found that peer behavior and severity of parents’ punishments were significant predictors of self-reported delinquency but that perceptions of risk of arrest (certainty) were not. She also found that “internalized norms” (otherwise referred to as morality) mediated the impact of peer behavior and parental sanctions on delinquency. Numerous studies have found measures of morality to be among the strongest predictors of the frequency of offending behavior or perceptions of future offending (e.g., Green, 1989a; Lanza-Kaduce, 1988; Nagin & Paternoster, 1991). However, none of these studies sampled high-offending or gang-involved youth.

Results from studies utilizing an adult offending population should be generalized to juvenile offenders with caution. Some of these studies test a specific type of criminal, for example, those who are active burglars, batterers, or property offenders (Decker, Wright, & Logie, 1993; Heckert & Gondolf, 2000; Piquero & Rengert, 1999). Youthful offenders are not specialists in their offending and often offend in groups, which may imply a different mechanism of decision making involved in adolescence (Piquero, Paternoster, Mazerolle, Brame, & Dean, 1999; Warr, 2002). Juveniles are likely influenced by peers, status and identity issues, and other potential situational contexts such as drug and alcohol use in ways that are different from adults. These influences may render deterrence processes less effective in adolescents and even less effective for gang members.

There has been a serious effort to identify “detrable offenders” (Pogarsky, 2002). Many scholars believe that deterrence will not work on the entire population of people, but there is disagreement as to which individuals are not deterrable. Some studies suggest that frequent offenders may be “undetrable,” whereas other research finds that crime-prone individuals (i.e., those with low self-control and high impulsivity) may be more sensitive to the threat of legal deterrents than other individuals are (Pogarsky, 2002; Wright et al., 2004; Zimring & Hawkins, 1973).

Overall, past research on perceptual deterrence suggests a minor association between the perceived threat of legal sanctions (especially certainty) and levels of offending. The strength of this relationship in a population of juvenile offenders and gang members is not well known. Given the current policy climate of increasing punitive sanctions toward juveniles and gang members, studies that examine the deterrent effect of such sanctions in samples of young offenders are critical and timely. Prior research is unambiguous about the importance of including extralegal factors, such as morality, and nonlegal sanctions, such as the risk of social condemnation, and to consider the role of prior criminal offending in the examination of deterrence effects on future offending. The current study tests these relationships in a delinquent juvenile sample that permits the first systematic investigation of these issues with gang members.

Method

Sample

The data in this study derive from a program evaluation that assessed the effectiveness of an intensive juvenile probation supervision program, the

Youth/Family Accountability Model (YFAM). The YFAM program targeted “mid-risk” juveniles in various catchment areas of Los Angeles County (Hennigan, Maxson, & Zhang, 2003, 2005). To be considered for this program, youth had (a) to be 17.5 years old or younger, (b) to have at least two contacts with law enforcement and/or the probation department or one felony arrest, (c) to be given a Home-on-Probation (HOP) disposition, and (d) to live within the catchment areas stipulated by the program. Immediately following an HOP disposition, all youth in 12 high-crime catchment areas who met the eligibility requirements were randomly assigned to either the YFAM program or regular probation supervision. Study intake of 1,817 youth occurred over a 22-month period, from February 2000 through December 2001. A subset of the entire evaluation study population was then randomly sampled to take part in an in-depth interview process approximately 21 months after receiving the original HOP disposition.

For each month of study intake, a random sample of youth was selected for interviewing. All interviews were conducted in confidential settings by extensively trained field interviewers under close supervision. Interviews were not conducted with 3 youth who were residing in the California Youth Authority at the time of interview recruitment because privacy could not be assured. However, juveniles in other controlled settings, including juvenile halls, probation camps, and group homes, were interviewed.³ In total, 71%, or 744, of the selected respondents completed interviews. Most of the nonresponse was due to failure to locate the youth after multiple visits and calls to all known addresses of family members, relatives, or friends that were given as contacts at intake (22% of the sample). Of the remaining 6%, either the youth or the parent ($n = 61$) declined consent for an interview. Considering age, gender, ethnicity, and the risk factors measured at intake, the youth randomly selected for an interview were compared to those not selected, and those who responded were compared to those who did not respond to the interview. No apparent bias in the achieved sample was found (Hennigan et al., 2005).⁴

Measures

Similar to previous perceptual deterrence studies, this study utilizes hypothetical crime scenarios to gauge attitudes about crime (e.g., Nagin & Paternoster, 1991; Paternoster, 1989). In lieu of longitudinal self-report data on future criminal behavior, cross-sectional studies have used the respondent's report of the likelihood or intention to commit crimes in the future (Nagin & Pogarsky, 2001; Piquero & Paternoster, 1998; Pogarsky, 2002).

Although Wright et al. (2004) refer to this deterrence outcome measurement as “generally a sound and productive strategy with abundant advantages over other methodologies” (p. 189), they speculate that some people may overestimate criminal propensity due to boastfulness. Green (1989b) states that deterrence theory findings from adult estimates for future drinking and driving compare favorably with measures of actual future behavior, but clearly, more validity studies are needed. Youth might be more likely to engage in boastful reporting than adults do, and gang members might be even more likely to do so than other adolescents. Moreover, stated intentions to offend may be less concordant with actual offending behavior due to the differential influences on decision making noted earlier. Our study appears to be one of the first to use the intentions approach to investigate deterrence processes in an adolescent offender sample.

The dependent variable, *intention to offend in the future*, reflects each respondent’s answer to a question regarding his or her likelihood of offending for three scenarios: stealing a purse or wallet, selling marijuana to a stranger, and stealing an automobile. For each of these offenses the respondent was asked, “How likely or unlikely is it that during the next year you will [take something valuable like a purse or a wallet/sell marijuana to a stranger on the street/steal a car]?” For this analysis, responses were coded on a 6-point scale that ranged from *very unlikely* (1) to *very likely* (6) to create three future offending variables reflecting different offenses.⁵ The intention scores in this sample were skewed toward unlikely to offend, with group means of 1.86 (purse or wallet theft), 2.18 (marijuana sales), and 1.45 (car theft).

Our measure of gang membership was based on methods developed and used successfully by past researchers to identify gang members in youth samples (Esbensen & Huizinga, 1993; Esbensen, Osgood, Taylor, Peterson, & Freng, 2001; Thornberry, Krohn, Lizotte, Smith, & Tobin, 2003). Respondents were asked whether or not they considered their primary group of friends to be a “gang.” Following this question, all were asked a series of questions about the nature (open ended), behavior (e.g., fight with other groups, protect our territory), and practices (e.g., has a name, special colors, hand signs, wall signs, or clothing) of their primary group of friends. A “yes” response on the first question ($n = 114$) was taken as an indication of *gang membership*, and 8 additional youth were identified as gang members based on responses to the follow-up questions. In this sample, 122 juveniles (16.4%) were considered gang members. Katz, Webb, and Decker (2005) found a similar proportion of current gang members among their sample of arrested juveniles in Arizona. Studies of neighborhood or school samples find various proportions of gang members, contingent on site, gang definition, current or

ever participation, and the nature of the sample (see Klein & Maxson, 2006, Tables 1.1 and 1.2).

Respondents were asked to imagine that they committed three specific crimes—stealing an unattended purse or wallet, selling marijuana to a stranger on the street, and stealing an unattended car with the keys left in the ignition. Following the presentation of each scenario, the respondents were asked how likely they thought that they would be arrested and taken to court, with responses on a 6-point scale that ranged from *very unlikely* to *very likely*. The mean *certainty* scores suggest a moderate perception of risk of apprehension: 4.02 for purse or wallet theft, 4.35 for marijuana sales, and 5.06 for car theft.

Most perceptual deterrence studies operationalize punishment severity by asking how severe or light the punishment would be for a given offense. Grasmick and Bryjak (1980) suggest that deterrence depends not just on how severe the punishment is thought to be but also on how much each individual would like to avoid that punishment. In this study, each respondent was first asked how light or severe he or she believed the judge's order or punishment for the offense would be, from *very light* to *very severe*, and then asked how much the perceived punishment would bother him or her, from *not at all* to *very much* (both items on a 6-point scale). The two items were standardized and then averaged to create a *severity* score for each offense scenario. Unstandardized, the severity score means for this sample ranged from 4.55 for purse or wallet theft to 4.90 for marijuana sales and 5.32 for car theft, indicating that these respondents expect somewhat severe punishments to accrue if caught for these offenses.

Although our cross-sectional design cannot address the issue of causal ordering in the “experiential effect” posited by Paternoster (1987), we include history of past delinquency in order to examine the influence of deterrence variables when past offending is taken into account, as Pratt and his colleagues (2006) found the mean effect size of deterrence was substantially reduced with the introduction of prior criminal behavior. To create the past delinquency history variable, this research followed Esbensen and Huizinga's (1993) classification of serious and street offenses. Respondents were asked if they had ever committed any of the 20 acts considered serious and street offenses. The total number of affirmative responses was compiled to indicate each respondent's variety of *past delinquency*.⁶ The number of offense types that young offenders in this sample committed ranged from 0 to 20. The average for the sample was 5.52. To refine this analysis further, we included measures of whether the specific offense scenario was among the past crimes the respondent had committed. Just 14.7% of this sample acknowledged ever *stealing a purse or wallet*, whereas

42.4% had ever *sold marijuana*, and one quarter (24.9%) had *stolen a car* or other vehicle.

Researchers have noted the import of including other crime predictors in models that examine the explanatory value of deterrence (Paternoster, Saltzman, Waldo, & Chiricos, 1983; Pratt et al., 2006). For example, morality has been cited in much of the perceptual deterrence literature as a significant predictor of delinquent behavior. Respondents were asked how “right or wrong” they believed it was to engage in each of the three crimes, from *very right* to *very wrong*, on a 6-point scale. Responses were standardized for a *morality* score for each offense. The morality scores in this sample were skewed toward the opinion that offending is wrong and undeserved by the victim, with unstandardized means of 5.21 (purse or wallet theft), 4.76 (marijuana sales), and 5.48 (car theft).

Disapproval from family and friends has been considered in past research as important, nonlegal sanctions that exert more influence on offending than the threat of legal sanctions. Past investigations have tended to test these two constructs together. We assess the effects of adult disapproval and peer disapproval separately to determine each variable’s unique contribution to perceptions of future offending. To measure adult disapproval, each respondent was asked to imagine that all of the adults whom the respondent values were informed of the juvenile’s involvement in each of the three criminal situations. The respondents were asked to indicate how unlikely or likely (on a 6-point scale) it was that these adults would lose some respect for them in each crime scenario, to create the *loss of adults’ respect* variable. The means are 4.59 (steal purse or wallet), 4.71 (sell marijuana), and 4.92 (steal car). Peer disapproval was assessed in a similar fashion by having respondents indicate how unlikely or likely it would be for their friends to lose respect for them if they learned about the respondents’ engagement in each of the three crimes. The *loss of friends’ respect* scores averaged 2.89 (steal purse or wallet), 2.68 (sell marijuana), and 2.95 (steal car). In general, these juveniles believe their friends would react far less negatively to their delinquent behavior than would adults.

Age and gender are important correlates of crime that are included as control variables when examining deterrence effects.⁷ At the time of the interview, the respondents’ ages in this study ranged between 12.01 and 19.91 years old, with a mean age of about 17½ ($M = 17.45$, $SD = 1.19$). Male respondents comprise most of the sample ($n = 599$, 80.8%), but a substantial number of female respondents are included ($n = 143$, 19.2%). As noted previously, a variable representing the random assignment to the treatment or control group (YFAM/control) is entered into all regressions as a control on possible program effects.

Analysis

The purpose of this research is to investigate the influence of perceptual deterrence (certainty and severity of legal sanctions) with the stated intentions to commit three types of offenses in a sample of adjudicated juvenile offenders. Our primary interest is in whether the influence of deterrence processes varies in gang youth as compared with nongang youth. Second, we want to understand whether any detected patterns are influenced by past involvement in offending. Finally, it is important to assess whether deterrence effects are more or less important than other explanatory variables such as moral judgment and the threat of nonlegal sanctions (i.e., loss of adult or peer respect).

Following an examination of correlation matrices to ensure that all the variables of interest could be included in multivariate regressions,⁸ we first examined the bivariate distributions of all variables between gang and nongang youth. Following confirmation that gang youth reported different perceptions of future offending, threat of formal and informal sanctions, and morality, we proceeded with a series of two-stage ordinary least squares regressions to examine the influence of the variables of interest on intentions to offend in the future. In the first regression model, we included the controls (treatment, age, and sex), gang membership, and the perceptions of certainty and severity in the first stage. The second stage added interaction terms for Gang \times Certainty and Gang \times Severity in order to detect a differential effect of deterrence processes and gang membership, including the amount of additional variance in future offending explained (change in R^2) by the addition of the gang interactions. Continuous variables were centered around the mean to allow for the analysis of interactions. The coefficients estimated in the second stage (the full model) are reported.⁹

Next, the level of past offending and whether or not the respondent engaged in the specific offense addressed by the crime scenarios were included in the basic model, and then interactions between gang and perceptual deterrence variables were examined. In the final model, alternative influences on intentions to offend, specifically morality and the threat of nonlegal sanctions (loss of respect by adults and peers), were added to the model, and finally, interaction terms for gang and risk of legal sanctions were entered.

Results

Table 1 displays the distributions of demographic and prior offending characteristics among gang and nongang youth. There are no age or ethnic differences among gang and nongang youth in this sample, but consistent with prior research (Esbensen & Deschenes, 1998; Katz et al., 2005), a higher

Table 1. Demographic and Prior Offending Characteristics of Gang and Nongang Youth (percentages, except where indicated)

| Variable | Gang Members (<i>n</i> = 122) | Nongang Members (<i>n</i> = 620) | Total Sample (<i>N</i> = 744) |
|---|-----------------------------------|--------------------------------------|-----------------------------------|
| Sex ^{**} | | | |
| Female | 10.7 | 20.9 | 19.2 |
| Male | 89.3 | 79.1 | 80.8 |
| Age (in years, with <i>SD</i>) | 17.37 (1.17) | 17.46 (1.19) | 17.45 (1.19) |
| Ethnicity | | | |
| Hispanic | 68.9 | 61.6 | 62.9 |
| African American | 15.6 | 20.2 | 19.4 |
| Caucasian | 3.3 | 7.7 | 7.0 |
| Other | 12.3 | 10.5 | 10.8 |
| Past delinquency ^{**} (<i>M</i> , with <i>SD</i>) | 10.00 (5.11) | 4.64 (4.08) | 5.52 (4.70) |
| Ever stole purse or wallet ^{**} | 32.8 | 11.1 | 14.7 |
| Ever sold marijuana ^{**} | 72.7 | 36.5 | 42.4 |
| Ever stole a car ^{**} | 60.7 | 17.9 | 24.9 |

^{**}*p* < .01.

proportion of gang participants are male. As expected, gang members report more delinquency offense types in their past offending profiles, an average of 10 offense types to fewer than 5 among nongang youth. Gang members also have more experience with the specific offenses used in the crime scenarios: They are more than twice as likely as other offenders to have committed minor theft or sold marijuana and three times as likely to have stolen a car.

The gang and nongang means for the perceived deterrence variables of certainty and severity, the alternative explanations of morality and loss of respect from adults and peers, and intentions to commit crime in the future are displayed in Table 2, with the major column headings signifying each of three crime scenarios: stealing a purse or wallet, selling marijuana, and stealing a car. Turning first to the major outcome variable, consistent with their heightened levels of prior offending (as shown in Table 1) and with expectations from prior research, gang members project that they will commit each of these three offenses in the following year significantly more often than other youth predict. With just one exception, there are consistent gang and nongang differences in all three offense scenarios for the predictors of criminal offending. Gang members perceive less certainty of arrest and lower severity of punishment for each type of crime. They are less likely to view these offenses as wrong (morality), except in the case of minor theft. Table 2

Table 2. Levels of Intentions to Offend and Predictor Variables in Gang and Nongang Youth for Three Types of Crimes

| Variable | Steal Purse or Wallet | | | Sell Marijuana | | | Steal Car | | |
|------------------|-----------------------|----------------------|--------------------|-------------------|----------------------|--------------------|-------------------|----------------------|--------------------|
| | Gang (n = 122) | Nongang (n = 620) | Total (N = 744) | Gang (n = 122) | Nongang (n = 618) | Total (N = 744) | Gang (n = 122) | Nongang (n = 620) | Total (N = 744) |
| Certainty | 3.59 (1.82) | 4.12 (1.78) | 4.03 (1.80) | 3.65 (1.83) | 4.49 (1.72) | 4.35 (1.76) | 4.75 (1.59) | 5.12 (1.50) | 5.06 (1.52) |
| Severity | 4.27 (1.35) | 4.60 (1.14) | 4.55 (1.18) | 4.48 (1.34) | 4.98 (.99) | 4.90 (1.07) | 4.86 (1.34) | 5.40 (0.78) | 5.32 (0.92) |
| Morality | 5.19 (1.02) | 5.21 (1.06) | 5.21 (1.05) | 4.43 (1.45) | 4.82 (1.39) | 4.76 (1.40) | 5.17 (1.03) | 5.54 (0.81) | 5.48 (0.86) |
| Adult respect | 4.16 (1.85) | 4.67 (1.66) | 4.59 (1.70) | 4.27 (1.64) | 4.80 (1.54) | 4.71 (1.57) | 4.62 (1.66) | 4.98 (1.53) | 4.92 (1.56) |
| Peer respect | 2.24 (1.45) | 3.02 (1.72) | 2.89 (1.73) | 2.06 (1.38) | 2.80 (1.73) | 2.68 (1.70) | 2.02 (1.29) | 3.13 (1.71) | 2.95 (1.70) |
| Future offending | 2.19 (1.44) | 1.80 (1.19) | 1.86 (1.24) | 3.12 (1.75) | 2.00 (1.43) | 2.18 (1.54) | 1.93 (1.20) | 1.35 (0.82) | 1.45 (0.92) |

Note: Means are shown, with standard deviations in parentheses. All gang and nongang comparisons are significantly different at $p < .05$, except the morality measure for steal purse or wallet.

also shows that gang members less often expect condemnation from significant adults or peers for committing such offenses. These bivariate findings are in line with what one would expect from the gang research literature and suggest that gang members are less deterred than other delinquent offenders are: They are less likely to perceive punishment certainty or severity and less likely to feel moral inhibitions or anticipate condemnation by valued adults or peers, while projecting a greater likelihood of committing these acts in the near future. Multivariate analyses are required to identify the influence of perceptual deterrence processes on intentions to commit crime, independent of the effects of prior offending, morality, and loss of respect.

In the first regression model, reported in Table 3, we entered the control variables, gang membership and the perceptual deterrence variables. These variables explain just 6% to 13% of the variance in intentions to offend in the future. Gang membership is positively associated with future offending for all three crime offenses and has larger coefficients in the models for marijuana sales and car theft, although all coefficients are small (the highest is .21). In contrast with much of the prior deterrence research, we detect significant negative effects of perceptions of the severity of punishment on all three offenses and also certainty effects for marijuana sales. We find little evidence that being a gang member influences these deterrence effects, except in the case of intentions to steal a car. Gang members that perceive a higher certainty of arrest are less likely to project that they will commit this offense in the next year, whereas certainty has no influence on nongang youths' intentions to steal a car. Figure 1 displays this interaction. Although statistically significant, the coefficient for this interaction is low ($B = -.10$).

In the second model shown in Table 4, adding the prior offending and experience with the specific scenario crimes increases the explained variance only slightly for the two theft offenses. However, the adjusted R^2 more than doubles for marijuana sales (from .13 in Table 3 to .28 in Table 4), a result of the influence of prior marijuana sales on intentions to do so in the future. Gang membership is no longer significant on the intention to commit minor theft but continues to be related to intentions to sell marijuana and steal a car even when the levels of past offending are taken into account. The main effects of the perceptual deterrence variables—severity for all three crimes and certainty for marijuana sales—remain significant, suggesting that for this sample of adjudicated offenders, deterrence processes do not seem to be a function primarily of past offending experience. The Gang \times Certainty interaction in car theft continues to be significant, and the interaction between gang and severity also is significant for this crime. However, the graphed interaction (not shown) reveals that severity of punishment influences the

Table 3. Regression of Gang Membership and Perceptions of Deterrence on Intentions to Offend in the Future

| Variable | Steal Purse or Wallet | | | | Sell Marijuana | | | | Steal Car | | | |
|------------------|--|------|-------|---------|---|------|-------|---------|---|------|-------|---------|
| | b | SE | B | t | b | SE | B | t | b | SE | B | t |
| Constant | 1.58 | 0.11 | | 14.21** | 1.76 | 0.13 | | 13.12** | 1.36 | 0.08 | | 16.60** |
| YFAM/control | 0.05 | 0.09 | 0.02 | 0.61 | 0.08 | 0.11 | 0.02 | 0.70 | 0.01 | 0.07 | 0.00 | 0.10 |
| Age | -0.10 | 0.04 | -0.10 | -2.71** | -0.03 | 0.05 | -0.02 | -0.55 | -0.04 | 0.03 | -0.05 | -1.33 |
| Sex | 0.25 | 0.11 | 0.08 | 2.22* | 0.31 | 0.14 | 0.08 | 2.23* | 0.01 | 0.08 | 0.00 | 0.09 |
| Gang membership | 0.29 | 0.12 | 0.09 | 2.44* | 0.88 | 0.15 | 0.21 | 5.94** | 0.48 | 0.09 | 0.19 | 5.27** |
| Certainty | -0.01 | 0.03 | -0.01 | -0.33 | -0.12 | 0.03 | -0.14 | 3.77** | -0.04 | 0.02 | -0.06 | -1.72 |
| Severity | -0.21 | 0.04 | -0.20 | -5.12** | -0.22 | 0.05 | -0.15 | 4.09** | -0.17 | 0.04 | -0.17 | -4.43** |
| | F(6, 733) = 9.20, p < .001 Adjusted R ² = .06 n = 740 | | | | F(6, 729) = 18.88, p < .001 Adjusted R ² = .13 n = 736 | | | | F(6, 732) = 12.88, p < .001 Adjusted R ² = .09 n = 739 | | | |
| Gang × Certainty | -0.00 | 0.07 | -0.00 | -0.02 | -0.06 | 0.09 | -0.03 | -0.65 | -0.14 | 0.06 | -0.10 | -2.46* |
| Gang × Severity | 0.06 | 0.09 | 0.03 | 0.62 | 0.07 | 0.12 | 0.03 | 0.59 | 0.14 | 0.08 | 0.09 | 1.83 |
| | F(8, 731) = 6.93, p < .001 Adjusted R ² = .06 n = 740 | | | | F(8, 727) = 16.21, p < .001 Adjusted R ² = .13 n = 736 | | | | F(8, 730) = 10.64, p < .001 Adjusted R ² = .10 n = 739 | | | |

Note: YFAM = Youth/Family Accountability Model.

*p < .05, **p < .01.

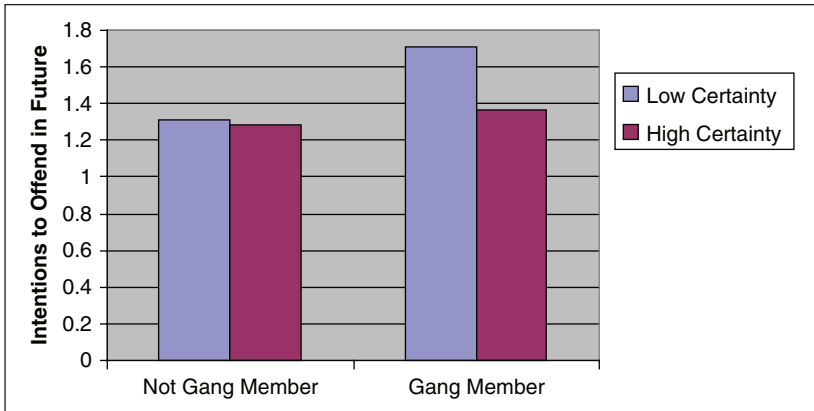


Figure 1. Interaction between gang membership and perceived certainty of stealing a car on intentions to offend in the future

intention to steal a car for nongang, but not gang, youth, opposite from the pattern detected in the Gang \times Certainty interaction.

The third regression model, presented in Table 5, adds the alternative predictors of morality and nonlegal sanctions. As expected from past research, morality has statistically significant and some of the strongest effects on intentions to commit crime in the future. The adjusted R^2 for marijuana selling increases to .37, whereas the other two scenarios show more modest increases. Interestingly, in this sample, nonlegal sanctions are not significant: Loss of respect from adults or peers for offending is not related to the intentions to offend. The influence of morality on intention to sell marijuana eclipses the perceptual deterrence effects for this offense: Neither certainty nor severity is statistically significant. However, the direct effect of severity on intentions to commit minor theft and car theft persist even with the introduction of morality into these models. Also, gang membership remains significant for selling marijuana and for car theft. The Gang \times Severity interaction in car theft is no longer significant, but the certainty interaction persists.¹⁰

Summary and Discussion

This study extends our understanding of the deterrent effect of the threat of legal sanctions on juvenile offenders and tests these effects with gang members for the first time. Given the recent escalation in more punitive public

Table 4. Regression of Gang Membership, Offense Experience, and Perceptions of Deterrence on Intentions to Offend in Future

| Variable | Steal Purse or Wallet | | | | Sell Marijuana | | | | Steal Car | | | |
|-------------------------|--|------|-------|---------|---|------|-------|---------|---|------|-------|---------|
| | b | SE | B | t | b | SE | B | t | b | SE | B | t |
| Constant | 1.52 | 0.12 | | 13.11** | 1.54 | 0.13 | | 11.68** | 1.39 | 0.08 | | 16.52** |
| YFAM/Control | 0.05 | 0.09 | 0.02 | 0.53 | 0.06 | 0.10 | 0.02 | 0.64 | 0.00 | 0.06 | 0.00 | 0.01 |
| Age | -0.10 | 0.04 | -0.09 | -2.62** | -0.08 | 0.04 | -0.06 | -2.01* | -0.05 | 0.03 | -0.06 | -1.73 |
| Sex | 0.26 | 0.11 | 0.08 | 2.30* | 0.09 | 0.13 | 0.02 | 0.70 | -0.03 | 0.08 | -0.01 | -0.34 |
| Gang membership | 0.13 | 0.13 | 0.04 | 1.04 | 0.42 | 0.15 | 0.10 | 2.87** | 0.32 | 0.10 | 0.13 | 3.29** |
| Past delinquency | 0.01 | 0.01 | 0.03 | 0.62 | 0.03 | 0.01 | 0.09 | 2.07* | 0.03 | 0.01 | 0.13 | 2.78** |
| Ever did specific crime | 0.57 | 0.15 | 0.16 | 3.84** | 1.13 | 0.13 | 0.36 | 8.90** | 0.95 | 0.10 | 0.05 | 1.00 |
| Certainty | -0.01 | 0.03 | -0.01 | -0.19 | -0.09 | 0.03 | -0.10 | -3.01** | -0.03 | 0.02 | -0.06 | -1.53 |
| Severity | -0.19 | 0.04 | -0.18 | -4.78** | -0.11 | 0.05 | -0.08 | -2.29* | -0.14 | 0.04 | -0.14 | -3.67** |
| | F(8, 731) = 10.21, $p < .001$ Adjusted $R^2 = .09$ n = 739 | | | | F(8, 725) = 35.86, $p < .001$ Adjusted $R^2 = .28$ n = 733 | | | | F(8, 730) = 11.84, $p < .001$ Adjusted $R^2 = .11$ n = 738 | | | |
| Gang × Certainty | 0.01 | 0.07 | 0.01 | 0.15 | -0.02 | 0.08 | -0.01 | -0.25 | -0.12 | 0.06 | -0.09 | -2.13* |
| Gang × Severity | 0.07 | 0.09 | 0.03 | 0.72 | 0.04 | 0.11 | 0.02 | 0.36 | 0.16 | 0.08 | 0.10 | 1.98* |
| | F(10, 729) = 8.22, $p < .001$ Adjusted $R^2 = .09$ n = 739 | | | | F(10, 723) = 28.63, $p < .001$ Adjusted $R^2 = .28$ n = 733 | | | | F(10, 728) = 10.18, $p < .001$ Adjusted $R^2 = .11$ n = 733 | | | |

Note: YFAM = Youth/Family Accountability Model.

* $p < .05$. ** $p < .01$.

Table 5. Regression of Gang Membership, Offense Experience, Perceptions of Deterrence, and Informal Social Control on Intentions to Offend in Future

| Variable | Steal Purse or Wallet | | | | Sell Marijuana | | | | Steal Car | | | |
|-------------------------|--|------|-------|---------|--|------|-------|----------|--|------|-------|---------|
| | b | SE | B | t | b | SE | B | t | b | SE | B | t |
| Constant | 1.55 | 0.11 | | 13.81** | 1.63 | 0.12 | | 13.18** | 1.37 | 0.08 | | 16.99** |
| YFAM/Control | 0.02 | 0.08 | 0.01 | 0.28 | 0.04 | 0.09 | 0.01 | 0.39 | 0.01 | 0.06 | 0.01 | 0.22 |
| Age | -0.10 | 0.04 | -0.10 | -2.79** | -0.10 | 0.04 | -0.08 | -2.69** | -0.04 | 0.03 | -0.05 | -1.59 |
| Sex | 0.23 | 0.11 | 0.07 | 2.12* | 0.13 | 0.12 | 0.03 | 1.12 | 0.00 | 0.08 | 0.00 | 0.01 |
| Gang membership | 0.15 | 0.13 | 0.05 | 1.19 | 0.45 | 0.14 | 0.11 | 3.28** | 0.27 | 0.09 | 0.11 | 2.87** |
| Past delinquency | 0.01 | 0.01 | 0.04 | 0.75 | 0.03 | 0.01 | 0.09 | 2.13* | 0.02 | 0.01 | 0.09 | 1.98* |
| Ever did specific crime | 0.53 | 0.15 | 0.15 | 3.66** | 0.86 | 0.12 | 0.28 | 7.01** | 0.10 | 0.09 | 0.05 | 1.09 |
| Certainty | 0.01 | 0.03 | 0.02 | 0.55 | -0.06 | 0.03 | -0.06 | -1.94 | -0.01 | 0.02 | -0.02 | -0.66 |
| Severity | -0.14 | 0.04 | -0.13 | -3.45** | -0.05 | 0.05 | -0.03 | -0.95 | -0.09 | 0.04 | -0.09 | -2.35* |
| Morality | -0.28 | 0.04 | -0.24 | -6.58** | -0.37 | 0.04 | -0.34 | -10.35** | -0.31 | 0.04 | -0.29 | -8.31** |
| Adult respect | -0.05 | 0.03 | -0.06 | -1.70 | -0.01 | 0.03 | -0.01 | -0.21 | -0.02 | 0.02 | -0.03 | -0.88 |
| Peer respect | 0.03 | 0.03 | 0.04 | 0.90 | 0.03 | 0.03 | 0.03 | 1.00 | 0.00 | 0.02 | 0.01 | 0.20 |
| | F(11, 727) = 12.35, p < .001 Adjusted R ² = .15 n = 738 | | | | F(11, 721) = 39.71, p < .001 Adjusted R ² = .37 n = 732 | | | | F(11, 727) = 15.81, p < .001 Adjusted R ² = .18 n = 738 | | | |
| Gang × Certainty | 0.01 | 0.07 | 0.00 | 0.07 | 0.00 | 0.08 | 0.00 | 0.02 | -0.14 | 0.06 | -0.10 | -2.48* |
| Gang × Severity | 0.05 | 0.09 | 0.02 | 0.53 | -0.05 | 0.11 | -0.02 | -0.45 | 0.14 | 0.08 | 0.08 | 1.83 |
| | F(13, 725) = 10.45, p < .001 Adjusted R ² = .14 n = 738 | | | | F(13, 719) = 33.54, p < .001 Adjusted R ² = .37 n = 732 | | | | F(13, 725) = 14.06, p < .001 Adjusted R ² = .19 n = 738 | | | |

Note: YFAM = Youth/Family Accountability Model.

*p < .05. **p < .01.

policy responses toward gang members and youthful offenders more generally, we examined the association between perceptual deterrence variables and intentions to continue to offend in a population that has been neglected in past research. This population is more representative of the actual targets of recent legislative enactments than are samples used in past deterrence research.

We found evidence of weak negative effects of perceived severity of punishment on anticipated property offending in this population of juvenile offenders, and these effects persisted even when the experience of prior offending, nonlegal sanctions, and morality were taken into account. A significant Severity \times Gang interaction in the second regression model indicated that the relationship was evident in nongang rather than gang youth, although this interaction no longer reached significance when morality was entered.

A relationship between certainty and perceptions of future offending was evident only in the selling marijuana scenario and only prior to the introduction of morality. However, the Gang \times Certainty interaction for car theft was significant even after other variables were introduced into the model. The effect is small but suggests that gang members might be vulnerable to manipulation of certainty of arrest, at least for car theft.

Overall, we found no evidence that gang members were more vulnerable to punishment severity than were other youthful offenders and limited evidence that certainty can be a deterrent. This is in accord with past research on street gangs (e.g., Klein, 1995) and observations based on social identity theory (e.g., Turner et al., 1987) that suggest that individuals' perceptions of the threat of legal sanctions would have little influence on the level of gang members' anticipated offending. In general, we conclude that gang members are not more deterrable than nongang youth and are not likely to respond to laws that mete out draconian penalties for gang crime.

Consistent with past research (Foglia, 1997; Green, 1989a; Lanza-Kaduce, 1988; Paternoster & Iovanni, 1986), morality was the strongest predictor variable in the models for all three crime scenarios and appeared most important to the intention to sell marijuana. More than one third of the variance in intention to sell marijuana was explained by the model, and this was primarily attributable to morality and past experience. This suggests that manipulation of punishments for drug sale offenses or increasing the probability of arrest is unlikely to influence offending levels.

Our models for intention to commit property crime (minor and more serious, car theft) are not particularly robust, with less than 20% of the variance explained. As with marijuana sales, morality appears to be critical in understanding future offending patterns, but the severity of punishment also comes into play. It is unusual in deterrence research to find severity effects.

Pratt and his colleagues (2006) found that deterrence effects were variable by the research sample, and past research has rarely included serious juvenile offenders. Most of the adolescents in this sample have participated in substantial delinquency and know that getting caught is unlikely. Each has also experienced arrest and justice system sanctions for criminal behavior. Perhaps the experienced low certainty of detection weakens this aspect of deterrence relative to the severity of experienced consequences. Clearly, there is more to be learned about deterrence by including such populations in future studies.

In another departure from previous studies, we find no significant effects on future offending from the loss of respect by valued adults and peers. Pratt et al. (2006) identified nonlegal sanctions as "large enough to be considered as substantively important" (p. 379), but our study suggests that these effects are contingent on the offending level and age of the study samples. Our sample of juvenile offenders likely reflects the history of negative influence of peer delinquency well documented in the literature (Warr, 2002), so it is not surprising that loss of respect by peers is not an issue, especially in light of Warr and Stafford's (1991) finding that peer attitudes are far less important than peer behavior.

More research is needed to clarify the mechanism by which gang members and other juvenile offenders may ignore the threat of legal sanctions yet still be influenced by morality concerns. If the processes of group dynamics among gang members override any hesitation to offend due to concerns about legal sanctions, why do they not also override any hesitation due to morality concerns? This is an intriguing question for future research.

Considering the processes at work among high-offending youth in general in this sample, intentions to offend in the future were much more strongly associated with moral concerns than with concerns about the risk of legal sanctions. This is consistent with recent research findings that moral inhibitions held by youth participating in the National Youth Study (Elliott, Huizinga, & Menard, 1989) appeared to moderate the relationship between change in perceptions of the certainty of legal sanctions between Wave 6 and Wave 7 and offending over the same time period (Pogarsky, Kim, & Paternoster, 2005).

Our study is subject to various methodological criticisms, particularly its cross-sectional design. This design necessitated the use of perceptual outcome measures that could benefit from validation studies, particularly as these pertain to high-offending youth and gang members.¹¹ Future studies might include more offense types, especially violence. Our study shares concerns about reporting accuracy with other studies that utilize self-report methods. Furthermore, the study is located in one city, Los Angeles, with its

unique history of gang problems and antigang policy responses. This sample of adjudicated juvenile offenders is best identified as mid-risk, in that it excludes both first-time referrals to the juvenile justice system and those placed by judges in correctional institutions.

Despite these limitations, our work contributes to the ongoing scholarly scrutiny of the tenets and practice of deterrence and applies this inquiry to the relatively new context of gang members. Accordingly, we hope to have responded to Pratt and his colleagues' (2006) challenge:

Criminology thus has a responsibility to evaluate both the impact of get tough policies and their theoretical underpinnings. In this latter regard, research on deterrence takes on special significance: it speaks to the issue of whether the premise that harsher punishments will make the choice of crime less attractive is rooted in sound criminological knowledge. In turn, it illuminates whether policies based on the logic of deterrence will, in fact, contribute to public safety. (p. 383)

If replicated, these findings have important public policy implications because the more serious and sweeping legislation, such as increased use of waivers, sentencing enhancements, and charging juveniles with provisions for three strikes, are generally aimed at gang members and high-offending juveniles. We find little support for the notion that more punitive laws targeting gang members will deter their intentions to offend in the future.

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Notes

1. Few deterrence studies have attempted to test the celerity (swiftness) aspect of deterrence theory (Nagin & Pogarsky, 2001).
2. Although most panel studies have not found an effect of perceptual deterrence, Piquero and Paternoster (1998) detected a certainty effect in their longitudinal investigation. Similarly, Wright, Caspi, Moffitt, and Paternoster (2004) found that certainty of punishment was correlated with frequency of offending among the criminally prone participants in their longitudinal study.
3. We believe our research procedures minimized impact of correctional supervision on youths' responses. We estimate that at the time of interview, 35% of the sample was out of the criminal justice system, 51% was under some sort of supervision in the community (juvenile or adult), and 13% was in custody (juvenile or adult). The consent process made clear that the interviewers were from the university and were not associated with any authorities. The respondents freely reported other confidential information. They self-reported substantial delinquent behavior: 32% reported a property crime, 37% reported a violent crime, and 60% reported substance use in the past 6 months. Of those in juvenile hall or camp at *both* 18 months and 24 months after intake, 35% reported a recent property crime and 59% reported a recent violent crime.
4. Furthermore, comparison of a variety of indicators at intake confirmed the integrity of the random assignment process: Youth assigned to the Youth/Family Accountability Model (YFAM) program were statistically equivalent to the control group. Nevertheless, we include an assignment to treatment variable (YFAM/control) as a control in all multivariate analyses reported in order to ensure that exposure to the treatment experience did not influence the processes examined here.
5. Paternoster (1986) argued against the use of composite scales in perceptual deterrence research. He suggested that deterrence cannot be assumed to operate similarly in all offenses or for all people. Similarly, the meta-analysis conducted by Pratt, Cullen, Blevins, Daigle, and Madensen (2006) generates different deterrence effects according to the specific offense captured by the dependent variable, with the strongest effects evident in white-collar/organization crimes. Alternatively, composite measures have the advantage of increased reliability (e.g., Wright, Caspi, Moffitt, & Paternoster, 2004). Here, we constructed three scenarios that asked the respondents to consider offenses that are not unusual in this sample of juvenile offenders. Although we see advantages in improving measurement reliability by combining the items across offense scenarios, we defer to Paternoster's argument and preserve the separate offenses in order to test for specific patterns in minor theft versus auto theft and in marijuana sales.

6. The optimal manner of representing history of offending has been the subject of much discussion in the delinquency literature. Variety scores are preferred over logged frequency counts in cases where researchers are concerned that high counts of minor offenses will swamp more serious offenses (Bendixen, Endresen, & Olweus, 2003). We felt it appropriate to use a lifetime offending measure and opted for the variety score for this reason.
7. Race/ethnicity of the overall sample was 62.9% Hispanic ($n = 466$), 19.4% African American ($n = 144$), 7% Caucasian ($n = 52$), and 10.8% other ($n = 80$). Race/ethnicity was not included in the presented analyses because it was not a significant predictor of anticipated future offending, probably due to the low number of Caucasian youth in this juvenile justice system-derived sample.
8. A review of the correlation matrices for each model showed that, not surprisingly, previous experience with each of the three offenses was strongly correlated to a respondent's past delinquency. Past delinquency was centered prior to inclusion in any model. Variance inflation factor and tolerance statistics did not reveal problems with multicollinearity when included with previous experience in any of the specific offenses.
9. Tests were conducted to ensure that the nature of the data conforms to the assumptions required to run an ordinary least squares regression. We found that the independent and dependent variables follow a linear relationship. Centering potentially problematic variables sufficiently addressed issues of multicollinearity, and each model conformed to the assumption of normally distributed error variance.
10. The full model is reported in Table 5, but given the number of variables included, we repeated the tests described with a more limited number of predictors (omitting treatment group, gender, peer, and adult social sanctions) and replicated the results reported.
11. As with all empirical research, strong effects are more readily interpreted than null findings, but confidence in null findings is strengthened by continuity with prior research. The methods and measures used here have roots in past research. Finding a stronger relationship between offending and morality and weaker relationships with deterrence variables is consistent with the body of past research. The strength of the current study lies in its unique population. The findings here extend tests of the role of perceptual deterrence to a new population, mid-risk youth including gang members.

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