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## Effects of Individual and Contextual Characteristics on Preadjudication Detention of Juvenile Delinquents

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# Effects of Individual and Contextual Characteristics on Preadjudication Detention of Juvenile Delinquents

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This study examined individual and contextual factors affecting preadjudication detention of juvenile delinquents in 65 counties of a northeastern state. Results demonstrated that while individual characteristics of the juvenile delinquents were important predictors, much of the variation in decisions was explained when contextual factors of the counties were included in a two-level hierarchical linear model. In addition to the statistically significant legal and extralegal juvenile characteristics, our study found that counties with a higher percentage of non-White population were more likely to detain juvenile delinquents prior to adjudication. These findings demonstrate the importance of considering both individual and contextual factors of jurisdictions when examining the adjudication process.

**Keywords** contextual characteristics; individual characteristics; juvenile delinquents; preadjudication detention

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## Introduction

Since the Illinois legislature first articulated a juvenile court system in 1899, that system underpinnings have been markedly distinct from the adult system's. This restructuring supported a distinct philosophy that sought to protect society's youth and act in their best interests. The enacted legislation attempted to achieve this goal with rules that regulated the treatment and control of dependent, neglected, and delinquent children. As the juvenile court system has continued to evolve, and juvenile crime rates have escalated to unprecedented levels, a new discussion surrounding the orientation of the juvenile court has arisen. Some researchers have argued that the modern system is shifting away from the original treatment philosophy and becoming more criminalized (Feld, 1991a). While other researchers disagree that such a paradigmatic evolution is underway, it remains clear that the decision-making process on the care of juvenile delinquents should be fair and consistent across both individuals and jurisdictions, with decisions made in the best interest of the juvenile.

Despite the fundamental understanding of the need for equality in treatment of juveniles, researchers have demonstrated that a number of legal and extralegal factors significantly affect the court's decision-making process, which leads to inconsistent treatment at the various stages of processing. While each decision point in the criminal justice system significantly influences subsequent court processes, it is especially disconcerting if inconsistent decisions are made before adjudication, because researchers have demonstrated that these early stages affect both type and severity of a subsequent disposition (Bortner & Reed, 1985; Frazier & Bishop, 1985; McCarthy, 1987; Wu, 1997). Based on the role that these stages of processing, including preadjudication detention, have on subsequent court outcomes, research on the juvenile-court system must consider factors that may influence these early court processes.

Studies capturing the additive and interactive effects of juvenile delinquents' individual characteristics and case attributes on preadjudication detention decisions have been used to examine the "cumulative" effect of these decisions on dispositions and sentencing outcomes. Consistent with findings from studies on adult arrestees

demonstrating the influence of race/ethnicity and class on pretrial decisions (Bridges, 1997; Lizotte, 1978; Zatz, 1987), research on juvenile-court processes has also found a relationship between juvenile delinquents' race and preadjudication detention (Bishop & Frazier, 1996; Bortner & Reed, 1985; Secret & Johnson, 1997; Schutt & Dannefer, 1988; Wordes, Bynum, & Corley, 1994; Wu, 1997; Wu & Fuentes, 1998; Wu, Cernkovich, & Dunn, 1997). Not all studies, however, have found this type of direct relationship. Bishop and Frazier (1996) found that the effect of race on detention decisions is mediated by gender and prior record. Specifically, non-White males and females are detained at similar rates, whereas White males are more likely to be detained than White females. Also, when a juvenile's prior record is extensive, the likelihood of being detained is higher for non-Whites than for Whites. Minimal differences exist across racial groups when offenders have no prior record or non-serious offenses in prior record. Some studies have found that race is indirectly operating through detention in its effect on subsequent court processes, such as case dispositions, while others have found an effect of pretrial detention on disposition independent of race (Bortner & Reed, 1985; Fagan, Slaughter, & Hartstone, 1987; Frazier & Bishop, 1985; McCarthy, 1987; Wu, 1997).

To better understand the level of consistency in preadjudication detention decisions, it is important to examine the issue at a statewide or national level. Variation in preadjudication detention between juvenile delinquents is an important area to examine because it may indicate unwarranted differential treatment. One reason for variation in decisions between individuals referred for similar delinquent acts may be differences in the individual characteristics of the juvenile associated with the referral—such as the number of prior referrals and dispositions. Individual characteristics such as gender, age, and race or ethnicity vary dramatically, but are extralegal and should not influence adjudicial outcomes. Although the influence of legal and extralegal characteristics of a juvenile delinquent on judicial outcomes has been examined in previous literature, a second explanation examined less frequently is the contextual influence of the characteristics of the county itself.

Given two different aspects that may influence preadjudication detention outcomes and noteworthy research in this area, we chose to examine how legal,

extralegal, and contextual variables influence decisions across multiple jurisdictions. First, we offer a detailed description of the literature related to individual and contextual effects on juvenile delinquent processing in the court system. We then expand on current research by engaging in an empirical study of individual and contextual effects on preadjudication detention of juvenile delinquents.

## **Individual Characteristics and Juvenile Court Processes**

Several studies have used what we refer to here as the *individual differences argument* to explain variation in preadjudication detention decisions. This argument suggests that individual characteristics of juvenile delinquents have a significant influence on judicial outcomes. While juvenile delinquents may vary in any number of respects, only differences in legally relevant characteristics should lead to differences in decisions. However, as noted, prior research demonstrates that in addition to legally relevant factors, a number of extralegal factors impact the court's decision-making process.

Although studies have found that legal indicators including offense seriousness, prior record, and probation violations are stronger predictors of detention status than race (Bishop & Frazier, 1988; O'Neill, 2002), several researchers have found that the effect of race is directly related to detention decisions as well as conditioned by gender and prior record.

Furthermore, the rates of detention and disposition for Black juvenile delinquents continue to be substantially higher than those for Whites which may, in part, be attributed to differences in offenses seriousness and prior record (McGarrell, 1993; Shelden, 1999). Harms (2002) reports that between 1987 and 1999, delinquency cases in detention facilities grew 25 percent, with the largest increases in girls' and White juvenile delinquent referrals. Even with these increases, however, Black delinquents remain at the greatest risk for being detained compared to other racial/ethnic groups (Harms, 2002). Wordes et al. (1994) examined three detention phases (police detention, court intake detention, and preliminary hearing detention) and found that after controlling for legal and social variables, Black and Latino juvenile delinquents were more likely to be placed in detention. Moreover, studies show that Black and Latino

juvenile delinquents were more likely to be detained at disposition; yet, White juvenile delinquents were more likely to be adjudicated than minority juveniles delinquents (Wu, 1997; Wu & Fuentes, 1998). Other studies reveal no direct racial effects at pretrial detention but find the influence of race at the disposition stage (Fagan et al., 1987).

Other extralegal variables have also been reported to affect juvenile court processing. Schutt and Dannefer (1988) find that White juvenile delinquents from single-parent households were more likely to be detained than their counter- parts. Wu and Fuentes (1998) examine the effects of race and welfare status on detention, adjudication, and disposition status and find a direct relationship between race and these court outcomes and a significant interaction between non-Whites and welfare status on disposition outcomes. Specifically, minority juvenile delinquents whose families receive welfare assistance received more severe dispositions. Further, researchers find that juvenile delinquents not residing at home, who display low levels of motivation for change, mental-health problems, and extensive prior referrals, are more likely to be committed to a residential facility (Tomkins, 1992).

The different findings on the effect of extralegal variables on preadjudication detention decisions led to explorations of interactive effects between legal, extralegal, and juvenile court processes. Bishop and Frazier (1988) found no direct effect between race and detention status but did find an interaction effect between race (i.e., White) and detention status on court referrals (i.e., prosecutors were more likely to file a referral for White juveniles who were detained).

A statewide assessment of racial disproportionality in Washington State found that older minority juvenile delinquents were more likely detained than Whites (Bridges et al., 1993). Researchers have also examined the influence of preadjudication detention decisions on subsequent juvenile court decision-making processes. Studies have found that a juvenile delinquent's detention status affects the likelihood of their confinement at adjudication (Wu, 1997) as well as other disposition outcomes (Bortner & Reed, 1985; Frazier & Bishop, 1985).

When identifying differences in the characteristics that explain variance in processing, juvenile court officials claim that the more severe treatment is attributable to the greater need for intervention and treatment (Bishop & Frazier, 1996). Extensive

histories and dispositions also significantly influence processing decisions and thus result in more severe punishment for certain delinquents (Bishop & Frazier, 1988). Ultimately, the decision to detain juvenile delinquents prior to adjudication is rooted in notions of protecting either the community or the youth, providing proper placement when juvenile delinquents lack it, and/or to ensure court appearance (McCarthy, 1987). The impact that preventive detention has on subsequent juvenile court processing may be regarded as a self-fulfilling prophecy, given the increased severity at adjudication and disposition attributable to detention status (McCarthy, 1987).

### **Contextual Characteristics and Juvenile Court Processes**

A second explanation of variation in preadjudication detention decisions is what we call the *contextual differences argument*, which suggests that characteristics germane to the jurisdiction may explain variation beyond individual characteristics. Some of these factors might include the jurisdiction's social context (e.g., racial composition, racial income inequality), urbanism, and crime rate (exposure to crime). Prior sentencing studies have captured the importance of measuring social context in disposition and sentencing outcomes (Bortner, Zatz, & Hawkins, 2000; Britt, 2000; Myers & Talarico, 1987; Peterson & Hagan, 1984; Secret & Johnson, 1997). In their review of juvenile transfer decisions, Bortner et al. (2000) call for research that examines early juvenile court processes alongside structural components in order to address the "continued failure to contextualize statistical analyses" (p. 310). Further, expanding studies of juvenile court processes to include the economic and social conditions of the individual juvenile court has also been previously proposed and advocated (see Feld, 1991b, 1999). Social factors at the jurisdiction level such as ethnic heterogeneity and residential/community instability have been shown to influence not only juvenile offending in urban and rural jurisdictions (Hawkins, 1993, 1999; see Osgood & Chambers, 2000) but also juvenile court processes.

In macro-level analyses, Sampson and Laub (1993) found that the proportion of "underclass" poverty and racial inequality in a county impacts decisions to detain and remove juvenile delinquents from their home at the time of disposition. Similarly,

Bridges et al. (1993) found that urbanism, violent crime, and percent of minority juvenile delinquents in counties directly affected adjudication and disposition decisions, but did not significantly affect detention status. Feld (1991b) also examined the role of urbanism in a study of detention practices in urban, suburban, and rural counties in Minnesota. He found that juvenile delinquents referred for person offenses and those with longer criminal histories were more likely to be detained in all types of counties studied. However, juvenile courts in urban counties had higher detention rates than others. Feld (1991b) attributed the higher rates of detention in urban counties to available detention facilities. More specifically, the larger presence of detention centers in urban areas and availability of bedspace provides the capacity for formal control. Feld also notes that most urban courts operate in areas characterized by economic distress, residential instability, and racially and ethnically mixed populations. Secret and Johnson (1997) examined the impact of both individual and structural (or contextual) components of detention, adjudication, and disposition decisions by aggregating individual characteristics of the juveniles within each jurisdiction. They found, in the state of Nebraska, that county-level characteristics such as crime rate, percent with high school education, percent unemployed, percent in poverty, percent non-White, percent urban, and average age of population significantly influenced juvenile-court process decisions.

Social class has also been integrated into studies of judicial court outcomes. Frazier and Lee (1992) use macro-level measures, such as class indicators (i.e., proportion of population employed, migration, and mean income per capita), county crime, and household size, to determine their impact in Florida on the county rates of detention. They found violent crime and mean income per capita to be the strongest predictors of county-level rates.

Other studies have attempted to account for macro level factors by comparing individual level models between jurisdictions that differ on some macro-level characteristic. For example, one recent study compared decisions to detain Hispanic juvenile delinquents in one rural juvenile court with an urban court in a southwestern state. Researchers found that in the urban court, school status and offense category significantly influenced the decision to detain, whereas in the rural court, only the number of prior offenses affected detention status (Maupin & Bond-Maupin, 1999).



Maupin and Bond-Maupin (1999) attribute this result to a contextual difference in that the rural court officials were more stringent in their use of detention screening criteria, which produced their higher detention rates.

Consistent with existing research confirming the relationship between crime and dynamic social forces, including poverty, urbanism, segregated, and disorganized communities (Wilson, 1987, 1996), we believe that examinations of juvenile court decisions should be centered on identifying those theoretical explanations that can best explain general court outcomes. Furthermore, moving beyond site-specific analyses and focusing on multiple jurisdictions allows for examination of not only the relationship between court actions and social class but also other structural components shown to impact specific decision-making processes (Hawkins, 1993, 1999; Zatz, 2000). We recognize the critical role that both individual and contextual indicators play in court processes. We therefore propose to integrate both individual characteristics of juvenile delinquents and contextual indicators of the jurisdictions to examine the combined influence of these factors on preadjudication detention status in one particular state.

## **Current Study**

This study will examine referrals for all delinquent acts from 65 counties in a northeastern state during 1990 to determine the factors that affect preadjudication detention of juveniles. Specifically, we will test the following research questions:

1. What individual characteristics of juvenile defendants predict preadjudication detention?
2. What county-level contextual characteristics predict preadjudication detention of juveniles when controlling for their individual characteristics?

To test these questions, we will examine statewide (multijurisdictional) data using a hierarchical generalized linear model to determine the effects of factors consistent with both the individual differences argument and the contextual differences argument on preadjudication detention. Level one variables will explore the effects of individual

characteristics (i.e., legal and extralegal) of the juvenile defendants on preadjudication detention decisions. Level two variables will allow us to explore the impact of the contextual characteristics of the counties on preadjudication detention decisions.

Our study will advance this area of research in a number of ways. First, we will use a statewide data set of the entire population of juvenile delinquency referrals. The majority of previous studies include single jurisdiction examinations or comparisons across geographic areas (i.e., urban, suburban, rural counties) to theoretically address how detention outcomes vary across such areas without considering how county-level characteristics vary and influence outcomes. Additionally, when statewide data have been used in prior detention studies, they fail to appropriately address (i.e., empirically) the “nested” nature of these data. Second, the data will include all referrals in a calendar year to allow for a more complete examination. Third, we will incorporate measures of both the individual and the county within the same analytical model, to examine the individual and contextual differences arguments. Fourth, we will include a more detailed stratification of racial groups including Hispanic juvenile defendants to determine the impact of individual characteristics on preadjudication detention decisions. Finally, we will implement the most appropriate modeling strategy, hierarchical generalized linear modeling, to analyze these relationships.

## **Method**

### **Participants**

Data for this study consist of all substantiated referrals to juvenile court for delinquent acts ( $n = 8,289$ ) from all counties of a northeastern state during 1990.<sup>1</sup> The data included juvenile delinquency referrals for all offenses excluding those for status offenses.<sup>2</sup> The referral was examined as the unit of analysis; it is therefore possible that

1. One large county did not record pretrial detention decision information for its referrals, which resulted in the exclusion of 5,082 referrals from the original data set of referrals. This county was unique such that it was 100 percent urban. Further, the crime rate and racial inequality were above average but not at the top of the range for either variable. Fortunately, the sample does contain a nearly identical county that is 98 percent urban and contextual characteristics similar to the excluded county, thereby decreasing the likelihood of bias in the study.

2. A potentially important limitation is that these data do not include technical violations, though they are very common occurrences in many jurisdictions.

the same juvenile delinquent was referred multiple times to court for a different charge, within either the same or a different jurisdiction.<sup>3</sup>

## Measurement

The dependent variable of interest is the detention of a juvenile delinquent prior to adjudication. Preadjudication detention is operationally defined as the care and custody of a juvenile prior to adjudication in a secure, residential detention facility resulting from a substantiated referral for a delinquent act as opposed to the release of a juvenile to the community prior to further court processing. Preadjudication detention is coded as a binary outcome with detention equal to one, and no preadjudication detention equal to zero.

The independent variables included individual-level measures of the legal and extralegal characteristics of the juvenile delinquents associated with each referral, as well as county-level characteristics. Specifically, individual-level variables included the offense type that resulted in a referral, the number of prior referrals for new crimes, family income level, living arrangement, age, gender, and ethnicity.

The variable *offense type* reflected the most serious crime for which the juvenile was charged (if multiple charges existed). Offense type was grouped according to violent crime equal to one, and nonviolent crime equal to zero.<sup>4</sup> Nonviolent crimes included theft (34.9 percent), miscellaneous offenses (21.4 percent), burglary (17.2 percent), drug offenses (5.2 percent), and arson (1.2 percent). The majority of the miscellaneous offenses consisted of DUI, trespassing, criminal mischief, and loitering charges. Violent crimes included assault (10.8 percent), and aggravated assault (6.8 percent), robbery (1.8 percent), murder (.03 percent), and rape (0.6 percent).

3. It is important to note that this state's juvenile court system is organized at the county level. This level of organization varies among states and would be an important aspect to consider in similar research projects.

4. Due to the relatively low number of cases for some crime types, we dichotomized offenses into a traditional violent/nonviolent classification.

The criminal history of the juvenile delinquent was measured using the juvenile's

*number of prior referrals*.<sup>5</sup> *Family-income level* was measured using the juvenile's self-report during intake. Family income levels were structured in a ratio level scale that consisted of four categories ranging from earning less than \$8,000 to earning more than \$24,001. *Living arrangement* of the juvenile delinquent was categorized according to the arrangement of the household contrasting two-parent households with single-parent households, group homes, foster homes, or other living situations.

Age, gender, and ethnicity were measured using the self-reported data recorded during intake. Age was measured as a continuous variable. Gender was coded as male equal to one, female equal to zero. Ethnicities reported included White, Black, Hispanic, and "other." In the analysis, the various ethnicities were dummy-coded with White juveniles serving as the reference category.

Table 1 presents a summary of the demographic characteristics for the juvenile delinquents associated with each referral. The typical juvenile delinquent associated with a referral in this population was a 15-year-old White male, charged with a nonviolent crime as his first offense. According to the descriptive statistics for the sample, 80 percent of the juvenile delinquents were charged with a nonviolent crime. The current charge was the first referral for 85 percent of the sample. Juvenile delinquent's family background information was also reported during processing. Approximately, half of the juvenile delinquents stated that they resided in a one-parent household, or an alternative arrangement such as foster care. The self-reported economic backgrounds of the associated families, as measured through annual family income level, were very diverse with nearly equal percentages of families in each economic background bracket. According to the US Census Bureau (1990) Summary Tape File 3c, the median level of income for family household in this state was \$34,856.<sup>6</sup> Thus, a large number of these juvenile delinquents resided in households with below-median levels of income.

5. The offense history data only included the 3 years before the current referral; however, given that the average age of the juvenile was 15 years old, it is a relatively strong proxy that captures the majority of the juvenile's criminal history.

6. Given that these data are from 1990, it is important to distinguish that the family-income variable is underestimated by today's standards. Census data show that a comparable median level of income from family household in 2000 was significantly higher for this state at \$49,184, a difference of \$14,328 from 1990.

**Table 1** Descriptive statistics

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County-level characteristics		
Urbanization, <i>M</i> % ( <i>SD</i> )	39.2 (26.7)	
Racial composition, <i>M</i> % ( <i>SD</i> )	3.09 (3.28)	
Racial income inequality, <i>M</i> ( <i>SD</i> )	4,830.07 (3,489.9)	
Crime rate, <i>M</i> ( <i>SD</i> )	855.3 (528.6)	
Detention rate, <i>M</i> ( <i>SD</i> )	0.125 (.33)	
Individual characteristics		Percent ( <i>n</i> = 8,289)
Offense type	Non-violent crime	80.0
	Violent crime	20.0
Number of prior referrals	0	85.0
	1	12.3
	2	2.1
	3 or more	.5
Gender	Male	85.2
	Female	14.8
Race	White	76.4
	Black	16.9
	Hispanic	5.6
	Other	1.1
Living arrangement	Two-parent household	44.8
	One-parent household/other	53.3
Family-income level	< 8,000	23.2
	8,000–16,000	27.5
	16,001–24,000	19.3
	> 24,001	30.1
Age	<i>M</i> ( <i>SD</i> )	15.05 (1.8)

To ascertain the contextual or county-level effects on preadjudication detention, we included four contextual measures: urbanization, racial composition, racial economic inequality, and county crime rates. Data for the first three variables measured were derived from the publicly available 1990 US Bureau of the Census, Summary Tape File 3C. Urbanization was operationalized as the percentage of county residents that were classified as living in urban areas. The racial composition of a county was measured by the percentage of the county's population that was non-White. Non-White racial groups included African Americans, Asians, American Indian, or those individuals identified by the US Census as "other." Racial economic inequality was operationalized by income inequality between racial groups, calculated as the difference between the mean White and mean Black per capita income by county. Finally, crime rate for each county was based on the total number of juvenile arrests for all crimes per 100,000 residents. The crime statistics were derived from the 1990 Uniform

## Crime Reports.

Table 1 presents descriptive information of the county-level variables. During 1990, the US Census Bureau classified an urban area as “comprising all territory, population, and housing units in urbanized areas and in places of 2,500 or more persons outside urbanized areas.” Less than half population of the counties (39.2 percent) resided in urban areas. On average, the majority of the county residents resided in rural areas. The racial composition measure of percentage of the population that was non-White ranged from 0.34 percent to 17.49 percent indicating that some counties were relatively homogenous. Regarding racial income inequality, the mean White per capita income-level average was an average of \$4,830.57 higher than mean Black per capita income levels. The county crime rates varied widely between 212 crimes per 100,000 people and 3,769 crimes per 100,000 people. The average county crime rate was 855 crimes per 100,000 people. Finally, the rate of detention by county ranged from 0 to .299 with a mean detention rate of .125. Results of an ANOVA showed that the mean rate of detention by county was significantly different,  $F(1, 64) = 11.02$ ,  $p < .001$ ,  $\eta^2 = .26$ ) justifying the examination of contextual characteristics on detention outcomes.

## Results

To determine the effects of the individual characteristics of juvenile delinquents on preadjudication detention decisions, we employed a two-level hierarchical generalized linear modeling (HGLM) strategy for our analysis. Given that the outcome measured was a binary variable (preadjudication detention vs. no preadjudication detention), the assumption of normality within the data was not realistic and required a nonlinear analytical strategy that used the HGLM rather than a standard HLM strategy (Raudenbush, Bryk, Cheong, & Congdon, 2000). The HGLM model is similar to a logistic regression model in that it produces the log odds of success (occurrence of preadjudication detention). To facilitate interpretation of the results, we converted the log odds into odds ratios.

### Bivariate Relationships

### ***Contextual characteristics***

Pearson correlation coefficients demonstrated statistically significant correlations between many of the contextual characteristics of the counties (see Appendix A). Counties that were more racially diverse had higher levels of racial economic inequality based on income levels ( $r = .32, p < .05$ ). Further, counties in which a higher percentage of the residents lived in urban areas were more likely to have racial economic inequality ( $r = .30, p < .05$ ) and were also more likely to be more racially and ethnically mixed ( $r = .69, p < .05$ ) than rural areas.

### ***Individual characteristics***

A cursory examination of the bivariate relationship between the individual characteristics of the juvenile delinquents noted a number of statistically significant correlations; however, many were low in magnitude (see Appendix B). Among more substantive correlations, we found that the race of juvenile defendants was significantly correlated with family income levels, such that juveniles of color were more likely to have lower family income levels ( $r = -.12, p < .01$  for Hispanic, and  $r = -.17, p < .01$  for Black) compared to White juveniles. Further, Black juvenile delinquents were more likely to reside in a single-parent household than in a two-parent household ( $r = -.19, p < .01$ ) and be referred for a violent crime as compared to nonviolent crime ( $r = .16, p < .01$ ).

### **Effects of Individual Characteristics on Preadjudication Detention Decisions**

Using a hierarchical generalized linear model, we regressed the dependent variable, preadjudication detention, on the individual characteristics (level one) of the juvenile defendants associated with each referral,<sup>7</sup> and the county characteristics (level two). We first discuss the effects of the individual-level characteristics on

7. Individual-level variables were group-mean-centered around the mean county level of that variable.

preadjudication detention, which included legal factors typically considered in

preadjudication detention decisions, such as crime type and prior record, as well as extralegal factors, such as race/ethnicity and gender, which should not be considered in judicial decisions.

Results from the level one effects demonstrated that both legal and extralegal characteristics of juveniles significantly affected preadjudication detention decisions (see Table 2). Among the factors that had a robust impact were race, gender, and age. A Hispanic juvenile delinquent was about two and a half times more likely to be held in preadjudication than one who was White, those classified as “other” about twice as likely,<sup>8</sup> and African Americans one and a half times more likely. Additionally, males were 1.67 times more likely to be detained than females. Juvenile delinquents who were older at the time of referral also had a greater likelihood of preadjudication detention, experiencing a 1.12 increase in likelihood for each year.

The extralegal characteristics of family situations were also found to impact preadjudication detention decisions. Juveniles who lived in two-parent households were .31 times less likely to be detained prior to adjudication than those in single-parent headed households, foster care, or some other type of temporary situation. Further, higher levels of family income significantly decreased the likelihood of preadjudication detention by a factor of .13.

Several legal factors were also found to significantly affect the likelihood of preadjudication detention. The number of prior referrals significantly increased the odds of preadjudication detention. For each additional prior referral, the likelihood that a juvenile delinquent was detained prior to adjudication nearly doubled—a 1.89 greater likelihood. Further, when a juvenile delinquent was referred for a violent rather than a nonviolent crime, the odds that they would be detained significantly increased by more than one and a half times.

8. Unfortunately, the data did not further specify the ethnicity of the juvenile delinquents in this group.

**Table 2** Factors affecting preadjudication detention of juvenile delinquents



	Exp (B)	SE
<b>Contextual characteristics</b>		
<i>Intercept (level 2)</i>		.04** (.43)
Urbanization	1.01	(.01)
Ethnic heterogeneity		1.14* (.05)
Racial inequality	.99	(.00)
Crime rate	.99	(.00)
<b>Individual characteristics</b>		
<i>Extralegal characteristics</i>		
Race (1 = Hispanic) <sup>a</sup>		2.56** (.13)
Race (1 = other) <sup>a</sup>		2.03* (.28)
Race (1 = Black) <sup>a</sup>		1.48** (.09)
Gender (1 = male)		1.67** (.12)
Age		1.12** (.02)
Living situation (1 = two-parent home)		.69** (.08)
Family income		.87** (.04)
<i>Legal characteristics</i>		
Offense type (1 = violent crime)		1.61** (.08)
Number of prior referrals		1.89** (.06)
Chi-square	443.2	<i>df</i> = 56

<sup>a</sup>White.

\* $p < .01$ ; \*\* $p < .001$ .

## Effects of Contextual Characteristics on Preadjudication Detention Decisions

To determine the effects of contextual county characteristics on preadjudication detention, we examined the coefficients for the level two variables. The findings reveal that only racial composition had a statistically significant effect on preadjudication detention. Counties that had a higher percentage of non- White residents were significantly more likely to detain youths prior to their adjudication hearing.

While other county-level characteristics were not individually significant, we complete additional post hoc analysis to determine whether, when taken as a block, the contextual variables added substantively to the explained variance, as demonstrated through an improved model fit. Including only individual characteristics as predictors (level one) resulted in a chi-square of 1341.24 as compared to a chi-square of 443.2 when both level one and level two measures were included. A *t*-test determined the difference between the chi-square values to be statistically significant at  $p .05$ .

The improved fit of the model with the addition of the county-level variables demonstrates that individual characteristics of the juvenile delinquents are an important,

but incomplete, explanation of the variation in preadjudication detention. The importance of this study is the evidence it finds that underscores the significance of including both individual and contextual variables in understanding preadjudication detention decisions.

## **Discussion**

Differential treatment of juvenile defendants in preadjudication detention decisions in a northeast state is attributable to both individual and contextual characteristics that vary within and between counties. The probability of detention is not solely attributable to individual characteristics of the juveniles, but also to the context in which the court operates, specifically, the racial composition of the county. It is essential to consider both the individual composition of the juvenile delinquent population within the county, and the contextual components of counties that vary throughout the state, in formulating an understanding of the detention process.

Interestingly, we find that race/ethnicity affects preadjudication detention at both the individual and county level. Minority juvenile delinquents, compared to their White counterparts, have a consistently higher probability of preadjudication detentions. Further, we conclude that juvenile delinquents who live within areas that have high minority populations (more heterogeneous) will more often be detained, regardless of their individual race or ethnicity.

Our results are consistent with the argument that racial composition at the community level represents a social threat from the minority population. Researchers suggest that minority offenders who reside in areas with a relatively large minority population are treated more severely than White offenders (Blalock, 1957; Bridges & Crutchfield, 1988; Bridges & Myers, 1994; Frisbie & Neibert, 1976). Bridges and Crutchfield (1988) argue that Black offenders residing in urban areas with higher violent-crime rates are at higher risk of formal control and consequently receive more severe punishments than White offenders. Although our study finds that both individual race/ethnicity and county racial composition affect preadjudication detention decisions, the effect of a county's crime rate in our analysis is insignificant. It thus would seem that

our results provide support for the racial threat hypothesis given the effect of racial composition in detention decisions. A perceived threat of minority juveniles, especially those who live in counties with populations high in racial and ethnic composition, may place minority juveniles at increased risk of detention regardless of actual crime rates in those jurisdictions. It is worthwhile to note, however, that our measures do not perfectly quantify all case specific characteristics, which leaves room for the possibility of systematic differences between cases by race/ethnicity. Thus, not all legal factors have been perfectly accounted for in our study, preventing robust support of the racial threat hypothesis.

A further limitation of our study is that we lack an indicator for the availability of county detention resources and, more generally, the resources of the county's juvenile court system. A few studies have suggested that the economic capacity of juvenile court jurisdictions is an important predictor of formal control (Feld, 1991b). According to Smith (1998), the capacity to house juvenile delinquents has a more pronounced effect on racial/ethnic minorities given their overrepresentation in the justice system. Smith (1998) found that during the same time that juvenile delinquency rates were increasing, the average length of stay for juvenile delinquents in custody decreased from 6 months in 1986 to fewer than 4 months in 1995. The reduction in available resources for youth confinement affects not only the length-of-stay decisions but also the ability to appropriately respond and treat juveniles while detained. Researchers have proposed and found that bed-space capacity significantly influences the decision to detain juveniles prior to adjudication (Feld, 1991b; Krisberg, Litsky, & Schwartz, 1984). As fewer resources are also being made available for diversionary and preventative programs, available bed space in detention centers may serve as the catch-all response for juveniles whether warranted or not. Future research would benefit from developing a clear measure of county economic capacities and court resources.

Our findings clearly suggest several directions for future research. Researchers should examine the possible multiplicative or interactive effects between juveniles' race/ethnicity and the racial and ethnic composition of counties. In particular, future studies should explore whether minority juveniles who reside in more racially and ethnically mixed communities are more likely to be detained. Britt (2000) addressed this

question for an adult sample of offenders at the sentencing phase in Pennsylvania and found no significant relationship between the proportion of the population that is Black, offender's race, and the likelihood of incarceration. However, he did find an interactive effect between the violent-crime rate and offender's race that suggested a longer sentence length for Blacks who reside in counties with higher violent-crime rates.

We encourage researchers to explore the interaction between contextual variables and other types of extralegal variables. A review of statewide juvenile court processing data from Hawaii revealed that gender had no effect on early decision-making processes (i.e., petition and adjudication) but found that girls were sanctioned more harshly than boys during the disposition phase (MacDonald & Chesney-Lind, 2001). Although it is clear that the effect of gender is not constant across juvenile court processing, it remains unknown whether context-based variables mediate the effect of gender in different ways and may be contributing to the inconsistent individual gender effects of petition, adjudication, and disposition outcomes. Further, studies should not be limited to the examination of interactive effects amongst contextual and extralegal factors. Important interactive relationships may also exist between contextual variables, and legal variables that have consistently demonstrated a significant impact across all stages in the adjudication process.

Based on our findings, we must stress the importance of considering both individual and contextual factors, and propose enhanced exploration of multi-level interactions. This is certainly not to suggest that research that focuses on individual-level variables is invalid. It is important to point out that the coefficients for the individual characteristics that we introduced at level one of our model did not significantly change, nor lose their statistical significance, once contextual factors were added at level two. Thus, adding contextual factors creates a more complete picture.

The direction of research on factors affecting the juvenile court process is clearly moving in the direction of improved articulation of legal, extralegal, and contextual factors, more appropriate modeling strategies, consideration of multiple jurisdictions, and a systemic approach as opposed to single point evaluations. All of these considerations are vast improvements on earlier research, and hold promise for understanding the broader impact of a variety of factors. In moving towards these multi-

jurisdiction, systemic approaches, it is important that we do not neglect the merit of in-depth, single jurisdiction analyses. These smaller-scale studies can provide qualitative assessments of individual and situational factors related to specific needs that are not documented in official data. Examples of these factors are the lack of involved guardians; a greater need for treatment (substance abuse or otherwise) by some groups of juvenile delinquents; or the need for treatment that otherwise would not be received if the juvenile was not funneled into the formal criminal-justice system due to lack of insurance or other socioeconomic factors. A qualitative approach that included observations of courtroom proceedings and interviews with family members would add insight to the officially documented data most frequently utilized by researchers.

In conclusion, our study has demonstrated the important role of individual and contextual variables in preadjudication detention. We propose that in future endeavors focusing on court outcomes, researchers should, first, continue to examine individual and contextual variables that affect preadjudication detention as well as interactions between individual and contextual variables and, second, determine the long-term effects of this particular decision point and the factors affecting it.

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## **References**

- Bishop, D. M., & Frazier, C. E. (1988). The influence of race in juvenile justice processing. *Journal of Research in Crime and Delinquency*, 25 (3), 242–263.
- Bishop, D. M., & Frazier, C. E. (1996). Race effects in juvenile justice decision-making: Findings of a statewide analysis. *Journal of Criminal Law and Criminology*, 86 (2), 392–413.
- Blalock, H. M. (1957). *Toward a theory of minority group relations*. New York: Wiley.

- Bortner, M., & Reed, W. (1985). The preeminence of process: An examination of refocused justice research. *Social Science Quarterly*, 66 (2), 413–425.
- Bortner, M. A., Zatz, M. S., & Hawkins, D. F. (2000). Race and transfer: Empirical research and social context. In J. Fagan & F. E. Zimring (Eds.), *The changing borders of juvenile justice* (pp. 277–320). Chicago: University of Chicago Press.
- Bridges, G. S. (1997). *A study on racial and ethnic disparities in superior court bail and pre-trial detention practices in Washington*. Olympia, WA: Washington State Minority and Justice Commission.
- Bridges, G. S., Conley, D., Beretta, G. R., Engen, R. L., et al. (1993). *Racial disproportionality in the juvenile justice system: Final report*. Olympia, WA: Washington Department of Social and Health Services.
- Bridges, G. S., & Crutchfield, R. D. (1988). Law, social standing, and racial disparities in imprisonment. *Social Forces*, 66, 601–616.
- Bridges, G., & Myers, M. (1994). Problems and prospects in the study of inequality, crime, and social control. In G. Bridges & M. Myers (Eds.), *Inequality, crime, and social control* (pp. 3–21). Boulder, CO: Westview Press.
- Britt, C. (2000). Social context and racial disparities in punishment decisions. *Justice Quarterly*, 17 (4), 707–732.
- Fagan, J., Slaughter, A., & Hartstone, E. (1987). Blind justice? The impact of race on juvenile justice process. *Crime & Delinquency*, 33 (2), 224–258.
- Feld, B. C. (1991a). Criminalizing the American juvenile court. In M. Tonry (Ed.), *Crime and justice: A review of research*, Vol. 17 (pp. 197–267). Chicago: University of Chicago Press.
- Feld, B. C. (1991b). Justice by geography: Urban, suburban, and rural variations in juvenile justice administration. *The Journal of Criminal Law & Criminology*, 82 (1), 156–210.
- Feld, B. C. (1999). A funny thing happened on the way to the centenary. *Punishment & Society*, 1 (2), 187–214.
- Frazier, C. E., & Bishop, D. M. (1985). The pretrial detention of juveniles and its impact on case dispositions. *The Journal of Criminal Law & Criminology*, 76 (4), 1132–1152.

- Frazier, C. E., & Lee, S. R. (1992). Reducing juvenile detention rates or expanding the official control nets: An evaluation of a legislative reform effort. *Crime & Delinquency*, 38 (2), 204–218.
- Frisbie, W., & Neibert, L. (1976). Inequality and the relative size of minority populations: A Comparative Analysis. *American Journal of Sociology*, 82, 1007–1030.
- Harms, P. (2002). *Detention in delinquency cases, 1989–1998*. Washington, DC: Office of Juvenile Justice and Delinquency Prevention.
- Hawkins, D. F. (1993). Crime and ethnicity. In B. Forst (Ed.), *The socio-economics of crime and justice* (pp. 89–120). Armonk, NY: M. E. Sharpe.
- Hawkins, D. F. (1999). What can we learn from data disaggregation? The case of homicide and African Americans. In M. D. Smith & M. Zahan (Eds.), *Homicide: A sourcebook of social research* (pp. 195–210). Thousand Oaks, CA: Sage.
- Krisberg, B., Litsky, P., & Schwartz, I. (1984). Youth in confinement: Justice by geography. *Journal of Research in Crime and Delinquency*, 21 (2), 153–181.
- MacDonald, J. M., & Chesney-Lind, M. (2001). Gender bias and juvenile justice revisited: A multiyear analysis. *Crime & Delinquency*, 47 (2), 173–195.
- Maupin, J. R., & Bond-Maupin, L. J. (1999). Detention decision-making in a predominantly Hispanic region: Rural and non-rural differences. *Juvenile and Family Court Journal*, 50 (3), 11–23.
- McCarthy, B. R. (1987). Preventive detention and pretrial custody in the juvenile court. *Journal of Criminal Justice*, 15 (3), 185–198.
- McGarrell, E. (1993). Trends in racial disproportionality in juvenile court processing: 1985–1989. *Crime & Delinquency*, 39 (1), 29–48.
- Myers, M. A., & Talarico, S. M. (1987). *The social contexts of criminal sentencing*. New York: Springer.
- O'Neill, B. F. (2002). Influences on detention decisions in the juvenile justice system. *Juvenile and Family Court Journal*, 53 (1), 47–58.
- Osgood, D. W., & Chambers, J. M. (2000). Social disorganization outside the metropolis: An analysis of rural youth violence. *Criminology*, 38 (1), 81–115.
- Peterson, R. D., & Hagan, J. (1984). Changing conceptions of race: Towards an account of anomalous findings of sentencing research. *American Sociological Review*, 49



56–70.

- Raudenbush, S., Bryk, A., Cheong, Y. F., & Congdon, R. (2000). *HLM5: Hierarchical linear and nonlinear modeling*. Lincolnwood, IL: SSI Scientific Software International.
- Sampson, R. J., & Laub, J. H. (1993). Structural variations in juvenile court processing: Inequality, the underclass, and social control. *Law & Society Review*, 27 (2), 285–311.
- Schutt, R. K., & Dannefer, D. (1988). Detention decisions in juvenile cases: JINS, JDs, and gender. *Law and Society Review*, 22 (3), 509–520.
- Secret, P. E., & Johnson, J. B. (1997). The effect of race on juvenile, justice decision making in Nebraska: Detention, adjudication, and disposition, 1998–1993. *Justice Quarterly*, 14 (3), 445–478.
- Shelden, R. G. (1999). *Detention diversion advocacy: An evaluation*. Washington, DC: Office of Juvenile Justice and Delinquency Prevention.
- Smith, B. (1998). Children in custody: 20 year trends in juvenile detention, correctional, and shelters facilities. *Crime & Delinquency*, 44 (4), 256–543.
- Tomkins, A. J. (1992). Dispositional decision making in the juvenile justice system. In J. R. Ogloff (Ed.), *Law and psychology: The broadening of the discipline* (pp. 71–105). Durham, NC: Carolina Academic Press.
- Wilson, W. J. (1987). *The truly disadvantaged: The inner city, the underclass, and public policy*. Chicago: University of Chicago Press.
- Wilson, W. J. (1996). *When work disappears: The world of the new urban poor*. Chicago: University of Chicago Press.
- Wordes, M., Bynum, T. S., & Corley, C. J. (1994). Locking up youth: The impact of race on detention decision. *Journal of Research in Crime and Delinquency*, 31 (2), 149–165.
- Wu, B. (1997). The effect of race and juvenile justice processing. *Juvenile & Family Court Judges*, 48 (1), 43–51.
- Wu, B., Cernkovich, S., & Dunn, C. S. (1997). Assessing the effects of race and class on juvenile justice processing in Ohio. *Journal of Criminal Justice*, 25 (4), 265–277.
- Wu, B., & Fuentes, A. (1998). The entangled effects of race and urban poverty. *Juvenile*



*and Family Court Journal*, 49 (2), 41–53.

Zatz, M. S. (1987). The Changing forms of racial biases in sentencing. *Journal of Research in Crime and Delinquency*, 24 (1), 69–92.

Zatz, M. S. (2000). Convergence of race, ethnicity, and class on court decision-making: Looking toward the 21st century. In J. Horney (Ed.), *Policies, process, & decisions of the criminal justice system: Criminal justice 2000*, Vol. 3 (pp. 503–552). Washington, DC: US Department of Justice, Office of Justice Programs, National Institute of Justice.

#### Appendix A. Correlation Matrix of Contextual County-Level Variables

	Crime rate	Urbanization	Racial economic inequality
Urbanization	-.005		
Racial economic inequality	.217	.303*	
Racial composition	.096	.675*	.310*

\*Correlation is significant at the 0.05 level (two-tailed).

## Appendix B. Correlation Matrix of Juvenile Delinquent Characteristics

	Crime type	Prior referrals	Gender	Race (Black = 1)	Race (Hispanic = 1)	Race (other = 1)	Living arrangement	Family income
Prior referrals	.02							
Gender	-.06**	.07**						
Race (Black = 1)	.16**	.83**	-.05**					
Race (Hispanic = 1)	.01	.01	.03**	-.11**				
Race (other = 1)	.02*	.00	-.01	-.05**	-.03*			
Living arrangement	-.07**	-.06**	.05**	-.19**	-.10**	.01		
Family income	-.08**	-.11**	.05**	-.17**	-.12**	.01	.02**	
Age	-.03*	.10**	.02*	-.06**	-.02*	.00	-.06**	.07**

\*Correlation is significant at the 0.05 level (two-tailed). \*\*Correlation is significant at the 0.01 level (two-tailed).