Analysis of Juvenile Disproportionate Minorty Confinement in Georgia

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Pete Colbenson
Executive Director
Children and Youth Coordinating Council

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Project Staff

John C. Speir, Ph.D.
Tammy Meredith, Ph.D.
Sharon C. Johnson, M.S.

Applied Research Services, Inc.
663 Ethel Street, NW
Altanta, GA 30318
(404) 881-1120
ars@ars-corp.com

In 1974 the Juvenile Justice and Delinquency Prevention (JJDP) Act created the Office of Juvenile Justice and Delinquency Prevention (OJJDP) in an effort to prevent juvenile crime, as well as improve juvenile justice policies nationwide. In 1988, Congress amended the Act to require states participating in the Formula Grants Program to address the problem of disproportionate minority confinement (DMC). (Formula Grants are federal monies normally allocated to States for continuing activities in accordance with distribution formulas prescribed by law and/or administrative regulations.) In 1992, the amendment was further strengthened as the issue of DMC was elevated to a "core requirement," making 25% of each State's Formula Grant funds contingent upon reducing the disproportionate number of minority youth confined in detention or correctional facilities. OJJDP defines minority populations as African-Americans, American Indians, Asians, Pacific Islanders, and Hispanics.

Currently, OJJDP does not specify strategies for reducing DMC, but requires states receiving Formula Grants to address the issue in three phases: identification, assessment, and intervention. Identification involves determining whether a state has a disproportionate number of minority youth confined. The assessment phase involves determining why DMC exists. Lastly, the intervention phase requires states to develop strategies for reducing DMC. This report will address the identification phase by examining the arrest and incarceration data of youths in Georgia to determine if disproportionate minority confinement exists, and if so, to assess the severity of the problem.

The main OJJDP requirement under the JJDP Act for meeting the requirements of the identification phase is completion of the "Phase I Index Matrix." A matrix must be completed for the state as a whole, and also for three geographic units within the state (such as counties) with large minority populations. To complete the matrix, states must insert the numbers of minority and non-minority youth arrested and confined in four types of secure facilities. Such percentages are divided by a state's at-risk minority juvenile population (typically 10-17 year olds). For example, if 50% of the youths in a state's juvenile detention facilities are African-American, and only 25% of the state's at risk population was African-American, then we would come up with an index value of 2.0. If an index value above 1.0 is generated, then DMC exists. Therefore, the greater the index value, the greater the percentage of DMC. An index value below 1.0 would denote that minority youth are underrepresented. In our example, an index value of 2.0 would mean that African-American youths are represented in detention facilities at twice their rate of representation in the state's at-risk population. The initial part of this report completes this requirement statewide for African-Americans and Hispanic youths while also targeting specific jurisdictions where Hispanics youths are over-represented as percentage of the overall at-risk population.

Phase I Matrix: Analysis and Conclusions

The Phase I Matrix was computed for African-Americans and Hispanic youths who together account for 40% of the at-risk population statewide (African-Americans 35%, and Hispanics 5%). The Asian population of Georgia makes up less than 1% of at-risk population; therefore, DMC matrices were not calculated for this group.

As shown in Matrix 1, DMC remains a problem in Georgia. African-American youths are arrested, detained, and incarcerated in Georgia's juvenile facilities at nearly twice the rate of Caucasian youth. While African-American youths make up only 35% of Georgia's population, they comprise 62% of arrested youth, and 67% of confined youth in the state. African-Americans register an overall index score of 1.94 indicating that African-American youth are represented in detention facilities at nearly twice their rate of representation of the Georgia's at-risk population. These results require further investigation to determine the exact problem associated with the over-representation.

The Hispanic at-risk population has been steadily rising in Georgia. Hispanic youth make up 5% of the at-risk population statewide. The Phase I DMC Matrix for Hispanics is reflected in Matrix 2. The Matrix remains partially incomplete. For some reason, the UCR arrest statistics do not include any estimates on the number of Hispanic juveniles arrested. However, an index score can still be calculated with the available data. Georgia's overall Hispanic index score is .40, reflecting an under-representation of Hispanic youth in Georgia's juvenile justice system. Similarly, Georgia registers a .40 index score for Hispanic youths confined in secure facilities. However, the index score on line three of the matrix shows a slight over-representation of Hispanic youth detained in secure juvenile facilities (index score of 1.12). This over-representation may be the result of census data problems associated with undercounting Hispanic youths in Georgia. In order to investigate the disproportionate minority confinement exists, Georgia is looking carefully at DMC in selected jurisdictions with a disorientate number of Hispanic youths. Until such time, Georgia is not conducting any Phase II specific analysis.

Georgia Studies Investigating African-American Over-Representation

In the past 20 years, three studies have been conducted to investigate the influence of racial bias in Georgia's juvenile courts. In 1989, a University of Georgia research team conducted one of the first studies (Lockhart, Kurtz, Sutphen, and Gauger, 1989). The researchers examined 10% of all delinquent and unruly crimes committed by male youth in 149 Georgia counties in 1988. The sample consisted of 11,962 counts committed by 3,277 males. Six decision points were examined

Matrix 1
Disproportionate Minority Confinement
Phase I Index Matrix

1. Area Reported
_X_ Statewide
___ County _____
___ Other _____

2. Minority Reported
___ All minorities
_X_ African-Americans
___ American Indians
___ Asians
___ Hispanics
___ Pacific Islanders
___ Other _____
___ Combination _____

3. Reporting Period
January 2001 through December 2001
month/year month/year

4. Data Items

Data Items	A Total Number of All Youth	B Total Number of Minority Youth	C % Minority	D Index
1. Popluation at risk (age 10 through 16)	840,805	290,366	35%	1
2. Juveniles arrested	30,922	19,238	62%	1.77
3. Juveniles confined in secure juvenile detention facilities	863	584	67%	1.91
4. Juveniles coinfined in juvenile correctional facilities	1,755	1,192	67%	1.91
5. Juveniles confined in adult jails	0	0	0	0
6. Juveniles confined in adult lockups	0	0	0	0
7. Total (items 3-6)	2,618	1,776	68%	1.94

5. Data Sources

Item 1: Summary File 1 (ASCII), Census 2000
Item 2: Georgia Crime Information Center (GCIC), 2001
Item 3: Georgia Department of Juvenile Justice, Active Population, 12/31/2001
Item 4: Georgia Department of Juvenile Justice, Active Population, 12/31/2001
Item 5: N/A
Item 6: N/A

Martix 2
Disproportionate Minority Confinement
Phase I Index Matrix

1. Area Reported

_X_ Statewide
___ County _____
___ Other _____

2. Minority Reported

___ All minorities
___ African-Americans
___ American Indians
___ Asians
_X_ Hispanics

(intake, detention, petition, adjudication, disposition, commitment) in relation to four groups of variables: extralegal (age, race), legal (present crime and past crimes), organizational (administration and formalization), and community expectations (rehabilitation vs. punitive).

Univariate analysis showed differences between Black and White youths in relation to extralegal and legal factors. The authors did not, however, find racial differences in any of the six juvenile justice decision points. Multivariate statistics were not used, although their importance was indicated in the report.

While data analysis did not uncover any racial differences between the adjudications of Black and White youths, the authors suggested that discrimination occurs prior to the six decision points examined. It was suggested that Black youths were more likely to be arrested than White youths, and Blacks were more likely to be charged with more serious crimes.

The second Georgia racial bias study was conducted in 1993 by P. David Kurtz, Martha Giddings, Richard Sutphen, Karen Gill, and Jack Martin of the University of Georgia for the Children and Youth Coordinating Council. They collected information on male youth via police questionnaires during the summer and fall of 1990. If charges were dropped, then tracking of the youth ended. However, if the youth proceeded through the juvenile justice system, then surveys would be completed by intake officers, judges, and Department of Juvenile Justice employees at pivotal case points. A final sample of 471 youths was used in the study.

The researchers collected information on five decision points: law enforcement (complaint, release, detention request), court intake (dismissed, informal adjustment, petition), court adjudication (dismissal, adjudicated delinquent), court disposition (dismissal, probation, commitment), and Department of Juvenile Justice placement (home placement, community treatment). Legal variables (i.e. seriousness of offense), community variables (urban vs. rural), and extralegal variables (i.e. race, age, demeanor) were also examined for each case.

While no direct effects of race were found, the researchers suggested that more Black youths were arrested and charged with more serious crimes because police officers perceived their demeanor to be less favorable than White youths. Even though no bias was found at any of the decision points examined, the researchers suggested that the seriousness of crimes Black youth were charged with resulted in tougher sentences for them.

The authors constructed a Cumulative Penetration Model and concluded that since Blacks were charged with more serious crimes due to the dislike of their demeanor

by police officers, they penetrated the system further than White youths. The final implications were that race has an indirect effect on the adjudication and disposition of cases in Georgia's juvenile courts.

In 1995 a report was released from the Georgia State University research team of R. Barry Ruback, Paula Vardaman and Richard Morrell that represents the most comprehensive assessment of decision-making in Georgia's juvenile courts to date. The report was commissioned by the Georgia Supreme Court Commission on Racial and Ethnic Bias in the Court System to examine whether there was racial or ethnic bias in adjudication and disposition decisions made in Georgia's juvenile courts. The project consisted of a two-prong approach: analysis of adjudication and disposition decisions, and a questionnaire given to judges and probation officers to assess adjudication and disposition decisions to hypothetical juvenile cases.

The first portion of the study involved analysis of 2,043 delinquency adjudications from 16 county juvenile courts for offenses committed in 1993. Four of the counties were in the metropolitan Atlanta area, and 12 were non-metropolitan areas. For each case, five types of information were collected: demographic (sex, age), crime (offense), decision (case disposition), legal history (prior record), and social history (family, school). All cases were divided into three disposition categories: dismissed, informal adjustment, and adjudicated delinquent. Comparisons were then made between the dispositions of Black and White youths.

The study found that while Black youths were disproportionately represented in the juvenile justice system, at the bivariate level, White youths were treated more severely. In terms of differences between urban and rural jurisdictions, Black youth were treated more severely in urban counties, and White youth were treated more severely in rural counties. When controlling for legal history, crime severity, county type (urban/rural) and whether the defendant admitted or denied the crime, race was *not* shown to have a significant effect on adjudication.

The second part of the study involved surveying a sample of 246 persons: 67 judges, 53 probation officers/supervisors, and 126 Department of Juvenile Justice Court workers/administrators. A 2x2x2 (offender characteristics) between x3 (crimes) study design was used to create eight different versions of the following three crimes: motor vehicle theft, simple battery, and drug possession. Each survey consisted of three hypothetical situations describing one of the three crimes and the race, prior record, and admission/denial of charge by the youth. Respondents would then make adjudication decisions accordingly. Race did not turn out to be a significant predictor of the adjudication decision when examined alone, or in combination with other factors.

Understanding Conflicting Results

As the evidence suggests, conflicting results have cast a census of doubt over this entire body of research. The prevalence of methodological and statistical problems in juvenile justice research is well documented (McCarthy and Smith, 1986, Bishop, 1988, Feyerherm, 1995) and is discussed in almost every study examining this sensitive issue. McCarthy and Smith (1986), in a comprehensive review of prior studies, discovered substantial variation across research studies. They note extensive differences in time frame, measures of offense severity and disposition, offender population, and statistical / analytical strategies.

Zatz (1987) describes three waves of research with each characterized by different methodologies and findings. Earlier racial bias studies in the 1960's and 1970's found evidence of overt racial bias. Yet, these studies failed to ensure that equally situated youths were compared to one another, leaving out important factors known to influence judicial decisions, such as prior record. This made it very difficult to examine the effects of race among youths with similar prior records and charges. As statistical methods improved and state databases offered researchers more information about a youth's background, researchers found that race was not important when looking at equally situated youths. Legal factors, such as prior record and offense severity, were significant even though these factors were highly correlated with race. However, such research found no direct, overt evidence of racial bias.

Today, researchers have expanded their conceptualization of racial bias to include indirect racial bias. That is, although race may not have a direct impact on judicial decision-makers, race is looked at as operating through other legally accepted variables, such as prior detentions, family status, gang affiliation, and school participation (Feyerherm, 1995). If a minority youth is much more likely to be detained, then this fact could adversely affect subsequent judicial decisions – adjudication, commitment. Moreover, the effects of racial bias can build as the youth moves through the system. That is, while racial bias may be undetectable at one decision point, the aggregation of this bias across multiple decision points may be significant (Feyerherm, 1995).

In short, three major methodological problems underscore this research.

(1) The absence of a centralized repository for juvenile justice records force researchers to analyze data that is often missing important, longitudinal information regarding details about a youth's offense, system penetration, detention episodes, and commitment history. Consequently, researchers employ imprecise measures of prior history or crime severity. For example, McCarthy and Smith (1986) reviewed over 20 studies and found significant problems with key measures. For example,

most studies relied on simple crime type (violent, property, drugs) as a measure of crime severity.

(2) Juvenile justice officials do not collect in any systematic way important extra-legal factors, such as family background, social class, psychiatric and mental capacity, legal representation, school performance, parents' attitude, availability of insurance and access to private mental health facilities. These factors may account for the perceived racial bias in some studies.

(3) Researchers look at only one decision point while excluding the outcomes of earlier decisions, such as whether the youth was detained in a secure facility following arrest or referral

The historical problem in conducting racial bias research is providing an explanation for such bias, if it is found that minorities receive more severe sanctions than Whites, independent of the severity of current offense, severity of additional charges, prior criminal record (severity and volume), and other relevant legal factors. Kleck (1981) outlines three possible explanations and sources of such bias:

- Overt racial discrimination - conscious or unconscious decision to treat minorities more harshly.

- Class discrimination - the court's judgment as to the youth's social class, perception of family support, or lack of economic or social ties to the community status, or insurance for community-based alternatives

- Institutional discrimination - statutes with higher penalties for crimes committed more frequently by racial minority members

For whatever reasons, race (directly or indirectly) could be finding its way into juvenile justice decisions, independent of the defendant's crime and criminal history, and may adversely impact the disposition and commitment decisions of juvenile judges for minority youths.

Current Assessment of African-American DMC

Given the debate about the influence of race in Georgia juvenile justice case processing, this study analyzes closed juvenile court delinquent and unruly referrals in 13 counties from 1995 to 2001, totaling 302,506 referrals. The data for this study comes from the Council of Juvenile Court Judges database, which collects and maintains data on all juvenile court referrals (delinquency, unruly, deprived and neglect, etc.) filed in these courts. Although these counties represent a small percentage of Georgia's 159 counties, they account for over 50% of the delinquent and

unruly referrals filed annually in Georgia. Additionally, these counties also represent a mix of urban and rural counties.

The purpose of the analysis was to assess the existence and extent of any racial disparity in decision making at four key case processing points, relying upon state-of-the-art multivariate statistical techniques. The four decision points are reflected by the outcome variables described below: detention, adjudication for delinquency, adjudication for unruly behavior, and, among those adjudicated, commitment to a Department of Juvenile Justice short or long-term residential facility.

Two-thirds of the referrals (64%) were for delinquency and almost one in three referrals was for a property offense (29%). The majority of referrals were male (70%) and non-white (56%).

Of the 302,506 referrals examined, 18% resulted in a detention, 41% resulted in adjudication, and of those adjudicated, 14% were committed to a Department of Juvenile Justice short or long-term residential facility.

In this study, 64% of the juvenile justice referrals were for delinquency, 19% were for traffic violations, and 17% were referrals for unruliness. Black Non-Hispanics make up 54% of the referrals while White Non-Hispanics represent 42% of the referrals. For this reason, the analysis collapses race and ethnicity into two groups: White and Non-White. Tables 1 and 2 show the referral type across race and gender groups. Similar to past studies, these data show that a higher percentage of Non-Whites than Whites among delinquency referrals, while Whites account for a higher proportion among traffic and unruly referrals. On average, 15% of all youth in the study group are detained. Overall, 29% of Non-White males are detained compared to 8% for White Males. Among Non-White Females, 22% are detained compared to only 7% of White Females. Table 3 displays the percentage detained for different race and gender groups by referral type.

The cohort was randomly divided into two samples – referred to as the "estimation" and "validation" samples (each including roughly 150,000 referrals). This allows for a second test of all findings, to ensure proper interpretation of statistical relationships. The following multivariate logistic regression models were developed on the estimation sample and tested on the validation sample.

Table 1. Referral Type by Race

Delinquent	
Non-White	79%
White	47%
Traffic	
Non-White	7%
White	32%
Unruly	
Non-White	14%
White	20%

Table 2. Referral Type by Gender

Delinquent	
Male	70%
Female	50%
Traffic	
Male	19%
Female	21%
Unruly	
Male	11%
Female	29%

Table 3. Number of Youth Detained by Race

Delinquent	
Non-White Males	84%
White Males	54%
Non-White Females	67%
White Females	35%
Traffic	
Non-White Males	7%
White Males	32%
Non-White Females	6%
White Females	33%
Unruly	
Non-White Males	9%
White Males	14%
Non-White Females	27%
White Females	32%

Key Factors

This analysis is limited by the data available in the Council for Juvenile Court Judges database system. Therefore, many extra-legal variables incorporated in Ruback (1995) were not available (family relationships, legal representation). Table 4 on the next page summarizes the key variables under investigation in this study.

Table 4.

Measures	Description
Outcome Measures	
Detention Status	Detained for this referral – Yes/No
Adjudication - Delinquent	Adjudicated delinquent – Yes/No
Adjudication - Unruly	Adjudicated unruly – Yes/No
Commitment	Committed to a secure facility – Yes/No
Explanatory Measures	
Severity of Current Offense	Severity index measuring the severity of current offense
Referral Type	Type of referral
Most Serious Crime Type	Most serious crime type (adjudicated delinquent or unruly)
Prior Detentions	No. prior times youth was detained
Prior Referrals	No. prior referrals
Severity of Past Record	Severity index measuring the severity and quantify of past adjudications
Prior Delinquent Adjudications	No. prior delinquent adjudications
Gender	Male and female
Race	White vs. Non-White (this grouping was dictated by the relative few cases among other racial and ethnic groups)

In an effort to capture the volume and severity of each prior conviction, the present study relied on a transformation of the Georgia Department of Corrections offense priority code, which is used to rank the severity of all Georgia felonies and misdemeanors. The priority codes represents the rank of each statute as it relates to the minimum and maximum sentence provided under the Georgia

criminal code. This rank, which ranges from 1 to 400, was then multiplied by the sentencing mid-point of each criminal statute. This final scale is the "severity index" of past history.

Study Findings

A multivariate statistical analysis was conducted to predict outcomes (detention, adjudication and commitment) as a function of key offense and offender characteristics. Because the outcome measures in this study are dichotomous (Yes/No), ordinary least squares (OLS) regression is not an appropriate statistical technique. The multivariate ordinary least squares (OLS) regression assumption of normally distributed error terms is violated with a dichotomous dependent variable, producing biased parameter estimates (Hosmer & Lemeshow, 1989)[1]. This would lead to the inappropriate selection of significant "predictors" or variables. The nonlinear logistic regression model does not have a similar error term assumption and allows for the estimation of unbiased regression coefficients.

Statistical model building (selection of the final variables for inclusion in the model) was conducted according to the strategies outlined by Hosmer & Lemeshow (1989), testing each predictor variable individually and using the likelihood ratio and Wald tests to aid in variable selection. The final models allow for the calculation of the probability of the outcome (such as the probability of detention) for each juvenile in the cohort, given his/her individual case characteristics.

Tables 5 through 8 describe the final regression models selected. Each table lists the statistically significant predictors of the probability of the outcome (detention, adjudication and commitment).

Table 5. Significant Predictors of Detention

Variable	B	S.E.	Sig.	Odds Ratio
Current Offense is Drug	0.53	0.03	0.00	1.70
Current Offense is a Felony	0.39	0.03	0.00	1.48
Referral Made for Delinquency	1.02	0.03	0.00	2.78
Seriousness of Current Offense (0-10)	0.02	0.00	0.00	1.02
Age of Juvenile (Years)	0.05	0.01	0.00	1.05
Gender/Race Interaction (comparison group is White Females)				
Non-White Females	0.90	0.03	0.00	2.47
White Males	-0.25	0.03	0.00	0.78
Non-White Males	0.74	0.03	0.00	2.10
Number of Prior Detentions	0.55	0.01	0.00	1.73
Constant	-4.10	0.09	0.00	0.02

N=143,973

84% of cases correctly classified by the model (detained vs. not)

Table 6. Significant Predictors of Adjudication for Delinquency

Variable	B	S.E.	Sig.	Odds Ratio
Seriousness of Current Offense (0-10)	0.14	0.00	0.00	1.16
Current Offense is Against Person	0.50	0.02	0.00	1.65
Current Offense is Property	0.26	0.02	0.00	1.29
Current Offense is Drug	0.86	0.03	0.00	2.35
Age of Juvenile (Years)	-0.05	0.00	0.00	0.96
Gender/Race Interaction (comparison group is White Females)				
Non-White Females	-0.11	0.03	0.08	0.90
White Males	0.28	0.02	0.00	1.32
Non-White Males	0.02	0.02	0.48	1.02
Seriousness of Prior Record (0-10)	0.11	0.00	0.00	1.12
Number of Prior Delinquency Adjudications	0.03	0.00	0.00	1.03
Constant	-1.51	0.07	0.00	0.22

N=143,973

74% of cases correctly classified by the model (adjudicated vs. not)

Table 7. Significant Predictors of Adjudication for Unruly Behavior

Variable	B	S.E.	Sig.	Odds Ratio
Seriousness of Current Offense (0-10)	-2.61	0.05	0.00	0.71
Age of Juvenile (Years)	-0.11	0.01	0.00	0.89
Gender/Race Interaction (comparison group is White Females)				
Non-White Females	-0.49	0.04	0.00	0.61
White Males	0.06	0.04	0.09	1.07
Non-White Males	-0.28	0.04	0.00	0.75
Number of Prior Unruly Adjudications	0.33	0.02	0.00	1.38
Constant	0.87	0.14	0.00	2.39

N=143,973

95% of cases correctly classified by the model (adjudicated vs. not)

Table 8. Significant Predictors of Commitment to Long or Short Term Residential Facility

Variable	B	S.E.	Sig.	Odds Ratio
Seriousness of Current Offense (0-10)	0.07	0.00	0.00	1.07
Current Offense is a Felony	0.26	0.05	0.00	1.30
Current Offense is Against Person	0.52	0.04	0.00	1.69
Gender/Race Interaction (comparison group is White Females)				
Non-White Females	0.24	0.07	0.00	1.28
White Males	0.11	0.06	0.05	1.11
Non-White Males	0.45	0.05	0.00	1.57

of offense and prior record), White males are less likely than White females to be detained. In summary, it would appear that Non-Whites are more likely than Whites to be detained. And within both race groups (White and Non-White), being female places the juvenile at an additional disadvantage.

It is interesting to note that the impact of race and gender changes across decision points. In general, race effects are most notable at the detention decision. Among similarly situated juvenile offenders, Non-White females are the most likely and White males are the least likely to be detained. At the adjudication decision, White males are the most likely and Non-White females are the least likely to be adjudicated delinquent. In comparison, Whites (male and female) are the most likely and Non-White males are the least likely to be adjudicated unruly. Finally, among those adjudicated, Non-White males are the most likely and White females are the least likely to be committed to residential facilities.

Comments

The analysis reveals a clear racial/gender bias at the detention decision, controlling for current offense and past record. In fact, Non-White males and females are more than twice as likely to be detained compared to Whites. However, the impact of race is less clear as youths move through the system. For example, White males are more likely to be adjudicated delinquent than Non-White males. This parallels the same findings Ruback (1995) discovered investigating an entirely different study group and while using different measures of current offense and past offending.

Race appears important again at the commitment decision, although its influence is significantly less than at the detention decision. This is also the only decision point where the number of prior detentions plays a significant role, suggesting that race and prior detentions figure prominently into the decision to commit a youth to a secure facility (YDC, 90-Day Program). It is entirely plausible that the race effect detected at the commitment decision reflect the inability to incorporate important extra-legal variables into the analysis, such as family background, social class, psychiatric and mental capacity, legal representation, school performance, parents' attitude, availability of insurance and access to private mental health facilities, and similar non-legal factors. Another empirical regularity is the role gender plays in decision-making. The evidence suggests that race and gender interact together, influencing decisions differently depending on the youth's race and gender. It appears that Non-white females are treated especially harsh at detention, suggesting that CYCC and DJJ examine the detention decision, giving special attention to crafting alternatives.

Interpretation of Multivariate Results

The popularity of the logistic regression approach rests on its ability to provide two useful pieces of information to policy-makers. First, the equation identifies the impact of significant predictors on the outcome of interest in general. This information is gleaned from the sign (+/-) of the regression coefficient (column "B" in Tables 5-8). Predictors with a positive sign indicate variables that *increase* the likelihood of the outcome. Predictors with a negative sign indicate variables that *decrease* the likelihood of the outcome. For example, Table 5 indicates that all variables, with the exception of one, gender/race group (being a White male), increase the likelihood of being detained (committing a drug offense, committing a felony, being referred for delinquency, seriousness of the current offense, age, and the number of prior detentions).

The logistic regression coefficient is in a scale of "log odds" making a direct interpretation impossible. However, a mathematical transformation (anti-log) of the coefficient provides the user with an "odds ratio" – a cornerstone of logistic regression interpretation. An odds ratio indicates the increase or decrease in the likelihood (odds) of the outcome (detention) for each unit increase in the predictor variable. In Table 5, for example, the odds ratio of 2.78 for "Referral Made for Delinquency" indicates that delinquent referrals were almost three times as likely (2.78) to be detained compared to other referrals (unruly and traffic). The odds ratio of 1.05 for "Age of Juvenile" indicates that for each additional year of age there is a 5% increase in the likelihood of detention (a juvenile that is age 16 is 20% more likely to be detained than a juvenile that is age 12). The odds ratio of 1.70 for "Current Offense is Drug" indicates that a drug offender is 70% more likely to be detained than an offender referred for a personal, property, traffic or other offense.

Specific Interpretation of Race/Gender Disparity

In each of the four models presented above, race and gender have a statistically significant interaction effect. While race and gender both figure prominently in the decisions to detain, adjudicate and commit juveniles, race effects are tempered by gender (the impact of race is different for males and females). In addition, the reader will notice that the impact of both race and gender differs by decision point. Whereas one's race and gender may be an advantage at one stage of processing, it will be a disadvantage at another stage (meaning there is no consistent direction of disparity).

In multivariate regression analyses, an interaction effect is determined by comparing all categories of the interaction (all possible combinations of race and gender) to a "reference" group. In these models, White females were selected as the reference

group. Interpretation of the race/gender odds ratios must be made relative to this reference group.

At the detention decision (see Table 5), Non-White females are the most likely to be detained (as indicated by the largest odds ratio). In fact, Non-White females are 2.5 times more likely to be detained than White females, controlling for all other variables in the model (meaning among females committing similar offenses with similar prior backgrounds). Non-White males are also more likely than White females to be detained. And finally, among similarly situated offenders (in terms of offense and prior record), White males are less likely than White females to be detained. In summary, it would appear that Non-Whites are more likely than Whites to be detained. And within both race groups (White and Non-White), being female places the juvenile at an additional disadvantage.

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similar non-legal factors. Another empirical regularity is the role gender plays in decision-making. The evidence suggests that race and gender interact together, influencing decisions differently depending on the youth's race and gender. It appears that Non-White females are treated especially harsh at detention, suggesting that CYCC and DJJ examine the detention decision, giving special attention to crafting alternatives.

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