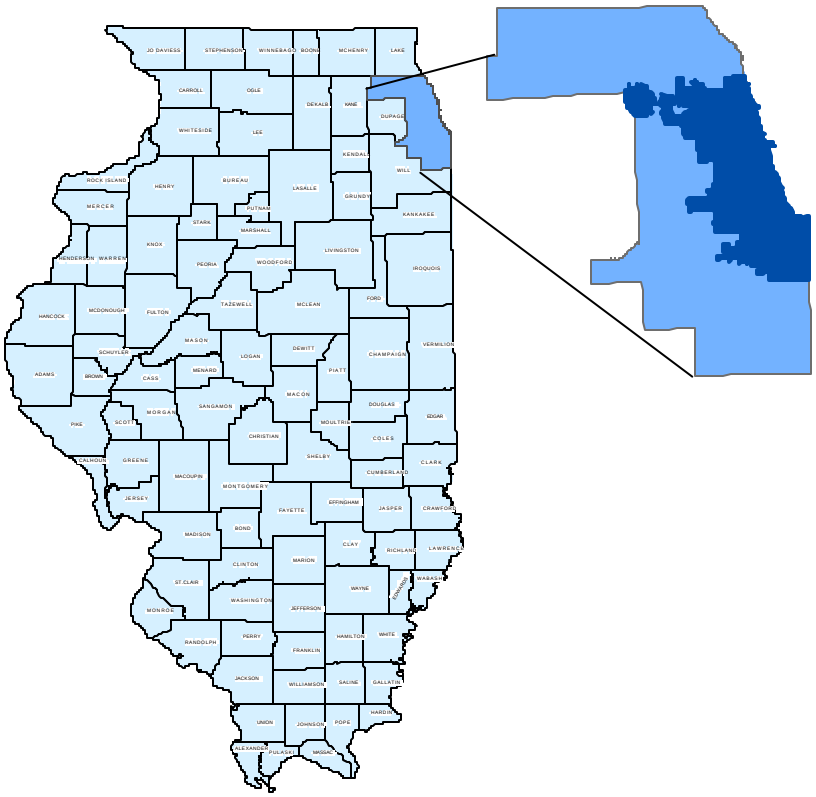
A Study of Disproportionate Minority Representation in the Cook County Juvenile Justice System

Part II:
Assessment of Disproportionate Minority Representation Through Individual-Level Analyses and Surveys of Juvenile Justice Professionals



Prepared by

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CRIMINAL JUSTICE
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Prepared for

The Illinois Juvenile Justice Commission

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- The *Cook County Juvenile Probation and Court Services Department* provided data that enabled us to calculate a number of the statistics reported in Part One. In particular, we thank Michael Rohan for granting us access to the data and Ken Keller for providing the data.

- The *Office of the Clerk of the Circuit Court of Cook County* also provided data that enabled us to calculate a number of the statistics reported in Part One. In particular, we thank the Honorable Curtis Heaston, presiding judge of the *Juvenile Division of the Circuit Court of Cook County* for granting us access to the office of the circuit court clerk data, Warren Watkins for facilitating the process by which we received the data, and John Biga for providing the data.

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- The *Cook County Juvenile Probation and Court Services Department* provided data that enabled us to select a sample for the individual-level analyses. In addition, surveys were completed by juvenile probation officers. Again, we thank Michael Rohan for granting us access to the data and for granting us permission to distribute the surveys, and Ken Keller for providing the data. In addition, we thank Pat Zeglen for facilitating the process by which the surveys were distributed. We also sincerely thank the juvenile probation officers who completed surveys.

- Staff at the *Record Library of the Juvenile Division of the Circuit Court of Cook County* provided us with assistance in locating family folders and provided us with space in their offices to record data from the folders.

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Executive Summary

The Juvenile Justice and Delinquency Prevention (JJDP) Act of 1974 is a federal law intended to provide support to state and local juvenile justice systems (42 U.S.C § 5601-5785). In order to receive this support, each state must periodically submit a state plan to the U.S. Department of Justice's Office of Juvenile Justice and Delinquency Prevention. The plan is to be developed and approved by a state advisory group. In Illinois the state advisory group is the Illinois Juvenile Justice Commission of the Illinois Department of Human Services.

Since 1998, when the JJDP Act was amended by the U.S. Congress, the state plan was required to include a section on disproportionate minority confinement at state detention and correctional facilities. Disproportionate minority confinement occurs when members of minority groups are represented in detention and correctional facilities at proportions higher than their representation in the general population.

The Illinois Criminal Justice Information Authority completed a two-part report intended to assess the level and extent of racial disproportionality in the Cook County juvenile justice system. The report is intended to assist the Illinois Juvenile Justice Commission with the disproportionate minority confinement section of the state plan. This summary describes methods and results from both parts of the report.

Part One: Disproportionate Minority Representation in the Aggregate

Part One of the report used broad, aggregate data to examine the overall level and extent of disproportionate minority representation (DMR) at multiple stages in the Cook County juvenile justice system process. Part One treated the juvenile justice system process as a series of sequential stages. At each stage, decisions are made which may: (1) remove juveniles from the juvenile justice system, (2) keep juveniles in the juvenile justice system, but not move them on to the next stage (i.e., move them "deeper" into the juvenile justice system), or (3) move juveniles on to the next stage. One possible "final stage" is confinement in a secure detention or correctional facility. Figure I shows an abridged flowchart of the juvenile justice system process, with the aspects or stages of the juvenile justice system examined in Part One of the report shaded in the figure. By examining these stages, the report examined not just disproportionate minority confinement but, more generally, disproportionate minority *representation* at multiple stages.

Figure I only shows the sequential stages that lead to post-trial confinement in a secure detention or correctional facility. Part One of the report examined both post-trial and pre-trial confinement. Pre-trial confinement was examined in a section of Part One of the report that was separate from the section examining stages shaded in Figure I. On the whole, decisions related to pre-trial confinement (through detention screenings or detention hearings) occur after a juvenile is referred to court, irrespective of subsequent flow through the juvenile justice system process shown in Figure I.

Figure II shows pre-trial confinement decision making processes, again with aspects examined in Part One shaded in the figure.

Figure I: Abridged Flowchart of the Juvenile Justice System Process

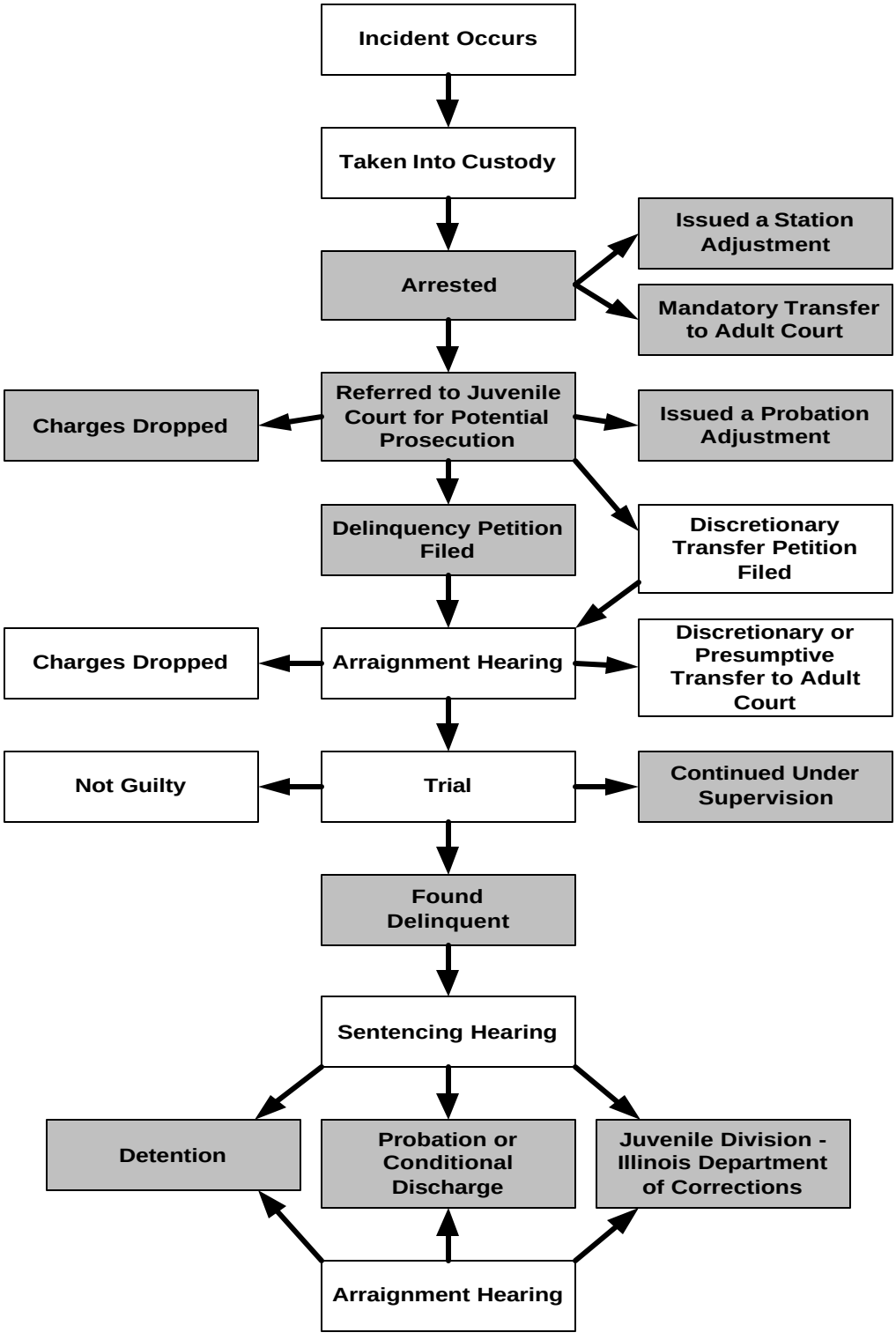
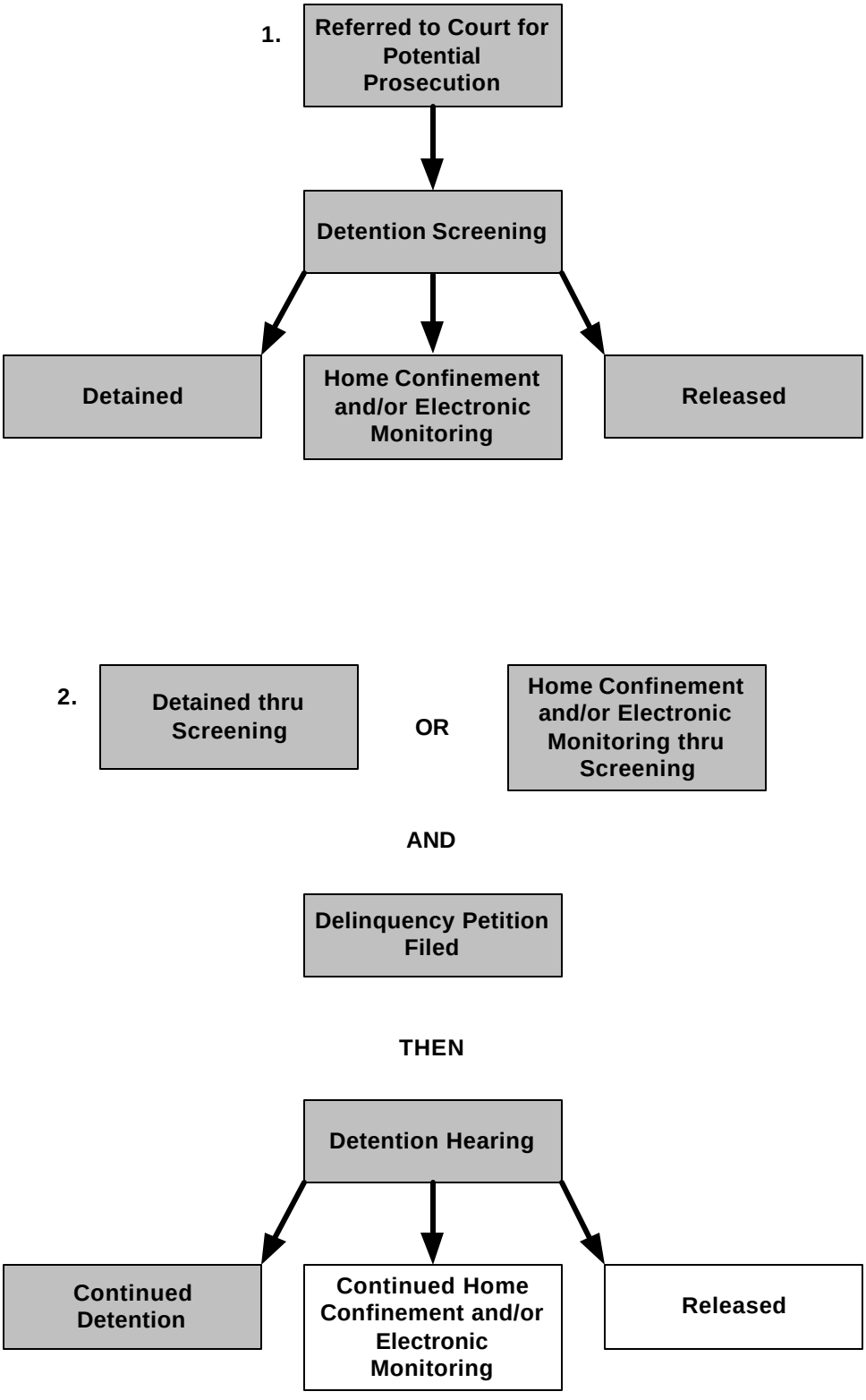


Figure II: Pre-Trial Confinement Process in the Juvenile Justice System



Part One: Method

With the exception of data on arrests and referrals to juvenile court, all data on the aspects shaded in Figure I and Figure II were obtained from the Cook County Juvenile Probation and Court Services Department (juvenile probation) and from the Office of the Clerk of the Circuit Court of Cook County (circuit clerk's office). Data was obtained which made it possible to calculate the total number of juveniles by race involved in each of the aspects that are shaded. The data pertained to juveniles *ages 10-16* who were involved in each of the aspects from *1996-1999*. Data was aggregated across these ages and years. The following three racial groups were examined: (1) *Caucasian*, (2) *African-American*, and (3) *Hispanic*.[1]

In addition to disaggregating the data by race, the data was also disaggregated by *gender, geographic location (Chicago vs. suburban Cook County), and offense type (violent offense vs. property offense vs. drug offense vs. weapons offense vs. other offense)*. This made it possible to add additional context to analyses examining representation by race. For example, it made it possible to examine if overrepresentation in a particular aspect of the juvenile justice system is particularly prevalent among male African-Americans from Chicago.

The exception to the two paragraphs above is that, for arrests and referrals to juvenile court, data was not obtained from juvenile probation or from the circuit clerk's office. Instead, data was obtained from the Chicago Police Department and individually from 92 law enforcement agencies in suburban Cook County. It was only possible to obtain 1999 data from the Chicago Police Department. Thus, only 1999 data was examined for the arrest and court referral aspects of the juvenile justice system.

Using U.S. Census Bureau population data in conjunction with the data described above, two basic statistics were calculated for each aspect of the juvenile justice system shaded in Figure I and Figure II: (1) representation indices, and (2) disparity indices.

Representation Index

Each representation index examined the representation of a single racial group or subgroup (e.g., a racial subgroup might be African-American females, Hispanics who were arrested for property offenses, etc.) at a single aspect or stage of the juvenile justice system, relative to the representation of the racial group or subgroup in the general population. The representation indices were calculated as follows:

[1] Throughout both parts of the report, expressions such as "by race", "racial groups", etc., are used to collectively describe Caucasians, African-Americans, and Hispanics. Such expressions are not comprehensive, as Hispanics constitute an ethnic group as opposed to a racial group. In order to maintain simplicity and parsimony in the text, the word ethnic is excluded when collectively describing the three groups. Similarly, for parsimony, throughout both parts of the report, the term Hispanic is used to describe all individuals of Hispanic and Latino descent (Mexican, Puerto Rican, Cuban, Central or South American, etc).

$$(1)\ \%\ \text{represented in system aspect} = \frac{\#\ \text{in system aspect for racial group or subgroup}}{\text{total \# in system aspect}}$$

AND

$$(2)\ \%\ \text{represented in general population} = \frac{\text{racial group or subgroup population}}{\text{total juvenile population}}$$

THEN

$$(3)\ \text{Representation Index (RI)} = \frac{\%\ \text{represented in system aspect}}{\%\ \text{represented in general population}}$$

As an example, to calculate the RI for African-Americans who have had juvenile delinquency petitions filed against them, first determine (1) the percentage of all those who had a delinquency petition filed against them that are African-American, and (2) the percentage of the total juvenile population that is African-American, then (3) divide the percentage calculated in (1) by the percentage calculated in (2).

The RI can be interpreted as follows:

- **RI < 1** means that representation of the racial group in the aspect of the juvenile justice system being examined is **less than** the representation of the racial group in the general population.

- **RI = 1** means that representation of the racial group in the aspect of the juvenile justice system being examined is **equal to** the representation of the racial group in the general population.

- **RI > 1** means that the representation of the racial group in the aspect of the juvenile justice system being examined is **greater than** the representation of the racial group in the general population.

- **RI > 2** means that the representation of the racial group in the aspect of the juvenile justice system being examined is **more than twice that of** the representation of the racial group in the general population.

According to this interpretation, RI statistics that are greater than one indicate disproportionate overrepresentation.

Disparity Index

Certain aspects of the juvenile justice system proceed in stages. Some stages precede or are preceded by other stages. For example, arrests precede court referrals, court referrals in turn precede the filing of a delinquency petition, and so on. After a juvenile proceeds to a particular stage, it is useful to examine whether the juvenile proceeds from that stage to the subsequent stage. Disparity indices are similar to representation indices, except that disparity indices examine representation at a particular stage relative to representation at the previous stage, as opposed to representation in the general population.

For a juvenile justice system stage, X, and the successive stage, Y, the disparity index statistic for racial group or subgroup, Z, would be calculated as follows:

$$\text{Disparity Index (DI)} = \frac{\%\text{ of racial group or subgroup Z at stage Y}}{\%\text{ of racial group or subgroup Z at stage X}}$$

As an example, if one wanted to calculate the DI for African-Americans who were referred to court relative to a subsequent stage, such as African-Americans who had a delinquency petition filed against them, one would determine the percentage of those who were referred to court that are African-American (% referred to court), and the percentage of those who had a delinquency petition filed against them that are African-American (% delinquency petition filings), and then divide % delinquency petition filings by % referred to court.

The DI is interpreted in approximately the same manner as the RI, with DI statistics greater than one indicating greater representation at the *subsequent, or later*, stage, DI statistics less than one indicating greater representation at the *earlier* stage, and DI statistics equal to one indicating equal representation at the two stages.

Part One: Results

Stages Leading to Post-Trial Confinement

Figure I shows that data was obtained on the following sequential stages that may, as an end result, culminate in post-trial confinement in a secure detention or correctional facility: (1) arrest, (2) referral to juvenile court for potential prosecution, (3) delinquency petition filing, and (4) being found delinquent. Juveniles who proceed past these four stages may be confined in a secure detention or correctional facility.

Table I shows representation indices for the arrest stage for Caucasians, African-Americans, and Hispanics for Cook County as a whole. Table I also shows court referral, delinquency petition filing, findings of delinquency, and post-trial confinement in the Juvenile Division of the Illinois Department of Corrections disparity indices for Cook County as a whole.

Table I can be interpreted as follows. The arrest stage is, in some respects, the "gateway" stage for involvement in the juvenile justice system. As such, the arrest stage plays an important role in determining minority representation in the juvenile justice system. If certain racial groups are over or under represented at the arrest stage, then the relevant question to ask for subsequent stages is whether the stage adds to or minimizes the level of over or under representation that occurred at the arrest stage. Thus, Table I shows RI's for the arrest stage to show initial levels of representation upon "entering the gate", and DI's for subsequent stages to show the direction of change in representation after the arrest stage.

Table I: Representation in Juvenile Justice System Stages Leading to Post-Trial Confinement – Cook County

Juvenile Justice System Stage	Race		
	Caucasian	African-American	Hispanic
Representation Index:			
Arrest	0.61	1.91	0.56
Then, Disparity Index:			
Court Referral	0.42	1.18	1.19
Delinquency Petition	0.80	1.07	0.88
Found Delinquent	0.97	1.02	1.04
Juvenile – IDOC	0.61	1.06	1.01

Figure III provides a visual interpretation of the representation and disparity levels listed in Table I. Essentially, Figure III provides separate lines for Caucasian, African-American, and Hispanic juveniles showing initial representation at the arrest stage and increases or decreases in representation at subsequent stages. Increases or decreases in representation at subsequent stages are based on approximations made using the disparity indices in Table I.

At the top of Figure III, the three lines begin with the arrest stage (the point parallel to the label "Arrested" in Figure III). The lines are located at a place on the Representation Index scale in Figure III that approximates the representation indices shown in Table I (0.61 for Caucasians, 1.91 for African-Americans, and 0.56 for Hispanics). Then, at subsequent stages, Figure III uses the disparity indices in Table I to approximate how much that stage adds to or minimizes over or under representation.

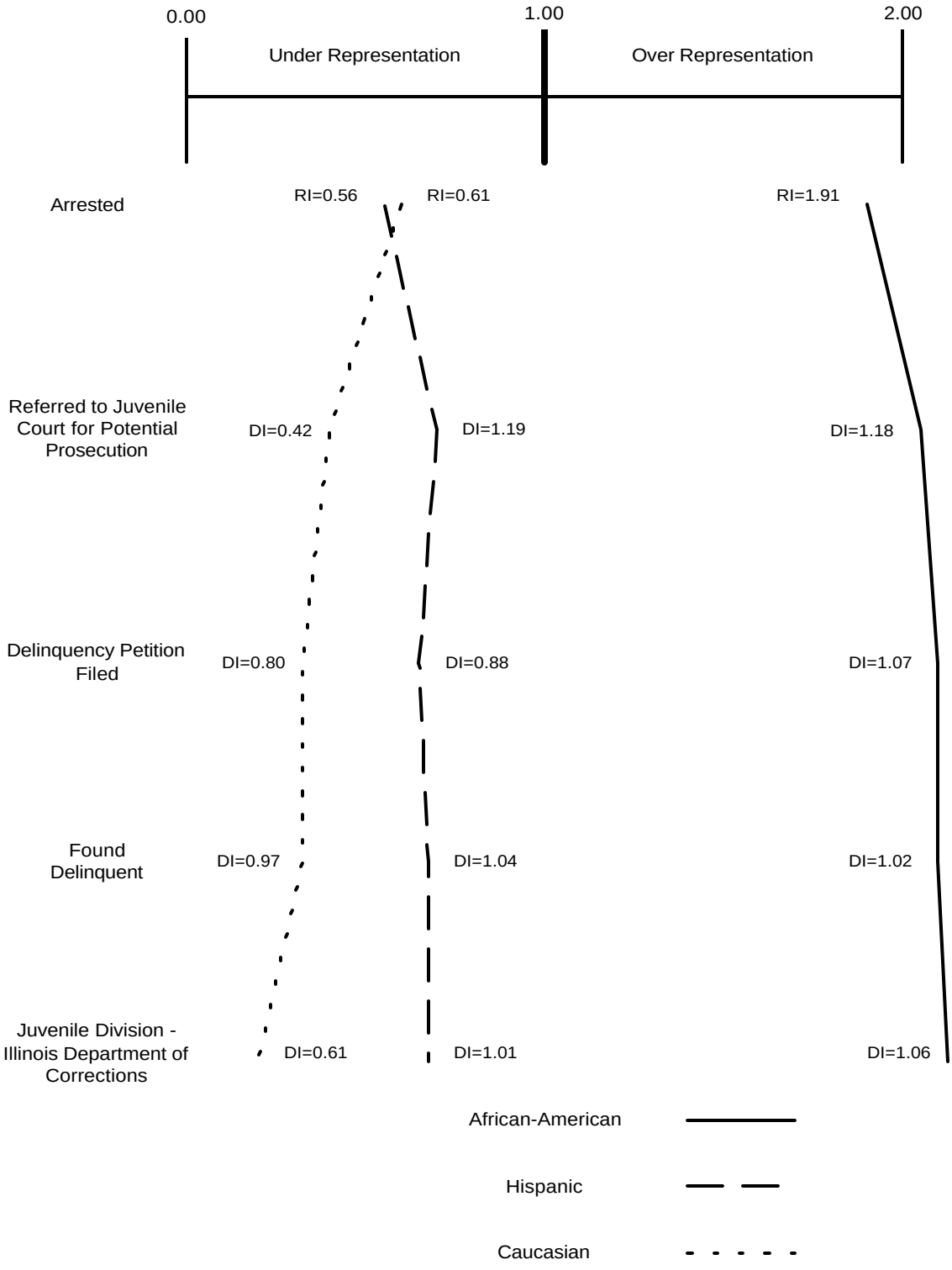
In order to understand Figure III, the reader must: (1) be aware that Figure III combines two statistical measures (the representation index and the disparity index) and that the scale at the top of Figure III is a Representation Index scale, and (2) recall that disparity indices only measure overrepresentation and underrepresentation relative to the previous stage examined. Thus, do not expect that the disparity indices shown in Figure III will match the Representation Index scale at the top of the figure. The purpose of Figure III is to show how changes from one stage to the next (as reflected in the disparity indices) can collectively impact overall representation (as reflected in the Represention Index scale).

For example, the African-American disparity index for court referrals was 1.18. Thus, the court referral stage adds to overrepresentation of African-Americans. This is reflected in Figure III by, from the point labeled "Arrested" to the point labeled "Referred to Court for Potential Prosecution", extending the line even further in the direction of overrepresentation on the Representation Index scale. However, the Representation Index scale at "Referred to Court for Potential Prosecution" for African-Americans will not be 1.18. The disparity index 1.18 only represents the change from the point labeled "Arrested" to the point labeled "Referred to Court for Potential Prosecution", whereas the Representation Index scale at the top of Figure III shows overall representation (which is the Representation Index at the arrest stage, followed by additional overrepresentation at the court referral stage).

Using this strategy, Figure III shows that African-American juveniles were considerably overrepresented at each of the stages that directly lead to post-trial confinement in a secure detention or correctional facility and, as a result, were overrepresented among those in the Juvenile Division of the Illinois Department of Corrections. In addition, Figure III provides some suggestion of how African-American juveniles came to be overrepresented at each of the stages that directly lead to post-trial confinement. Specifically, it is worth noting in Figure III that, on the whole, the three lines are not radically different. They are all fairly straight, with the African-American and Hispanic lines extending slightly in the direction of overrepresentation and the Caucasian line extending slightly in the direction of underrepresentation.

However, the three lines start at radically different places. This suggests that the first stage in Figure III, the arrest stage, played a large role in contributing to overrepresentation of African-Americans. Subsequent stages did not minimize the overrepresentation of African-Americans. Instead, later stages contributed to overrepresentation of African-Americans, but to a lesser extent than the arrest stage.

Figure III: Visual Interpretation of Representation in Juvenile Justice System Stages Leading to Post-Trial Confinement – Cook County[a]



a: Figure III uses two statistics to show how changes from one stage to the next contribute to overall representation. See pages vii and viii for an explanation of Figure III.

DI's For Other Aspects of the Juvenile Justice System

Table II compares disparity indices for sentences to the Juvenile Division of the Illinois Department of Corrections to the other two post-trial outcomes examined in Part One: (1) probation sentences, and (2) sentences to the Cook County Juvenile Temporary Detention Center. The denominator, or earlier stage, for the disparity indices in Table II is the delinquency stage, or the stage at which juveniles are found delinquent. So, the DI's in Table II essentially examine the likelihood of juveniles of different races receiving the three outcomes after they are found delinquent.

Table II: Disparity Indices for Three Post-Trial Outcomes – Cook County

Outcome	Race		
	Caucasian	African-American	Hispanic
Probation	1.11	0.98	1.03
Detention Center	0.86	1.02	1.02
Juvenile – IDOC	0.61	1.06	1.01

Table III compares Cook County disparity indices for four aspects of the juvenile justice system that prevent juveniles from moving deeper into the juvenile justice system, either by removing them from the juvenile justice system (by dropping charges after the case is referred to court) or by keeping juveniles in the juvenile justice system, but not moving them on to the next stage (by issuing a station adjustment, issuing a probation adjustment, or continuing the case under supervision). For station adjustments, data was not obtained from Chicago, so Cook County as a whole refers to suburban Cook County.

Table III also shows, for each of the four aspects in the table, the denominator, or earlier stage, that was considered when calculating the DI's. For example, "Arrested → Issued a Station Adjustment" in Table III indicates that the arrest stage was the earlier stage used to calculate DI's when examining station adjustments.

Table III: Disparity Indices for Three Alternatives to Moving "Deeper" Into the Juvenile Justice System – Cook County

Alternative	Race		
	Caucasian	African-American	Hispanic
Issued a Station Adjustment	0.98	1.11	0.83
Charges Dropped	1.24	0.86	1.38
Issued a Probation Adjustment	1.64	0.82	1.26
Continued Under Supervision	1.99	0.80	1.30
Earlier Stages Used to Calculate DI's			
Arrested → Issued a Station Adjustment			
Referred to Court for Potential Prosecution → Charges Dropped			
Referred to Court for Potential Prosecution → Issued a Probation Adjustment			
Delinquency Petition Filed → Continued Under Supervision			

Perhaps the most notable aspect of Table II is that, of those found delinquent, Caucasians were underrepresented among those receiving outcomes involving confinement in secure detention and correctional facilities.

Perhaps the most notable aspect of Table III is that Caucasians and Hispanics were overrepresented in three of the four alternatives, while African-Americans were underrepresented.

Pre-Trial Confinement

Both pre-trial confinement and post-trial confinement can contribute to disproportionate minority confinement (see Figure II for aspects of the juvenile justice system leading to pre-trial confinement). Table IV shows disparity indices for detention screening for Cook County as a whole. The earlier stage that was considered for the disparity indices was the court referral stage. Thus, the disparity indices examine whether those who were referred to court were screened for detention.

Table IV also shows disparity indices reflecting results of detention screenings for Cook County as whole (detained in a secure facility, non-secure detention, released). The earlier stage that was considered for these disparity indices was detention screening (whether the juvenile was screened for detention). Finally, Table IV shows disparity indices for those who attended a detention hearing and were ordered to be detained (either because they were ordered to remain in secure detention or because they were switched from non-secure to secure detention). The earlier stage that was considered for these disparity indices was detention hearing (whether the juvenile attended a detention hearing).

Table IV: Disparity Indices for Aspects of the Juvenile Justice System Related to Pre-Trial Confinement – Cook County

Pre-Trial Detention Decision	Race		
	Caucasian	African-American	Hispanic
Detention Screening	0.40	1.18	0.85
If Screened, Then:			
Secure Detention	1.18	0.98	1.03
Non-Secure Detention	0.86	1.00	1.03
Released	0.88	1.02	0.90
If Secure Detention or Non-Secure Detention, Then Detention Hearing:			
Secure Detention Thru Hearing	1.07	1.00	0.97

Perhaps the most notable aspect of Table IV is the Detention Screening row. This row essentially shows the likelihood of being screened for detention upon being referred to court. Disparity indices for African-Americans were considerably higher than disparity indices for Hispanics and, especially, for Caucasians. This was the case regardless of the offense for which the juvenile was referred to court. Because more African-Americans were screened for detention, there were more opportunities for African-American juveniles to be detained prior to trial.

Results to Part One by Geographic Location and Gender

RI's and DI's for each of the aspects of the juvenile justice system shaded in Figure I and Figure II were also calculated by geographic location in Cook County (Chicago vs. suburban Cook County) and by gender.

What follows are some notable differences between Chicago and suburban Cook County that qualify the results pertaining to Cook County as a whole:

- Underrepresentation of Caucasians at the arrest stage was more the result of underrepresentation in Chicago as opposed to in suburban Cook County. On the other hand, underrepresentation of Caucasians at the court referral stage (those referred to court of those arrested) was more the result of underrepresentation in suburban Cook County. Thus, in Chicago, Caucasians may be less likely to get arrested, but more likely be prosecuted once they are arrested. The inverse may be true in suburban Cook County.

- Overrepresentation of African-Americans and Hispanics at the court referral stage in suburban Cook County was notably higher than overrepresentation of African-Americans and Hispanics at the court referral stage in Chicago.

- Caucasians and Hispanics who had a delinquency petition filed in suburban Cook County were more likely to be found delinquent than those who had a delinquency petition filed in Chicago.

- Disparity indices by geographic location examining those who had their charges dropped (after having their cases referred to court) suggest that Caucasians and Hispanics from Chicago were more likely to have their charges dropped than Caucasians and Hispanics from suburban Cook County. There was little difference in these disparity indices by geographic location for African-Americans.

What follows are some notable differences between male and female offenders that qualify the results pertaining to Cook County as a whole:

- A number of the disparity indices indicating overrepresentation for African-Americans and/or considerable differences in disparity indices between African-Americans and Caucasians can be more aptly described as applying to male African-Americans, but not female African-Americans. For example, there were considerable differences between male African-Americans and female African-Americans in the following aspects of the juvenile justice system, all of which indicate lower representation for females: (1) being found delinquent, (2) being sentenced to the Juvenile Division of the Illinois Department of Corrections, and (3) being screened for pre-trial detention. Overall, DI's for female African-Americans were almost always, to varying extents, lower than DI's for male African-Americans.

- On the whole, the same pattern emerged when examining differences in DI's between male Caucasians and female Caucasians and differences between male Hispanics and female Hispanics: DI's were lower for females. Overall, when comparing DI's by racial group just for females, DI's for female African-Americans were higher than DI's for female Caucasians and/or female Hispanics.

- For a number of aspects of the juvenile justice system, DI's for female African-Americans approximated DI's for male Caucasians and male Hispanics.

Part Two: Individual-Level Analyses and Surveys

Part Two of the report had the same overall goal as Part One: to examine the overall level and extent of disproportionate minority representation at various stages in the Cook County juvenile justice system process. Part Two used different methodological approaches to examine DMR. Part Two used different methodological approaches because Part One relied on a broad, aggregate approach that could potentially mask important details. Overall, results in Part Two of the report corroborated the results of Part One.

There were three components to Part Two of the report. For the most part, data for Part Two of the report was collected from specific police districts in south and southwest Chicago (the 5th, 6th, 8th, and 22nd Districts) and from a specific municipal district of suburban Cook County (the 4th Municipal District, with the largest municipalities in the district being Berwyn, Cicero, and Oak Park). The four Chicago police districts examined either have large majority African-American populations or have majority Caucasian and/or Hispanic populations. The population across all 21 municipalities composing the 4th Municipal District of suburban Cook County is majority Caucasian with reasonably large African-American and Hispanic populations.

For Component One, individual-level data was obtained from a sample of court files pertaining to male juveniles ages 10-16 who were referred to court in 1998 or 1999 from the specified Chicago police districts and municipal district, and who committed specific violent, property, drug, or weapons offenses. The information was used in statistical analyses intended to determine the relative importance of race and other factors in predicting case outcomes. The same three racial groups were examined as in Part One: Caucasians, African-Americans, and Hispanics.

For Component Two, surveys were distributed to juvenile justice professionals responsible for making decisions at many of the juvenile justice system processing stages shown in Figure I. The professionals were asked their perceptions of racial biases or issues in the Cook County juvenile justice system.

For Component Three, short surveys were distributed to juvenile investigators. Juvenile investigators were asked to complete a short survey pertaining to every juvenile interrogation they conducted during a two-week period. The surveys asked juvenile investigators to record case characteristics (including the juvenile's race) and the outcome of the interrogation, such as whether the juvenile investigator issued a station adjustment or referred the case to court. As with Component One, statistical analyses were conducted intended to determine the relative importance of race and other factors in predicting interrogation outcomes.

Part Two: Results

Component One Results

Two statistical analyses were conducted. Both analyses used a type of analysis called multinomial logistic regression. One purpose of multinomial logistic regression is to determine the importance of several factors in predicting an outcome. For Analysis One, multinomial logistic regression was used to determine the importance of six factors (including juvenile race) in predicting *how far juveniles proceed in the system*. For Analysis Two, multinomial logistic regression was used to determine the importance of the same six factors in predicting *case dispositions*. Table V shows the data and categories used in the two analyses.

Table V: Data Used in Component One Analyses

Variable/Category	Frequency (n=466)
Race	
Juvenile Race	
African-American	260 (55.8%)
Hispanic	98 (21.0%)
Caucasian	108 (23.2%)
Demographics/Juvenile Characteristics	
Juvenile Age	
9	3 (0.6%)
10	2 (0.4%)
11	3 (0.6%)
12	11 (2.4%)
13	40 (8.6%)
14	64 (13.7%)
15	131 (28.1%)
16	206 (44.2%)
17	6 (1.3%)
Living Arrangement[a]	
Two Parents in Home	58 (12.4%)
One Parent in Home	174 (37.3%)
Other Parent(s)	214 (45.9%)
Missing	20 (4.3%)
Location of Arrest and Court Referral	
Chicago	298 (63.9%)
Suburban Cook County	168 (36.1%)
Offense Type	
Violent Offense	143 (30.7%)
Property Offense	180 (38.6%)
Drug Offense	143 (30.7%)
Criminal History Factor	
Did the Juvenile Have a Prior Arrest?[a]	
Yes	276 (59.2%)
No	190 (40.8%)
How Far Juveniles Proceed in the System	
Resolved Before Arraignment	138 (31.9%)
Resolved At Arraignment	125 (28.9%)
Resolved After Arraignment	170 (39.3%)

Table V (cont.): Data Used in Component One Analyses

Variable/Category	Frequency (n=466)
Case Outcome	
Charges Dropped/Juvenile Acquitted	99 (23.0%)
Diversion/Screened Out/Supervision	162 (37.6%)
Probation Sentence	141 (32.7%)
Incarceration	29 (6.7%)

a: There were 31 missing cases for How Far Juveniles Proceed in the System and 33 missing cases for Case Outcome either because it was not possible to determine outcomes from the information included in the family folder or because the juvenile had a warrant issued for his or her arrest and, hence, there was no case outcome or resolution as yet.

Two patterns of results from the analyses seemed to corroborate Part One of the report:

- Race played a significant role in predicting how far juveniles proceed in the juvenile justice system (whether their cases are resolved before arraignment, at arraignment, or after arraignment). There was a tendency for *Caucasians and Hispanics to progress further in the system than African-Americans*.

The analyses conducted for Component One pertained to stages of the juvenile justice system that occur after juveniles are referred to court. Part One indicated that much of the overrepresentation of African-Americans in the juvenile justice system could be attributed to stages of the juvenile justice system prior to court referral. This result tends to corroborate the straight lines in Figure III from the court referral stage to the adjudication stage and demonstrates that it is possible for African-Americans to be *more likely* to either be removed from the juvenile justice system or not be moved deeper into the system during these stages.

- Caucasians and Hispanics were more likely than African-Americans to receive a probation sentence than they were to receive any of the other three types of dispositions examined in Analysis Two: charged dropped/acquitted, diversion/prosecutorial screening/supervision, or incarceration. On the other hand, African-Americans were more likely than Caucasians and Hispanics to be incarcerated than they were to receive a probation sentence.

This pattern of results is, in some respects, consistent with Part One, as probation disparity indices for Caucasians were higher than for African-Americans, and probation disparity indices for Hispanics were slightly higher than for African-Americans (see Table II). Table II also showed that incarceration disparity indices for African-Americans were higher than for Caucasians.

The following patterns of results seemed somewhat inconsistent with Part One:

- Caucasians and Hispanics were not more likely than African-Americans to receive outcomes that provide alternatives to moving deeper into the juvenile justice system (charges dropped/acquitted or diversion/screened out/supervision).

Results from Part One indicated that Caucasians and Hispanics were overrepresented in three aspects of the juvenile justice system that provide alternatives to moving deeper into the system, while African-Americans were underrepresented (see Table III).

Component Two Results and Component Three Results

For Component Two, surveys were distributed to patrol officers from the 4th Municipal District, juvenile investigators from the 4th Municipal District, juvenile court judges, juvenile probation officers, and public defenders.

Statistical analysis of results by profession yielded several differences that may potentially tie in to results from Part One:

- Comparisons of survey items by profession yielded several attitudinal differences between law enforcement professionals (patrol officers and juvenile investigators) and two other types of professions (juvenile probation officers and public defenders) such that one or both types of law enforcement professionals were less likely to believe that minority juveniles are treated differently in the juvenile justice system and more likely to attribute negative qualities to minority juveniles (based on survey items asking the extent to which the respondent agrees that minority juveniles are less willing to acknowledge guilt, more likely to have a negative attitude toward authority, and more likely to use drugs).

It is conceivable that the perceptions and attitudes of juvenile justice system decision-makers contribute to disproportionate minority representation at earlier, law enforcement-related stages of the juvenile justice system. As such, these results seem to tie in to results from Part One indicating that earlier, law enforcement-related decisions play a large role in contributing to subsequent disproportionate minority confinement.

For Component Three, juvenile investigators from the specified Chicago police districts and municipal district were asked to complete a short survey after every juvenile interrogation they conducted during a two-week period. As with Component One, a statistical analysis was conducted intended to determine the relative importance of race and other factors in predicting interrogation outcomes.

- The analysis indicated that juvenile attitude/demeanor was the factor that played the largest role in predicting post-interrogation juvenile dispositions.

Survey results from Component Two indicated that some juvenile investigators believed that minority juveniles are more likely to have negative attitudes/demeanors. If perceived or actual juvenile attitude/demeanor is correlated with race, then using attitude/demeanor to make decisions may place minority juveniles at a disadvantage.

Directions for Future Research

Part One and Part Two of this report collectively provide a comprehensive examination of the level and extent of disproportionate minority representation in Cook County. To know the level and extent of disproportionate minority representation is to understand what is occurring, but not why it is occurring. The next research step may be to examine areas or aspects of the juvenile justice system that seem to be contributing to disproportionate minority representation. This report identifies areas or aspects of the juvenile justice system that may warrant closer exploration:

- Processes for determining which juveniles are taken into custody and arrested.
- Processes for determining which juveniles are referred to court.
- Processes for determining which juveniles are issued probation adjustments and which juveniles have their cases continued under supervision.
- Processes for determining sentences that juveniles receive, in particular for determining which juveniles receive probation as opposed to incarceration.

This report suggests that these aspects of the juvenile justice system may be contributing to disproportionate minority confinement. As such, it may be useful to closely these aspects of the juvenile justice system, including policies and practices that determine how decisions are made. This is not to suggest that juvenile justice professionals responsible for making decisions related to these aspects are discriminating against minorities. It is to suggest that perhaps processes, policies, and practices related to these aspects are unwittingly placing minority juveniles at a disadvantage.

I. Introduction

The Juvenile Justice and Delinquency Prevention (JJDP) Act of 1974 is a federal law intended to provide support to state and local juvenile justice systems (42 U.S.C § 5601-5785). The JJDP Act provides for the allocation of funds to state and local governments, intended to address juvenile delinquency and improve juvenile justice systems. To receive these funds, each state is required to submit periodical plans to the U.S. Department of Justice's Office of Juvenile Justice and Delinquency Prevention (OJJDP), the federal agency that administers the funds. Each state is also required to convene a state advisory group, composed of professionals from various areas of the juvenile justice system, whose responsibilities include developing and approving the state plan. In Illinois, the state advisory group is the Illinois Juvenile Justice Commission (IJJC) of the Illinois Department of Human Services.

Since 1988, when the JJDP Act was amended by the U.S. Congress, the state plan was required to include a section on disproportionate minority confinement in the state's detention and correctional facilities. Disproportionate minority confinement occurs when members of minority groups are represented in detention and correctional facilities at proportions higher than their representation in the general population. This amendment was added to the JJDP Act in light of concerns that large minority populations in juvenile correctional facilities may be the result of systematic biases in the juvenile justice system.

In 1992, disproportionate minority confinement was made an even more prominent aspect of the JJDP Act. In 1992, disproportionate minority confinement was declared to be one of four "core components" of the state plan, or components that are essential to receive funding from OJJDP. The section on disproportionate minority confinement in the state plan section of the JJDP Act states that the plan should:

"address efforts to reduce the proportion of juveniles detained or confined in secure detention facilities, secure correctional facilities, jails, and lockups who are members of minority groups if such proportion exceeds the proportion such groups represent in the general population" (42 U.S.C. § 5633(23)).

This section implies that the state advisory group must assess the level and extent of disproportionate minority confinement in an attempt to direct efforts at reducing it's prevalence. IJJC contracted with the Illinois Criminal Justice Information Authority (ICJIA) for the completion of a two-part report intended to achieve this end. This document is Part Two of the report.

Both Part One and Part Two of the report pertain exclusively to one Illinois county: Cook County. IJJC believed that learning about disproportionate minority confinement specifically in Cook County would provide useful information for the state plan because: (1) Cook County has the largest population and, hence, the largest juvenile justice system of any county in Illinois, (2) Illinois' largest city, Chicago, is located in Cook County, (3) Cook County has the largest number of minorities of any Illinois county, and (4) Cook

County has the greatest amount of juvenile crime of any Illinois county. Appendix A provides a demographic description of Cook County.

Both Part One and Part Two of the report are intended to assist IJJC in completing the state plan section pertaining to disproportionate minority confinement. However, both reports address not only disproportionate minority *confinement*, but also overall disproportionate minority *representation* (DMR) at multiple stages in the juvenile justice system. Various types of juvenile justice professionals make decisions at various points in the juvenile justice system, each of which may contribute to disproportionate minority confinement. For example, overrepresentation at the arrest stage, arraignment stage, trial stage, and so forth, can all contribute to an end result of disproportionate minority confinement. Thus, both Part One and Part Two of the report examine multiple stages in the juvenile justice system, as opposed to simply examining confinement in secure facilities.

The purpose of Part One of the report was to use quantitative analysis of aggregate data to examine the level and extent of minority overrepresentation at numerous important stages of the juvenile justice system. The purpose of Part Two of the report was to expand upon Part One by: (1) using data collected from Cook County juvenile court system case files to examine the importance of juvenile race relative to other potentially relevant factors in predicting case processing decisions at several stages, and (2) using survey data collected from various types of juvenile justice professionals to examine perceptions of racial issues in the Cook County juvenile justice system.[2] Part Two used different methodological approaches because the aggregate approach adopted in Part One could potentially mask important details.

Part One and Part Two are written as stand-alone documents. A reader of Part Two need not refer to Part One (or vice versa) in order to obtain all the information necessary to fully understand the document. Nonetheless, both documents include results and conclusions that are synthesized across both parts of the overall report. In other words, an attempt was made to use all the information in both documents to draw overall conclusions about disproportionate minority representation in Cook County.

Prior to describing the research included in Part Two in more detail, this introduction includes several subsections that provide additional background information in areas that may contribute to a greater understanding of the document. Subsections are provided on the following topics: (1) a description of the juvenile justice system process (i.e., the sequential stages that juveniles proceed through), (2) a description of previous research and literature examining disproportionate minority representation in various aspects of the juvenile justice system, and (3) a brief review of notable results from Part One of the report. After these three subsections, the introduction is concluded with a brief

[2] Throughout both parts of the report, expressions such as "by race", "racial groups", etc., are used to collectively describe Caucasians, African-Americans, and Hispanics. Such expressions are not comprehensive, as Hispanics constitute an ethnic group as opposed to a racial group. In order to maintain simplicity and parsimony in the text, the word ethnic is excluded when collectively describing the three groups.

introduction to the research components of this document. Part Two includes three research components.

The Juvenile Justice System Process

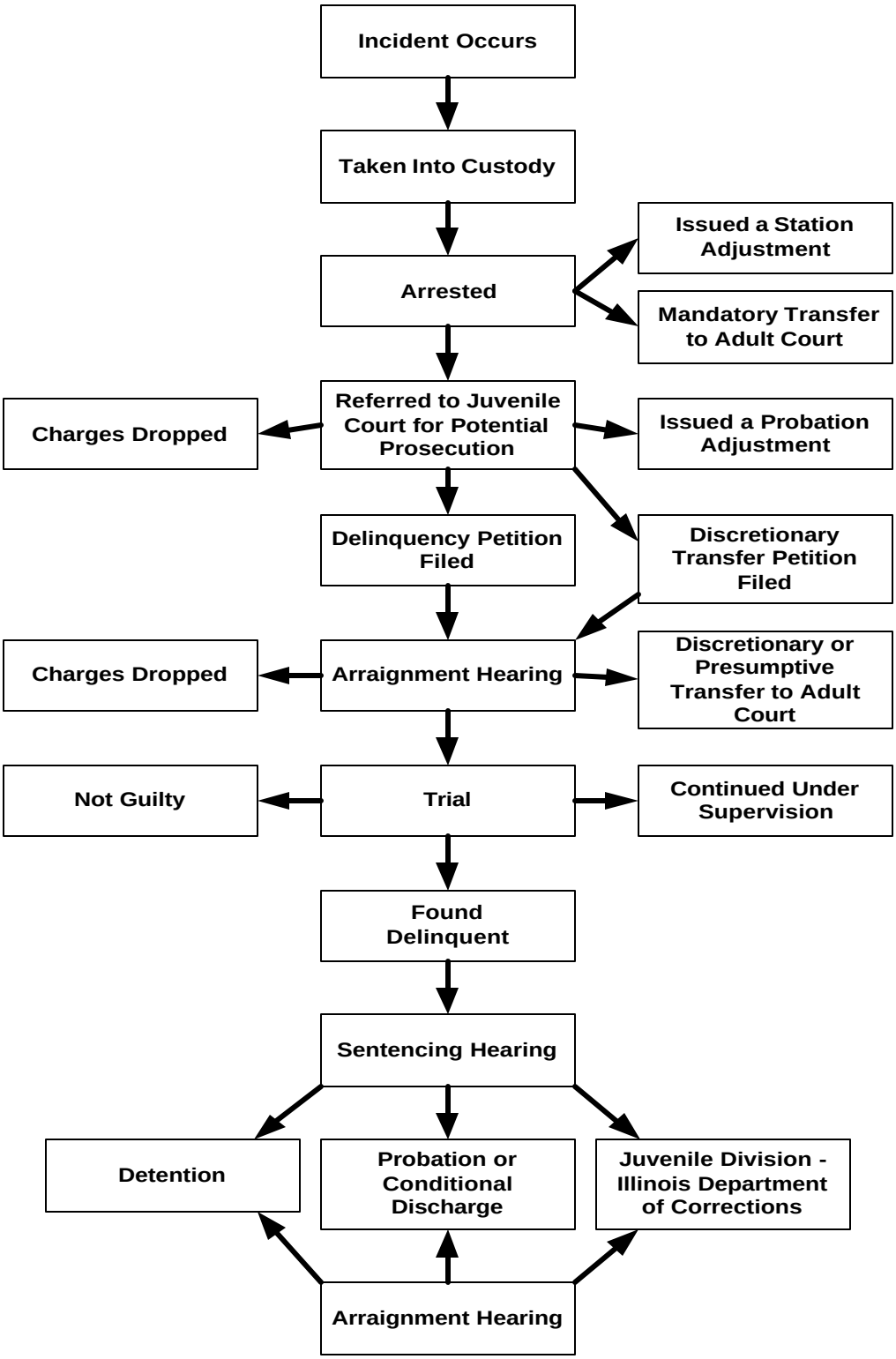
The juvenile justice system process is sequential. In order to be confined in a secure facility, juveniles must first be arrested, then have their case referred to court by the law enforcement agency for potential prosecution, then the state's attorney must file a delinquency petition against the juvenile, etc.

Figure 1 shows a simplified flowchart demonstrating the juvenile justice system process in Illinois. The flowchart is not intended to show every possible aspect or stage of the juvenile justice system process. Moreover, there is slight variation in the juvenile justice system process across Illinois counties. The purpose of Figure 1 is to show the core aspects and stages of the juvenile justice system process.

Downward arrows in Figure 1 indicate the juvenile justice system sequence. For example, in order to be confined in a secure facility, a juvenile must proceed from the top of Figure 1 to the bottom of Figure 1. The arrows in Figure 1 pointing to the right that are located up to or at the box labeled "trial" indicate instances when there is a case outcome involves the juvenile remaining in the juvenile justice system or in the adult criminal justice system. The arrows in Figure 1 pointing to the left that are located up to or at the box labeled "trial" indicate instances when there is a case outcome that involves the juvenile being removed from the juvenile justice system entirely.

What follows is a brief description of the process shown in Figure 1.

Figure 1: Abridged Flowchart of the Juvenile Justice System Process



Brief Process Description

After a juvenile is taken into police custody because there is probable cause that he or she has committed an offense, then a juvenile investigator handles the case at the police station. Unless the juvenile investigator opts not to process the case, the juvenile is then officially arrested.

After an arrest is made, then the juvenile investigator may handle the case by issuing a station adjustment. A station adjustment occurs when the juvenile investigator handles the case at the police station, then releases the juvenile to his or her parents without referring the case to court. The juvenile investigator will typically make this release contingent upon the juvenile completing one or more conditions, often specified in a station adjustment plan.

After an arrest is made, if the juvenile investigator believes that a case warrants prosecution, then the case may be referred to juvenile court for potential prosecution.

Illinois law makes it possible for juveniles who have been arrested for violent or serious offenses to be transferred from the juvenile court system to the adult criminal court system. In Illinois, there are three types of transfers: (1) discretionary transfers, (2) presumptive transfers, and (3) mandatory transfers. Table 1 provides definitions of these three types of transfers. If it is mandatory that a juvenile be transferred to adult criminal court, then the case is initially referred directly to adult criminal court without having ever been referred to juvenile court.

In addition to the three types of transfers, Illinois law also lists several offenses for which, if charged with the offense, the juvenile is automatically excluded from juvenile court. These are offenses listed under an excluded jurisdiction section of Illinois' juvenile delinquency laws. The one distinction between excluded jurisdiction and mandatory transfers is that, for mandatory transfers, in order for the juvenile to be prosecuted in adult criminal court, the state's attorney's office must file a transfer motion. For excluded jurisdiction, every juvenile charged with the offense must be transferred to adult criminal court, irrespective of whether the state's attorney's office files a transfer motion. Table 1 shows excluded jurisdiction offenses. However, excluded jurisdiction was not included in Figure 1, as juveniles who are charged with excluded jurisdiction offenses are generally excluded from the juvenile justice system. Juveniles who are found guilty of excluded jurisdiction offenses may be incarcerated in the Juvenile Division of the Illinois Department of Corrections until they become adults. Thus, there is some crossover into the juvenile justice system, even for excluded jurisdiction juveniles.

Table 1: Transfers From Juvenile Court to Adult Criminal Court

Type of Transfer to Adult Criminal Court (705 ILCS 405/5-805)
Mandatory Transfers: Instances when Illinois law mandates that the juvenile be transferred to adult criminal court, pending a motion made by the state's attorney's Office. Illinois law mandates that a juvenile be transferred to adult criminal court if the juvenile is 15 years of age or older and: (1) the juvenile has been arrested for committing a forcible felony and has either been previously convicted for a felony or allegedly committed the forcible felony in furtherance of gang activity, (2) the juvenile has been arrested for committing a felony and has either been previously convicted for a forcible felony or allegedly committed the felony in furtherance of gang activity, (3) the juvenile has been arrested for committing one of the offenses listed in the presumptive transfer laws and has previously been convicted for a forcible felony, or (4) the juvenile has been arrested for aggravated discharge of a firearm at school or at a school-related activity.
Presumptive Transfer: Instances when Illinois law states that the juvenile will be transferred to adult criminal court pending a motion made by the state's attorney's office, unless the juvenile judge determines based on clear and convincing evidence that the juvenile is amenable to the care, treatment and training programs available to the juvenile court. Pending the juvenile judge's ruling, presumptive transfers may occur if the juvenile is 15 years of age or older and has been arrested for one of the following offenses: (1) a Class X felony other than armed violence, (2) aggravated discharge of a firearm, (3) armed violence with a firearm when the offense is a Class 1 or Class 2 felony and is committed in furtherance of gang activities, (4) armed violence with a firearm in conjunction with a serious drug offense, (5) armed violence when the weapon is one that is outlawed in Illinois' Unlawful Use of Weapons law, such as a machine gun. In Illinois Class X felonies are the most serious felonies (and includes, for example, second degree murder), followed by Class 1 felonies and Class 2 felonies.
Discretionary Transfer: Illinois law allows the state's attorney's office to petition the court for a transfer to adult criminal court for any case. If the offense does not fall under those requiring mandatory or presumptive transfers, then the juvenile judge considers the transfer petition submitted by the state's attorney's office and makes a ruling whether to transfer the case to adult criminal court.

Table 1 (cont.): Transfers From Juvenile Court to Adult Criminal Court

Excluded Jurisdiction (705 ILCS 405/5-130)
Juveniles of the following ages who are charged with the following offenses are excluded from juvenile court: (1) a juvenile at least 15 years of age or older who is charged with first degree murder, aggravated criminal sexual assault, aggravated battery with a firearm committed at or near school or a school-related activity, armed robbery when the armed robbery was committed with a firearm, aggravated vehicular hijacking when the hijacking was committed with a firearm, (2) a juvenile at least 15 years of age or older who is charged with certain offenses under the Illinois Controlled Substances Act at or near school or a school-related activity, or at or near a public housing property, (3) a juvenile at least 15 years of age or older who is charged with an unlawful use of weapons offense while in school, (4) a juvenile at least 13 years of age or older who is charged with first degree murder committed during the course of aggravated criminal sexual assault, criminal sexual assault, or aggravated kidnapping, (5) any juvenile who escapes from custody or violates bail bond while under the jurisdiction of the adult criminal court, and (6) any juvenile who had previously been convicted in adult criminal court.

Relatively few juvenile cases are referred to adult criminal court. Most cases that are referred to court for prosecution are sent to juvenile court. After a case is referred to juvenile court for potential prosecution, then the state's attorney's office reviews the case to determine whether to proceed with a prosecution. If the state's attorney's office determines that there is insufficient evidence to warrant prosecution, then the charges will be dropped. If the state's attorney's office decides to proceed with the prosecution, then a delinquency petition is filed.

Illinois law also provides for an additional option at this stage. The state's attorney's office is authorized to issue a probation adjustment. For a probation adjustment, the case is turned over to a probation officer, who convenes a meeting with the juvenile, his or her parent(s) or guardian(s), and other individuals involved in the case. The purpose of the meeting is to resolve the case before it reaches a trial. This resolution is typically contingent upon the juvenile completing one or more conditions, often specified in a probation adjustment plan.

If a delinquency petition is filed, then the juvenile is required to attend an arraignment hearing, at which he or she is typically required to enter a guilty or not guilty plea. It is also possible for the judge to drop the charges during this hearing. If the juvenile's attorney and the state's attorney have submitted a plea agreement to the judge involving a particular sentence, then the arraignment hearing is also used as an opportunity for the judge to accept or reject the plea agreement. If the judge accepts the plea agreement, then the juvenile may receive, among other options, any one of the three sentencing outcomes listed at the bottom of Figure 1: (1) a juvenile detention sentence, (2) a probation or conditional discharge sentence, or (3) a sentence to the juvenile division of the Illinois

Department of Corrections. This explains the arrows at the bottom of Figure 1 pointing directly from the arraignment hearing to each of these potential sentences.

If the juvenile pleads not guilty at the arraignment hearing, then the case proceeds to a trial. At the trial, the juvenile may be found delinquent. Alternatively, the juvenile may be offered the opportunity to have the case continued under supervision. When a case is continued under supervision, a guilty or not guilty judgment is not made. Instead, the juvenile and the juvenile's parent(s) or guardian(s) agree to a court-determined supervision plan. Juveniles who do not abide by the plan may be asked to return to court and have the case tried in juvenile court.

If a juvenile is found delinquent, then typically a sentencing hearing is held, at which the details of the juvenile's sentence are determined. Three possible sentencing options are those listed towards the bottom of Figure 1: a juvenile detention sentence, a probation or conditional discharge sentence, or a sentence to the juvenile division of the Illinois Department of Corrections.

Pre-Trial Confinement

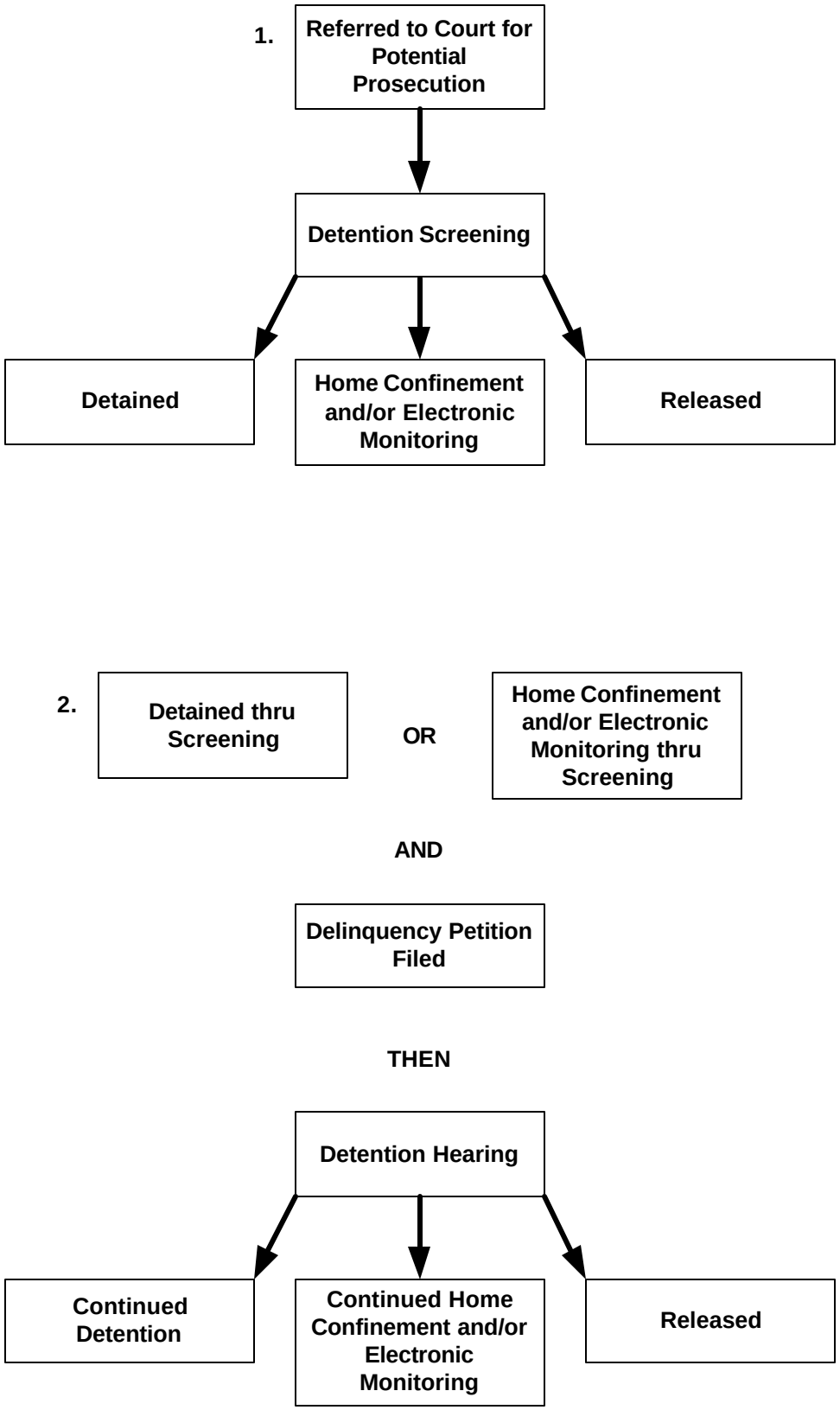
Confinement in a secure facility can occur when juveniles are found guilty at trial and sentenced to prison. In addition, juveniles who are referred to court may also be detained while waiting for their case to be resolved. Secure confinement that occurs prior to a case being resolved is pre-trial confinement. Minorities may also be overrepresented among those detained while waiting for their case to be resolved. Thus, pre-trial confinement is also examined in this document.

Figure 2 shows that there are two stages in the juvenile justice system process when decisions are made regarding pre-trial confinement. What follows is a description of the process for pre-trial confinement decisions.

Diagram 1 in Figure 2 shows the juvenile court process in instances when a detention screening form is completed. For some juvenile cases, a detention screening form is not completed. For example, in instances when it is apparent on the surface that the minor should not be detained (e.g., because the offense is relatively minor), juvenile decision-makers may not go through the formality of completing a detention screening form.

The primary purpose of the detention screening form is to determine whether the juvenile should be detained for the safety of the community (because the juvenile may re-offend while awaiting trial) or because the juvenile may fail to attend his or her scheduled court dates. Typically, a detention intake officer completes this form. Using this form as a guide, the probation officer determines whether the juvenile should be detained in a secure facility, placed on home confinement and/or electronic monitoring, or released. When juveniles are placed on home confinement, they are required to remain in one or more designated locations during specified hours. When juveniles are placed on electronic monitoring, they are required to wear an electronic tracking device that permits probation officers to determine their whereabouts.

Figure 2: Pre-Trial Confinement Process in the Juvenile Justice System



An additional aspect of detention screening not shown in Figure 2 is that the detention intake officer who completes the screening form can recommend overriding the decision indicated by the form. For example, if the form indicates that the juvenile should be detained, the detention intake officer can recommend overriding this decision and not detaining the juvenile. This is an override down. Similarly, if the form indicates that the juvenile should not be detained, the detention intake officer can recommend overriding this decision and detaining the juvenile. This is an override up. After an override recommendation is made by a detention intake officer, the recommendation must receive administrative approval (be accepted by a supervisor).

Diagram 2 in Figure 2 shows that there is also a second stage in the juvenile justice process when pre-trial confinement decisions are made. If, as a result of the detention screening process, a decision is made to detain the juvenile in a secure facility or to place the juvenile on home confinement and/or electronic monitoring, and if a delinquency petition is filed against the juvenile, then the juvenile is required to attend a detention hearing. At the detention hearing, the juvenile judge considers the juvenile's current detention status and, depending on the current status, determines whether the juvenile should continue to be detained in a secure facility, continue on home confinement and/or electronic monitoring, or be released.

Previous Research and Literature

A large number of reports and articles have been written on disproportionate minority representation and/or confinement. This subsection is limited to selected research and literature that directly informed and provided a context for the research in either Part One or Part Two of the report. Specifically, this subsection describes and summarizes the following research and literature: (1) the Office of Juvenile Justice and Delinquency Prevention's *Disproportionate Minority Confinement Technical Assistance Manual,* and (2) two comprehensive disproportionate minority confinement research reviews written by Carl E. Pope and colleagues (Pope & Feyerherm, 1990; Pope, Lovell, & Hsia, unpublished manuscript).[3]

OJJDP's Technical Assistance Manual

In 1990, shortly after the changes to the JJDP Act requiring that disproportionate minority confinement be addressed in the state plan, the Office of Juvenile Justice and Delinquency Prevention (OJJDP) published a *Disproportionate Minority Confinement Technical Assistance Manual* intended to provide juvenile justice systems with assistance

[3] Disproportionate Minority Confinement Technical Assistance Manual (1990). U.S. Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention: Washington DC.

Pope, C, & Feyerherm, W.H. (1990). Minority status and juvenile justice processing: An assessment of the research literature (part 1). Criminal Justice Abstracts, 22(2), 527-542.

Pope, C., Lovell, R., & Hsia, H.M. (2003). Disproportionate minority confinement: a review of research literature from 1989 to 2001. U.S. Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention: Washington, D.C.

in addressing disproportionate minority confinement in their communities and to provide suggestions that could guide local assessments of disproportionate minority confinement. The manual included a section on potential causes of disproportionate minority confinement. The section on potential causes introduced two concepts that guided the methodology used in the overall report: indirect effects and accumulated disadvantaged status.

In the technical assistance manual, three potential causes of disproportionate minority confinement are described: (1) overt discrimination, (2) indirect effects, and (3) accumulated disadvantaged status. Table 2 defines each of these potential causes. Two of the three OJJDP causes (indirect effects and accumulated disadvantaged status) played a large role in the development of Part One of the report. Indirect effects played a large role in the development of this document. While there may be juvenile justice professionals in Cook County who overtly discriminate against minority juveniles, investigation of such discrimination did not play a large role in this document, as it is difficult to isolate and measure discrimination using most methodological approaches.

Table 2: Suggested OJJDP Causes of Disproportionate Minority Confinement

Cause	Explanation
Overt Discrimination	Juvenile justice system professionals make decisions directly based on or influenced by the race of the juvenile.
Indirect Effects	Juvenile justice system professionals use information to make decisions that is *correlated with* race and which places minorities at a disadvantage. For example, if prior arrest history is used to make decisions and minorities have more prior arrests, then use of prior arrests as a decision-making criteria places minorities at a disadvantage.
Accumulated Disadvantaged Status	The idea that each stage of the juvenile justice system contributes to disproportionate minority confinement. Small levels of disproportionality at each stage "snowball" into appreciable levels of disproportionate minority confinement.

Table 2 shows that OJJDP suggested that disproportionate minority confinement results from indirect effects when juvenile justice professionals use factors to make decisions that are correlated with race and that place minorities at a disadvantage. An indirect effect can be any factor that differs across racial groups. In some instances, juvenile justice professionals may not intend for indirect effects to work to the disadvantage of minority juveniles.

Instead, juvenile justice professionals may believe that, by considering indirect effects when making decisions, they are considering factors that contribute to the likelihood of the juvenile engaging in criminal behavior in the future. In fact, many indirect effects are also potential juvenile delinquency risk factors, or factors that have been demonstrated to be related to juvenile delinquency.

Table 2 shows that accumulated disadvantaged status occurs when small levels of minority overrepresentation in multiple aspects of the juvenile justice system process accumulate and result in appreciable levels of disproportionate minority confinement.

Reviews of Research on Disproportionate Minority Confinement

Carl E. Pope and colleagues have written two reviews of disproportionate minority confinement-related research (Pope & Feyerherm, 1990; Pope, Lovell, & Hsia, unpublished manuscript). The first review examined research published between 1969 and 1988. The second review examined research published between 1989 and 2001. For both reviews, Pope and colleagues conducted extensive searches for qualitative and/or quantitative empirical research published in academic journals and books. The first review included 46 publications and the second review included 34 publications. Many of the research studies explicitly examined disproportionate minority representation at one or more aspects or stages of the juvenile justice system process (including arrests, delinquency adjudications, and detention sentences), although a number of the studies were included in the review because they are peripherally related to disproportionate minority representation or confinement (e.g., surveys of law enforcement officers or minority juveniles, evaluations of programming intended to address disproportionate minority confinement).

Because the two reviews written by Pope and colleagues covered over 30 years of research and were based on comprehensive searches for high quality research, they provide a strong indication of the prevalence and extent of disproportionate minority representation in the United States. This information was considered when developing the approach used in this report. The following bullet points describe characteristics of the research included in the two reviews.

- A considerable majority of the research in both reviews examined disproportionate minority representation of African-Americans, while considerably fewer studies examined other minority groups. However, a number of research studies classified all minorities into a "non-white" category and compared Caucasians to "non-whites".

- Both reviews included research that examined data aggregated at different levels, including the state level, multiple county level, county level, multiple city level, or city level. The norm was to examine data broken down to at minimum the multiple county level.

- Both reviews included research from disparate geographic areas within the United States.

- In both reviews, the most frequently examined juvenile justice system aspects or stages examined were the disposition (delinquent vs. not delinquent) and the nature/severity of the disposition. Other frequently researched aspects or stages included detention-related decisions and delinquency petition filings. Aspects or stages of the juvenile justice system related to law enforcement, such as arrests or court referrals, were examined much less frequently.

- A large majority of the research in both reviews reported results of a relatively sophisticated statistical analysis, such as log linear analysis, logistic regression, or multiple regression.

In both reviews, Pope and colleagues examined the research for race effects, or instances when minority status has an impact on what happens to juveniles as they are processed through the juvenile justice system. For the 1989-2001 review, Pope and colleagues used the following coding scheme to record the presence or absence of race effects: (1) "Yes", indicating that there was a race effect for every juvenile justice system aspect or stage examined, (2) "Mixed", indicating that there were race effects for some of the aspects or stages examined, but not others, or that there were race effects for certain types of offenders or offenses, but not others, (3) "No", indicating that there were no race effects for any of the juvenile justice system aspects or stages examined, or (4) "Unknown", for instances when the research was pertinent to disproportionate minority representation, but did not conduct analyses directly examining for race effects. The 1969-1988 review included the "Yes". "No", and "Mixed" categories, but excluded the "Unknown" category. The following bullet points summarize notable results regarding race effects from the research included in the two reviews.

- A majority of the research studies in both reviews were classified "Yes" or "Mixed" by Pope and colleagues (27, or 58.7% of the research studies in the 1969-1988 review and 25, or 71.5% of the research studies in the 1989-2001 review).

- Whereas 19 (41.3%) of the research studies in the 1969-1988 review were classified as "No", only 1 (2.9%) research study from the 1989-2001 review was classified as "No" (although 8, or 23.5% were classified as "Unknown"). However, the category "Unknown" was not included in the 1969-1988 review. Brief descriptions of the research studies included in the 1969-1988 review (available in an appendix in the review) suggested that few studies would have been classified as "Unknown" even if the category had been used.

- Considerably fewer studies in the 1969-1988 review were classified as "Mixed" (9, or 17.6% of the research studies in the 1969-1988 review vs. 17, or 50.0% of the research studies in the 1989-2001 review).

The results described in these three bullet points indicate that, on the whole, results of research included in the two reviews found evidence of disproportionate minority representation, although the percentage of research studies finding race effects was notably higher in the 1989-2001 review. The bullet points below provide additional detail regarding results of the research studies included in the two reviews.

- It was noted in both reviews that race effects occurred for every aspect or stage of the juvenile justice system process examined in the research studies.

- It was noted in the 1969-1988 review that the level of statistical sophistication was not related to the likelihood of the research study finding a race effect. Research that utilized more sophisticated statistical analyses were just as likely to find race effects as those that utilized less sophisticated analyses. However, the 1989-2001 review noted that, relative to studies published between 1969-1988, research published between 1989-2001 tended to utilize more "precise" analyses (e.g., examining interactions between race and other factors in their statistical analyses). Pope and colleagues suggest that this increased precision resulted in more research from 1989-2001 finding "mixed" results.

- The 1969-1988 review noted that several research studies found evidence of "accumulated disadvantaged status" for minority juveniles, whereby small levels of disproportionality at each sequential stage of the juvenile justice system "snowball" into appreciable levels of disproportionate minority confinement. On the other hand, the 1989-2001 review noted that there were fewer instances when research studies found evidence of accumulated disadvantaged status. Pope and colleagues attributed this to the increased precision of statistical analyses in the 1989-2001 research studies, resulting in an increased number of research studies finding "mixed" results.

Results From Part One of the Report

This document (Part Two of the report) utilized data collected from Cook County juvenile justice system case files and survey data collected from juvenile justice professionals to examine disproportionate minority representation. Part One formed the foundation of the report, as Part One used aggregate data to examine the level and extent of disproportionate minority representation across many aspects and stages of the juvenile justice system process listed in Figure 1 and Figure 2. The following bullet points list some of the notable results from Part One of the report:

- African-Americans were considerably overrepresented among juveniles who were arrested in Cook County as a whole. On the other hand, Caucasians and Hispanics were considerably underrepresented among juveniles who were arrested in Cook County as a whole.[4]

[4] Throughout both parts of the report, the term Hispanic is used to describe all individuals of Hispanic and Latino descent (Mexican, Puerto Rican, Cuban, Central or South American, etc).

- After the arrest stage, the only stage that seemed to make a large contribution to African-American overrepresentation in the Cook County juvenile justice system was the court referral stage, or the stage at which juveniles who have been arrested are referred to court for potential prosecution. After the court referral stage, later stages contributed to African-American overrepresentation, but to a lesser extent.

- African-Americans in Cook County as a whole were overrepresented among those confined in secure correctional facilities in the Juvenile Division of the Illinois Department of Corrections. On the other hand, Caucasians and Hispanics were underrepresented. Thus, results suggested that there was disproportionate post-trial minority confinement of African-Americans in Cook County as a whole. Results suggest that the disproportionate minority confinement occurred largely because of the overrepresentation of African-Americans at the arrest stage and, to a lesser extent, the court referral stage.

- Not every juvenile is screened for detention upon having their case referred to court for potential prosecution. Of the juveniles who had their cases referred to court for potential prosecution in Cook County as a whole, African-Americans were overrepresented among those who were screened for detention. On the other hand, Caucasians were considerably underrepresented among those who were screened for detention. Hispanics were moderately underrepresented.

- Juveniles who are not screened for detention will likely not be detained in a secure detention facility prior to adjudication, whereas those who are screened may face pre-trial confinement. Results suggested that, as a result of representation among those who were screened for detention, of the juveniles who had their cases referred to court for potential prosecution, African-Americans were overrepresented among those detained prior to trial. On the other hand, Caucasians and Hispanics were underrepresented.

Components of Part Two of the Report

The bullet points in the preceding subsection describing results from Part One of the report indicate that disproportionate minority representation existed at multiple aspects or stages of the Cook County juvenile justice system process. Part One of the report noted that high levels of disproportionate minority representation existed for juvenile justice system aspects or stages that occur earlier in the process, such as arrests and court referrals.

Part One used broad, aggregate data to draw conclusions. One purpose of Part Two was to use different methodologies, ones that provide a more localized or specified approach, to examine the level and extent of disproportionate minority representation in Cook County. When designing the methodological approach for this report, it was hoped that the broad approach of Part One and the more specified approach of Part Two could

collectively paint a holistic picture of the level and extent of disproportionate minority representation in Cook County.

Part Two includes three components, each of which used a different methodological approach.

Component One: Individual-Level Analyses

The purpose of Component One was to use individual-level statistical analyses to examine race as a contributing factor in juvenile justice system processing decisions that occur after a juvenile is referred to court (see Figure 1). For Component One, individual-level information was obtained from the court case files of a sample of juveniles who had their cases referred to the Cook County juvenile court system. Two types of information were obtained from each case file examined: (1) information pertaining to factors that could potentially impact case processing decisions, and (2) outcome information. Statistical analyses were conducted to determine the relative importance of race and other potentially relevant factors in predicting outcomes. The statistical analyses also examined the extent to which race and other potentially relevant factors act in concert to predict outcomes.

Component Two: Surveys of Juvenile Justice System Decision-Makers

The primary purpose of Component Two was to learn how Cook County juvenile justice system decision-makers perceive racial biases and issues in the Cook County juvenile justice system. Surveys were distributed to juvenile justice professionals responsible for making decisions at many of the juvenile justice system processing stages shown in Figure 1, including juvenile investigators, juvenile probation officers, and juvenile court judges.

Component Three: Juvenile Investigator Interview Surveys

After juveniles are taken into police custody, they are interviewed by juvenile investigators at the police department. These interviews play a large role in determining the decisions that juvenile investigators make regarding how to handle individual juvenile cases. The purpose of Component Three was to learn how information obtained in the interviews is used to make decisions. For Component Three, multiple surveys were distributed to Cook County juvenile investigators, who were asked to complete a short survey after every interview they completed during a two-week period.

Juvenile interviews were specifically targeted for examination in Part Two because decisions made while juveniles are in police custody were perceived by Illinois Criminal Justice Information Authority research staff as being critical for determining how cases proceed in the Cook County juvenile justice system. Subsequent to the decision to target juvenile interviews for closer examination, results from Part One of the report revealed that African-Americans were overrepresented at aspects of the juvenile justice system that occur while juveniles are in police custody, suggesting that the decision to target juvenile interviews was prudent.

II. General Method

Each component of Part Two of the report has a unique methodology. Methodology specific to individual components of Part Two is described at the beginning of Sections III-V of this document, each of which pertains to one of the three components. This section describes methodology that was consistent across all three components. Specifically, for the most part, data was obtained for all three components from the same geographic locations within Cook County.

The aggregate analyses conducted for Part One of the report distinguished between disproportionate minority representation in Chicago as a whole and in suburban Cook County as a whole. To maintain consistency across both parts of the report, an attempt was made to obtain information for all three Part Two components from both Chicago and suburban Cook County. However, because of the more specified nature of the three components, it would have been unmanageable to obtain data from Chicago *as a whole* and suburban Cook County *as a whole*. Chicago and suburban Cook County include a large number of police districts and police departments, respectively. Thus, a decision was made to focus Part Two data collection primarily on four police districts within Chicago and on a single suburban Cook County municipal district served by 24 law enforcement agencies. Instances when data was not collected exclusively from these areas of Chicago and suburban Cook County are noted in the applicable location in the text.

For the most part, data pertaining to juveniles who were initially taken into custody by the Chicago Police Department (CPD) focus on the following four police districts: the 5th District (Calumet), the 6th District (Gresham), the 8th District (Chicago Lawn), and the 22nd District (Morgan Park). Thus, in terms of the three Part Two components, individual-level data was obtained from juveniles who were originally taken into custody by police officers in these districts (Component One), an attempt was made to distribute surveys to key juvenile justice professionals who handle cases involving juveniles who were originally taken into custody in these districts (Component Two), and short juvenile interview surveys were distributed to juvenile investigators who work in these districts (Component Three).

These four Chicago police districts were selected because of the racial compositions in the Chicago communities served by police in these districts. The four districts have different racial compositions, thereby ensuring that the data would sufficiently reflect multiple racial groups. Table 3 shows 2000 population estimates by race for the 5th, 6th, 8th, and 22nd Districts from the CPD website.

Estimates in Table 3 were calculated by Northwestern University's Institute for Policy Research using census tract data.[5] Table 3 shows that the 5th and 6th Districts, both located in south Chicago, are predominantly African-American communities. The 8th District, located in southwest Chicago, has a majority Caucasian population, with an appreciable African-American and Hispanic population. The 22nd District, located in southwest Chicago, has a majority African-American population, with an appreciable Caucasian population.

Table 3: 2000 Population by Race for the 5th, 6th, 8th, and 22nd Chicago Police Districts

Population					
African-American	**Caucasian[a]**	**Hispanic[a]**	**Asian**	**Other**	**Total**
5th District (Calumet)					
88,129 (94.4%)	3,274 (3.5%)	994 (1.1%)	674 (0.7%)	313 (0.3%)	93,384
6th District (Gresham)					
104,016 (98.7%)	410 (0.3%)	628 (0.6%)	78 (0.1%)	228 (0.2%)	105,360
8th District (Chicago Lawn)					
57,500 (23.5%)	93,516 (38.3%)	87,930 (36.0%)	2,209 (0.9%)	3,315 (1.4%)	244,470
22nd District (Morgan Park)					
69,629 (62.4%)	38,761 (34.7%)	2,246 (2.0%)	365 (0.3%)	544 (0.5%)	111,545

Source: Chicago Police Department website. Numbers calculated by Northwestern University's Institute for Policy Research using U.S. Census Bureau estimates.

a: See Footnote 5.

For the most part, data pertaining to juveniles who were initially taken into custody in suburban Cook County focused on the 4th Municipal District of Cook County (4th District). This district was selected because it was identified as a racially diverse area of suburban Cook County. Table 4 lists the 21 law enforcement agencies serving cities, villages, and towns in the 4th District, as well as population by race for these 21

[5] The U.S. Census Bureau treats race and ethnicity as separate categories. The U.S. Census Bureau race categories are White, African-American, American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander. Ethnicity categories are Hispanic vs. non-Hispanic. Thus, according to this system, one could be classified as White Hispanic, Black Non-Hispanic, etc. For the data in Table 3, Northwestern University: (1) included Hispanics of all races, and (2) only included non-Hispanic Whites.

municipalities.[6] In addition to the law enforcement agencies listed in Table 4, the Cook County Forest Preserve Police Department, the Cook County Memorial Park Police Department, and the Cook County Sheriff's Office also take juveniles into custody in the 4th District. Table 4 shows that a considerable majority of the 4th District population is Caucasian, but that the district also includes reasonably large African-American and Hispanic populations.

Table 4: 2000 Population by Race for 21 Law Enforcement Agencies Serving the 4th Municipal District

Population						
African-American	**Caucasian[a]**	**Hispanic**	**Asian**	**Other**	**Multiple Races**	**Total**
Bellwood						
16,783	2,412	1,631	197	53	311	20,535
Berkeley						
1,455	3,114	814	202	7	113	5,245
Berwyn						
702	39,667	20,543	1,400	253	1,954	54,016
Broadview						
6,043	1,815	325	110	13	157	8,264
Brookfield						
169	17,850	1,537	237	29	250	19,085
Cicero						
956	41,327	66,299	828	797	3,431	85,616
Elmwood Park						
132	23,255	2,798	530	52	594	25,405
Forest Park						
4,892	8,808	1,230	1,071	34	443	15,688
Franklin Park						
147	15,401	7,399	481	66	499	19,434
Hillside						
3,008	4,020	1,068	418	19	218	8,155
La Grange Park						
409	12,394	472	218	19	134	13,295
Maywood						
22,308	2,625	2,843	80	35	439	26,987
Melrose Park						
676	16,575	12,485	461	117	689	23,171

[6] The U.S. Census Bureau data that was used to create Table 4 did not provide populations broken down by ethnicity (Hispanic or non-Hispanic) for each racial category. Thus, unlike Table 3, the Caucasian category includes both White Hispanics and White non-Hispanics.

Table 4 cont.: 2000 Population by Race for 21 Law Enforcement Agencies Serving the 4th Municipal District

Population						
African-American	**Caucasian[a]**	**Hispanic**	**Asian**	**Other**	**Multiple Races**	**Total**
Northlake						
285	8,964	4,133	436	65	303	11,878
North Riverside						
198	6,066	544	175	10	75	6,688
Oak Park						
11,788	36,124	2,374	2,178	97	1,480	52,524
River Forest						
560	10,396	466	364	16	185	11,635
River Grove						
38	9,841	1,043	217	37	146	10,668
Riverside						
23	8,484	489	142	8	98	8,895
Stone Park						
93	2,768	4,057	104	25	145	5,127
Westchester						
1,212	14,494	956	579	20	193	16,824
Total						
71,679 (16.0%)	286,400 (63.8%)	133,506 (29.7%)	10,428 (2.3%)	1772 (0.4%)	11,857 (2.6%)	449,135

Source: U.S. Census Bureau

a: See Footnote 6

III. Component One: Individual-Level Analyses

The purpose of Component One was to use individual-level statistical analyses to examine race as a contributing factor in juvenile justice system processing decisions. The analyses were based on data obtained from *family folders* housed in the Record Library of the Juvenile Division of the Circuit Court of Cook County. Each family folder contains information on one or more juveniles whose cases were referred to juvenile court in Cook County. Thus, once a law enforcement agency refers a case to juvenile court in Cook County, information on the case is included in a family folder, irrespective of how the case is handled from that point.

This section of the document describes: (1) the methodology used to obtain information from family folders, (2) the statistical analyses used to analyze family folder information, and (3) results of the statistical analyses.

Method

Family Folders

The term "family folder" refers to the organization of files in the Record Library. The files are organized by the name of the juvenile's mother. Thus, for example, if two brothers with the same mother each have a different case referred to court, information regarding their individual cases would be housed in the same family folder. Family folders provide a rich source of information on factors that may impact processing decisions, as well as information on case outcomes (including many of those that appear in Figure 1).

Multiple agencies responsible for a number of the possible outcomes that appear in Figure 1 contribute to the family folders, including law enforcement agencies in Cook County, the Cook County Juvenile Probation and Court Services Department, the Office of the Clerk of the Circuit Court of Cook County, and the Juvenile Justice Bureau of the Cook County State's Attorney's Office. In addition, the family folders include information that is submitted to one or more of these agencies from schools and from juvenile service or treatment providers.

Table 5 lists some of the types of information that is available in family folders. Table 5 distinguishes between forms and orders that indicate how the case proceeded ("case processing information") and other types of forms and orders ("additional information"). Forms and orders that indicate how the case proceeded tend to provide information on case outcomes. Other types of forms and orders tend to provide information on factors that may impact processing decisions. An attempt was made to list information in Table 5 under both "case processing information" and "additional information" approximately in the order that the form, order, or sheet would be completed, based on the juvenile justice system process.

Table 5: Types of Information Available in Family Folders

Case Processing Information
Complaint information (including notes on interviews with complainants, or individuals who initially reported the offense)
Reports on previous station adjustments
Arrest reports
Delinquency petitions
Delinquency adjudication sheets
Probation or continued under supervision orders
Home confinement orders
Temporary detention orders
Additional Information
Social investigation forms
Risk assessment forms
Probation/supervision case logs
Probation/supervision case plans
School records and reports
Reports from service or treatment providers (e.g., clinical, psychological, and psychiatric reports)
Letters and correspondence between juvenile court system professionals and professionals outside of the court system

Sample

A sample of juveniles who were referred to juvenile court in Cook County was selected for individual-level analysis. This subsection describes the process used to select the sample.

Each family folder is assigned a number by the Juvenile Probation and Court Services Department and/or the Office of the Clerk of the Circuit Court. However, because family folders may include more than one juvenile, it was difficult to select a sample of juveniles by selecting family folder numbers. Fortunately, in addition to being assigned a family folder number, each juvenile case is also assigned an individual, person-specific, number. To ensure that specific, single juveniles and offenses were being sampled, the sample was drawn using the individualized case numbers.

The Cook County Juvenile Probation and Court Services Department maintains a database of juveniles who were referred to court. The database includes each individual juvenile case, including their individual case numbers. Illinois Criminal Justice Information Authority research staff requested and received a list of individualized case numbers, along with some basic demographic information for each case (race, gender,

offense type, geographic location of the arrest and court referral) from the Juvenile Probation and Court Services Department.

Research staff were provided with a list of every individualized case number from 1996 to 1999, including the requested demographic information for each case. The list included 84,143 individualized case numbers. Upon receiving the list, research staff examined the demographic information and made a number of decisions regarding how to go about selecting a sample from the list.

The first decision that research staff made was that a sample would be selected from only those cases involving court referrals made *during 1998*. Thus, even though the list included all cases from 1996 to 1999, initial sampling was limited to 1998 and 1999 cases. 1998 was selected because, at the time the individual-level analyses were being conducted (early 2001), 1996 and 1997 cases seemed to be too far in the past to draw conclusions regarding current events in the Cook County juvenile justice system. The list included 19,644 cases that were referred during 1998.

The initial decision to exclude 1999 cases from sampling was made because a number of 1999 cases had not been closed, or had not received a final court disposition. Only cases that had received a court disposition could be included in the individual-level analyses, as case outcome was a primary variable of interest.

Despite the initial decision to exclude 1999 cases, it eventually became necessary to also include an appreciable number of 1999 cases that had received a court disposition in the final sample. The reasons for this inclusion are described below.

After identifying 1998 as the target year for sampling, the most important decision made was that the sample would be selected using a *stratified random sampling* approach. Stratified random sampling means that, instead of selecting a random sample from among an entire list (for example, the list of 84,143 cases), a number of smaller random samples are selected from subgroups within the list as a whole. For example, a sample may be randomly selected from among just those in the list who are African-American, who have committed a specific type of offense, etc. Collectively, the smaller samples selected from each subgroup comprise the overall sample.

Stratified random sampling has at least two advantages over sampling from an entire list. First, it ensures that cases with specific criteria of interest will be sufficiently represented in the final, overall sample. For example, if one is interested in race, then stratified sampling can be used to ensure that a sufficient number of African-Americans are included in the sample. Second, stratified random sampling allows one to control the proportion of cases in the sample that have particular criteria. For example, one can control how many African-Americans are in the sample relative to how many Caucasians are in the sample. For these reasons, stratified random sampling seemed to be a useful approach for the individual-level analyses.

Research staff determined that the following criteria would be used to develop subgroups that would, in turn, be used to select smaller samples: (1) the juvenile's race, (2) the location of the arrest and court referral, (3) the type of offense the juvenile committed, and (4) the juvenile's gender.

One aspect of stratified random sampling that makes the process somewhat cumbersome is that, as one increases the criteria that one uses to develop subgroups, one also rapidly expands the number of smaller samples that must be selected. For example, imagine that one is interested in selecting stratified samples based on juvenile race and the location of the arrest and court referral. Imagine further that one is interested in selecting smaller samples from three racial groups (African-Americans, Caucasians, Hispanics) and two types of locations (Chicago vs. suburban Cook County). Given this scenario, one must select six smaller samples (one for African-Americans arrested and referred to court in Chicago, Caucasians arrested and referred to court in suburban Cook County, etc.). As more criteria are included and more categories are included for each criteria (e.g., if one had chosen to also examine Asians, in addition to African-Americans, Caucasians, and Hispanics), the number of combinations of categories increases, potentially creating instances when an unreasonable number of samples must be drawn or when there are too few cases in a particular combination of categories to draw a large enough sample.

With the expansion of combinations of categories in mind, research staff explored the number of cases in various combinations of categories for the four criteria listed above and opted to select smaller samples using the following categories: (1) African-American, Caucasian, and Hispanic for the juvenile race criterion, (2) Chicago and suburban Cook County for the location of arrest and court referral criterion, (3) violent offenses, property offenses, and drug offenses for the type of offense the juvenile committed criterion, and (4) male offenders for the juvenile gender criterion. The remainder of this part of the sample description explains how categories were determined for each of the four criteria.

For the *juvenile race* criterion, an attempt was made to also include Asians as a category that would be used for stratification. However, there were too few cases in many of the combinations of categories that included Asians to warrant their inclusion. Thus, stratification was limited to African-Americans, Caucasians, and Hispanics.

For the *location of arrest and court referral* criterion, a decision was made to limit sampling to Chicago cases that were referred to court by law enforcement agencies in the 5th, 6th, 8th, and 22nd Districts of the Chicago Police Department and suburban Cook County cases that were referred to court by law enforcement agencies serving the 4th Municipal District. This decision was made in order to maintain consistency across the three components of this document (see the General Method section, pages 18-21)[7]. For

[7] A majority of the cases from Chicago considered for sampling were referred by the 8th District (approximately 90%). At least one case considered for sampling was referred by nearly every law enforcement agency serving the 4th Municipal District. The percentage of cases referred by individual law enforcement agencies in the 4th District tended to be commensurate with the size of the municipality served by the law enforcement agency (e.g., law enforcement agencies serving smaller municipalities made fewer referrals).

the remainder of this component of the document, the general terms "Chicago" and "suburban Cook County" are used to make reference to cases that were selected specifically from these districts of Chicago and suburban Cook County.

For the *type of offense the juvenile committed* criterion, a decision was made to limit sampling to specific types of violent offenses, property offenses, and drug offenses. It was decided that including all violent offenses, property offenses, and drug offenses in the three respective categories would result in categories that were too broad to be meaningful.

The violent offense and property offense categories were limited to index offenses. Index offenses are eight offenses (four violent offenses and four property offenses) that states are required to collect information on to satisfy requirements of the Federal Bureau of Investigation's Uniform Crime Reporting (UCR) Program. The Federal Bureau of Investigation (FBI) developed the UCR program to ensure that states maintain consistent, reliable crime data.

Table 6 shows the types of offenses classified as violent index offenses and property index offenses. The FBI and Illinois use somewhat different names for similar index offenses. Table 6 shows the names of the offenses listed by the FBI as index offenses and, for each index offense, provides the names that Illinois criminal code applies to the same offense.

Table 6: Violent Index Offenses and Property Index Offenses

FBI Index Offense	Illinois Classification for the Offense
Violent Index Offenses	
Murder, Non-Negligent Manslaughter	First Degree Murder, Second Degree Murder
Forcible Rape	Criminal Sexual Assault
Robbery	Robbery
Aggravated Assault/Battery, including Attempted Murder	Attempted Murder, Aggravated Assault, Aggravated Battery, Ritual Mutilation
Property Index Offenses	
Burglary	Burglary
Larceny/Theft, including Burglary From Motor Vehicle	Theft, Burglary From Motor Vehicle
Motor Vehicle Theft	Motor Vehicle Theft
Arson	Arson

Just as four specific violent offenses and four specific property offenses were selected to include in the categories used for stratified sampling, four drug offenses were also selected. The four drug offenses selected for potential sampling were: (1) possession of cannabis, (2) manufacture/delivery of cannabis, (3) possession of controlled substances, and (4) manufacture/delivery of controlled substances. These four drug offenses were

selected because they seemed to constitute important violations of Illinois's anti-drug laws.[8]

For the remainder of this component of the document, the general terms "violent offense", "property offense", and "drug offense" are used to make reference to cases that were referred to court for index offenses or for the four drug offenses listed above.

Finally, for the *juvenile gender* criterion, an attempt was made to include both males and females for stratification. However, there were too few cases in many of the combinations of categories that included females to warrant including females. Thus, only males were included in the final sample. Gender was not used to develop subgroups used for stratification.

Selecting the Final Sample. The previous part of this sample description essentially described how the original list of 84,143 cases was pared down to a smaller list. The smaller list included 1998 cases that fit into the categories identified for selecting stratified random samples. The smaller list included 2,327 cases. These cases were used to select the final sample.

The categories that were included in the four stratification criteria resulted in 18 combinations of categories, such as Chicago/African-American/Violent Offense and so on. Table 7 shows each of the 18 combinations of categories.

For each of the 18 combinations, a separate decision was made as to how many cases to sample out of the total number of cases in the combination. For example, there were a total of 531 cases in the Chicago/African-American/Property Offense combination. A decision was made to select a sample of 120 cases out of this total. Decisions on how many cases to sample for the 18 combinations were made based on the following criteria: (1) the percentage of cases in the combination, out of the 2,327 total cases, (2) the ability of research staff to obtain information from the total number of case files selected in a reasonable period of time, and (3) the need to ensure that all three racial groups are sufficiently represented (in particular, that information was obtained on a sufficient number of Caucasians and Hispanics referred to court in Chicago, as a majority of the Chicago cases pertained to African-Americans).

[8] Another factor that contributed to the decision to limit analysis to specific types of violent, property, and drug offenses was to maintain consistency across Part One and Part Two of the report. Several of the analyses conducted for Part One of the report (those examining arrests and station adjustments) utilized primarily the same types of violent, property, and drug offenses as those examined in this component of the document.

Table 7: Final Samples Obtained for 18 Stratum Included in Individual-Level Analyses

Stratum Location/Race/Offense Type	Final Sample
Chicago/Caucasian/Violent	14
Chicago/Caucasian/Property	14
Chicago/Caucasian/Drug	19
Chicago/African-American/Violent	58
Chicago/African-American/Property	92
Chicago/African-American/Drug	55
Chicago/Hispanic or Latino/Violent	13
Chicago/Hispanic or Latino/Property	16
Chicago/Hispanic or Latino/Drug	17
Suburban Cook/Caucasian/Violent	21
Suburban Cook/Caucasian/Property	21
Suburban Cook/Caucasian/Drug	19
Suburban Cook/African-American/Violent	20
Suburban Cook/African-American/Property	16
Suburban Cook/African-American/Drug	19
Suburban Cook/Hispanic or Latino/Violent	17
Suburban Cook/Hispanic or Latino/Property	21
Suburban Cook/Hispanic or Latino/Drug	14
TOTAL	**466**

After decisions were made on sample sizes, samples were randomly selected, and research staff attempted to locate the case files, it became apparent that it would be necessary to select some cases that were not referred to court during 1998. The additional cases were referred during 1999. It was necessary to select some 1999 cases for two reasons: (1) research staff were unable to locate a number of the selected cases, and (2) additional cases were necessary in order to ensure that all three racial groups were sufficiently represented. Even after selecting additional 1999 cases, it was not possible to obtain the samples decided upon for all of the 18 combinations.

Additional 1999 cases were included in all of the 18 combinations except for the three combinations involving Chicago African-Americans: Chicago/African-American/Violent Offense, Chicago/African-American/Property Offense, and Chicago/African-American/Drug Offense. Because there were a large number of cases to sample from in these three combinations, it was unnecessary to select additional 1999 cases.

Table 7 shows the final sample sizes obtained for each of the 18 combinations. Because it was not always possible to obtain the "ideal" sample sizes for all of the 18 combinations and because it was necessary in some instances to "over-select" Caucasians and/or Hispanics in order to ensure that all three racial groups were sufficiently represented, the final samples for the 18 combinations are not proportional to their representation in the total list of 2,327 cases (the list that was originally used to make decisions regarding sample sizes).

Another way of expressing the fact that the final samples for the 18 combinations are not proportional to their representation in the total list is to say that the overall sample (across all 18 combinations) does not adequately represent the population from which it was selected. When a sample does not represent the population from which it was selected, one solution is to, prior to conducting analyses, assign each case a weight so that the case reflects its level of representation in the population.

In the present context, this meant assigning each case in the final sample a weight reflecting the level of representation in the population (2,327 1998 cases and 750 1999 cases = 3,077 cases) of whatever combination the case represents. The weights were calculated as follows: 3,077 / total number of cases in the combination. So, for example, there were 108 cases in the Chicago/Caucasian/Property Offense cases in the total list of 3,077. Thus, each Chicago/Caucasian/Property Offense case was assigned a weight of 28.5 (3,077/108) prior to conducting the individual-level analyses.

Procedure

After ideal sample sizes were determined for each of the 18 combinations and cases were randomly selected based on the ideal sample sizes, Illinois Criminal Justice Information Authority research staff went to the Record Library to locate the family folders and obtain information from the selected individual case files within each of the family folders. For each family folder or individual case file that could not be located on the first attempt (for both the original sample and replacement cases), research staff made one additional attempt to locate the family folder or case file. Data collection took place during Spring 2001.

The same information was obtained from each individual case file that was located. An instrument was developed for the purpose of obtaining information from the individual case files. Appendix B shows the data collection instrument used to obtain information from individual case files in the family folders.

Data Collection Instrument

The instrument used to obtain information from individual case files included three sections intended to provide information on factors that potentially impact processing decisions: (1) an offense characteristics section, (2) a criminal history section, and (3) a demographic or juvenile characteristics section. The demographic section included a place to record the juvenile's race.

The instrument also included a fourth section intended to provide information on case outcomes. This section asked research staff to record information regarding the following types of court hearings: (1) detention hearings, (2) arraignment hearings, (3) trials, and (4) sentencing hearings. Collectively, the items on the instruments pertaining to these types of hearings addressed a number of the juvenile justice system process outcomes shown in Figure 1 and pre-trial confinement outcomes shown in Figure 2.

The instrument was developed specifically with the intent of providing information that could be used for the individual-level analyses. The individual-level analyses were intended to achieve the following goal.

Goal. The individual-level analyses were intended to provide information on the relative importance of race as opposed to other relevant factors in predicting: (1) how far juveniles proceed in the system and, (2) case dispositions.

Analysis Plan

The individual-level analyses were conducted using a statistical analysis known as multinomial logistic regression. One purpose of multinomial logistic regression is to determine the importance of several factors in predicting an outcome. With multinomial logistic regression, the factors are typically being used to predict three or four possible outcomes. For the individual-level analyses, two separate analyses were conducted. One analysis determined the importance of race and several other factors in predicting how far juveniles proceed in the system. The other analysis determined the importance of race and several other factors in predicting case dispositions. For both analyses, there were three possible outcomes that were being predicted. Appendix C explains multinomial logistic regression in more detail, as well as the procedures that were adopted when conducting the analyses.

Predicting Factors. The data collection instrument was fairly comprehensive, including items requiring research staff to record a great deal of information on offense characteristics, criminal history, and demographics. These items provided information that was used to select predicting factors. Not every offense characteristic, criminal history, and demographic item was used as a predicting factor. For some items, there was too much missing information. In other instances, two items were strongly related to each other. When items that are strongly related to each other are included in the same analysis, it can sacrifice the quality of the analysis by making results difficult to interpret. Thus, one of the items should be excluded from the analysis. Overall, despite excluding a number of items, the individual analyses still included a variety of factors that juvenile justice professionals consider when deciding how to handle a case (prior arrests, the nature of the offense, the juvenile's age, etc.).

Table 8 shows the predicting factors that were included in the individual-level analyses. Table 8 also shows, for each factor, the number of juveniles in each response category. Several of the predicting factors were the same factors used to develop the 18 combinations of subgroups for the stratified sampling strategy. Some of the predicting factors in Table 8 were slightly modified or condensed from their original form in order to make them more amenable to analysis. Table 8 identifies the predicting factors that were modified from their original form.

Table 8: Predicting Factors Included in the Individual-Level Analyses

Predicting Factor	Frequency (n=466)
Race	
Juvenile Race	
African-American	260 (55.8%)
Hispanic	98 (21.0%)
Caucasian	108 (23.2%)
Demographics/Juvenile Characteristics	
Juvenile Age	
9	3 (0.6%)
10	2 (0.4%)
11	3 (0.6%)
12	11 (2.4%)
13	40 (8.6%)
14	64 (13.7%)
15	131 (28.1%)
16	206 (44.2%)
17	6 (1.3%)
Living Arrangement[a]	
Two Parents in Home	58 (12.4%)
One Parent in Home	174 (37.3%)
Other Parent(s)	214 (45.9%)
Missing	20 (4.3%)

Table 8 cont.: Predicting Factors Included in the Individual-Level Analyses

Predicting Factor	Frequency (n=466)
Location of Arrest and Court Referral	
Chicago	298 (63.9%)
Suburban Cook County	168 (36.1%)
Offense Characteristic	
Offense Type	
Violent Offense	143 (30.7%)
Property Offense	180 (38.6%)
Drug Offense	143 (30.7%)
Criminal History Factor	
Did the Juvenile Have a Prior Arrest?[a]	
Yes	276 (59.2%)
No	190 (40.8%)

a: These factors were condensed in order to make them more amenable to analysis.

Outcome Variables. Two individual-level analyses were conducted. Both individual analyses used the same predicting factors (those listed in Table 8). The two analyses differed in only one respect: they examined the relative importance of the factors in Table 8 as predictors of different outcome variables. In Analysis One, the factors were used to predict how far juveniles proceed in the system. In Analysis Two, the factors were used to predict case dispositions. This distinction was made because the two types of outcome variables examined in the two analyses seemed to be qualitatively distinct. For example, the factors could predict whether the case goes to trial or is resolved prior to trial (how far the case proceeds). And, regardless of how far the case proceeds, the factors could predict how punitive the disposition is.

For both Analysis One and Analysis Two, an attempt was made to use items in the fourth section of the data collection instrument to develop outcome variables (the section of the instrument entitled "Case Characteristics"; see the data collection instrument in Appendix B). However, upon examining the case files in the family folders, it became apparent to research staff that the data collection instruments were missing some key information regarding how far cases proceed and case outcomes. Thus, in addition to completing the data collection instrument, research staff also recorded notes in instances when the instrument omitted key information. Items on the data collection instrument and notes were used to develop a comprehensive "final case outcome" variable that captured all the necessary innuendo. This variable was used to develop the two outcome variables for the analyses. This comprehensive variable was condensed in order to make it amenable to analysis.

Specifically, for Analysis One, all the possible outcomes in the final case outcome variable were condensed into three categories describing how far the juvenile proceeded in the system: (1) case resolved before an arraignment hearing, (2) case resolved at an arraignment hearing, (3) case resolved after an arraignment hearing. These three categories formed Outcome Variable One. Similarly, for Analysis Two, all the possible outcomes in the final case outcome variable were condensed into four categories describing the case disposition: (1) case resolved via diversion or prosecutorial screening (cases which are "screened out" because the state's attorney's office opts not to prosecute) or supervision, (2) charges dropped or juvenile acquitted, (3) case resolved via probation, and (4) case resolved via incarceration. These four categories formed Outcome Variable Two.

Table 9 shows the case outcomes (from the final case outcome variable) that were condensed into each category of Outcome Variable One and Outcome Variable Two. Table 9 also shows the number of cases in each category of Outcome Variable One and Outcome Variable Two. For 31 of the 466 case files, outcome information was either missing or the juvenile had a warrant out for his or her arrest and, therefore, the case had not been resolved. An additional two cases had outcome information, but could not easily be classified into Outcome Variable Two.

The case disposition outcome variable (Outcome Variable Two) requires explanation. The first category of the case disposition variable (diversion/prosecutorial screening/supervision) included cases that were removed from the juvenile court system *for non-evidentiary reasons.* That is, the state's attorney's office may have had enough evidence to demonstrate that the juvenile committed the offense but, for various reasons, decision-makers involved in the case determined that the juvenile would be better served if the case was not tried in court. Instead, these juveniles were diverted into a program, issued a probation adjustment (which may be considered a form of diversion), or placed under court supervision. More often, these juveniles received no sanctions at all. Instead, the state's attorney's office screened the case prior to the arraignment hearing and determined that the case did not warrant prosecution. This was the outcome experienced by 117 of the 136 (86.0%) of the juveniles in the first case disposition category.

The second case disposition category (charges dropped or juvenile acquitted) included some cases that were removed from the juvenile court system without sanctions *for evidentiary reasons*, such as the prosecution not having enough evidence to prosecute the case. These are cases for which charged were dropped, the prosecutor removed the juvenile from the court record, or the juvenile was acquitted in court. These cases are qualitatively distinct from those in the first case disposition category because, unlike those in the first category, decision-makers involved in the case were more likely to have determined that the case warranted prosecution in court and, by implication, warranted a post-trial sanction. This distinction is imperfect because when the "official" outcome is dropped charges or removal from the court record, it is at least possible that these outcomes occurred for non-evidentiary reasons. Nonetheless, the second case outcome category seemed qualitatively distinct from the first category. Examination of juveniles classified into the two categories suggested different types of offenders, as those in the

second category tended to have allegedly committed more serious offenses and tended to have prior arrests. This suggests that juveniles in the second category were more likely to have received no sanctions for evidentiary reasons.

The third and fourth case disposition category included cases that were prosecuted in court and for which the juvenile received a post-trial court system-based sanction. The third case disposition category included cases in which the juvenile received a probation or conditional discharge sentence. Conditional discharge is similar to probation because, as with a probation sentence, the juvenile is required to complete certain conditions in a specified period of time. The fourth case disposition category included cases in which the primary sanction was incarceration, primarily in the Juvenile Division of the Illinois Department of Corrections or in a juvenile detention center, although a small number of the juveniles included in this category were sentenced to a non-secure residential facility.

Table 9: Types of Case Outcomes Classified Into Two Outcome Variables Used in the Individual-Level Analyses

Outcome Variable One: How Far the Juvenile Proceeded in the System[a]
Case Resolved Before an Arraignment Hearing **(n=138) Included the Following Types of Outcomes:**
Juvenile was sentenced to a probation adjustment or deemed inappropriate for prosecution prior to arraignment (n=117)
Juvenile was sentenced to community mediation program prior to arraignment (n=2)
Juvenile was diverted to a program (other than community mediation) prior to arraignment (n=5)
Juvenile was sentenced to supervision prior to arraignment (n=10)
Charges were dropped prior to arraignment (n=4)
Case Resolved at Arraignment **(n=125) Included the Following Types of Outcomes:**
Juvenile was sentenced to a probation adjustment or deemed inappropriate for prosecution at arraignment (n=9)
Juvenile was diverted to a program (other than community mediation) at arraignment (n=1)
Juvenile was sentenced to supervision at arraignment (n=4)
Charges were dropped at arraignment (n=41)
Juvenile pled guilty at arraignment, was sentenced to community mediation program (n=1)
Juvenile pled guilty at arraignment, was sentenced to supervision (n=8)
Juvenile pled guilty at arraignment, was sentenced to probation or conditional discharge (n=55)
Juvenile pled guilty at arraignment, was sentenced to a juvenile detention center or non-secure residential facility (n=3)
Juvenile pled guilty at arraignment, was sentenced to Department of Corrections (n=3)

Table 9 cont.: Types of Case Outcomes Classified Into Two Outcome Variables Used in the Individual-Level Analyses

Outcome Variable One Continued
Case Resolved After Arraignment Hearing **(n=170) Included the Following Types of Outcomes:**
Juvenile was sentenced to supervision prior to the trial (n=1)[b]
Juvenile was sentenced to probation or conditional discharge prior to the trial (n=11)
Juvenile was sentenced to a juvenile detention center or non-secure residential facility prior to the trial (n=3)
Juvenile was sentenced to Department of Corrections prior to the trial (n=1)
Charges were dropped prior to the trial (n=6)
Juvenile was acquitted or removed from the court record prior to the trial (n=11)
Juvenile was found guilty at trial, sentenced to supervision (n=3)
Juvenile was found guilty at trial, sentenced to probation or conditional discharge (n=75)
Juvenile was found guilty at trial, sentenced to a juvenile detention center or non-secure residential facility (n=12)
Juvenile was found guilty at trial, sentenced to Department of Corrections (n=6)
Juvenile was found guilty at trial, sentenced to drug treatment/assessment for drug treatment (n=1)
Juvenile was found guilty at trial, sentenced to incarceration but released for time served (n=1)
Juvenile was found guilty at trial, a restraining order was issued against the juvenile (n=1)[c]
Juvenile went to trial, but, prior to adjudication, was transferred to adult court on charges levied in a different offense (n=1)[c]
Charged were dropped at trial (n=23)
Juvenile was acquitted or removed from the court record at trial (n=14)
Outcome Variable Two: Final Case Disposition[a]
Case Resolved Via Diversion, Prosecutorial Screening, or Supervision **(n=162) Included the Following Types of Outcomes:**
Juvenile was sentenced to a probation adjustment or deemed inappropriate for prosecution prior to arraignment (n=117)
Juvenile was sentenced to community mediation program prior to arraignment (n=2)
Juvenile was diverted to a program (other than community mediation) prior to arraignment (n=5)
Juvenile was sentenced to a probation adjustment or deemed inappropriate for prosecution at arraignment (n=9)
Juvenile was diverted to a program (other than community mediation) at arraignment (n=1)
Juvenile pled guilty at arraignment, was sentenced to community mediation program (n=1)
Juvenile was found guilty at trial, sentenced to drug treatment/assessment for drug treatment (n=1)
Juvenile was sentenced to supervision prior to arraignment (n=10)
Juvenile was sentenced to supervision at arraignment (n=4)
Juvenile pled guilty at arraignment, was sentenced to supervision (n=8)[d]
Juvenile was sentenced to supervision prior to the trial (n=1)
Juvenile was found guilty at trial, sentenced to supervision (n=3)[d]

Table 9 cont.: Types of Case Outcomes Classified Into Two Outcome Variables Used in the Individual-Level Analyses

Outcome Variable Two Continued
Charges Dropped or Juvenile Acquitted **(n=99) Included the Following Types of Outcomes:**
Charges were dropped prior to arraignment (n=4)
Charges were dropped at arraignment (n=41)
Charges were dropped prior to the trial (n=6)
Charged were dropped at trial (n=23)
Juvenile was acquitted or removed from the court record prior to the trial (n=11)
Juvenile was acquitted or removed from the court record at trial (n=14)
Case Resolved With a Probation Sentence **(n=141) Included the Following Types of Outcomes:**
Juvenile pled guilty at arraignment, was sentenced to probation or conditional discharge (n=55)
Juvenile was sentenced to probation or conditional discharge prior to the trial (n=11)
Juvenile was found guilty at trial, sentenced to probation or conditional discharge (n=75)
Case Resolved Through Incarceration **(n=29) Included the Following Types of Outcomes:**
Juvenile pled guilty at arraignment, was sentenced to a juvenile detention center or non-secure residential facility (n=3)
Juvenile pled guilty at arraignment, was sentenced to Department of Corrections (n=3)
Juvenile was sentenced to a juvenile detention center or non-secure residential facility prior to the trial (n=3)
Juvenile was sentenced to Department of Corrections prior to the trial (n=1)
Juvenile was found guilty at trial, sentenced to a juvenile detention center or non-secure residential facility (n=12)
Juvenile was found guilty at trial, sentenced to Department of Corrections (n=6)
Juvenile was found guilty at trial, sentenced to incarceration but released for time served (n=1)

a: For Outcome Variable One and Outcome Variable Two, there were 31 cases for which outcome information was unavailable or there was an arrest warrant issued for the juvenile (and, hence, no outcome at the time of data collection).
b: Cases listed as being resolved prior to the trial were resolved after the arraignment hearing, but before the trial.
c: These cases were excluded from Outcome Variable Two because they could not easily be classified into any of the categories.
d: These cases may be the product of error, as supervision sentences typically occur in lieu of adjudication.

Conducting the Analyses. When conducting multinomial logistic regression analyses, the predicting factors are entered into a statistical model together and the results of the analysis provide information on the importance of each factor in predicting the outcome. The results of an analysis lists each predicting factor and, for each factor, provides statistics based on odds and probabilities that are used to determine whether each factor plays a significant role in predicting the outcome. Two such statistics are the *Wald statistic* and the *–2 log likelihood value*. These two statistics were used to draw the conclusions described in the results section below. These two statistics provide

information on the *independent effect* of each factor, or the isolated impact of each factor, even after all the other factors are considered. Thus, the two statistics provided information on the independent, isolated importance of race in predicting outcomes. Appendix C describes the two statistics in more detail.

Another aspect of multinomial logistic regression that adds more information, while also adding more complexity, is that two or more predicting factors can be entered into the statistical model as *interactions.* For example, one could examine how race and offense type interactively predict the outcome. Examining interactions can become quite complex, as one could examine interactions for every combination of two predicting factors, three predicting factors, etc. Typically, interactions are examined when the individual conducting the analysis has a theory-guided reason to believe that two or more factors will interact.

Because no such theory had been developed for Analysis One and Analysis Two and because the primary purpose of the analyses was to examine the independent importance of race in predicting the outcome, interactions were not initially included in the analyses. However, the results of the analyses suggested that it may be interesting to explore the importance of several interactions involving African-Americans. Thus, after the analyses were conducted, they were re-run several additional times, each time adding a predicting factor to the model that provided information regarding an interaction involving African-Americans. Re-running the analyses in this manner yielded several interesting results for Analysis One (but not for Analysis Two) and, thus, interactions are reported in the results of Analysis One.

Results

This subsection summarizes results of Analysis One and Analysis Two. Two additional aspects of multinomial logistic regression are worth noting, as they may aid interpretation of the results described in this subsection.

First, when a multinomial logistic regression analysis is conducted, several of the most useful results are provided separately for each combination of two outcome categories. For example, Outcome Variable One (how far the juvenile proceeded in the system) included three categories: case resolved before an arraignment hearing, case resolved at arraignment, case resolved after an arraignment hearing. Some analysis results pertain exclusively to the comparison between "case resolved before an arraignment" vs. "case resolved at arraignment", another set of results pertain exclusively to the comparison between "case resolved at arraignment" vs. "case resolved after arraignment", etc. Because several important types of results are provided in this manner, the summary of results below is also presented in this manner. Specifically, results are presented for every combination of two categories in each outcome variable.[9]

[9] In order to present data for every combination of two categories, it was necessary to re-run the analysis after altering what is labeled the "reference category", using the vernacular of multinomial logistic regression, or the category for which the other categories are compared to. Appendix C explains the concept of a reference category in more detail.

Similarly, when a multinomial logistic regression analysis is conducted, several of the most useful results are reported separately for each combination of two categories of a predicting factor. For example, results comparing Caucasians to African-Americans are provided separately from results comparing Caucasians to Hispanics, and so forth. Because several types of results are provided in this manner, results are presented for every combination of categories in each predicting factor (if applicable, as the predicting factor "juvenile age" does not include distinct categories).[10]

The second aspect of multinomial logistic regression worth noting is that, when examining results, it is often informative to examine *goodness of fit* statistics. Multinomial logistic regression is one of several types of regression analysis. Results to each of type of regression analysis includes a goodness of fit statistic. Goodness of fit statistics provide a measure of how well the combination of factors included in the model predict the outcome. If the factors do not effectively predict the outcome, it suggests that other factors should be included in the model and/or that interaction terms should be included in the model. Appendix C describes goodness of fit statistics for multinomial logistic regression in more detail.

The extent to which one attends to goodness of fit statistics depends in part upon the goal(s) of the analysis. Typically, goodness of fit is more important when one is attempting to find the best combination of factors that comprehensively explain an outcome. This was not a goal for Analysis One or Analysis Two. The primary goal of the analyses was to determine the role that race plays in predicting the outcome, relative to several other seemingly relevant predicting factors. Nonetheless, goodness of fit is mentioned in passing in the results subsections below, as it provides a context for understanding the overall importance of the factors in predicting outcomes.

Results – Analysis One

The -2 log likelihood values indicated that each of the predicting factors with the exception of juvenile age played a significant role in predicting how far juveniles proceed in the system. Thus, race, independent from each of the other factors, played a significant role in predicting how far juveniles proceed in the system.

However, the goodness of fit statistic indicated that the model for Analysis One did not include the best combination of predicting factors. This may suggest that, in addition to the predicting factors included in the model for Analysis One, there are also other factors that predict how far juveniles proceed in the system. It may also suggest that interactions should be added to the model.

Table 10 summarizes results to Analysis One. Table 10 shows results for every combination of categories in each predicting factor and in the outcome. Then, in the column that begins with the label "Category More Likely to …..", Table 10 shows the category that was more likely to progress *further into the system*.

[10] Again, this required re-running the analysis. See Footnote 9.

Table 10: A Summary of Results for Analysis One

Before Arraignment vs. After Arraignment		
Predicting Factor	**Significant?**	**Category More Likely to Be Resolved After Arraignment**
Juvenile Race		
Caucasian vs. African-American	Yes	Caucasian
Caucasian vs. Hispanic	No	N/A
African-American vs. Hispanic	Yes	Hispanic
Juvenile Age	No	N/A
Living Arrangement		
Two Parents vs. One Parent	No	N/A
Two Parents vs. Other Parent(s)	No	N/A
One Parent vs. Other Parent(s)	No	N/A
Location of Arrest and Court Referral		
Chicago vs. Suburban Cook County	Yes	Chicago
Offense Type		
Violent Offense vs. Property Offense	Yes	Violent Offense
Violent Offense vs. Drug Offense	Yes	Violent Offense
Property Offense vs. Drug Offense	Yes	Drug Offense
Did the Juvenile Have a Prior Arrest?		
Yes vs. No	Yes	Yes, Had a Prior Arrest
At Arraignment vs. After Arraignment		
Predicting Factor	**Significant?**	**Category More Likely to Be Resolved After Arraignment**
Juvenile Race		
Caucasian vs. African-American	Yes	Caucasian
Caucasian vs. Hispanic	Yes	Caucasian
African-American vs. Hispanic	No	N/A
Juvenile Age	No	N/A
Living Arrangement		
Two Parents vs. One Parent	No	N/A
Two Parents vs. Other Parent(s)	No	N/A
One Parent vs. Other Parent(s)	Yes	Other Parent(s)

Table 10 cont.: A Summary of Results for Analysis One

At Arraignment vs. After Arraignment Continued		
Predicting Factor	**Significant?**	**Category More Likely to Be Resolved After Arraignment**
Location of Arrest and Court Referral		
Chicago vs. Suburban Cook County	Yes	Suburban Cook County
Offense Type		
Violent Offense vs. Property Offense	Yes	Violent Offense
Violent Offense vs. Drug Offense	No	N/A
Property Offense vs. Drug Offense	Yes	Drug Offense
Did the Juvenile Have a Prior Arrest?		
Yes vs. No	Yes	Yes, Had a Prior Arrest
Before Arraignment vs. At Arraignment		
Predicting Factor	**Significant?**	**Category More Likely to Be Resolved At Arraignment**
Juvenile Race		
Caucasian vs. African-American	Yes	Caucasian
Caucasian vs. Hispanic	No	N/A
African-American vs. Hispanic	Yes	Hispanic
Juvenile Age	No	N/A
Living Arrangement		
Two Parents vs. One Parent	No	N/A
Two Parents vs. Other Parent(s)	Yes	Other Parent(s)
One Parent vs. Other Parent(s)	Yes	Other Parent(s)
Location of Arrest and Court Referral		
Chicago vs. Suburban Cook County	Yes	Chicago
Offense Type		
Violent Offense vs. Property Offense	No	N/A
Violent Offense vs. Drug Offense	Yes	Violent Offense
Property Offense vs. Drug Offense	Yes	Property Offense
Did the Juvenile Have a Prior Arrest?		
Yes vs. No	Yes	Yes, Had a Prior Arrest

Table 10 shows an interesting pattern of results for juvenile race. Specifically, there was a tendency for Caucasians and for Hispanics to progress further in the system than African-Americans. This pattern of results was unexpected. However, Part One of the report found that African-Americans were considerably overrepresented at earlier stages in the juvenile justice system (e.g., the arrest stage, the court referral stage), and that later stages in the juvenile justice system, such as those examined in Analysis One did not play as large a role in contributing to overrepresentation. The fact that, after the court referral stage (per Analysis One), Caucasians and Hispanics tended to be more likely to progress to later stages, suggests that African-Americans might be more likely to be removed from the juvenile justice system or not be moved deeper into the juvenile justice system during the stages of the juvenile justice system examined in Analysis One.

It should also be noted that Analysis One pertained exclusively to 1998 and 1999 cases referred to court from specific districts in Chicago and suburban Cook County for specific types of violent, property, and drug offenses. On the other hand, the data for Part One was broader, including all cases from 1996 to 1999 for all of Cook County and, for most of the analyses, all violent, property, and drug offenses.

Race Interactions. Because the model for Analysis One did not include the best combination of predicting factors, a decision was made to include additional predicting factors to the model that address interactions between the predicting factors used in Analysis One. Moreover, because the results of Analysis One indicated that African-Americans did not progress as far into the system as Caucasians or Hispanics, additional factors were included in an attempt to learn whether there were qualifiers or caveats to this result. For example, predicting factors were added to the model to determine whether African-Americans referred to court from Chicago differ from African-Americans referred to court from suburban Cook County (in terms of how far they progress in the system), whether African-Americans who were referred for violent offenses differ from African-Americans who were referred for property offenses, etc.

In order to compare African-Americans across other predicting factors, Analysis One was repeated a number of times, each time including the same predicting factors, but also adding one additional predicting factor. The additional predicting factor examined African-Americans in a single category of one of the Analysis One predicting factors. This concept is made clear in Table 11. Table 11 shows each of the additional predicting factors. For example, one of the additional predicting factors examined Chicago African-Americans in isolation by examining how far Chicago African-Americans progressed in the system vs. all other juveniles. Another examined African-Americans who were referred for violent offenses, and so on.[11]

[11] This is not the typical manner of examining interactions in multinomial logistic regression. See Appendix C for a description of the typical manner of examining interactions, as well as the reasons why the approach described in the text was adopted. In addition, the interaction between juvenile race and juvenile age was examined in the traditional manner. This was primarily because the juvenile age variable is measured differently from the other variables. Again, Appendix C describes this in more detail.

Table 11: A List of Comparisons Examining African-Americans Across Categories of Other Predicting Factors

Living Arrangement
African-Americans with One Parent in Home vs. All Others
African-Americans with Two Parents in Home vs. All Others
African-Americans with Other Parent(s) vs. All Others
Location of Arrest and Court Referral
Chicago African-Americans vs. All Others
Suburban Cook County African-Americans vs. All Others
Offense Type
African-Americans Referred for Violent Offenses vs. All Others
African-Americans Referred for Property Offenses vs. All Others
African-Americans Referred for Drug Offenses vs. All Others
Did the Juvenile Have a Prior Arrest
African-Americans With Prior Arrests vs. All Others
African-Americans With No Prior Arrests vs. All Others
Juvenile Age
Juvenile Race by Juvenile Age Interaction[a]

a: Because juvenile age is measured differently from the predicting factors, a different approach was used. See Footnote 11.

Across all the comparisons listed in Table 11, several qualifiers emerged to the overall result in Analysis One indicating that African-Americans do not proceed as far into the system as Caucasians or Hispanics. All statistically significant qualifiers are described in the following bullet points. If a qualifier is not described, then the applicable comparison was non-significant. The qualifiers show that, even though, overall, African-Americans were less likely to proceed further into the system overall, there are a number of contexts or situations when certain subgroups of African-Americans are *more likely* to proceed further into the system.

- Chicago African-Americans were *more likely* than all others to proceed from the pre-arraignment stage to the arraignment hearing, whereas suburban Cook County African-Americans were *less likely*. On the other hand Chicago African-Americans were *less likely* to proceed from the arraignment hearing to the post-arraignment stage than all others, whereas suburban Cook County African-Americans were *more likely*.

- African-Americans with prior arrests were *more likely* than all others to proceed from the pre-arraignment stage to the arraignment hearing, whereas African-Americans with no prior arrests are *less likely*. On the other hand, African-Americans with prior arrests were *less likely* than all others to proceed from the arraignment hearing to the post-arraignment stage.

- African-Americans referred to court for either violent offenses or drug offenses were *more likely* than all others to proceed from the pre-arraignment stage to the post-arraignment stage and from the arraignment hearing to the post-arraignment stage. On the other hand, African-Americans referred to court for property offenses were *less likely* than all others to proceed from the pre-arraignment stage to the post-arraignment stage and from the arraignment hearing to the post-arraignment stage.

- African-Americans from one-parent households were *more likely* than all others to proceed from the pre-arraignment stage to the post-arraignment stage and from the arraignment hearing to the post-arraignment stage. On the other hand, African-Americans from two-parent households were *less likely* than all others to proceed from the pre-arraignment stage to the post-arraignment stage and from the pre-arraignment stage to the arraignment hearing.

- Race interacts with juvenile age such that, as age increases, African-Americans are more likely to proceed from pre-arraignment to arraignment, from pre-arraignment to post-arraignment, and from arraignment to post-arraignment than Hispanics.

Conclusions-Analysis One. Each component of this document includes several conclusion subsections that summarize results described in the preceding text. The purpose of the conclusion subsections is to clarify or draw attention to results that are potentially more noteworthy. This conclusion subsection summarizes Analysis One. Notable results from Analysis One are as follows:

- Race was a significant factor in predicting how far juveniles proceed in the system. There was a tendency for Caucasians and for Hispanics to progress further in the system than African-Americans. This was an unexpected result. However, the result seems consistent with Part One of the report. Results from Part One indicated that African-Americans are considerably overrepresented at earlier stages of the juvenile justice system and that the stages examined in Analysis One (stages after a juvenile is referred to court, is arraigned, and is tried in court) do not play as large a role in contributing to overrepresentation.

- Despite the overall result indicating that African-American juveniles do not progress as far into the system as Caucasians and Hispanics, follow-up analyses indicated that there are subgroups of African-Americans who tend to progress further into the system than Caucasians, Hispanics, and other subgroups of African-Americans. The following African-American subgroups tend to progress further into the system: (1) those who have been referred to court for violent or drug offenses, (2) those who have a prior arrest, and (3) those who come from one-parent families. In general, race tends to interact with other factors to predict how far a juvenile progresses in the system.

- In addition to race, -2 log likelihood values indicated that, overall, every predicting factor included in Analysis One except of juvenile age played an independent role in predicting how far juveniles progress in the system. In several instances, the role that the factor played in predicting how far juveniles progress was fairly complex. For example, Chicago juveniles were more likely than suburban Cook County juveniles to progress from pre-arraignment to an arraignment hearing, but were also more likely than suburban Cook County juveniles to have their cases resolved at the arraignment hearing as opposed to post-arraignment (e.g., at trial). A complex relationship also emerged for the prior arrest predicting factor and for the distinction between juveniles who were referred to court for property offenses vs. drug offenses.

- On the other hand, a simple relationship emerged whereby those who were referred to court for violent offenses consistently progressed further in the system.

Results – Analysis Two

-2 log likelihood analysis indicated that each of the predicting factors played a role in predicting case dispositions. Thus, race, independent from each of the other factors, played a role in predicting case dispositions.

As with Analysis One, the goodness of fit statistic indicated that the model for Analysis Two did not include the best combination of predicting factors. Thus, as with Analysis One, there may be additional factors (other than the predicting factors included in the model) that predict case dispositions. Or, interactions should potentially be included in the model.

Table 12 summarizes results to Analysis Two. Table 12 summarizes results in the same manner adopted for Analysis One. Specifically, Table 12 shows results for every combination of categories in each predicting factor and the outcome. In addition, Table 12 shows the category that was more likely to receive the outcome with the most "intended or actual punitiveness". The three outcome categories are not distinguishable entirely based on the actual level of punitiveness of the outcome, as those who had their charges dropped or who were acquitted received no punishment at all. Yet, presumably those in the juvenile court system, in particular the state's attorney's office, *intended* to prosecute (i.e., punish) juveniles who had their charges dropped or were acquitted, had the evidence been sufficient to find the juvenile guilty. Thus, those who had their cases diverted, were not prosecuted based on state's attorney's office screening, or were placed under court supervision were intended to receive less punishment than those who had their charges dropped or were acquitted.

In other instances, there are clear differences in the *actual* punishment received. Those who were diverted, screened, or placed under supervision and those who had their charges dropped or were acquitted ostensibly received less punishment than those who were sentenced to probation or incarceration. Thus, the four outcome categories can be

ordered in the following manner in regards to "intended or actual punitiveness", ranging from least "intended or actual" punishment to most "intended or actual" punishment: (1) case resolved via diversion, prosecutorial screening, or supervision, (2) charges dropped or juvenile acquitted, and (3) case resolved via probation, and (4) case resolved through incarceration.

Table 12: A Summary of Results for Analysis Two

Diversion/Screening/Supervision vs. Incarceration		
Predicting Factor	**Significant?**	**Category More Likely to Be Resolved Via Incarceration**
Juvenile Race		
Caucasian vs. African-American	No	N/A
Caucasian vs. Hispanic	No	N/A
African-American vs. Hispanic	No	N/A
Juvenile Age	No	N/A
Living Arrangement		
Two Parents vs. One Parent	Yes	One Parent
Two Parents vs. Other Parent(s)	Yes	Other Parent(s)
One Parent vs. Other Parent(s)	Yes	One Parent
Location of Arrest and Court Referral		
Chicago vs. Suburban Cook County	Yes	Chicago
Offense Type		
Violent Offense vs. Property Offense	Yes	Property Offense
Violent Offense vs. Drug Offense	Yes	Drug Offense
Property Offense vs. Drug Offense	No	N/A
Did the Juvenile Have a Prior Arrest?		
Yes vs. No	Yes	Yes, Had a Prior Arrest
Charges Dropped/Acquitted vs. Incarceration		
Predicting Factor	**Significant?**	**Category More Likely to Be Resolved Via Incarceration**
Juvenile Race		
Caucasian vs. African-American	No	N/A
Caucasian vs. Hispanic	Yes	Hispanic
African-American vs. Hispanic	No	N/A
Juvenile Age	Yes	Younger Juveniles

Table 12 (cont.): A Summary of Results for Analysis Two

Charges Dropped/Acquitted vs. Incarceration continued		
Predicting Factor	**Significant?**	**Category More Likely to Be Resolved Via Incarceration**
Living Arrangement		
Two Parents vs. One Parent	Yes	One Parent
Two Parents vs. Other Parent(s)	No	N/A
One Parent vs. Other Parent(s)	Yes	One Parent
Location of Arrest and Court Referral		
Chicago vs. Suburban Cook County	Yes	Suburban Cook County
Offense Type		
Violent Offense vs. Property Offense	Yes	Property Offense
Violent Offense vs. Drug Offense	Yes	Drug Offense
Property Offense vs. Drug Offense	No	N/A
Did the Juvenile Have a Prior Arrest?		
Yes vs. No	Yes	Yes, Had a Prior Arrest
Probation vs. Incarceration		
Predicting Factor	**Significant?**	**Category More Likely to Be Resolved Via Incarceration**
Juvenile Race		
Caucasian vs. African-American	Yes	African-American
Caucasian vs. Hispanic	No	N/A
African-American vs. Hispanic	Yes	African-American
Juvenile Age	No	N/A
Living Arrangement		
Two Parents vs. One Parent	Yes	One Parent
Two Parents vs. Other Parent(s)	No	N/A
One Parent vs. Other Parent(s)	Yes	One Parent
Location of Arrest and Court Referral		
Chicago vs. Suburban Cook County	Yes	Chicago
Offense Type		
Violent Offense vs. Property Offense	Yes	Property Offense
Violent Offense vs. Drug Offense	Yes	Drug Offense
Property Offense vs. Drug Offense	Yes	Property Offense

Table 12 (cont.): A Summary of Results for Analysis Two

Probation vs. Incarceration continued		
Predicting Factor	**Significant?**	**Category More Likely to Be Resolved Via Incarceration**
Did the Juvenile Have a Prior Arrest?		
Yes vs. No	Yes	Yes, Had a Prior Arrest
Diversion/Screening/Supervision vs. Probation		
Predicting Factor	**Significant?**	**Category More Likely to Be Resolved Via Probation**
Juvenile Race		
Caucasian vs. African-American	Yes	Caucasian
Caucasian vs. Hispanic	No	N/A
African-American vs. Hispanic	Yes	Hispanic
Juvenile Age	No	N/A
Living Arrangement		
Two Parents vs. One Parent	No	N/A
Two Parents vs. Other Parent(s)	Yes	Other Parent(s)
One Parent vs. Other Parent(s)	No	N/A
Location of Arrest and Court Referral		
Chicago vs. Suburban Cook County	Yes	Chicago
Offense Type		
Violent Offense vs. Property Offense	Yes	Violent Offense
Violent Offense vs. Drug Offense	No	N/A
Property Offense vs. Drug Offense	Yes	Drug Offense
Did the Juvenile Have a Prior Arrest?		
Yes vs. No	Yes	Yes, Had a Prior Arrest
Charges Dropped/Acquitted vs. Probation		
Predicting Factor	**Significant?**	**Category More Likely to Be Resolved Via Probation**
Juvenile Race		
Caucasian vs. African-American	Yes	Caucasian
Caucasian vs. Hispanic	Yes	Hispanic
African-American vs. Hispanic	Yes	Hispanic

Table 12 (cont.): A Summary of Results for Analysis Two

Charges Dropped/Acquitted vs. Probation continued		
Predicting Factor	**Significant?**	**Category More Likely to Be Resolved Via Probation**
Juvenile Age	No	N/A
Living Arrangement		
Two Parents vs. One Parent	Yes	Two Parents
Two Parents vs. Other Parent(s)	Yes	Two Parents
One Parent vs. Other Parent(s)	No	N/A
Location of Arrest and Court Referral		
Chicago vs. Suburban Cook County	Yes	Suburban Cook County
Offense Type		
Violent Offense vs. Property Offense	No	N/A
Violent Offense vs. Drug Offense	Yes	Drug Offense
Property Offense vs. Drug Offense	Yes	Drug Offense
Did the Juvenile Have a Prior Arrest?		
Yes vs. No	No	N/A
Diversion/Screening/Supervision vs. Charges Dropped/Acquitted		
Predicting Factor	**Significant?**	**Category More Likely to Be Resolved Via Dropped/Acquitted**
Juvenile Race		
Caucasian vs. African-American	No	N/A
Caucasian vs. Hispanic	No	N/A
African-American vs. Hispanic	Yes	African-American
Juvenile Age	Yes	Older Juveniles
Living Arrangement		
Two Parents vs. One Parent	Yes	One Parent
Two Parents vs. Other Parent(s)	Yes	Other Parent(s)
One Parent vs. Other Parent(s)	No	N/A
Location of Arrest and Court Referral		
Chicago vs. Suburban Cook County	Yes	Chicago

Table 12 (cont.): A Summary of Results for Analysis Two

Diversion/Screening/Supervision vs. Charges Dropped/Acquitted continued		
Predicting Factor	**Significant?**	**Category More Likely to Be Resolved Via Dropped/Acquitted**
Offense Type		
Violent Offense vs. Property Offense	Yes	Violent Offense
Violent Offense vs. Drug Offense	Yes	Violent Offense
Property Offense vs. Drug Offense	Yes	Property Offense
Did the Juvenile Have a Prior Arrest?		
Yes vs. No	Yes	Yes, Had a Prior Arrest

Table 12 shows a fairly complex pattern of results for juvenile race. The one seemingly consistent result across all comparisons is that Caucasians and Hispanics were more likely than African-Americans to receive a probation sentence than any other type of disposition. Caucasians and Hispanics were more likely than African-Americans to receive probation as opposed to incarceration. By the same token, Caucasians and Hispanics were also more likely than African-Americans to receive probation as opposed to potentially less punitive dispositions, such as diversion/screening/supervision.

This result is, in part, consistent with Part One of the report. In Part One, it was found that, in the aggregate, of those juveniles who were found delinquent, Caucasians and, to a lesser extent, Hispanics were more highly represented than African-Americans among those sentenced to probation. However, Part One also found that Caucasians and Hispanics were more highly represented among those who have their charges dropped, are issued a probation adjustment (in some respects, a form of diversion), and are placed on supervision. In this regard, it was surprising that Caucasians and Hispanics were more likely than African-Americans to receive probation as opposed to a less punitive disposition.

Part One of the report also found that, in the aggregate, of those juveniles who were found delinquent, Caucasians were considerably underrepresented among those who were sentenced to the Juvenile Division of the Illinois Department of Corrections. This is consistent with the result indicating that Caucasians were more likely than Hispanics to receive probation as opposed to incarceration. However, given that Part One found that Caucasians were underrepresented among those sentenced to the Juvenile Division of the Illinois Department of Corrections and overrepresented among those who have their charges dropped, are issued a probation adjustment, etc., it was somewhat surprising that, for Analysis Two, African-Americans were not more likely than Caucasians to be incarcerated as opposed to less punitive options, such as diversion/screening/supervision or charges dropped/acquitted.

Finally, it should also be noted that, as with Analysis One, the results of Analysis Two pertained exclusively to 1998 and 1999 cases referred to court from specific districts in Chicago and suburban Cook County for specific types of violent, property, and drug offenses. On the other hand, the data for Part One was much broader, encompassing more cases.

Race Interactions. As in Analysis One, Analysis Two showed that the best combination of predicting factors was not included in the model. Analysis Two also showed an interesting pattern of results for African-Americans. Thus, as with Analysis One, a decision was made to add additional factors to the model to learn whether African-Americans differ across categories of other predicting factors. The same factors listed in Table 11 were added to the model for Analysis Two. The impact of the additional factors were only examined for results comparing: (1) probation to incarceration, and (2) probation to diversion/screening/supervision. These two types of comparisons seemed to yield the most interesting differences by race in Analysis Two.

The additional factors yielded few new insights. It is perhaps notable that very few differences occurred for results comparing probation to incarceration. Thus, on the whole, the specific African-American subgroups listed in Table 11 were not more or less likely than all others to be incarcerated as opposed to sentenced to probation.

Conclusions-Analysis Two. This conclusion subsection summarizes Analysis Two. Notable results from Analysis Two are as follows:

- Race was a significant factor in predicting case dispositions. This seemed to largely be the result of a pattern whereby Caucasians and Hispanics were more likely than African-Americans to receive a probation sentence as opposed to any other type of disposition, including dispositions that were more punitive (incarceration) and less punitive (diversion/screening/supervision).

- In addition to race, -2 log likelihood values indicated that every predicting factor included in Analysis Two played an independent role in predicting case outcomes. Patterns of results for the other predicting factors are notable. For example: (1) juveniles from one parent homes were more likely than juveniles from two parent homes or juveniles with other living arrangements to be incarcerated as opposed to receiving any other type of disposition, (2) juveniles with at least one prior arrest were more likely than juveniles with no prior arrests to be incarcerated as opposed to receiving any other type of disposition, (3) unexpectedly, juveniles who were referred to court for property offenses or drug offenses were more likely than juveniles who were referred to court for violent offenses to be incarcerated as opposed to receiving any other type of disposition, and (4) across the comparisons of all four disposition categories, Chicago juveniles were more likely than suburban Cook County juveniles to have their charges dropped or be acquitted as opposed to have their cases resolved by diversion, prosecutorial screening, or supervision.

IV. Component Two: Surveys of Juvenile Justice System Decision-Makers

The primary purpose of Component Two was to learn how Cook County juvenile justice system decision-makers perceive racial biases and issues in the Cook County juvenile justice system. Surveys were distributed to juvenile justice professionals responsible for making decisions at many of the juvenile justice system processing stages shown in Figure 1.

An attempt was made to distribute surveys to the following types of juvenile justice professionals: (1) assistant state's attorneys in the Juvenile Justice Bureau of the Cook County State's Attorney's Office, (2) public defenders from the Office of the Cook County Public Defender who defend juveniles in delinquency cases, (3) police officers from municipal law enforcement agencies in Cook County, (4) juvenile police officers (i.e., police officers who have received juvenile certification) from municipal law enforcement agencies in Cook County, (5) juvenile probation officers from the Cook County Juvenile Probation and Court Services Department, and (6) judges who hear delinquency cases in the Juvenile Division of the Circuit Court of Cook County.

The survey was distributed to both police officers and juvenile police officers (3 and 4 in the list above) in an attempt to collect information from law enforcement officers who come into contact with juveniles at different stages of the juvenile justice system process. When attempting to distribute surveys to police officers, officers assigned to patrol were targeted. Patrol officers take juveniles into custody and, hence, come into contact with juveniles at the earliest stage of the juvenile justice system process. When attempting to distribute surveys to juvenile police officers, officers assigned to juvenile investigations were targeted. Juvenile investigators interview juveniles who are taken into custody after they arrive at the police station, then determine whether to officially arrest the juvenile and whether to refer the case to juvenile court for potential prosecution. Thus, juvenile investigators also come into contact with juveniles at an early stage in the juvenile justice system process, albeit typically at a later stage than patrol officers.[12]

The remainder of this section of the document describes: (1) survey methodology, including the approach taken to analyze survey data, and (2) survey results.

Method

Samples

The survey sampling process differed based on profession. In particular, the sampling process for police officers (both patrol officers and juvenile investigators) deviated from the other professions.

[12] Different law enforcement agencies handle juvenile cases differently. For some agencies, the same individuals who investigate juvenile cases may also patrol the streets and, hence, take juveniles into custody. In general, however, the distinction between patrol officers and juvenile investigators seems to apply to many law enforcement agencies.

Patrol Officers and Juvenile Investigators. Because of the large number of individuals working as patrol officers or juvenile investigators in Cook County, it was not possible to distribute surveys to every patrol officer and juvenile investigator. Instead, an attempt was made to distribute surveys to every patrol officer and juvenile investigator who serves the 5th, 6th, 8th, and 22nd Districts of the Chicago Police Department and the 4th Municipal District of suburban Cook County (see the General Method section, pages 18-21).

Head Chicago Police Department (CPD) staff were contacted to request permission to distribute surveys to patrol officers and juvenile investigators in the four districts. Head CPD staff opted not to allow surveys to be distributed, stating that CPD patrol officers and juvenile investigators are required to use objective legal standards such as reasonable suspicion and probable cause and, hence, do not use subjective attitudes or perceptions when processing juvenile cases.

Head staff in each law enforcement agency that takes juveniles into custody in the 4th Municipal District were contacted to request permission to distribute surveys to patrol officers and juvenile investigators in their agency. Of the 24 law enforcement agencies that take juveniles into custody in the 4th Municipal District (the 21 law enforcement agencies listed in Table 4 on pages 19-20, the Cook County Forest Preserve Police Department, the Cook County Memorial Park Police Department, and the Cook County Sheriff's Office) 23 granted permission to distribute surveys to patrol officers and juvenile investigators. Table 13 shows response rates for patrol officers and juvenile investigators from the 4th Municipal District (labeled Patrol Officers – Suburban Cook and Juvenile Investigators – Suburban Cook in Table 13). Response rates were calculated based on the number of patrol officers and juvenile investigators in all 24 4th Municipal District law enforcement agencies.

Other Professions. An attempt was made to distribute surveys to every individual in the Juvenile Justice Bureau of the Cook County State's Attorney's Office, Office of the Cook County Public Defender, and Cook County Juvenile Probation and Court Services Department who worked in an appropriate capacity as a juvenile justice system decision-maker. Thus, unlike with patrol officers and juvenile investigators, an attempt was made to sample from Cook County as a whole, as opposed to from specific districts within Cook County. In addition, because the state's attorney's office, public defender's office, and probation department are all county-level agencies, no attempt was made to collect separate samples from Chicago and suburban Cook County. Juvenile justice professionals in these agencies often handle cases involving both Chicago and suburban Cook County juveniles.

Head staff in the Cook County State's Attorney's Office, Office of the Cook County Public Defender, and Cook County Juvenile Probation and Court Services Department were contacted to request permission to distribute surveys in their agencies. Permission was granted from the Office of the Cook County Public Defender and from the Cook County Probation and Court Services Department. The Cook County State's Attorney's Office opted not to allow surveys to be distributed, stating that their office uses an

objective, well-defined set of standards and guidelines for processing juvenile cases. Table 13 shows response rates for Cook County public defenders and juvenile probation officers.

Every judge who hears delinquency cases in the Juvenile Division of the Circuit Court of Cook County was sent a copy of the survey. Table 13 shows the response rate for Cook County juvenile court judges.

Table 13: Juvenile Justice System Decision-Maker Survey
Response Rates by Profession

Profession	# of Professionals	# of Completed Surveys	Response Rate
Patrol Officers – Chicago	N/A	0	0.0%
Juvenile Investigators – Chicago	N/A	0	0.0%
Patrol Officers – Suburban Cook	916	257	28.1%
Juvenile Investigators – Suburban Cook	157	88	56.1%
Assistant State's Attorneys	N/A	0	0.0%
Public Defenders	76	42	55.3%
Juvenile Probation Officers	229	142	62.0%
Juvenile Court Judges	16	6	37.5%
TOTAL	1394	535	38.4%

Procedure

A research staff member visited each agency that granted permission to distribute surveys and met with head staff. The purpose of the visit was to discuss the surveys in more detail, drop off enough surveys for every applicable professional in the agency, and to discuss timelines for survey completion. Juvenile justice professionals were given between two to four weeks to complete the surveys.

After the meeting, head staff in each agency explained the project to applicable professionals, distributed the surveys, and collected completed surveys. Research staff either provided head staff with a stamped envelope in which to return all agency surveys or personally picked up all completed surveys around the time of the survey completion deadline. All surveys were distributed and completed during Spring 2001.

Survey Instruments

A unique survey instrument was designed for each juvenile justice profession. In addition to a short demographic section, each survey included three core sections: a profession-specific section and two sections that were very similar across all professions (Section 2 and Section 3). Analyses for this document relied entirely on the sections that were very similar. As an example of the instrument (including, essentially, the items that were

analyzed for this document) Appendix D shows the survey instrument that was distributed to patrol officers. The surveys were intended to achieve three goals.

Goal 1. The surveys were intended to determine the perceptions that juvenile justice professionals have about racial biases and racial issues in the Cook County juvenile justice system. These survey items made it possible to: (1) determine whether juvenile justice professionals believe that, overall, juveniles of different races are treated differently by the juvenile justice system, and (2) determine whether juvenile justice professionals personally believe that there are tangible differences between juveniles of different races. Each survey instrument included an identical list of statements pertaining to racial biases and issues in the juvenile justice system, with instructions for respondents to record the extent to which they agree with the statement (strongly agree, agree, disagree, strongly disagree; Section 3 in the survey instrument in Appendix D).[13] The list of statements was based on items included in an example survey instrument published in a research guide for addressing minority representation developed by Michael J. Lieber of Northern Iowa University (1995).[14]

Goal 2. The surveys were intended to examine whether perceptions of racial biases and issues in the Cook County juvenile justice system (i.e., responses to survey items examined for Goal 1) differ across three dimensions. Each of the three dimensions may play a role in impacting responses to survey items addressing perceptions of racial biases and issues. Survey responses were examined to determine whether perceptions of racial biases and issues differ based on: (1) the respondent's profession, (2) the racial composition of the respondent's caseload, and (3) the respondent's race. Differences in perceptions of racial biases and issues by profession also indicate, by implication, differences in perceptions across different stages of the juvenile justice system process, as different types of juvenile justice system professionals come into contact with juveniles at different stages of the juvenile justice system.

Each survey instrument included items that could be used to distinguish respondents based on their race and based on the racial composition of their caseloads. First, each survey instrument included a question asking respondents to report the approximate percentage of non-Caucasian juvenile offenders in their caseloads, by racial category (see the second question in Section 1 of the patrol officer survey instrument in Appendix D). This question was used to categorize survey respondents based on caseload racial composition. Second, each of the survey instruments concluded with a short demographic section, in which respondents were asked to report their own race.

[13] These survey items were nearly identical across surveys, although each profession was also asked questions related to biases in areas specific to their profession. For example, law enforcement surveys included the item "For similar behaviors, police officers arrest white youth less often than minority youth" while probation officer, juvenile judge, and public defender surveys included the item "For similar behaviors, probation officers issue a violation of probation to white youth less often than minority youth".
[14] Lieber, M. J. (1995). A Guide to Addressing the Disproportionate Overrepresentation of Minority Youth in Secure Facilities. Cedar Falls: University of Northern Iowa.

Goal 3. Part One of the report included a short section on juvenile delinquency risk factors. The risk factor section was included in Part One in recognition that risk factors have an impact on disproportionate minority representation. For example, if the presence of a particular juvenile delinquency risk factor differs by juvenile race (e.g., is more prevalent in African-American juveniles) and juvenile justice professionals consider the risk factor when making juvenile case processing decisions, it may place minority juveniles at a disadvantage and, hence, contribute to disproportionate minority representation (see the definition of indirect effects in Table 2).

Each survey instrument included an identical list of potential juvenile delinquency risk factors, with instructions to record the perceived importance of the factor (very important, somewhat important, somewhat unimportant, not important) in predicting delinquent behavior (see Section 2 in the patrol officer survey instrument in Appendix D). The list of potential risk factors was based on items included in the example instrument developed by Michael J. Lieber.

Goal 3 was to determine which juvenile delinquency risk factors juvenile justice system professionals deem most important. Should the risk factors deemed most important differ by juvenile race, consideration of the risk factors when making processing decisions may result in disproportionate minority representation.

Survey Analysis Plan

Table 14 shows analyses that were conducted to achieve each of the three goals. The subsections below briefly describe the analyses listed in Table 14.

Goal 1: Perceptions of Racial Biases and Issues. Each survey included an identical list of statements pertaining to potential racial biases and issues in the juvenile justice system, with instructions for respondents to record the extent to which they agree with the statement (strongly agree, agree, disagree, strongly disagree). These questions were intended to assess perceptions of racial biases and issues. To achieve Goal 1, responses to questions assessing perceptions of racial biases and issues were summarized.

Goal 2: Variation in Perceptions. Goal 2 was to examine perceptions of racial biases and issues by profession, the racial composition of the respondent's caseload, and the respondent's race. To achieve Goal 2 statistical analyses were conducted to compare responses across categories of these three dimensions. Prior to describing the statistical analyses, this subsection reports the number of survey respondents in the categories comprising the three dimensions.

Table 14: Analyses Conducted to Achieve Three Survey Goals

Goal 1: Perceptions of Racial Biases and Issues
Use frequencies and percentages to summarize results to survey items in Section 3 of each survey instrument that address perceptions of racial biases and issues in the juvenile justice system.
Goal 2: Variation by Profession
Use chi-square analyses to compare responses to survey items in Section 3 of each survey instrument by profession.
Goal 2: Variation by Racial Composition of Caseload
Use cluster analysis to classify survey respondents based on the racial composition of their caseloads. Use confidence intervals to compare responses to survey items in Section 3 of each survey instrument by caseload racial composition categories identified through the cluster analysis.
Goal 2: Variation by Respondent Race
Use chi-square analyses to compare responses to survey items in Section 3 of each survey instrument by respondent race.
Goal 3: Perceptions of Potential Juvenile Justice System Risk Factors
Use principal components analysis to condense survey items in Section 2 of each survey instrument into distinct risk factor types and to determine which types of risk factors are deemed most important. Use frequencies and percentages to summarize results to survey items in Section 2 of each survey instrument addressing perceptions of potential juvenile delinquency risk factors.

Profession Categories. Table 13 shows the number of survey respondents by profession. Table 13 shows that the largest number of surveys were received from suburban Cook County patrol officers, although a fairly large number of surveys were also received from juvenile probation officers, suburban Cook County juvenile investigators, and public defenders.

Caseload Racial Composition Categories. Each survey instrument included a question asking respondents to report the approximate percentage of non-Caucasian juvenile offenders in their caseloads, by racial category. The racial categories listed in this question were African-American, Hispanic, Asian, and Other. This question was used to classify respondents based on the racial composition of their caseloads, using a statistical technique known as cluster analysis.

Cluster analysis was used, across all professions, to classify survey respondents based on the racial composition of their caseloads. One purpose of cluster analysis is to classify survey respondents into groups (clusters) that are similar on some pre-selected set of variables. In this case, cluster analysis was used on three of the percentages reported in the caseload racial composition question (percentage of African-Americans, Hispanics, and Asians in their caseload; the Other category was excluded from the analysis) to classify juvenile justice professionals into categories based on the racial composition of their caseload. Appendix C explains cluster analysis in more detail, as well as the procedures that were adopted when conducting the analysis.

The cluster analysis was used to guide the development of caseload racial composition categories that could be compared to each other. The cluster analysis yielded four distinct clusters that were split further into the following nine caseload racial composition categories: (1) strong African-American presence with few individuals from other minority racial groups in the caseload, (2) strong Hispanic presence with few individuals from other minority racial groups in the caseload, (3) strong Asian presence with few individuals from other minority racial groups in the caseload, (4) high majority Caucasian caseload, (5) approximately equal strong African-American and Hispanic presence, (6) approximately equal strong African-American and Asian presence, (7) strong African-American presence with a notable number of individuals from other minority racial groups in the caseload, (8) strong Hispanic presence with a notable number of individuals from other minority racial groups in the caseload, and (9) strong Asian presence with a notable number of individuals from other minority racial groups in the caseload.[15]

Appendix C explains how the cluster analysis was used to guide the development of the nine categories. Essentially, upon visual inspection of the four clusters, there appeared to be identifiable "sub-clusters" that the statistical technique lacked the power to identify. Thus, the four clusters identified through analysis were split up further based on the "sub-clusters". The nine categories were selected because they seemed to represent markedly different types of caseloads.

Across all professions, it was possible to classify 433 of the survey respondents into one of the nine categories (82.2% of the 527 juvenile justice professionals who completed the question regarding caseload racial composition). It was not possible to classify every survey respondent into one of the nine categories because the categories were meant to identify markedly different types of caseloads and, as such, criteria were used to classify juvenile justice professionals into the nine categories. Juvenile justice professionals who, based on their responses to the racial composition question, did not meet the criteria for inclusion in one of the nine categories, were excluded in all instances when results are reported by caseload racial composition. Appendix C describes the criteria used to classify respondents into the nine categories.

[15] On the whole, both Part One and Part Two of the report limit the analysis of minority groups to African-Americans and Hispanics, while excluding Asians. However, because a notable number of respondents had caseloads with a significant number of Asians, a decision was made to include Asians in the category scheme for caseload racial composition.

Table 15 shows: (1) the total number of juvenile justice professionals in each of the nine caseload racial composition categories, (2) for each of the nine categories, based on the survey item used to conduct the cluster analysis, the average percentage of African-Americans, Hispanics, and Asians in respondents' caseloads, (3) the professions of those in each of the nine categories, and (4) the race of the juvenile justice professionals in each of the nine categories.

Table 15 shows that caseload racial composition is not independent from respondent profession or from respondent race. That is, particular professions and respondent racial groups are represented more frequently within particular caseload racial compositions. For example, nearly every juvenile justice professional classified in the "strong Hispanic presence, few others" caseload racial composition category is a patrol officer. For a number of caseload racial composition categories, an appreciable majority of respondents were Caucasian.

This non-independence makes it difficult to discern whether differences in the survey responses of those in the nine caseload racial composition categories are the result of differences in the caseloads of respondents, differences in respondent profession, differences in respondent race, or differences in all three dimensions. Instances when this non-independence may impact results of analyses examining differences based on caseload racial composition are noted in the appropriate sections.

Table 15: Information on Nine Caseload Racial Composition Categories

Category	Average Racial Caseload Composition	Respondent Profession	Respondent Race
Strong African-American Presence, Few Others[a] (n=174)	**African-American** 84.2% **Hispanic** 1.8% **Asian** 2.6%	**Patrol Officer** = 56 **Investigator** = 18 **Judge** = 2 **Probation** = 79 **Public Defender** = 19	**Caucasian** = 99 **African-American** = 51 **Hispanic** = 6 **Asian** = 0 **Other** = 2 **Missing** = 15
Strong Hispanic Presence, Few Others (n=52)	**African-American** 4.8% **Hispanic** 73.7% **Asian** 0.7%	**Patrol Officer** = 51 **Investigator** = 1 **Judge** = 0 **Probation** = 0 **Public Defender** = 0	**Caucasian** = 27 **African-American** = 3 **Hispanic** = 14 **Asian** = 0 **Other** = 5 **Missing** = 1
Strong Asian Presence, Few Others (n=30)	**African-American** 3.3% **Hispanic** 0.6% **Asian** 79.8%	**Patrol Officer** = 0 **Investigator** = 18 **Judge** = 0 **Probation** = 11 **Public Defender** = 1	**Caucasian** = 15 **African-American** = 1 **Hispanic** = 10 **Asian** = 0 **Other** = 5 **Missing** = 1

Table 15 (cont.): Information on Nine Caseload Racial Composition Categories

Category	Average Racial Caseload Composition	Respondent Profession	Respondent Race
High Majority Caucasian (n=35)	**African-American** 0.6% **Hispanic** 0.8% **Asian** 1.0%	**Patrol Officer** = 22 **Investigator** = 11 **Judge** = 0 **Probation** = 2 **Public Defender** = 0	**Caucasian** = 22 **African-American** = 2 **Hispanic** = 4 **Asian** = 0 **Other** = 5 **Missing** = 2
Strong, Equal African-American and Asian (n=14)	**African-American** 43.6% **Hispanic** 1.5% **Asian** 39.0%	**Patrol Officer** = 1 **Investigator** = 4 **Judge** = 0 **Probation** = 6 **Public Defender** = 3	**Caucasian** = 10 **African-American** = 1 **Hispanic** = 2 **Asian** = 0 **Other** = 0 **Missing** = 14
Strong, Equal African-American and Hispanic (n=33)	**African-American** 42.4% **Hispanic** 43.1% **Asian** 2.8%	**Patrol Officer** = 32 **Investigator** = 0 **Judge** = 0 **Probation** = 1 **Public Defender** = 0	**Caucasian** = 20 **African-American** = 2 **Hispanic** = 6 **Asian** = 1 **Other** = 3 **Missing** = 1

Table 15 (cont.): Information on Nine Caseload Racial Composition Categories

Category	Average Racial Caseload Composition	Respondent Profession	Respondent Race
Strong African-American Presence, Notable # of Others (n=61)	**African-American** 65.7% **Hispanic** 6.4% **Asian** 16.5%	**Patrol Officer** = 17 **Investigator** = 9 **Judge** = 4 **Probation** = 15 **Public Defender** = 16	**Caucasian** = 41 **African-American** = 10 **Hispanic** = 5 **Asian** = 0 **Other** = 2 **Missing** = 3
Strong Hispanic Presence, Notable # of Others (n=20)	**African-American** 22.0% **Hispanic** 57.4% **Asian** 1.5%	**Patrol Officer** = 20 **Investigator** = 0 **Judge** = 0 **Probation** = 0 **Public Defender** = 0	**Caucasian** = 15 **African-American** = 2 **Hispanic** = 1 **Asian** = 0 **Other** = 2 **Missing** = 0
Strong Asian Presence, Notable # of Others (n=14)	**African-American** 17.7% **Hispanic** 1.9% **Asian** 61.1%	**Patrol Officer** = 1 **Investigator** = 6 **Judge** = 0 **Probation** = 7 **Public Defender** = 0	**Caucasian** = 9 **African-American** = 0 **Hispanic** = 3 **Asian** = 0 **Other** = 0 **Missing** = 2
Other (n=94)	**N/A**	**Patrol Officer** = 57 **Investigator** = 21 **Judge** = 0 **Probation** = 15 **Public Defender** = 1	**Caucasian** = 69 **African-American** = 6 **Hispanic** = 7 **Asian** = 0 **Other** = 3 **Missing** = 9

Respondent Race Categories. A majority of the 535 survey respondents reported that they are Caucasian (331, or 61.9%). Notable percentages of survey respondents reported that they are African-American (79, or 14.8%) or Hispanic (58, or 10.8%). No more than five survey respondents identified themselves in any other racial category. Thus, when comparing responses to survey items by respondent race, only responses by Caucasian, African-American, and Hispanic juvenile justice professionals were compared.

Table 16 shows respondent race by profession. Just as caseload racial composition was not independent from profession or respondent race, Table 16 shows that respondent race was not independent from profession. A majority of the probation officers who responded to the survey identified themselves as African-American and Hispanic, whereas a majority of every other profession identified as Caucasian.

Table 16: Respondent Race by Profession

		Respondent Race		
		Caucasian	**African-American**	**Hispanic**
Profession	**Patrol Officers**	171 (76.0%)[a]	23 (10.2%)	31 (13.8%)
	Juvenile Investigators	69 (85.2%)	4 (4.9%)	8 (9.9%)
	Juvenile Judges	4 (100.0%)	0 (0.0%)	0 (0.0%)
	Juvenile Probation Officers	56 (46.3%)	47 (38.9%)	18 (14.9%)
	Public Defenders	31 (83.8%)	5 (13.5%)	1 (2.7%)
	Total	331	79	58

a: Percentages in the table reflect the percentage of respondents identifying with the race out of those in each profession.

Analyses Used to Make Comparisons. Two types of analyses were used to determine whether there were significant, or noteworthy, differences in survey responses by profession, caseload racial composition, and respondent race. These analyses made it possible to determine whether perceptions of racial biases and issues differ across categories of the three dimensions.

Two different types of analyses were used because the distributions of responses to the survey items addressing racial biases, or the frequencies with which survey respondents gave particular responses, differed across the three dimensions. The appropriateness of a statistical analysis is often contingent upon the distribution of responses, necessitating that different types of analyses be used for different types of distributions. For example, there were four possible responses to each of the survey items addressing racial biases

(strongly agree, agree, disagree, or strongly disagree). If 25% of all respondents gave each of the four responses, this would suggest a different analysis than if 75% of all respondents "strongly agreed" or "agreed".

If the distribution was relatively spread out across all possible survey responses (as in the example where 25% of all respondents gave each of the four responses), then a statistical technique known as *chi-square* was used. Chi-square was used to compare responses by profession and respondent race. Chi-square can be used to examine whether the number of responses in different response categories (such as strongly agree, agree, etc.) differs for individuals in different categories (e.g., profession categories, racial categories, etc.).

If the distribution was skewed, that is if many survey respondents tended to give the same one or two responses to the question (as in the example where 75% of all respondents "strongly agreed" or "agreed"), then a statistical technique that relies on *standard error* was adopted. The standard error approach was used to compare responses by caseload racial composition. Standard error provides a measure of the extent to which results may be slightly inaccurate because data was obtained from a sample, as opposed to from everyone who could have completed the survey (the population).

Standard error measures were used to create "boundaries" around numbers to account for possible inaccuracies. One can reasonably infer with a high level of probability that, even accounting for possible inaccuracy, the number should fall somewhere inside of the boundaries. If the boundaries for two numbers do not overlap at all, then one can infer that, even accounting for possible inaccuracy, the numbers are significantly different. This concept was utilized to compare responses when distributions were skewed.

Appendix C explains chi-square and standard error in more detail. Appendix C also explains the procedures that were adopted when conducting the two statistical techniques that, in turn, aids in explaining how the analyses are appropriate for particular types of distributions.

Collectively, chi-square and the standard error approach were used to examine differences by profession, caseload racial composition, and respondent race. However, there were a number of instances when a particular profession, racial composition, or respondent race were excluded from the analyses. Particular categories were excluded when there were an insufficient number of respondents to warrant statistical analysis. For example, only six juvenile court judges responded to the survey. In instances when there were an insufficient number of survey respondents in a particular category, responses by individuals in that category were examined by visual inspection or by using basic totals and percentages, and were then informally compared to the other categories.

Goal 3: Perceptions of Potential Juvenile Justice System Risk Factors. Goal 3 was to determine which juvenile delinquency risk factors juvenile justice system professionals deemed most important. Each survey included an identical list of potential juvenile justice system risk factors, with instructions to record the perceived importance of the factor (very important, somewhat important, somewhat unimportant, not important) in predicting delinquent behavior.

To achieve Goal 3, a statistical technique known as principal components analysis was adopted. One purpose of principal components analysis is to condense a large number of variables into a small number of highly correlated categories (components). In this case, principal components analysis was used on the items comprising the list of potential juvenile justice system risk factors to: (1) condense the items into distinct risk factor types, and (2) based on responses to the items, determine which types of risk factors were deemed most important. One principal components analysis was conducted that included all of the 535 completed surveys. Appendix C explains principal components analysis in more detail, as well as the procedures that were adopted when conducting the analysis.

Results

Goal 1: Perceptions of Racial Biases and Issues

Each survey instrument included a list of statements pertaining to potential racial biases and issues in the juvenile justice system, with instructions for respondents to record the extent to which they agree with the statement (strongly agree, agree, disagree, strongly disagree; see Section 3 in the patrol officer survey instrument in Appendix D). To achieve Goal 1, responses to these survey items are examined and summarized in this subsection.

The list of statements on racial biases and issues included at least two qualitatively distinct types of questions. First, several of the statements addressed whether the respondent believed that juvenile justice system professionals treat minority juveniles and Caucasian juveniles differently in the juvenile justice system (e.g., whether minority juveniles are more likely to be arrested, more likely to be referred to court, etc.). Second, several of the statements addressed whether the respondent believed that there are differences between minority juveniles and Caucasian juveniles (e.g., whether minority juveniles are more likely to commit crimes, more likely to use drugs, etc.).

Table 17 shows, for each statement and across all respondents asked to respond to the statement, the number and percentage of responses in each response category. Table 17 lists statements addressing perceived differences in how juvenile justice system professionals treat minority and Caucasian juveniles separately from statements addressing perceived differences between Caucasian and minority juveniles. Numbers and percentages listed in bold reflect instances when at least 25% of respondents strongly agreed or agreed with the statement.

Table 17: Responses to Survey Items on Racial Biases and Issues in the Juvenile Justice System

Survey Item				
Strongly Agree	**Agree**	**Disagree**	**Strongly Disagree**	**Did Not Respond**
Perceived Differences in Treatment of Minorities vs. Caucasians				
Minority youth are treated differently from white youth in the juvenile justice system. (all professions, n=535)				
63[a] (11.8%)	**136 (25.4%)**	**242 (45.2%)**	**81 (15.1%)**	**13 (2.4%)**
For similar behaviors, white youth are arrested less often than minority youth. (patrol officers, investigators, n=345)				
10 (2.9%)	48 (13.9%)	207 (60.0%)	73 (21.2%)	7 (2.0%)
Race of the suspect plays a role in deciding which youth are referred to court. (patrol officers, n=257)				
14 (5.4%)	31 (12.1%)	135 (52.5%)	73 (28.4%)	4 (1.6%)
For the same crimes, minorities are referred to court more often than whites. (patrol officers, n=257)				
13 (5.1%)	**56 (21.8%)**	**142 (55.3%)**	**39 (15.2%)**	**7 (2.7%)**
For similar delinquent/criminal behavior, minority youth are more likely to be charged with a greater offense than white youth (judges, probation officers, public defenders, n=190)				
37 (19.5%)	**59 (31.1%)**	**66 (34.7%)**	**18 (9.5%)**	**10 (5.3%)**
Race of the juvenile plays a role in deciding which youth receive treatment/program referrals. (investigators, judges, probation officers, public defenders, n=278)				
16 (5.8%)	45 (16.2%)	143 (51.4%)	65 (23.4%)	9 (3.2%)
For similar behaviors, probation officers issue a violation of probation to white youth less often than minority youth. (judges, probation officers, public defenders, n=190)				
9 (4.7%)	23 (12.1%)	102 (53.7%)	37 (19.5%)	19 (10.0%)

Table 17 (cont.): Responses to Survey Items on Racial Biases and Issues in the Juvenile Justice System

Survey Item				
Strongly Agree	**Agree**	**Disagree**	**Strongly Disagree**	**Did Not Respond**
Perceived Differences Between Minorities and Caucasians				
It is more likely for minority youth versus white youth to come from a single parent family. (all professions, n=535)				
62 (11.6%)	**207 (38.7%)**	**207 (38.7%)**	**45 (8.4%)**	**14 (2.6%)**
It is more likely for minority families versus white families to be less trustful of the juvenile justice system. (all professions, n=535)				
66 (12.3%)	**226 (42.2%)**	**186 (34.8%)**	**43 (8.0%)**	**14 (2.6%)**
Minority youth versus white youth are less willing to acknowledge guilt. (all professions, n=535)				
23 (4.3%)	75 (14.0%)	350 (65.4%)	75 (14.0%)	12 (2.2%)
Minority youth versus white youth are more likely to have a negative attitude towards authority. (all professions, n=535)				
54 (10.1%)	**178 (33.3%)**	**242 (45.2%)**	**47 (8.8%)**	**14 (2.6%)**
Minority youth and white youth commit different types of crimes. (all professions, n=535)				
17 (3.2%)	98 (18.3%)	334 (62.4%)	69 (12.9%)	17 (3.2%)
Minority youth commit more crimes than white youth. (all professions, n=535)				
21 (3.9%)	**137 (25.6%)**	**297 (55.5%)**	**63 (11.8%)**	**17 (3.2%)**
Minority youth are more likely to use drugs than whites. (all professions, n=535)				
8 (1.5%)	64 (12.0%)	346 (64.7%)	102 (19.1%)	15 (2.8%)

a: Bold numbers and percentages reflect statements for which at least 25% of respondents strongly agreed or agreed with the statement.

Conclusions - Perceptions of Racial Biases and Issues. Goal 1 was to examine juvenile justice professionals' perceptions of racial biases and issues in the juvenile justice system. Goal 1 was to be achieved by summarizing responses to a list of survey items inquiring about potential racial biases and issues in the juvenile justice system. The following conclusions can be drawn regarding perceptions of differences between how minority and Caucasian juveniles are treated in the juvenile justice system:

- A notable percentage of juvenile justice professionals (37.2%) strongly agreed or agreed that minority juveniles are treated differently from Caucasian juveniles in juvenile justice system.

However:

- In general, small percentages of juvenile justice professionals strongly agreed or agreed that minority and Caucasian juveniles are treated differently in regard to specific types of juvenile justice system processing decisions. For example, a fairly small percentage of patrol officers and investigators strongly agreed or agreed that Caucasian juveniles are arrested less often than minority juveniles (16.8%). A fairly small percentage of judges, probation officers, and public defenders strongly agreed or agreed that Caucasian juveniles have violation of probations issued against them less often than minority juveniles (16.8%). One notable exception to this trend is that an appreciable percentage of judges, probation officers, and public defenders (50.6%) strongly agreed or agreed that minority juveniles are more likely to be charged with a greater offense than Caucasian juveniles.

Thus, the results reveal a potential paradox, in that 37.2% of respondents believed that minority juveniles and Caucasian juveniles are treated differently yet, when asked about specific areas of the juvenile justice system, far fewer professionals reported perceived differential treatment. This potential paradox may partly be explained by a belief that differential treatment occurs in aspects of the juvenile justice system that the respondent is not directly involved in. For the most part, in addition to being asked about overall differential treatment, juvenile justice system professionals were only asked about specific areas that they are involved in. Consistent with this, it is perhaps notable that the one specific area that a large percentage of juvenile justice professionals reported differential treatment was in charging (50.6% of respondents strongly agreed or agreed that minority juveniles are more likely to be charged with a greater offense). Charging is primarily the responsibility of state's attorney's, a profession that did not complete the surveys, and hence charging is an area of the juvenile justice system that no respondent is directly involved in.

The following conclusions can be drawn regarding perceptions of differences between minority and Caucasian juveniles:

- A notable percentage of juvenile justice professionals strongly agreed or agreed that minority juveniles commit more crimes than Caucasian juveniles (29.5%). A slightly smaller percentage of juvenile justice professionals strongly agreed or agreed that minority and Caucasian juveniles differ in the types of crime that they commit (21.5%).

- Notable percentages of juvenile justice professionals reported that minority juveniles and Caucasian juveniles differ in their attitudes towards the juvenile justice system. Specifically, notable percentages of juvenile justice professionals reported that minority families are less trustful of the juvenile justice system (54.5%), and minority juveniles are more likely to have a negative attitude towards authority (43.4%).

Goal 2: Variation in Perceptions

Goal 2 was to examine perceptions of racial biases and issues by profession, the racial composition of the respondent's caseload, and the respondent's race. To achieve Goal 2 statistical analyses were conducted to compare responses across categories of these three dimensions. This subsection describes results of statistical analyses used to compare responses by profession, caseload racial composition, and respondent race.

Variation by Profession. For most professions, statistical analyses were conducted to examine differences by profession in responses to survey items addressing racial biases and issues. Chi-square was used to analyze responses to these survey items (see Appendix C).

Juvenile judges were excluded from the statistical analyses, as there were too few surveys from judges to draw any meaningful conclusions based on statistical analyses. Instead, judge surveys were examined by visual inspection of responses and consistencies with or variation from responses by other respondents in other professions were noted. All six juvenile judges who responded to the survey tended to disagree or strongly disagree with every survey item addressing perceptions of racial biases and issues in the juvenile justice system. Of the 11 survey items shown in Table 17 that judges were asked to respond to, all 6 judges or 5 of 6 judges disagreed or strongly disagreed to 8 of them. No more than 2 of the 6 judges strongly agreed or agreed with any of the 11 survey items. Thus, on the whole, judges did not perceive biases and issues in the juvenile justice system.

Table 18 shows, for the remaining professions, the number and percentage of survey respondents who responded "strongly agree" or "agree" to each of the racial bias or issue survey items. Instances when respondents in a particular profession were not asked to respond to a survey item are marked "N/A" in Table 18.

Table 18: Responses to Survey Items on Perceptions of Racial Biases and Issues in the Juvenile Justice System by Profession

Patrol Officers	Investigators	Probation Officers	Public Defenders
Perceived Differences in Treatment of Minorities vs. Caucasians			
Minority youth are treated differently from white youth in the juvenile justice system.			
73[a] (28.4%)	16 (18.2%)	81 (57.0%)	28 (66.7%)
For similar behaviors, white youth are arrested less often than minority youth.			
51 (19.8%)	7 (8.0%)	N/A[b]	N/A
For similar delinquent/criminal behavior, minority youth are more likely to be charged with a greater offense than white youth.			
N/A	N/A	69 (48.6%)	27 (64.3%)
Race of the juvenile plays a role in deciding which youth receive treatment/program referrals.			
N/A	10 (11.4%)	41 (28.9%)	10 (23.8%)
For similar behaviors, probation officers issue a violation of probation to white youth less often than minority youth.			
N/A	N/A	22 (15.5%)	10 (23.8%)
Perceived Differences Between Minorities and Caucasians			
It is more likely for minority youth versus white youth to come from a single parent family.			
124 (48.2%)	39 (44.3%)	82 (57.7%)	22 (52.4%)
It is more likely for minority families versus white families to be less trustful of the juvenile justice system.			
146 (56.8%)	41 (46.6%)	76 (53.5%)	27 (64.3%)
Minority youth versus white youth are less willing to acknowledge guilt.			
70 (27.2%)	15 (17.0%)	10 (7.0%)	3 (7.1%)
Minority youth versus white youth are more likely to have a negative attitude towards authority.			
146 (56.8%)	35 (39.8%)	38 (26.8%)	13 (31.0%)
Minority youth and white youth commit different types of crime.			
60 (23.3%)	17 (19.3%)	31 (21.8%)	6 (14.3%)

Table 18 (cont.): Responses to Survey Items on Perceptions of Racial Biases and Issues in the Juvenile Justice System by Profession

Patrol Officers	Investigators	Probation Officers	Public Defenders
Perceived Differences Between Minorities and Caucasians			
Minority youth commit more crimes than white youth.			
90 (35.0%)	22 (25.0%)	35 (24.6%)	11 (26.2%)
Minority youth are more likely to use drugs than whites.			
49 (19.1%)	10 (11.4%)	6 (4.2%)	7 (16.7%)

a: Numbers and percentages in the table reflect the number and percentage of survey respondents who responded "strongly agree" or "agree" to the survey item.
b: N/A reflects instances when the profession was not asked to respond to the survey item.

Multiple chi-square statistics were calculated for each racial bias or issue survey item, individually comparing responses for each combination of two professions. Table 19 shows results of the chi-square analyses. In a small number of instances, it was not possible to conduct a chi-square analysis without violating a statistical assumption underlying the analysis (because the distribution of responses was not sufficiently spread out). Because there were so few instances in which this violation occurred, the standard error approach was not adopted as a substitute. Instead, responses were examined by visual inspection.

Table 19: Results of Chi-Square Analyses Examining Responses to Survey Items on Perceptions of Racial Biases and Issues by Profession

Comparison	Significant?	Higher Percentage For:[a]
Perceived Differences in Treatment of Minorities vs. Caucasians		
Minority youth are treated differently in the juvenile justice system		
Patrol officers vs. Investigators	No	N/A
Patrol officers vs. Probation officers	Yes	Probation officers
Patrol officers vs. Public defenders	Yes	Public defenders
Investigators vs. Probation officers	Yes	Probation officers
Investigators vs. Public defenders	Yes	Public defenders
Probation officers vs. Public defenders	No	N/A
White youth are arrested less often than minority youth		
Patrol officers vs. Investigators	Yes	Patrol officers
Minority youth are more likely to be charged with a greater offense		
Probation officers vs. Public defenders	No	N/A
Race plays a role in deciding treatment/program referrals		
Investigators vs. Probation officers	Yes	Probation officers
Investigators vs. Public defenders	Yes	Public defenders
Probation officers vs. Public defenders	No	N/A
Probation officers issue a violation of probation to white youth less often		
Probation officers vs. Public defenders	No	N/A
Perceived Differences Between Minorities and Caucasians		
Minority youth more likely to come from a single parent family		
Patrol officers vs. Investigators	No	N/A
Patrol officers vs. Probation officers	Yes	Probation officers
Patrol officers vs. Public defenders	No	N/A
Investigators vs. Probation officers	Yes	Probation officers
Investigators vs. Public defenders	No	N/A
Probation officers vs. Public defenders	No	N/A
Minority families are less trustful of the juvenile justice system		
Patrol officers vs. Investigators	No	N/A
Patrol officers vs. Probation officers	No	N/A
Patrol officers vs. Public defenders	No	N/A
Investigators vs. Probation officers	No	N/A
Investigators vs. Public defenders	N/A[b]	N/A
Probation officers vs. Public defenders	No	N/A

Table 19 (cont.): Results of Chi-Square Analyses Examining Responses to Survey Items on Perceptions of Racial Biases and Issues by Profession

Comparison	Significant?	Higher Percentage For:[a]
Perceived Differences Between Minorities and Caucasians		
Minority youth are less willing to acknowledge guilt		
Patrol officers vs. Investigators	No	N/A
Patrol officers vs. Probation officers	Yes	Patrol officers
Patrol officers vs. Public defenders	Yes	Patrol officers
Investigators vs. Probation officers	No	N/A
Investigators vs. Public defenders	Yes	Investigators
Probation officers vs. Public defenders	No	N/A
Minority youth are more likely to have a negative attitude toward authority		
Patrol officers vs. Investigators	No	N/A
Patrol officers vs. Probation officers	Yes	Patrol officers
Patrol officers vs. Public defenders	Yes	Patrol officers
Investigators vs. Probation officers	No	N/A
Investigators vs. Public defenders	No	N/A
Probation officers vs. Public defenders	No	N/A
Minority youth and white youth commit different types of crimes		
Patrol officers vs. Investigators	No	N/A
Patrol officers vs. Probation officers	No	N/A
Patrol officers vs. Public defenders	No	N/A
Investigators vs. Probation officers	No	N/A
Investigators vs. Public defenders	No	N/A
Probation officers vs. Public defenders	No	N/A
Minority youth commit more crimes than white youth		
Patrol officers vs. Investigators	No	N/A
Patrol officers vs. Probation officers	No	N/A
Patrol officers vs. Public defenders	No	N/A
Investigators vs. Probation officers	No	N/A
Investigators vs. Public defenders	No	N/A
Probation officers vs. Public defenders	No	N/A
Minority youth are more likely to use drugs than whites		
Patrol officers vs. Investigators	No	N/A
Patrol officers vs. Probation officers	Yes	Patrol officers
Patrol officers vs. Public defenders	No	N/A
Investigators vs. Probation officers	Yes	Investigators
Investigators vs. Public defenders	No	N/A
Probation officers vs. Public defenders	N/A	N/A

a: This column shows the profession for which a significantly higher percentage of respondents responded "strongly agree" or "agree", relative to the comparison profession.
b: N/A in this column refers to instances when a chi-square analysis could not be conducted because an assumption of the analysis was violated.

Conclusions – Variation by Profession. One aspect of Goal 2 was to examine variation in survey responses by profession. The overall responses to survey items addressing perceptions of racial biases and issues (shown in Table 17) can be qualified by several differences in responses across professions. The following conclusion can be drawn regarding differences across profession in responses to survey items addressing perceived differences in how minority juveniles and Caucasian juveniles are treated by the juvenile justice system:

- Significantly larger percentages of probation officers and public defenders compared to patrol officers and juvenile investigators strongly agreed or agreed that minority juveniles are treated differently from Caucasian juveniles in the juvenile justice system. Similarly, significantly larger percentages of probation officers and public defenders compared to juvenile investigators strongly agreed or agreed that race and ethnicity plays a role in determining which juveniles receive treatment or program referrals. Comparisons of responses to these two survey items by profession suggest that there may be differences across profession in perceptions of how minority juveniles and Caucasian juveniles are treated by the juvenile justice system.

The following conclusion can be drawn regarding differences across profession in responses to survey items addressing perceived differences between minority juveniles and Caucasian juveniles:

- When responses to survey items addressing perceived differences between minority juveniles and Caucasian juveniles significantly differed by profession, it was typically because larger percentages of patrol officers and/or juvenile investigators strongly agreed or agreed that differences exist. Larger percentages of patrol officers and/or juvenile investigators compared to probation officers and/or public defenders strongly agreed or agreed that minority juveniles are less willing to acknowledge guilt, more likely to have a negative attitude toward authority, and more likely to use drugs.

Overall:

- Relative to probation officers and public defenders, patrol officers and juvenile investigators were less likely to believe that minority juveniles are treated differently by the juvenile justice system and more likely to attach certain negative attributes to minority juveniles. Because different types of juvenile justice professionals come into contact with juveniles at different decision-making points in the juvenile justice system, this suggests that there may be differences in how juveniles are treated at different points in the system and/or how juveniles respond and behave at different points in the system.

Variation by Caseload Racial Composition. For a majority of the nine caseload racial composition categories (see Table 15), statistical analyses were conducted to determine whether responses to survey items addressing racial biases and issues in the juvenile justice system differed by caseload racial composition. There were only sufficient numbers of respondents to warrant statistical analysis for the following caseload racial composition categories: (1) strong Hispanic presence, few others, (2) strong African-American presence, few others, (3) high majority Caucasian, (4) strong, equal African-American and Hispanic presence, and (5) strong African-American presence, notable number of others. Responses for these five categories were examined using the standard error approach (see Appendix C). Responses for the remaining caseload racial composition categories were examined by visual inspection.

It should be recalled that caseload racial composition was not independent from profession. Certain professions (typically law enforcement professions) are overrepresented in certain caseload racial composition categories. Thus, it was not possible to determine whether differences were the result of inter-professional differences or differences in caseload racial composition.

Table 20 shows responses to the racial biases and issues survey items for the five caseload racial composition categories examined statistically (the percentage of respondents who strongly agreed or agreed with each of the survey items). Table 21 lists comparisons based on the standard error approach that reached or approached "significance".[16] If a comparison is not listed in Table 21, then it did not reach or approach significance.[17]

[16] The terms significance and significant difference are sometimes used for the standard error approach in an attempt to maintain semantic consistency, even though the approach does not technically adopt a significance test.

[17] In a number of instances throughout the remainder of the report, results that approached, or did not quite reach the significance threshold, are reported. For readers familiar with the concept of statistical significance, results were classified as approaching significance if $p < .06$ or $p < .07$.

Table 20: Responses to Survey Items on Perceptions of Racial Biases and Issues in the Juvenile Justice System by Caseload Racial Composition

Strong Afr.-Am. Presence, Few Others	Strong Hispanic Presence, Few Others	High Majority Caucasian	Strong, Equal Afr.-Am. and Hispanic	Strong Afr.-Am. Presence, Notable # of Others
Perceived Differences in Treatment of Minorities vs. Caucasians				
Minority youth are treated differently from white youth in the juvenile justice system.				
83[a] (n=174; 47.7%)	13 (n=52; 25.0%)	8 (n=35; 22.9%)	8 (n=33; 24.2%)	21 (n=61; 34.4%)
For similar behaviors, white youth are arrested less often than minority youth.				
12 (n=74; 16.2%)	10 (n=52; 19.2%)	4 (n=33; 12.1%)	7 (n=32; 21.9%)	1 (n=26; 3.8%)
Race of the suspect plays a role in deciding which youth are referred to court.				
10 (n=56; 17.9%)	9 (n=51; 17.6%)	4 (n=22; 18.2%)	3 (n=32; 9.4%)	N/A[b]
For the same crimes, minorities are referred to court more often than whites.				
13 (n=56; 23.2%)	14 (n=51; 27.5%)	6 (n=22; 27.3%)	7 (n=32; 21.9%)	N/A
For similar delinquent/criminal behavior, minority youth are more likely to be charged with a greater offense than white youth.				
54 (n=100; 54.0%)	N/A	N/A	N/A	13 (n=35; 37.1%)
Race of the juvenile plays a role in deciding which youth receive treatment/program referrals.				
29 (n=118; 24.6%)	N/A	N/A	N/A	7 (n=44; 15.9%)
For similar behaviors, probation officers issue a violation of probation to white youth less often than minority youth.				
13 (n=100; 13.0%)	N/A	N/A	N/A	7 (n=35; 20.0%)
Perceived Differences Between Minorities and Caucasians				
It is more likely for minority youth versus white youth to come from a single parent family.				
96 (n=174; 55.2%)	21 (n=52; 40.4%)	16 (n=35; 45.7%)	17 (n=33; 51.5%)	27 (n=61; 44.3%)
It is more likely for minority families versus white families to be less trustful of the juvenile justice system.				
96 (n=174; 55.2%)	24 (n=52; 46.2%)	16 (n=35; 45.7%)	16 (n=33; 48.5%)	31 (n=61; 50.8%)
Minority youth versus white youth are less willing to acknowledge guilt.				
20 (n=174; 11.5%)	13 (n=52; 25.0%)	5 (n=35; 14.3%)	13 (n=33; 39.4%)	11 (n=61; 18.0%)

Table 20 (cont.): Responses to Survey Items on Perceptions of Racial Biases and Issues in the Juvenile Justice System by Caseload Racial Composition

Strong Afr.-Am. Presence, Few Others	Strong Hispanic Presence, Few Others	High Majority Caucasian	Strong, Equal Afr.-Am. and Hispanic	Strong Afr.-Am. Presence, Notable # of Others
Perceived Differences Between Minorities and Caucasians				
Minority youth versus white youth are more likely to have a negative attitude towards authority.				
59 (n=174; 33.9%)	26 (n=52; 50.0%)	13 (n=35; 37.1%)	18 (n=33; 54.5%)	27 (n=61; 44.3%)
Minority youth and white youth commit different types of crime.				
39 (n=174; 22.4%)	9 (n=52; 17.3%)	7 (n=35; 20.0%)	10 (n=33; 30.3%)	16 (n=61; 26.2%)
Minority youth commit more crimes than white youth.				
53 (n=174; 30.5%)	17 (n=52; 32.7%)	4 (n=35; 11.4%)	11 (n=33; 33.3%)	21 (n=61; 34.4%)
Minority youth are more likely to use drugs than whites.				
12 (n=174; 6.9%)	11 (n=52; 21.2%)	3 (n=35; 8.6%)	11 (n=33; 33.3%)	9 (n=61; 14.8%)

a: Numbers and percentages in the table reflect the number and percentage of survey respondents who responded "strongly agree" or "agree" to the survey item.
b: N/A refers to instances when an insufficient number of survey respondents in the caseload racial composition category were asked to respond to the survey item.

Visual inspection of the caseload racial composition categories not examined statistically revealed several instances when very few or no survey respondents in the "strong Asian presence, few others" and the "strong, equal African-American and Asian presence" categories strongly agreed or agreed with survey items assessing perceived differences between minority juveniles and Caucasian juveniles. With the exception of these instances, responses by those in categories examined by visual inspection tended to approximately parallel responses by those in other categories.

Table 21: Several Noteworthy Differences in Responses to Survey Items on Racial Biases and Issues by Caseload Racial Composition[a]

Perceived Differences in Treatment of Minorities vs. Caucasians
Minority youth are treated differently from white youth in the juvenile justice system.
Strong African-American presence, few others more likely to agree than **Strong Hispanic presence, few others**
Strong African-American presence, few others more likely to agree than **High Majority Caucasian**
Strong African-American presence, few others more likely to agree than **Strong African-American presence, notable # of others**
Strong African-American presence, few others more likely to agree than **Strong, Equal African-American and Hispanic presence**
For similar behaviors, white youth are arrested less often than minority youth.
Strong African-American presence, few others more likely to agree than **Strong African-American presence, notable # of others**
Strong, Equal African-American and Hispanic presence more likely to agree than **Strong African-American presence, notable # of others**
Perceived Differences Between Minorities and Caucasians
It is more likely for minority youth versus white youth to come from a single parent family.
Strong African-American presence, few others more likely to agree than **Strong Hispanic presence, few others**
Minority youth versus white youth are less willing to acknowledge guilt.
Strong, Equal African-American and Hispanic presence more likely to agree than **Strong African-American presence, few others**
Minority youth versus white youth are more likely to have a negative attitude towards authority.
Strong, Equal African-American and Hispanic presence more likely to agree than **Strong African-American presence, few others**
Minority youth commit more crimes than white youth.
High Majority Caucasian more likely to agree than **Strong African-American presence, few others**
Minority youth are more likely to use drugs than whites.
Strong, Equal African-American and Hispanic presence more likely to agree than **Strong African-American presence, few others**

a: Results in this table only pertain to those caseload racial composition categories that were examined via statistical analysis (standard error). The table only lists comparisons that reached or approached significance.

Conclusion – Variation by Caseload Racial Composition. One aspect of Goal 2 was to examine variation in survey responses by caseload racial composition. The following conclusion can be drawn regarding perceptions of racial biases and issues in the juvenile justice system by caseload racial composition:

- For the caseload racial composition categories examined statistically, the standard error approach revealed several instances when responses by those in the "strong African-American presence, few others" category differed from responses by those in other categories. Those in the "strong African-American presence, few others" category tended to be more likely to agree that minority juveniles are treated differently than Caucasian juveniles in the juvenile justice system and less likely to agree that there are differences between minority juveniles and Caucasian juveniles. However, the caseload racial composition categories are not independent from profession and the direction of differences tended to mirror the pattern of results by profession.

Variation by Respondent Race. Chi-square was used to compare the responses of Caucasian, African-American, and Hispanic respondents to survey items addressing racial biases and issues. Multiple chi-square analyses were conducted for each of the survey items, individually comparing responses for each combination of two racial groups.

Table 22 shows the number and percentage of survey respondents who strongly agreed or agreed with each survey item by respondent race.

Table 22: Responses to Survey Items on Perceptions of Racial Biases and Issues in the Juvenile Justice System by Respondent Race

Caucasian	African-American	Hispanic
Perceived Differences in Treatment of Minorities vs. Caucasians		
Minority youth are treated differently from white youth in the juvenile justice system.		
120[a] (36.3%)	31 (39.2%)	21 (36.2%)
For similar behaviors, white youth are arrested less often than minority youth.		
42 (17.5%)	3 (11.1%)	7 (17.9%)
Race of the suspect plays a role in deciding which youth are referred to court.		
36 (21.1%)	2 (8.7%)	3 (9.7%)
For the same crimes, minorities are referred to court more often than whites.		
52 (30.4%)	5 (21.7%)	7 (22.6%)
For similar delinquent/criminal behavior, minority youth are more likely to be charged with a greater offense than white youth.		
47 (51.6%)	20 (38.5%)	11 (57.9%)
Race of the juvenile plays a role in deciding which youth receive treatment/program referrals.		
30 (18.8%)	14 (25.0%)	9 (33.3%)
For similar behaviors, probation officers issue a violation of probation to white youth less often than minority youth.		
14 (15.4%)	7 (13.5%)	4 (21.1%)
Perceived Differences Between Minorities and Caucasians		
It is more likely for minority youth versus white youth to come from a single parent family.		
162 (48.9%)	46 (58.2%)	25 (43.1%)
It is more likely for minority families versus white families to be less trustful of the juvenile justice system.		
184 (55.6%)	40 (50.6%)	31 (53.4%)
Minority youth versus white youth are less willing to acknowledge guilt.		
68 (20.5%)	7 (8.9%)	15 (25.9%)
Minority youth versus white youth are more likely to have a negative attitude towards authority.		
157 (47.4%)	21 (26.6%)	29 (50.0%)

Table 22 (cont.): Responses to Survey Items on Perceptions of Racial Biases and Issues in the Juvenile Justice System by Respondent Race

Caucasian	African-American	Hispanic
Perceived Differences Between Minorities and Caucasians		
Minority youth and white youth commit different types of crime.		
71 (21.5%)	13 (16.5%)	13 (22.4%)
Minority youth commit more crimes than white youth.		
92 (27.8%)	23 (29.1%)	19 (32.8%)
Minority youth are more likely to use drugs than whites.		
50 (15.1%)	9 (11.4%)	6 (10.3%)

a: Numbers and percentages in the table reflect the number and percentage of survey respondents who responded "strongly agree" or "agree" to the survey item.

Overall, very few of the chi-square analyses yielded a significant result. Table 23 describes results of chi-square analyses that yielded a significant result or a result that approached significance.

Table 23: Differences in Responses to Survey Items on Racial Biases and Issues by Respondent Race

Perceived Differences in Treatment of Minorities vs. Caucasians
Caucasian vs. African-American
A significant chi-square emerged for the survey item "For similar behaviors, probation officers issue a violation of probation to white youth less often than minority youth" (this item was provided to judges, probation officers, public defenders). This significant result emerged because African-American respondents were more likely to strongly disagree to the item. No other chi-square analyses yielded significant results.
Caucasian vs. Hispanic
No significant results.
African-American vs. Hispanic
No significant results.
Perceived Differences Between Minorities and Caucasians
Caucasian vs. African-American
Caucasian respondents (from all professions) were more likely than African-American respondents to strongly agree or agree to the following two survey items: (1) "Minority youth versus white youth are less willing to acknowledge guilt", and (2) "Minority youth versus white youth are more likely to have a negative attitude towards authority". No other chi-square analyses yielded significant results.

Table 23 (cont.): Differences in Responses to Survey Items on Racial Biases and Issues by Respondent Race

Perceived Differences Between Minorities and Caucasians
Caucasian vs. Hispanic
One chi-square analysis approached significance: Hispanic respondents (from all professions) were more likely than Caucasian respondents to strongly agree or agree to the following survey item: "Minority youth versus white youth are less willing to acknowledge guilt". No other chi-square analyses yielded significant results.
African-American vs. Hispanic
Hispanic respondents (from all professions) were more likely than African-American respondents to strongly agree or agree to the following two survey items: (1) "Minority youth versus white youth are less willing to acknowledge guilt", and (2) "Minority youth versus white youth are more likely to have a negative attitude towards authority". No other chi-square analyses yielded significant results.

Conclusion – Variation by Respondent Race. One aspect of Goal 2 was to examine variation in responses by respondent race. The following conclusion can be drawn regarding perceptions of racial biases and issues by respondent race:

- Chi-square analyses revealed a small number of instances when responses by African-Americans differed from responses by Caucasians or by both Caucasians and Hispanics. These differences may qualify differences by profession described above, in particular differences whereby probation officers differed from other professions (as a larger percentage of probation officers identified themselves as African-Americans, relative to other professions).

Goal 3: Perceptions of Potential Juvenile Justice System Risk Factors

Goal 3 was to determine which juvenile delinquency risk factors juvenile justice system professionals deem most important. Each survey included an identical list of potential juvenile justice system risk factors, with instructions to record the perceived importance of the factor (very important, somewhat important, somewhat unimportant, not important) in predicting delinquent behavior (see Section 2 in the patrol officer survey instrument shown in Appendix D). To achieve Goal 3, responses to these survey items are examined and summarized, with the assistance of principal components analysis.

Table 24 shows, for each potential risk factor item, the percentage of survey respondents who reported that the item is "very important" or "somewhat important". Table 24 also distinguishes between groups of potential risk factors. The groups were identified based on the principal components analysis.

Principal components analysis examines correlations between variables (in this case, the perceived importance of potential delinquency risk factors), and groups together variables with the strongest correlations to each other (see Appendix C for a more detailed description of principal components analysis, as well as the procedures adopted when conducting the analysis). Based on the logic of principal components analysis, when potential risk factors are grouped together, it implies that the grouped risk factors are qualitatively similar and that survey respondents tended to report that the grouped risk factors were perceived as approximately equally important in predicting juvenile delinquency.

Table 24: Perceived Importance of Potential Juvenile Delinquency Risk Factors by Type of Risk Factor

Potential Risk Factor	% Very Important or Somewhat Important
Social Influence Factors[a]	
Lack of parental supervision	96.8%[b]
Lack of parental discipline	96.0%
The influence of gangs	93.6%
The influence of other negative peer groups	93.4%
Abuse of alcohol or drugs by the juvenile	95.3%
Home Violence and Crime Factors	
Observing domestic violence in the home	94.7%
Being a victim of child abuse	95.3%
Alcohol or drug abuse by parents	96.4%
Academic Performance Factors and Social Development Factors	
Poor performance in school	84.0%
Having learning disabilities	76.6%
Schools with insufficient or inadequate curriculum	73.3%
Schools with insufficient or inadequate after-school programs	70.8%
Not knowing positive ways to interact with other youth	84.1%
Feelings of discrimination	67.0%
Home and Social Environment Factors	
Family living in poverty	79.7%
Living with relatives other than parents	74.6%
Living with mother only	73.5%
Living in a high crime neighborhood	86.8%
Other Factor	
Having siblings who are delinquent	88.9%

a: The potential risk factors are organized and labeled based on results to a principal components analysis.
b: Percentages are based on the number of juvenile justice professionals who responded to the item. Of the 535 juvenile justice professionals who completed surveys, between 527 and 531 responded to each question.

The principal components analysis yielded four components. On the whole, the potential risk factors that were included in each of the four components were qualitatively similar and distinct from the potential risk factors included in the other components. Table 24 labels each of the four components based on the nature of the potential risk factors included in the component. The four components are labeled as: (1) social influence factors (with the exception of "abuse of alcohol or drugs by the juvenile", these are factors indicating that juveniles lack parental guidance and have negative peer relations), (2) home violence and crime factors (factors indicating parental violence and substance abuse), (3) academic performance factors and social development factors (factors indicating both school performance and abilities/opportunities to develop appropriate social relationships), and (4) home and social environment factors (factors related to juveniles' living situation and community environment). One of the potential risk factors, "having siblings who are delinquent", could not easily be classified into one of the four components.

Conclusions - Perceptions of Potential Juvenile Justice System Risk Factors. Goal 3 was to examine perceptions of potential juvenile justice system risk factors to determine which types of potential risk factors survey respondents deemed most important. Goal 3 was to be achieved by summarizing and condensing responses to a list of survey items inquiring about the importance of various potential juvenile delinquency risk factors. The following conclusions can be drawn regarding perceptions of potential juvenile justice system risk factors:

- Survey respondents tended to report that potential risk factors in the "social influence factors" and "home violence and crime factors" components are slightly more important in predicting delinquent behavior than "academic performance factors and social development factors" and "home and social environment factors". Over 93 percent of survey respondents reported that potential risk factors in the former two components are "very important" or "somewhat important", whereas between approximately 71 and 86 percent reported that potential risk factors in the latter two components are "very important" or "somewhat important".

The percentages in Table 24 show that survey respondents tended to believe that each of the potential risk factors are "very important" or "somewhat important" in predicting delinquent behavior. Even for the potential risk factor with the lowest percentage in Table 24 ("feelings of discrimination"), a sizable majority of survey respondents (67.0%) responded "very important" or "somewhat important". The high percentages in Table 24 suggest that survey respondents believed that a multitude of factors are related to juvenile delinquency.

V. Component Three: Juvenile Investigator Interview Surveys

Interviews that take place after a juvenile is taken into custody by a law enforcement agency play a large role in determining the decisions that juvenile investigators make regarding how to handle juvenile cases. The purpose of Component Three was to learn how information obtained in the interviews is used to make decisions. Surveys were distributed to Cook County juvenile investigators, who were asked to complete a survey after every interview they completed during a two-week period. Police interviews were examined because they occur at a critical early stage in the juvenile justice system process.

This section of the report describes: (1) survey methodology, including the approach taken to analyze survey data, and (2) survey results.

Method

Sample

An attempt was made to distribute surveys to every juvenile investigator who works in the 5th, 6th, 8th, and 22nd Districts of the Chicago Police Department and who works in a law enforcement agency in the 4th Municipal District of suburban Cook County (see the General Method section, pages 18-21).

Head Chicago Police Department (CPD) staff were contacted to request permission to distribute surveys to juvenile investigators in the four districts. Whereas head CPD staff opted not to allow surveys to be distributed for Component Two of the report (see page 52), they granted permission for the juvenile interview surveys to be distributed. After granting permission, head CPD staff contacted personnel in each of the four CPD districts to describe the project and provide instructions. Head CPD staff then sent a packet of surveys to each of the four districts.

Head staff in each law enforcement agency that takes juveniles into custody in the 4th Municipal District were contacted to request permission to distribute juvenile interview surveys to juvenile investigators. These requests were made at the same time that permission was requested to distribute surveys for Component Two of the report (see pages 52-53). As with Component Two, 23 of the 24 law enforcement agencies serving the 4th Municipal District granted permission to distribute surveys.

A total of 267 surveys were received from juvenile investigators in Chicago and suburban Cook County. Table 25 shows, for both Chicago and suburban Cook County, the number of surveys received by police district (Chicago) or law enforcement agency (suburban Cook County). It was possible to report response rates by agency because, unlike the surveys for Component Two, juvenile investigators were asked to record their agency on the juvenile interview survey.

Table 25: Juvenile Interview Survey Sample

Chicago	
Police District	**Sample**
5th Police District	26
6th Police District	17
8th Police District	74
22nd Police District	42
Unknown Police District	4
Chicago Total	163
Suburban Cook County	
Law Enforcement Agency	**Sample**
Bellwood	9
Berwyn	19
Brookfield	7
Cicero	19
Elmwood Park	3
Hillside	3
Melrose Park	18
Northlake	7
Oak Park	8
River Grove	2
Riverside	9
Suburban Cook Total	104
TOTAL	267

Table 25 does not include response rates. The survey methodology made it difficult to determine response rates. For example, an ideal measure for the response rate would have been the number of surveys received relative to the total number of juvenile interviews held during the two-week period selected. Because of difficulties associated with obtaining information on total number of interviews (e.g., police districts or law enforcement agencies may not keep close track of this total, asking law enforcement agencies to keep track of this total would have made their participation in the research more cumbersome, etc.), research staff opted not to calculate response rates in this manner.

However, Table 25 shows that, whereas all four of the Chicago Police Districts examined in Component Three returned surveys, only 11 of the 24 law enforcement agencies serving the 4th Municipal District returned surveys. It may be inferred from this that the response rate was greater for Chicago.

In several instances, head staff from law enforcement agencies in suburban Cook County noted that it was conceivable that juvenile investigators could be instructed to complete surveys during a two week period for which their law enforcement agency takes no juveniles into custody (and, therefore, conducts no interviews). Those who raised this concern tended to represent smaller law enforcement agencies and tended to note that the request for their participation was occurring during a time of the year when, historically, few juveniles are taken into custody. In response to this concern, all law enforcement agencies were asked to, should no juveniles be taken into custody during the two-week period selected, return a blank survey with a brief note on it, explaining that their agency took no juveniles into custody. Research staff received notes of this type from two law enforcement agencies in suburban Cook County. When taking this factor into consideration, surveys were received from 11 of 22 suburban Cook County law enforcement agencies that conceivably could have completed surveys.

Procedure

After head CPD staff granted permission for surveys to be distributed, a research staff member met in person with those who had granted the permission. The purpose of the meeting was to discuss the surveys in more detail and to drop off enough surveys for every juvenile interview that might occur within a two-week period. Similarly, a research staff member met with head staff from each suburban Cook County law enforcement agency that granted permission to distribute juvenile interview surveys.

After these meetings, head staff in each agency explained the project to applicable professionals, distributed the surveys, and collected completed surveys. Research staff provided head staff with a stamped envelope in which to return all surveys from their agency.

Because the meetings occurred on different dates, the two-week survey completion period differed for each police district (CPD) or law enforcement agency (suburban Cook County) that returned surveys. Each police district or law enforcement agency was allowed to select their own two week period, but was encouraged to distribute the surveys and begin the two week period as soon as possible after the meeting. All surveys were distributed and completed during Spring 2001.

Survey Instruments

The juvenile interview survey instrument was purposefully designed to be short. Because juvenile investigators were asked to complete a survey for every juvenile arrestee who they interviewed during a two week period, it seemed imprudent to develop a lengthy survey instrument that investigators may have to complete multiple times.
Appendix E shows the juvenile interview survey instrument.

The survey instrument asked the juvenile investigator to provide basic information on the juvenile who was interviewed, the offense that the juvenile was taken into custody for, how the interview proceeded, and decisions that were made based on the interview. Table 26 shows the types of information inquired about on the juvenile interview survey instrument.

Table 26: Types of Information Obtained From the Juvenile Interview Survey Instrument

Information on the Juvenile
Race
Age
Gender
Number of Previous Felony and Misdemeanor Arrests
Offense Information (for the Offense Precipitating the Interview)
Most Serious Potential Charge
Whether a Weapon Was Involved
Whether the Victim Was Injured
Interview Information
Demeanor/Attitude of Juvenile
Demeanor/Attitude of Parent/Guardian (if present at interview)
Disposition Information
Case Disposition
Important Factors in Disposition Decision
Detention Decision

The juvenile interview surveys were intended to achieve the following goal.

Goal. The juvenile interview surveys were intended to provide information on the relative importance of race as opposed to other factors in predicting post-interview dispositions determined by juvenile investigators.

Survey Analysis Plan

A two-phase survey analysis plan was adopted to examine the importance of race in predicting dispositions determined by juvenile investigators. In the first analysis phase, preliminary analyses were conducted examining whether differences in juvenile race is related to differences in the other types of information listed in Table 26, including dispositions. For most of these analyses, chi-square analyses were conducted comparing survey responses by juvenile race (see Appendix C).

In the second phase, an analysis was conducted similar to those conducted for Component One of the report. A multinomial logistic regression analysis was conducted to determine the importance of several factors (including juvenile race) in predicting

post-interview dispositions (see Appendix C, also see pages 36-38 for a brief description of statistics used to interpret results of multinomial logistic regression analyses).

Results

Prior to describing results pertaining to the two phases of the analysis plan, the results section includes a summary of survey responses made by the sample as a whole and by respondents in Chicago and suburban Cook County. The summary is intended to provide an overview of results prior to examining the impact of race.

Summary of Responses

Table 27 summarizes juvenile interview survey results for: (1) all respondents, (2) Chicago Police Department respondents, and (3) suburban Cook County respondents. With one exception, chi-square analyses were conducted comparing responses by investigators in the Chicago Police Department to responses by investigators in suburban Cook County (see Appendix C)[18]. Instances when chi-square analysis yielded a significant difference between Chicago and suburban Cook County investigators are indicated in bold in Table 27.

Survey results regarding three of the types of information summarized in Table 27 warrant explanation. First, for parsimony, survey data obtained for the category "Type of Offense – Most Serious Potential Charge" in Table 27 was condensed into four offense types: crimes against persons, property crimes, drug crimes, and other crimes. On the survey, respondents had been asked to record the exact offense. Common offenses categorized into crimes against persons included various types of assault or battery offenses. Common offenses categorized into property crimes included retail theft, criminal damage to property, and various types of criminal trespassing. A large majority of drug crimes were cannabis related. A majority of offenses categorized into other crimes were disorderly conduct offenses.

Second, survey results for the category "Listed Factors Considered in Disposition Decisions" refers to a survey item that included a list of potential factors that may have played a role in the investigator's disposition decision, with instructions to rank the three most important factors. The row labeled "Yes" for each of the factors refers to the number of survey respondents who included the factor in their top three.

[18] When comparing "juvenile age" for Chicago and suburban Cook County respondents, an independent samples t test was used. This approach, which compares averages for two groups (in the present context, the analysis compared average age of juveniles interviewed by Chicago investigators to the average age of juveniles interviewed by suburban Cook County investigators) and determines whether there is a significant difference between the averages, was used because, unlike most other instances throughout the report, the distribution of responses for juvenile age was sufficiently spread out, unskewed, and measured in a manner which warranted examination of averages. Appendix C provides descriptions of nearly every statistical analysis used in this document. Because this was the only instance when an independent samples t test was used in the report, a description of this analysis was excluded from Appendix C.

Third, an examination of the category "Case Disposition" in Table 27 shows that survey respondents were provided with five disposition types: informal station adjustment without a program referral, informal station adjustment with program referral, formal station adjustment without program referral, formal station with program referral, and court referral. A station adjustment occurs when the juvenile investigator handles the case at the police station, then releases the juvenile to his or her parents without referring the case to court. The juvenile investigator will typically make this release contingent upon the juvenile completing one or more conditions, often specified in a station adjustment plan. Since January 1, 1999, Illinois law has distinguished between two types of station adjustments: the more rigorous formal station adjustment and the less rigorous informal station adjustment.

These disposition types exclude instances when juveniles are released from police custody with no further action taken (because of insufficient evidence, etc.). However, research staff were made to understand that, once a juvenile has reached the interview stage, this course of action is rare. Thus, this potential outcome was excluded from the juvenile interview survey. Juvenile investigators had little difficulty classifying dispositions in one of the five categories included on the survey.

Table 27: A Summary of Juvenile Interview Survey Results

Variable	All Respondents (n=267)	Chicago Respondents (n=163)	Suburban Cook Respondents (n=104)
Information on the Juvenile			
Juvenile Race			
African-American	147 (55.1%)	**120 (73.6%)[a]**	**27 (26.0%)**
Hispanic	59 (22.1%)	**22 (13.5%)**	**37 (35.6%)**
Caucasian	57 (21.3%)	**18 (11.0%)**	**39 (37.5%)**
Other	3 (1.1%)	**2 (1.2%)**	**1 (1.0%)**
Missing	1 (0.4%)	**1 (0.6%)**	**0 (0.0%)**
Juvenile Age			
8	1 (0.4%)	1 (0.6%)	0 (0.0%)
9	1 (0.4%)	1 (0.6%)	0 (0.0%)
10	1 (0.4%)	1 (0.6%)	0 (0.0%)
11	12 (4.5%)	7 (4.3%)	5 (4.8%)
12	13 (4.9%)	5 (3.1%)	8 (7.7%)
13	42 (15.7%)	24 (14.7%)	18 (17.3%)
14	47 (17.6%)	31 (19.0%)	16 (15.4%)
15	80 (30.0%)	46 (28.2%)	34 (32.7%)
16	67 (25.1%)	46 (28.2%)	21 (20.2%)
17	1 (0.4%)	0 (0.0%)	1 (1.0%)
Missing	2 (0.7%)	1 (0.6%)	1 (1.0%)

Table 27 (cont.): A Summary of Juvenile Interview Survey Results

Variable	All Respondents (n=267)	Chicago Respondents (n=163)	Suburban Cook Respondents (n=104)
Information on the Juvenile			
Gender of Juvenile			
Male	187 (70.0%)	109 (66.9%)	78 (75.0%)
Female	79 (29.6%)	53 (32.5%)	26 (25.0%)
Missing	1 (0.4%)	1 (0.6%)	0 (0.0%)
# of Previous Felony Arrests			
0	213 (79.8%)	138 (84.7%)[b]	75 (72.1%)
1	15 (5.6%)	14 (8.6%)	1 (1.0%)
More Than 1	14 (5.3%)	11 (6.7%)	3 (2.9%)
Missing	25 (9.4%)	0 (0.0%)	25 (24.0%)
# of Previous Misdemeanor Arrests			
0	155 (58.1%)	**92 (56.4%)**	**63 (60.6%)**
1	42 (15.7%)	**31 (19.0%)**	**11 (10.6%)**
More Than 1	51 (19.1%)	**40 (24.5%)**	**11 (10.6%)**
At Least One, Exact # Unknown	3 (1.1%)	**0 (0.0%)**	**3 (2.9%)**
Missing	16 (6.0%)	**0 (0.0%)**	**16 (15.4%)**
Offense Information (for the Offense Precipitating the Interview)			
Type of Offense - Most Serious Potential Charge[c]			
Crime Against Persons	110 (41.2%)	**73 (44.8%)**	**36 (34.6%)**
Property Crime	77 (28.8%)	**56 (34.4%)**	**21 (20.2%)**
Drug Crime	32 (12.0%)	**24 (14.7%)**	**8 (7.7%)**
Other	42 (15.7%)	**6 (3.7%)**	**36 (34.6%)**
Missing	6 (2.2%)	**4 (2.5%)**	**2 (1.9%)**
Whether a Weapon Was Involved			
Yes	44 (16.5%)	29 (17.8%)	15 (14.4%)
No	223 (83.5%)	134 (82.2%)	89 (85.6%)
Whether the Victim Was Injured			
Yes	33 (12.4%)	21 (12.9%)	12 (11.5%)
No	229 (85.8%)	139 (85.3%)	90 (86.5%)
Missing	5 (1.9%)	3 (1.8%)	2 (1.9%)

Table 27 (cont.): A Summary of Juvenile Interview Survey Results

Variable	All Respondents (n=267)	Chicago Respondents (n=163)	Suburban Cook Respondents (n=104)
Interview Information			
Demeanor/Attitude of Juvenile			
Very Cooperative	102 (38.2%)	57 (35.0%)	45 (43.3%)
Somewhat Cooperative	74 (27.7%)	44 (27.0%)	30 (28.8%)
Neutral	44 (16.5%)	32 (19.6%)	12 (11.5%)
Somewhat Uncooperative	28 (10.5%)	18 (11.0%)	10 (9.6%)
Very Uncooperative	11 (4.1%)	4 (2.5%)	7 (6.7%)
Missing	8 (3.0%)	8 (4.9%)	0 (0.0%)
Demeanor/Attitude of Parent/Guardian	(n=188)[d]	**(n=134)**	**(n=54)**
Very Cooperative	106 (56.4%)	**71 (53.0%)**	**35 (64.8%)**
Somewhat Cooperative	36 (19.1%)	**30 (22.4%)**	**6 (11.1%)**
Neutral	28 (14.9%)	**23 (17.2%)**	**5 (9.3%)**
Somewhat Uncooperative	9 (4.8%)	**4 (3.0%)**	**5 (9.3%)**
Very Uncooperative	4 (2.1%)	**1 (0.7%)**	**3 (5.6%)**
Missing	5 (2.7%)	**5 (3.7%)**	**0 (0.0%)**
Disposition Information			
Case Disposition			
Informal SA, No Program Referral	44 (16.5%)	**14 (8.6%)**	**30 (28.8%)**
Informal SA, Program Referral	75 (28.1%)	**68 (41.7%)**	**7 (6.7%)**
Formal SA, No Program Referral	28 (10.5%)	**10 (6.1%)**	**18 (17.3%)**
Formal SA, Program Referral	15 (5.6%)	**2 (1.2%)**	**13 (12.5%)**
Refer to Court	100 (37.5%)	**67 (41.1%)**	**33 (31.7%)**
Missing	5 (1.9%)	**2 (1.2%)**	**3 (2.9%)**
Listed Factors Considered in Disposition Decisions[e]			
Seriousness of Offense			
Yes	203 (76.0%)	121 (74.2%)	82 (78.8%)
No	64 (24.0%)	42 (25.8%)	22 (21.2%)
Age of Juvenile			
Yes	149 (55.8%)	**82 (50.3%)**	**67 (64.4%)**
No	118 (44.2%)	**81 (49.7%)**	**37 (35.6%)**
Prior History of Juvenile			
Yes	167 (62.5%)	106 (65.0%)	61 (58.7%)
No	100 (37.5%)	57 (35.0%)	43 (41.3%)

Table 27 (cont.): A Summary of Juvenile Interview Survey Results

Variable	All Respondents (n=267)	Chicago Respondents (n=163)	Suburban Cook Respondents (n=104)
Disposition Information			
Listed Factors Considered in Disposition Decisions[e]			
Culpability of Juvenile			
Yes	85 (31.8%)	52 (31.9%)	33 (31.7%)
No	182 (68.2%)	111 (68.1%)	71 (68.3%)
Offense in Aggressive Manner			
Yes	41 (15.4%)	22 (13.5%)	19 (18.3%)
No	226 (84.6%)	141 (86.5%)	85 (81.7%)
Used/Possessed Deadly Weapon			
Yes	16 (6.0%)	11 (6.7%)	5 (4.8%)
No	251 (94.0%)	152 (93.3%)	99 (95.2%)
Recommended Detention			
Yes	20 (7.5%)	14 (8.6%)	6 (5.8%)
No	241 (90.3%)	145 (89.0%)	96 (92.3%)
Missing	6 (2.2%)	4 (2.5%)	2 (1.9%)

a: Numbers listed in bold show instances when Chicago Police Department respondents significantly differed from suburban Cook County respondents.
b: Because of the large amount of missing information for suburban Cook County, it was not possible to compare Chicago to suburban Cook County.
c: See report text for a description of crimes classified into the offense type categories.
d: Results to the survey item regarding demeanor/attitude of parents/guardians are based on the number of instances when the survey respondent reported that a parent/guardian was present at the interrogation.
e: Survey respondents were given a list of possible factors that contributed to their disposition decision and asked to rank the top three factors. The row labeled "Yes" for each of the factors refers to the number of survey respondents who included the factor in their top three.

Perhaps the most notable aspect of Table 27 is that it reveals a number of differences between Chicago Police Department investigators and suburban Cook County investigators. These differences provide qualifiers that should be kept in mind when interpreting results in the next subsection (phase one of juvenile interview survey analysis), which compares survey results by juvenile race, collapsed across the geographic location of the respondent (Chicago vs. suburban Cook County). However, phase two of juvenile interview survey analysis will, through multinomial logistic

regression, examine the relative importance of juvenile race and respondent geographic location in predicting dispositions.

Notable differences by respondent geographic location can be summarized as follows:

- Juvenile investigators from the Chicago Police Department interviewed appreciably more African-American juveniles relative to juvenile investigators from suburban Cook County. Conversely, investigators from suburban Cook County interviewed appreciably more Hispanics and Caucasians.

- Juvenile investigators from the Chicago Police Department were somewhat more likely to interview juveniles for crimes against persons or for property offenses than were juvenile investigators from suburban Cook County. Conversely, investigators from suburban Cook County interviewed more juveniles for lesser, "other" offenses, such as disorderly conduct.

- Juvenile investigators from the Chicago Police Department tended to make different disposition decisions after interviews than juvenile investigators from suburban Cook County. On the whole, this difference seemed to be the result of differences in how Chicago and suburban Cook County investigators handle and/or classify station adjustments.

Juvenile Interview Information by Juvenile Race

In this subsection (phase one of juvenile interview survey analysis), responses to survey items listed in Table 27 are compared by the race of the interviewed juvenile. Table 28 shows responses to the juvenile interview survey items by juvenile race (Caucasian, African-American, Hispanic).

Table 28: Juvenile Interview Survey Results by Juvenile Race

Variable	Caucasian (n=57)	African-American (n=147)	Hispanic/ Latino (n=59)
Information on the Juvenile			
Juvenile Age			
8	0 (0.0%)	1 (0.7%)	0 (0.0%)
9	0 (0.0%)	1 (0.7%)	0 (0.0%)
10	1 (1.8%)	0 (0.0%)	0 (0.0%)
11	3 (5.3%)	7 (4.8%)	2 (3.4%)
12	1 (1.8%)	9 (6.1%)	3 (5.1%)
13	8 (14.0%)	26 (17.7%)	8 (13.6%)
14	6 (10.5%)	23 (15.6%)	17 (28.8%)
15	24 (42.1%)	42 (28.6%)	12 (20.3%)
16	13 (22.8%)	37 (25.2%)	17 (28.8%)
17	0 (0.0%)	1 (0.7%)	0 (0.0%)
Missing	1 (1.8%)	0 (0.0%)	0 (0.0%)
Gender of Juvenile			
Male	44 (77.2%)	94 (63.9%)	46 (78.0%)
Female	13 (22.8%)	53 (36.1%)	12 (20.3%)
Missing	0 (0.0%)	0 (0.0%)	1 (1.7%)
# of Previous Felony Arrests			
0	48 (84.2%)	118 (80.3%)	44 (74.6%)
1	2 (3.5%)	10 (6.8%)	3 (5.1%)
More Than 1	2 (3.6%)	11 (7.5%)	1 (1.7%)
Missing	5 (8.8%)	8 (5.4%)	11 (18.6%)
# of Previous Misdemeanor Arrests			
0	37 (64.9%)	83 (56.5%)	33 (55.9%)
1	8 (14.0%)	24 (16.3%)	10 (16.9%)
More Than 1	10 (17.6%)	32 (21.9%)	8 (13.6%)
At Least One, Exact # Unknown	1 (1.8%)	1 (0.7%)	0 (0.0%)
Missing	1 (1.8%)	7 (4.8%)	8 (13.6%)
Offense Information (for the Offense Precipitating the Interview)			
Type of Offense - Most Serious Potential Charge[a]			
Crime Against Persons	27 (47.4%)	64 (43.5%)	18 (30.5%)
Property Crime	13 (22.8%)	44 (29.9%)	19 (32.2%)
Drug Crime	3 (5.3%)	20 (13.6%)	7 (11.9%)
Other	13 (22.8%)	16 (10.9%)	13 (22.0%)
Missing	1 (1.8%)	3 (2.0%)	2 (3.4%)

Table 28 (cont.): Juvenile Interview Survey Results by Juvenile Race

Variable	Caucasian (n=57)	African-American (n=147)	Hispanic/ Latino (n=59)
Offense Information (for the Offense Precipitating the Interview)			
Whether a Weapon Was Involved			
Yes	12 (21.1%)	25 (17.0%)	7 (11.9%)
No	45 (78.9%)	122 (83.0%)	52 (88.1%)
Whether the Victim Was Injured			
Yes	11 (19.3%)	18 (12.2%)	4 (6.8%)
No	45 (78.9%)	127 (86.4%)	53 (89.8%)
Missing	1 (1.8%)	2 (1.4%)	2 (3.4%)
Interview Information			
Demeanor/Attitude of Juvenile			
Very Cooperative	30 (52.6%)	45 (30.6%)	26 (44.1%)
Somewhat Cooperative	18 (31.6%)	38 (25.9%)	17 (28.8%)
Neutral	3 (5.3%)	33 (22.4%)	8 (13.6%)
Somewhat Uncooperative	2 (3.5%)	17 (11.6%)	7 (11.9%)
Very Uncooperative	3 (5.3%)	8 (5.4%)	0 (0.0%)
Missing	1 (1.8%)	6 (4.1%)	1 (1.7%)
Demeanor/Attitude of Parent/Guardian	(n=38)[b]	(n=107)	(n=40)
Very Cooperative	26 (68.4%)	53 (49.5%)	26 (65.0%)
Somewhat Cooperative	6 (15.8%)	23 (21.5%)	6 (15.0%)
Neutral	2 (5.3%)	20 (18.7%)	5 (12.5%)
Somewhat Uncooperative	1 (2.6%)	6 (5.6%)	2 (5.0%)
Very Uncooperative	2 (5.3%)	2 (1.9%)	0 (0.0%)
Missing	1 (2.6%)	3 (2.8%)	1 (2.5%)
Disposition Information			
Case Disposition			
Informal SA, No Program Referral	15 (26.3%)	16 (10.9%)	13 (22.0%)
Informal SA, Program Referral	12 (21.1%)	46 (31.3%)	16 (27.1%)
Formal SA, No Program Referral	4 (7.0%)	19 (12.9%)	4 (6.8%)
Formal SA, Program Referral	6 (10.5%)	5 (3.4%)	3 (5.1%)
Refer to Court	19 (33.3%)	58 (39.5%)	22 (37.3%)
Missing	1 (1.8%)	3 (2.0%)	1 (1.7%)

Table 28 (cont.): Juvenile Interview Survey Results by Juvenile Race

Variable	Caucasian (n=57)	African-American (n=147)	Hispanic/ Latino (n=59)
Disposition Information			
Listed Factors Considered in Disposition Decisions[c]			
Seriousness of Offense			
Yes	48 (84.2%)	113 (76.9%)	38 (64.4%)
No	9 (15.8%)	34 (23.1%)	21 (35.6%)
Age of Juvenile			
Yes	36 (63.2%)	76 (51.7%)	33 (55.9%)
No	21 (36.8%)	71 (48.3%)	26 (44.1%)
Prior History of Juvenile			
Yes	42 (73.7%)	85 (57.8%)	37 (62.7%)
No	15 (26.3%)	62 (42.2%)	22 (37.3%)
Culpability of Juvenile			
Yes	12 (21.1%)	49 (33.3%)	23 (39.0%)
No	45 (78.9%)	98 (66.7%)	36 (61.0%)
Offense in Aggressive Manner			
Yes	9 (15.8%)	19 (12.9%)	13 (22.0%)
No	48 (84.2%)	128 (87.1%)	46 (78.0%)
Used/Possessed Deadly Weapon			
Yes	4 (7.0%)	8 (5.4%)	4 (6.8%)
No	53 (93.0%)	139 (94.6%)	55 (93.2%)
Recommended Detention			
Yes	3 (5.3%)	13 (8.8%)	2 (3.4%)
No	53 (93.0%)	130 (88.4%)	56 (94.9%)
Missing	1 (1.8%)	4 (2.7%)	1 (1.7%)

a: See report text for a description of crimes classified into the offense type categories.
b: Results to the survey item regarding demeanor/attitude of parents/guardians is based on the number of instances when the survey respondent reported that a parent/guardian was present at the interrogation.
c: Survey respondents were given a list of possible factors that contributed to their disposition decision and asked to rank the top three factors. The row labeled "Yes" for each of the factors refers to the number of survey respondents who included the factor in their top three.

Table 29 shows results of analyses examining juvenile interview survey responses by juvenile race. For the most part, chi-square analysis was used to compare responses by juvenile race.[19] Multiple analyses were conducted for each survey item, individually comparing responses for each combination of two racial groups. For three of the survey items listed in Table 29, it was not possible to conduct chi-square analyses without violating a statistical assumption underlying the analysis (those items for which the label "N/A" appears in the "Significant?" column). In these instances, responses were examined by visual inspection.

Table 29: Results of Analyses Examining Juvenile Interview Survey Results by Juvenile Race[a]

Comparison	Significant?	Abbreviated Explanation of Results
Information on the Juvenile		
Juvenile Age		
Caucasian vs. African-American	No	N/A
Caucasian vs. Hispanic	No	N/A
African-American vs. Hispanic	No	N/A
Gender of Juvenile		
Caucasian vs. African-American	Approached	More female African-American
Caucasian vs. Hispanic	No	N/A
African-American vs. Hispanic	Yes	More female African-American
# of Previous Felony Arrests		
Caucasian vs. African-American	N/A[b]	N/A
Caucasian vs. Hispanic	N/A	N/A
African-American vs. Hispanic	N/A	N/A
# of Previous Misdemeanor Arrests		
Caucasian vs. African-American	No	N/A
Caucasian vs. Hispanic	No	N/A
African-American vs. Hispanic	No	N/A
Offense Information (for the Offense Precipitating the Interview)		
Type of Offense – Most Serious Potential Charge		
Caucasian vs. African-American	Yes	Differences in "Drug" ,"Other"
Caucasian vs. Hispanic	No	N/A
African-American vs. Hispanic	No	N/A
Whether a Weapon Was Involved		
Caucasian vs. African-American	No	N/A
Caucasian vs. Hispanic	No	N/A
African-American vs. Hispanic	No	N/A

[19] Juvenile age was compared using independent samples t tests. See Footnote 15.

Table 29 (cont.): Results of Analyses Examining Juvenile Interview Survey Results by Juvenile Race

Comparison	Significant?	Abbreviated Explanation of Results
Offense Information (for the Offense Precipitating the Interview)		
Whether the Victim Was Injured		
Caucasian vs. African-American	No	N/A
Caucasian vs. Hispanic	Yes	More victim injuries - Caucasian
African-American vs. Hispanic	No	N/A
Interview Information		
Demeanor/Attitude of Juvenile		
Caucasian vs. African-American	Yes	More cooperative - Caucasian
Caucasian vs. Hispanic	No	N/A
African-American vs. Hispanic	No	N/A
Demeanor/Attitude of Parent/Guardian		
Caucasian vs. African-American	N/A	N/A
Caucasian vs. Hispanic	N/A	N/A
African-American vs. Hispanic	N/A	N/A
Disposition Information		
Case Disposition		
Caucasian vs. African-American	Yes	Station adjustment differences
Caucasian vs. Hispanic	No	N/A
African-American vs. Hispanic	No	N/A
Listed Factors Considered in Disposition Decisions		
Seriousness of Offense		
Caucasian vs. African-American	No	N/A
Caucasian vs. Hispanic	Yes	More important – Caucasian
African-American vs. Hispanic	Approached	More important – Afr.-American
Age of Juvenile		
Caucasian vs. African-American	No	N/A
Caucasian vs. Hispanic	No	N/A
African-American vs. Hispanic	No	N/A
Prior History of Juvenile		
Caucasian vs. African-American	Yes	More important – Caucasian
Caucasian vs. Hispanic	No	N/A
African-American vs. Hispanic	No	N/A
Culpability of Juvenile		
Caucasian vs. African-American	Approached	More important – Afr.-American
Caucasian vs. Hispanic	Yes	More important – Hisp./Latino
African-American vs. Hispanic	No	N/A
Offense in Aggressive Manner		
Caucasian vs. African-American	No	N/A
Caucasian vs. Hispanic	No	N/A
African-American vs. Hispanic	No	N/A

Table 29 (cont.): Results of Analyses Examining Juvenile Interview Survey Results by Juvenile Race

Comparison	Significant?	Abbreviated Explanation of Results
Disposition Information		
Used/Possessed Deadly Weapon		
Caucasian vs. African-American	No	N/A
Caucasian vs. Hispanic	No	N/A
African-American vs. Hispanic	No	N/A
Recommended Detention		
Caucasian vs. African-American	N/A	N/A
Caucasian vs. Hispanic	N/A	N/A
African-American vs. Hispanic	N/A	N/A

a: For the most part, results in this table are based on chi-square analyses. The exception is "juvenile age", for which race was compared using independent samples t tests.
b: N/A in this column refers to instances when a chi-square analysis could not be conducted because an assumption of the analysis was violated.

Conclusions - Juvenile Interview Information by Juvenile Race. The goal of Component Three of the report was to learn the importance of race in predicting post-interview dispositions determined by juvenile investigators. As an initial step in learning about race, chi-square analyses were conducted comparing survey responses by juvenile race. Based on these analyses, the following conclusions can be drawn regarding juvenile interview survey responses by juvenile race:

- Of the African-American juveniles who were interviewed, a larger number were female relative to the Caucasian or Hispanic juveniles interviewed.

- Juvenile investigators tended to report that Caucasian juveniles were more cooperative during the interview than African-American juveniles.

- African-American juveniles were more likely to have been interviewed for drug offenses than Caucasian juveniles, whereas Caucasian juveniles were more likely to have been interviewed for "Other" offenses, such as disorderly conduct.

- African-American juveniles and Caucasian juveniles received different dispositions. This seemed to predominantly be the result of African-American and Caucasian juveniles receiving different types of station adjustments.

These conclusions may be qualified by the following:

- Because race is not independent from respondent geographic location (Chicago vs. suburban Cook County), the four conclusions described above could be the result of geographic differences.

Multinomial Logistic Regression Analysis

This subsection (phase two of juvenile interview survey analysis) describes a multinomial logistic regression analysis intended to achieve the goal of Component Three (to determine the relative importance of race as opposed to other factors in predicting post-interview dispositions determined by juvenile investigators).

Predicting Factors. Table 26 showed the types of information that appeared on the juvenile interview survey instrument. Types of information listed under "information on the juvenile", "offense information", and "interview information" in Table 26 were all considered as possible predicting factors. In some instances, examination of survey responses indicated that two types of information considered as predicting factors were strongly related to each other. When closely related information is included in the same analysis, it can sacrifice the quality of an analysis by making results difficult to interpret. Thus, one of the information types should be excluded from the analysis.

After considering all potential predicting factors, the following types of information were selected for inclusion in the multinomial logistic regression analysis: (1) juvenile race, (2) location of the arrest and court referral (Chicago vs. suburban Cook County), (3) juvenile age, (4) juvenile gender, (5) total number of previous felony and misdemeanor arrests, (6) type of offense – most serious potential charge, and (7) demeanor/attitude of the juvenile. Thus, every type of information list under "information on the juvenile" in Table 26 was included in the analysis, as well as one relevant type of information listed under "offense information" and "interview information".

Table 27 and Table 28 summarized responses to survey items addressing the six types of predicting factors included in the analysis. In several instances, the items in Table 27 were slightly modified or condensed from their original form in order to make them more amenable to analysis. Perhaps most notably, the survey items separately inquiring about the total number of previous misdemeanor arrests and the total number of previous felony arrests were condensed into a *single* measure of the total number of felony *and* misdemeanor arrests.

Outcome Variable. The juvenile interview survey included an item inquiring about the post-interview case disposition. The item included the categories "informal station adjustment with program referral", "informal station adjustment without program referral", "formal station adjustment with program referral", "formal station adjustment without program referral", and "refer to court". These categories did a sufficient job of capturing the different types of disposition alternatives available to juvenile investigators, as investigators were able to classify nearly every disposition into one of these categories.

For the analysis, the five disposition categories were condensed into a three-category outcome variable by combining the "program referral" and "no program referral" categories for both formal and informal station adjustments. This created the following three outcome categories: informal station adjustment, formal station adjustment, and refer to court.

Conducting the Analysis. As with the analyses conducted for Component One of the report, the Wald statistic and –2 log likelihood value were used to determine the independent effect of each predicting factor on the outcome. The goodness of fit statistic was used to examination how well the seven factors predict post-interview juvenile dispositions. Pages 36-38 briefly describe the statistics used for Component One. Appendix C describes the statistics in more detail.

On page 37 it is noted that, for Component One, each analysis was conducted several times, each time adding a single additional predicting factor to the original model, intended to examine an interaction between juvenile race and one of the other predicting factors. However, because the initial analysis for Component Three just examining the seven predicting factors did not yield a notable pattern of results by race, this approach was not replicated for Component Three.

Instead, results of the analysis were informally compared to responses to juvenile interview survey items asking juvenile investigators to report what they believed were the most important factors contributing to their post-interview decisions. These are the items labeled "listed factors considered in disposition decisions" in Table 27 and Table 28. This comparison provided an interesting contrast between the perceptions of juvenile investigators and statistical results.

Results – Multinomial Logistic Regression Analysis. –2 log likelihood analysis indicated that, of the seven predicting factors examined, the following four played a significant role in predicting post-interview juvenile dispositions: (1) juvenile race, (2) location of the arrest and court referral, (3) type of offense, and (4) demeanor/attitude of the juvenile. In addition, the predicting factor "total number of previous felony and misdemeanor arrests" approached significance by statistical standards. Of the four significant factors, "location of the arrest and court referral" and "demeanor/attitude of the juvenile" played the largest role in predicting dispositions.

Overall, the goodness of fit statistic indicated that the model did a good job of explaining post-interview juvenile dispositions. That is, the seven predicting factors collectively played a significant role in predicting dispositions.

Table 30 summarizes results of the analysis. Table 30 shows results for every combination of categories for each of the four predicting factors that –2 log likelihood analysis indicated played a significant role in predicting post-interview juvenile

dispositions. For the most part, comparisons for the remaining three predicting factors were non-significant.[20]

Because station adjustments are intended to divert juveniles from the court system and because formal station adjustments are intended to be a more rigorous form of station adjustment, the three categories of the outcome variable can be ordered from least punitive to most punitive as follows: informal station adjustment, formal station adjustment, refer to court. Table 30 shows the category of the predicting factor that was more likely to receive *the more punitive disposition.*

Table 30: A Summary of Multinomial Logistic Regression Results

Informal Station Adjustment vs. Refer to Court		
Predicting Factor	**Significant?**	**Category More Likely to Be Resolved Via Court Referral**
Juvenile Race		
Caucasian vs. African-American	No	N/A
Caucasian vs. Hispanic	No	N/A
African-American vs. Hispanic	No	N/A
Location of Arrest and Court Referral		
Chicago vs. Suburban Cook County	No	N/A
Offense Type		
Property Offense vs. Drug Offense	No	N/A
Property Offense vs. Person Offense	No	N/A
Property Offense vs. Other Offense	Yes	Property Offense
Drug Offense vs. Person Offense	No	N/A
Drug Offense vs. Other Offense	No	N/A
Person Offense vs. Other Offense	Yes	Person Offense
Juvenile Attitude/Demeanor		
Very Coop. vs. Somewhat Coop.	Yes	Somewhat Coop.
Very Coop. vs. Neutral	Yes	Neutral
Very Coop. vs. Somewhat/Very Uncoop.	Yes	Some./Very Uncoop.
Somewhat Coop. vs. Neutral	Yes	Neutral
Somewhat Coop. vs, Somewhat/Very Uncoop.	No	N/A
Neutral vs. Somewhat/Very Uncoop.	No	N/A

[20] The one exception to this generalization is that juveniles who had more than one previous arrest were more likely than juveniles with no previous arrests or one previous arrest to have their cases resolved through court referral as opposed to informal station adjustment.

Table 30 (cont.): A Summary of Multinomial Logistic Regression Results

Formal Station Adjustment vs. Refer to Court		
Predicting Factor	**Significant?**	**Category More Likely to Be Resolved Via Court Referral**
Juvenile Race		
Caucasian vs. African-American	No	N/A
Caucasian vs. Hispanic	No	N/A
African-American vs. Hispanic	Yes	Hispanic
Location of Arrest and Court Referral		
Chicago vs. Suburban Cook County	Yes	Chicago
Offense Type		
Property Offense vs. Drug Offense	No	N/A
Property Offense vs. Person Offense	No	N/A
Property Offense vs. Other Offense	Yes	Property Offense
Drug Offense vs. Person Offense	No	N/A
Drug Offense vs. Other Offense	Approached	Drug Offense
Person Offense vs. Other Offense	Yes	Person Offense
Juvenile Attitude/Demeanor		
Very Coop. vs. Somewhat Coop.	No	N/A
Very Coop. vs. Neutral	No	N/A
Very Coop. vs. Somewhat/Very Uncoop.	Yes	Some./Very Uncoop.
Somewhat Coop. vs. Neutral	No	N/A
Somewhat Coop. vs, Somewhat/Very Uncoop.	No	N/A
Neutral vs. Somewhat/Very Uncoop.	Yes	Some./Very Uncoop.
Informal Station Adjustment vs. Formal Station Adjustment		
Predicting Factor	**Significant?**	**Category More Likely to Be Resolved Via Formal Adjustment**
Juvenile Race		
Caucasian vs. African-American	No	N/A
Caucasian vs. Hispanic	No	N/A
African-American vs. Hispanic	Yes	African-American
Location of Arrest and Court Referral		
Chicago vs. Suburban Cook County	Yes	Suburban Cook

Table 30 (cont.): A Summary of Multinomial Logistic Regression Results

Informal Station Adjustment vs. Formal Station Adjustment		
Predicting Factor	**Significant?**	**Category More Likely to Be Resolved Via Formal Adjustment**
Offense Type		
Property Offense vs. Drug Offense	No	N/A
Property Offense vs. Person Offense	No	N/A
Property Offense vs. Other Offense	No	N/A
Drug Offense vs. Person Offense	No	N/A
Drug Offense vs. Other Offense	No	N/A
Person Offense vs. Other Offense	No	N/A
Juvenile Attitude/Demeanor		
Very Coop. vs. Somewhat Coop.	No	N/A
Very Coop. vs. Neutral	Yes	Neutral
Very Coop. vs. Somewhat/Very Uncoop.	No	N/A
Somewhat Coop. vs. Neutral	Yes	Neutral
Somewhat Coop. vs. Somewhat/Very Uncoop.	No	N/A
Neutral vs. Somewhat/Very Uncoop.	Yes	Neutral

Table 30 shows that, despite the fact that –2 log likelihood analysis indicated that, overall, juvenile race was a significant predicting factor, only two comparisons were significant. Overall, across the four factors shown in Table 30, juvenile attitude/demeanor appeared to play the largest role in predicting post-interview juvenile dispositions.

Juvenile interview surveys included an item with a list of possible factors that juvenile investigators might consider when deciding how to handle juvenile cases. These are the items labeled "listed factors considered in disposition decisions" in Table 27 and Table 28 (also see the juvenile interview survey in Appendix E). Juvenile investigators were instructed to rank the three most important factors. They were also allowed to provide their own factors.

Although the list of factors in the survey item was not identical to the factors examined in the analysis, there were some common factors, such as the seriousness of the offense, the prior history of the juvenile, and the age of the juvenile. These three factors were most often ranked in the top three by juvenile investigators, with 76.0% of juvenile investigators ranking the seriousness of the offense in their top three, 62.5% ranking the prior history of the juvenile in their top three, and 55.8% ranking the age of the juvenile in their top three.

Of these three factors, only one (the type of the offense, which provided an indirect measure of the seriousness of the offense) was significantly related to post-interview juvenile dispositions in the analysis.

The factor that the analysis indicated was most important, juvenile attitude/demeanor, was not included in the list of factors. Two juvenile investigators wrote in juvenile attitude/demeanor as a factor, even though it did not appear on the list.

Conclusions – Multinomial Logistic Regression Analysis. A multinomial logistic regression analysis was conducted to learn the impact of race on post-interview juvenile dispositions, relative to other potential factors. The following conclusions can be drawn based on the results of the analysis:

- Race was significantly related to post-interview juvenile dispositions. However, a closer examination of results indicated that the significant result arose largely on the basis of a small number of differences across racial categories and that the differences did not lead to a consistent conclusion.

- Juvenile attitude/demeanor seemed to be the predicting factor with the strongest, most consistent relationship to post-interview juvenile dispositions.

- A majority of juvenile investigators ranked the seriousness of the offense, the prior history of the juvenile, and the age of the juvenile as one of the three most important factors contributing to their post-interview disposition decision. However, the analysis indicated that only one of these three factors (seriousness of the offense) was significantly related to post-interview juvenile dispositions. While this discrepancy may be the result of how the survey item inquiring about the importance of factors was constructed (it only included several possible factors), it may also be the result of differences in the *actual* and *perceived* factors that contribute to post-interview juvenile dispositions.

VI. Conclusion

Part One and Part Two of the report were intended to achieve the same goal: to assess the level and extent of disproportionate minority representation at multiple stages and aspects of the Cook County juvenile justice system process. Part One used broad, aggregate data to obtain an overall indication of disproportionate minority representation. In some respects, Part One provided the framework of the report, while Part Two provided additional detail that would not become apparent from the broad, aggregate approach adopted in Part One.

This section presents the basic framework of results provided in Part One, then integrates the results from Part Two with that framework. The goal of this section is to develop a cohesive overall description of disproportionate minority representation across both parts of the report. On the whole, the results from Part Two corroborated the results of Part One.

After integrating the two parts of the report, this section then identifies aspects of the Cook County juvenile justice system that may warrant closer exploration to determine if processes, policies, and practices related to the aspect are unintentionally contributing to disproportionate minority confinement.

Results From Part One

Part One of the report treated the juvenile justice system process as a series of sequential stages. At each stage, decisions are made which may: (1) remove juveniles from the juvenile justice system, (2) keep juveniles in the juvenile justice system, but not move them on to the next stage (i.e., move them "deeper" into the juvenile justice system), or (3) move juveniles on to the next stage. One possible "final stage" is confinement in a secure detention or correctional facility. Figure 1 showed an abridged flowchart of the juvenile justice system process. The core analyses of Part One examined several stages of the sequential flow through the juvenile justice system included in Figure 1: (1) arrested, (2) referred to court for potential prosecution, (3) delinquency petition filed, and (4) found delinquent. Then, Part One examined several outcomes for those who are found delinquent: (1) detention, (2) probation or conditional discharge, and (3) Juvenile Division – Illinois Department of Corrections. Collectively, these stages represent the sequential flow through the juvenile justice system that results in post-trial confinement in a secure facility.

Figure 3 provides an approximate visual interpretation of the conclusion that can be drawn based on Part One for Cook County as a whole regarding the representation of Caucasians, African-Americans, and Hispanics at sequential stages that can lead to post-trial confinement. Figure 3 also provides an approximate visual interpretation of Caucasian and minority representation among those detained in the Juvenile Division of the Illinois Department of Corrections.

Figure 3: Visual Interpretation of Representation in Juvenile Justice System Stages Leading to Post-Trial Confinement – Cook County

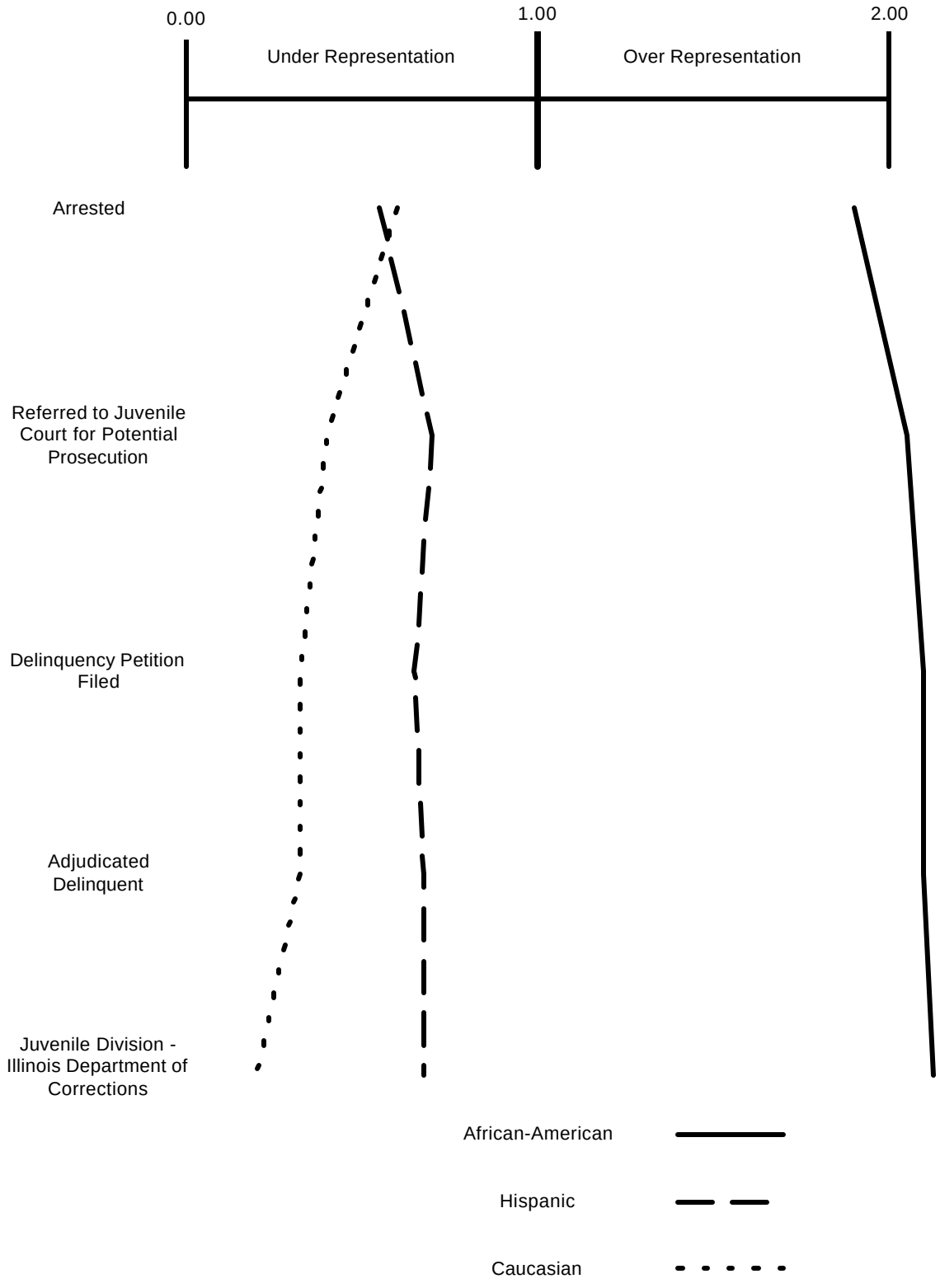


Figure 3 shows that African-American juveniles were considerably overrepresented at each of the stages that directly lead to post-trial confinement in a secure detention or correctional facility and, as a result, were overrepresented among those in the Juvenile Division of the Illinois Department of Corrections. In addition, Figure 3 provides some suggestion of how African-American juveniles came to be overrepresented at each of the stages that directly lead to post-trial confinement. Specifically, it is worth noting in Figure 3 that, on the whole, the three lines are not radically different. They are all fairly straight, with the African-American and Hispanic lines extending slightly in the direction of overrepresentation and the Caucasian line extending slightly in the direction of underrepresentation.

However, the three lines start at radically different places. This suggests that the first stage in Figure 3, the arrest stage, played a large role in contributing to overrepresentation of African-Americans. Subsequent stages did not minimize the overrepresentation of African-Americans. Instead, later stages contributed to overrepresentation of African-Americans, but to a lesser extent than the arrest stage.

Because of the pattern of results shown in Figure 3, African-Americans were also overrepresented among those who received the other outcomes in addition to sentences to the Juvenile Division of the Illinois Department of Corrections examined in Part One: confinement in a juvenile detention center, and probation or conditional discharge sentences.

Part One also examined representation in the three outcomes among those who were found delinquent. In terms of Figure 3, this amounted to just examining the lines from found delinquent to Juvenile Division – Illinois Department of Corrections. Of those who were found delinquent in Cook County as a whole, Caucasians were considerably underrepresented among those incarcerated and overrepresented among those sentenced to probation or conditional discharge. African-Americans and Hispanics were approximately equally represented among those incarcerated or sentenced to probation or conditional discharge. This result was not contingent upon the type of offense that the juvenile committed. This suggests that sentencing patterns differ by race.

Finally, Part One of the report examined several aspects of the juvenile justice system that prevent juveniles from moving "deeper" into the juvenile justice system, either by removing them from the juvenile justice system or by keeping them in the juvenile justice system, but not moving them on to the next stage. Figure 1 showed a number of these aspects. From Figure 1, Part One examined: (1) issued a station adjustment, (2) charges dropped, (3) issued a probation adjustment, and (4) continued under supervision. Caucasians and Hispanics in Cook County as a whole were overrepresented among those who had charges dropped, were issued a probation adjustment, or were continued under supervision, while African-Americans were underrepresented. The opposite pattern emerged for those issued a station adjustment, as African-Americans were overrepresented while Caucasians and Hispanics were underrepresented.

Overall, Part One found a pattern of results indicating that, because so many African-Americans entered into the juvenile justice system at the arrest stage, African-American juveniles were subsequently overrepresented at every stage leading directly to post-trial confinement and, eventually, were overrepresented among those receiving post-trial confinement. While stages subsequent to the court referral stage contributed less to African-American overrepresentation, it was still the case that African-Americans tended to be less likely to be removed or diverted from the juvenile justice system after being referred to court and, once found delinquent, had a greater chance than Caucasians of being incarcerated.

Part Two: Converging Results

Overall, results from the three components included in this document converge with results from Part One of the report. Other results from Part Two provide additional insights. Yet, several results from Part Two are inconsistent with Part One. The following subsections describe notable results from each of the three components of Part Two, with an emphasis on linking the results with Part One or noting inconsistencies from Part One.

Component One: Individual-Level Analyses

The individual-level analyses conducted for Component One examining information on a sample of juveniles referred to court yielded two results that seemed to be consistent with, and hence, corroborate results from Part One.

- Analysis One found that there was a tendency for Caucasians and Hispanics to progress further in the juvenile justice system than African-Americans. Analysis One essentially examined progress through the system after juveniles have been referred to court through sentencing. Figure 3, a visual interpretation of results from Part One, showed that these stages contribute less to overrepresentation of African-Americans in Cook County than earlier stages (arrest and court referral). In this respect, Analysis One corroborated this finding from Part One and demonstrated that, for at least one sample of juveniles, Caucasians and Hispanics can even be more likely than African-Americans to progress further through the system once they are referred to court.

- Analysis Two found that there was a tendency for Caucasians to be more likely than African-Americans to receive a probation sentence than to be incarcerated. On the other hand, Analysis Two found that there was a tendency for African-Americans to be more likely to be incarcerated than to receive a probation sentence. Both of these patterns of results were not contingent upon the type of offense committed by the juvenile. These results seem consistent with results from Part One of the report, which indicated that, of juveniles found delinquent in Cook County, Caucasians were overrepresented among those sentenced to probation and considerably underrepresented among those incarcerated.

The first bullet point suggests that earlier, law enforcement-related stages of the juvenile justice system play a large role in contributing to subsequent disproportionate minority confinement. The second bullet point suggests that, after juveniles are found delinquent, African-Americans are more likely to be incarcerated.

The analyses conducted for Component One also revealed some disparities between Part One results and Part Two results. The following result from Analysis Two cannot be reconciled with Part One of the report:

- Part One of the report found that Caucasians and Hispanics were considerably more likely than African-Americans to have their charges dropped after being referred to court and to receive two outcomes initiated in the court system that prevent them from moving "deeper" into the system: receiving a probation adjustment and having their case continued under supervision. However, Analysis Two also examined dropped charges and various forms of diversion and supervision and did not find an indication that Caucasians and Hispanics were more likely to receive these outcomes.

Component Two: Surveys of Juvenile Justice System Decision-Makers

For Component Two, surveys that included items regarding perceptions of racial biases and issues in the Cook County juvenile justice system were distributed to several types of juvenile justice professionals. Perhaps the most interesting results were those indicating differences in perceptions by profession. Differences by profession, in some respects, corroborated results from Part One.

- Significantly larger percentages of probation officers and public defenders compared to patrol officers and juvenile investigators strongly agreed or agreed that minority juveniles are treated differently from Caucasian juveniles in the juvenile justice system.

- Significantly larger percentages of patrol officers and/or juvenile investigators compared to probation officers and public defenders were more likely to strongly agree or agree that, compared to Caucasian juveniles, minority juveniles are less willing to acknowledge guilt, more likely to have a negative attitude toward authority, and more likely to use drugs.

It is conceivable that the perceptions and attitudes of juvenile justice system decision-makers contribute to disproportionate minority representation at earlier, law enforcement related stages of the juvenile justice system. As such, these results seem to tie in to results from Part One indicating that earlier, law enforcement related decisions play a large role in contributing to subsequent disproportionate minority confinement.

Component Three: Juvenile Investigator Interview Surveys

Responses to short surveys completed during a two-week period by juvenile investigators after they interviewed juveniles were used in a multinomial logistic regression analysis examining the importance of race relative to other factors in predicting post-interview disposition. The results to this analysis, in one respect, seemed linked to the results of the surveys distributed for Component Two.

- While results to the analysis did not indicate a notable pattern of results regarding the predictive value of race, they did consistently indicate that juvenile attitude/demeanor was the factor with the strongest relationship to post-interview juvenile dispositions.

This result is potentially interesting because if minority juveniles are perceived as being more uncooperative and negative than Caucasian juveniles, then juvenile attitude/demeanor could be a factor that indirectly results in differential treatment of juveniles based on race. Results from Component Two indicated that patrol officers, but not juvenile investigators (i.e., those who conduct juvenile interviews) were more likely than other professions to assign negative attitudes to minority juveniles.

Directions for Future Research

Part One and Part Two of this report collectively provide an examination of the level and extent of disproportionate minority representation in Cook County. To know the level and extent of disproportionate minority representation is to understand what is occurring, but not why it is occurring. The next research step may be to examine areas or aspects of the juvenile justice system that seem to be contributing to disproportionate minority representation. This report identifies areas or aspects of the juvenile justice system that may warrant closer exploration:

- Processes for determining which juveniles are taken into custody and arrested.
- Processes for determining which juveniles are referred to court.
- Processes for determining which juveniles are issued probation adjustments and which juveniles have their cases continued under supervision.
- Processes for determining sentences that juveniles receive, in particular for determining which juveniles receive probation as opposed to incarceration.

This report suggests that these aspects of the juvenile justice system may be contributing to disproportionate minority confinement. As such, it may be useful to closely these aspects of the juvenile justice system, including policies and practices that determine how decisions are made.

This is not to suggest that juvenile justice professionals responsible for making decisions related to these aspects are discriminating against minorities. It is to suggest that perhaps processes, policies, and practices related to these aspects are unwittingly placing minority juveniles at a disadvantage.

Appendix A

Cook County Demographic Information

This appendix provides a brief description of Cook County demographics, intended for readers who are unfamiliar with Cook County or who would like additional contextual information that can aid in interpreting Part One and Part Two of the report. For the most part, the demographic description is confined to the years 1996-2001 as, across Part One and Part Two of the report, data was used pertaining to these years (although no data was used directly pertaining to 2000). Part One of the report focused exclusively on 1996-1999. The family folder component (Component One) of Part Two focused on 1998-1999, while the surveys utilized for Component Two and Component Three were collected during 2001.

Cook County

Cook County is located on the eastern border of Illinois, towards the northern part of the state (one Illinois county separates Cook County from Wisconsin, the state immediately north of Illinois). Cook County is one of Illinois' larger counties. Cook County encompasses an area of 945.7 square miles, making it Illinois' 6^{th} largest county.

Cook County also has by far the largest population of any Illinois County. Using 2000 U.S. Census Bureau data as an example, Cook County had an estimated total population of 5,376,741, whereas DuPage County, the second most populous Illinois county, had an estimated total population of 904,161. As a result of this large population relative to other Illinois counties, Cook County is also by far the most densely populated Illinois county. Based on 2000 U.S. Census Bureau data, there were an estimated 5,684 persons per square mile in Cook County.

Cook County has been the most populous and most densely populated Illinois county for a long period of time. Cook County has consistently been the most populous and densely populated Illinois county primarily because the City of Chicago is located in Cook County. As a major urban metropolitan area, Chicago plays a large role in determining the Cook County economy and, related to this, where individuals locate themselves within Cook County.

Even though Chicago plays a large role in dictating overall Cook County demographics, there are still distinct differences in Chicago demographics and demographics for the remainder of Cook County (labeled suburban Cook County throughout the remainder of Appendix A). Thus, an attempt is made, for the basic demographic data reported below, to distinguish between Cook County as a whole and Chicago (although data for Chicago was not always available). This enables the reader to see the percentage of the Cook County total accounted for by Chicago.

The following four sections briefly describe, for Chicago, Cook County as a whole, and Illinois as a whole: (1) the juvenile population, (2) racial demographics, (3) economic demographics, and (4) basic crime levels. This demographic data shows that, relative to Illinois as a whole, Cook County is more racially disparate, has a larger percentage of indigent individuals, and experiences more crime.

Similarly, when data on Chicago is available, it is possible to examine the percentage of the Cook County total attributed specifically to Chicago. The remaining percentage not attributed to Chicago can be attributed to suburban Cook County. Comparisons between Chicago and Cook County as a whole show that, relative to suburban Cook County, Chicago is more racially disparate, has a larger percentage of indigent individuals, and experiences more crime.

Juvenile Population

Table A-1 shows the size of the juvenile population (ages 10-16) from 1996-2000 for Chicago, Cook County as a whole, and Illinois as a whole. Table A-1 also shows the percentage of the total population for that year accounted for by juveniles ages 10-16. For example, the percentage for Cook County for 1996 represents the percent of the total 1996 Cook County population who were 10-16.

The ages 10-16 were selected because, in Illinois, an individual must be 10 years old in order to be detained in a secure facility (and, hence, contribute to disproportionate minority confinement) and, after the age of 16, an individual is no longer considered a juvenile. 17 year olds who are arrested for criminal offenses have their cases processed in adult criminal court.

Table A-1: Juvenile Populations Ages 10-16, 1996-2000

Year	Chicago	Cook County	Illinois
1996	249,413 (8.9%)[a]	494,974 (9.5%)	1,199,355 (10.0%)
1997	247,192 (8.8%)	493,806 (9.5%)	1,202,435 (10.0%)
1998	246,661 (8.8%)	493,307 (9.5%)	1,204,448 (10.0%)
1999	247,972 (8.9%)	494,031 (9.5%)	1,208,336 (10.0%)
2000	277,614 (9.6%)	527,450 (9.8%)	1,258,314 (10.1%)

a: Percentages reflect the percentage of the total Chicago, Cook County, or Illinois population for that year who are 10-16.

Population by Race and Ethnicity

Table A-2 shows estimated overall 2000 populations for Chicago, Cook County, and Illinois by race and ethnicity, using U.S. Census Bureau data. These estimates provide an indication of the percentage of Cook County juveniles in various racial and ethnic groups, as percentages in the overall population tend to mirror percentages for specific age groups.

In order to understand the populations shown in Table A-2, it helps to understand how the U.S. Census Bureau classifies race and ethnicity. The U.S. Census Bureau treats race and ethnicity as separate categories. The U.S. Census Bureau race categories are White, African-American, American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander. Ethnicity categories are Hispanic vs. non-Hispanic. Thus, according to this system, one could be classified as, for example, a White Hispanic or a Black non-Hispanic.

Although the U.S. Census Bureau classification scheme makes it possible for one to be White and Hispanic, or African-American and Hispanic, when individuals or agencies make classifications by race/ethnicity, they tend to use distinct non-overlapping categories. Individuals are genderally classified as White or African-American or Hispanic. These categories are based largely on physical cues, such as skin color.

In general, those who are commonly considered to be "White" by individuals or agencies are classified into the "Non-Hispanic White" U.S. Census Bureau category. Those who are commonly considered to be "African-American" by individuals or agencies are classified into the "Non-Hispanic African-American" or "Hispanic African-American" U.S. Census Bureau categories. Those who are commonly considered to be "Hispanic" by individuals or agencies are classified into the "Hispanic White" U.S. Census Bureau category. The U.S. Census Bureau categories that coincide with common societal perceptions of "White", "African-American", and "Hispanic", are listed in bold in Table A-2.

Table A-2: Overall 2000 Populations by Race and Ethnicity

Racial/Ethnic Category	Chicago	Cook County	Illinois
Non-Hispanic:	2,142,372 (74.0%)[a]	4,305,001 (80.1%)	10,889,031 (87.7%)
White[b]	**907,166 (31.3%)**	**2,558,709 (47.6%)**	**8,424,140 (67.8%)**
African-American	**1,053,739 (36.4%)**	**1,390,448 (25.9%)**	**1,856,152 (14.9%)**
American Indian/Alaska Native	4,253 (0.1%)	6,754 (0.1%)	18,232 (0.1%)
Asian	124,437 (4.3%)	257,843 (4.8%)	419,916 (3.4%)
Native Hawaiian/Other Pacific Islander	972 (0.03%)	1,543 (0.03%)	3,116 (0.03%)
Other Race	4,331 (0.1%)	7,291 (0.1%)	13,479 (0.1%)
Two or More Races	47,474 (1.6%)	82,413 (1.5%)	153,996 (1.2%)
Hispanic:	753,644 (26.0%)	1,071,740 (19.9%)	1,530,262 (12.3%)
White	**308,149 (10.6%)**	**467,051 (8.7%)**	**701,331 (5.6%)**
African-American	**11,270 (0.4%)**	**14,913 (0.3%)**	**20,723 (0.2%)**
American Indian/Alaska Native	6,037 (0.2%)	8,742 (0.2%)	12,774 (0.1%)
Asian	1,537 (0.1%)	2,327 (0.04%)	3,687 (0.03%)
Native Hawaiian/Other Pacific Islander	816 (0.03%)	1,018 (0.02%)	1,494 (0.01%)
Other Race	388,872 (13.4%)	523,879 (9.7%)	709,223 (5.7%)
Two or More Races	36,963 (1.3%)	53,810 (1.0%)	81,020 (0.7%)
TOTAL	2,896,016	5,376,741	12,419,293

a: Percentages reflect the percentage of the total Chicago, Cook County, or Illinois population who are classified in the racial/ethnic category.

b: Racial groups listed in bold reflect categories that are commonly identified as White (Non-Hispanic White), African-American (Non-Hispanic African-American and Hispanic African-American), and Hispanic (Hispanic White).

Table A-2 shows that there are large African-American and Hispanic populations in Cook County and that, of the total 2000 Cook County African-American and Hispanic populations, a notable majority resided in Chicago. For example, of the 1,390,448 Non-Hispanic African-Americans in Cook County, 1,053,079 resided in Chicago (75.7%). On the whole, Chicago has larger minority populations than suburban Cook County.

In addition, Cook County accounts for a notable majority of the overall minority population in Illinois. For example, of the 1,856,152 Non-Hispanic African-Americans in Illinois, 1,390,448 reside in Cook County (74.9%).

Economy

Economic information plays a large role in defining the nature and character of a county. One basic economic indicator is the extent to which the population lives in poverty. Because Chicago is a major metropolitan area, Cook County is home to a large white-collar middle class population. However, the three tables below show that Cook County (and, when data was available, Chicago) also tends to have a sizable number of indigent individuals.

Table A-3 shows the number and percentage of minors ages 0-17 living in poverty (data was not available specifically for the age group 10-16) in Cook County and Illinois. Table A-4 shows the number of unemployed individuals and the percentage of the workforce that is unemployed in Chicago, Cook County, and Illinois. Table A-5 shows the number of individuals ages 0-19 living in families receiving public assistance (again, data was not available specifically for the age group 10-16).

Table A-3: Number and Percentage of Minors Ages 0-17 Living in Poverty

Year	Cook County	Illinois
1997	311,294 (22.7%)	564,675 (17.5%)
1998	273,245 (20.0%)	498,804 (15.4%)
1999	258,210 (18.7%)	480,853 (15.0%)

Table A-3 shows that, relative to Illinois as a whole, a larger percentage of the population of minors ages 0-17 in Cook County were living in poverty. On average, across the three years from 1996-2001 for which data was available, Cook County accounted for approximately 55% of the minors ages 0-17 living in poverty in Illinois.

Table A-4: Total Number of Unemployed Individuals, and Percentage of Workforce Unemployed

Year	Chicago	Cook County	Illinois
1996	87,612 (7%)	146,092 (6%)	325,734 (5%)
1997	78,977 (6%)	132,114 (5%)	291,921 (5%)
1998	74,434 (6%)	125,818 (5%)	278,172 (4%)
1999	72,695 (5%)	122,645 (5%)	273,630 (4%)
2000	72,696 (5%)	125,430 (5%)	279,439 (4%)
2001	72,697 (5%)	157,274 (6%)	342,573 (5%)

Table A-4 shows that the percentage of the total workforce in Chicago and Cook County who are unemployed tended to be 1% or 2% higher than the percentage in Illinois as a whole. On average, from 1996-2001, Cook County accounted for approximately 45% of those unemployed in Illinois.

Table A-5: Total Number of Individuals Ages 0-19 Living in Families Receiving Public Assistance

Year	Cook County	Illinois
1996	310,445 (22.0%)	467,988 (14.1%)
1997	267,008 (18.8%)	396,221 (11.8%)
1998	233,402 (16.5%)	337,421 (10.1%)
1999	183,093 (12.9%)	248,178 (7.4%)
2000	146,563 (10.4%)	191,001 (5.7%)
2001	110,233 (7.8%)	143,296 (4.3%)

Table A-5 shows that, relative to Illinois as a whole, a larger percentage of individuals ages 0-19 in Cook County were living in families receiving public assistance. From 1996 to 2001, the percentage of individuals ages 0-19 living in poverty in Illinois accounted for by Cook County tended to increase, from 66.3% in 1996 to 76.9% in 2001.

Crime

Crime levels in Cook County tend to be higher than those in other Illinois counties. Table A-6 shows the total number of arrests, across all ages, for violent index and property index offenses in Chicago, Cook County, and Illinois as a whole from 1996-2001. See Table 6 on page 26 for a list of violent index and property index offenses.

Table A-6: Number of Arrests for Violent Index and Property Index Offenses

Year	Chicago		Cook County		Illinois	
	Violent	Property	Violent	Property	Violent	Property
1996	12,685	46,638	16,591	65,231	31,967	108,938
1997	11,244	45,148	15,144	64,792	30,618	107,453
1998	10,176	34,793	14,222	53,007	29,413	94,283
1999	11,291	41,094	14,997	59,045	29,091	97,509
2000	10,001	39,933	13,373	59,956	27,264	94,672
2001	10,386	37,864	13,732	55,441	26,919	92,666

Table A-6 shows that a significant majority of the violent index and property index arrests in Cook County occurred in Chicago. Approximately 75% of Cook County violent index arrests and 70% of Cook County property index arrests from 1996-2001 occurred in Chicago. In addition, a significant percentage of the violent index and property index arrests in Illinois occurred in Cook County. Approximately 50% of Illinois violent index arrests and 60% of Illinois property index arrests occurred in Cook County.

Appendix B

Family Folder Data Collection Instrument

Case ID Number:_____ Family Folder Number:_____

Petition Number_____ Date of Corresponding Offense__/__/__

OFFENSE CHARACTERISTICS

Legal classification of the current offense_____

Was a weapon used? 1=Yes 2= No 3=Don't Know

If yes, type of weapon_____

Co-Offenders? 0=None 1=One 2=Two 3=More

If co-offenders, did offender have leadership role? 1=Yes 2=No 3=Don't Know

Victims? 1=Yes 2= No 3=Don't Know

If yes, number of victims_____

Victim 1_____ Victim 2_____ Victim 3_____

Codes: 1=Immediate Family 2=Relative 3=Aquiantance 4=Stranger 5=Not Sure

Extent of victim injury: Victim 1_____ Victim 2_____ Victim 3_____

Codes: 0 =None, 1=Minor, 2=Medical Treatment, 3=Hospitalization, 4=Fatal

Monetary damages/losses? 1=Yes 2=No 3=Don't Know

If yes, how much/what was damaged/lost?_____

Were drugs involved? 1=Yes 2=No 3=Don't Know How?_____

What type?_____

Was alcohol involved? 1=Yes 2=No 3=Don't Know How?_____

LEGAL BACKGROUND

Number of prior arrests_____

Arrest charges: Violent:_____ Property:_____ Drug:_____

Weapons:_____ Other: _____

Number of prior adjudications: _____

Adjudication charges: Violent:_____ Property:_____ Drug:_____

Weapons:_____ Other: _____

Number of prior stays in JTDC: _____

Number of prior incarcerations in IDOC: _____

Most serious prior offense_____Date __/__/__

Most recent prior offense_____Date __/__/__

Date of last court appearance __/__/__

At the time of the offense was the youth (circle all that apply):

1=In Detention

2=On Home Confinement (Not ELMO)

3=On ELMO

4=On Probation

5=On Supervision

6=Wanted On Warrant

7=Ward Of The Court

DEMOGRAPHICS

D.O.B. __/__/__ Age_____

Race 1=AA 2=HI 3=WH 4=ASIAN 5=OTHER/MIXED/UNKNOWN

Gender 1=Male 2=Female

Living arrangement 1=Both Natural Parents

2=Natural Mother Only

3=Natural Father Only

4=Natural Mother And Father Substitute

5=Natural Father And Mother Substitute

6=Adoptive Parent(S)

7=Relative

8=Foster Parent(s)

9=Institution

10=Other_____

11=Unknown

Amount of family income $_____

Source of income 1=One Adult Employed Full-Time

2=Two Adults Employed Full-Time

3=Offender Employed Full-Time

4=Offender Employed Part-Time

5=Public Aid

6=Public Aid And Social Security

7=Public Aid And Employment

8=Social Security

9=Social Security And Employment

10=Child Support And Alimony

11=Child Support/Alimony/Employment

12=Other_____

13=Unknown

School attendance 1=Attends Daily

2=Attends 3-4 Days Per Week

3=Attends 1-2 Days Per Week

4=Does Not Attend At All

5=Currently Suspended

6=Currently Expelled

7=Does Not Apply

8=Unknown

Current school status 1=Enrolled In A Regular Program

2=Enrolled In A Special Program

3=Enrolled In A Regular Program And Working

4=Enrolled In A Special Program And Working

5=Behavior Problems

6=Learning Disabilities

7=Not Enrolled In School

8=Not Enrolled In School But Working Full/Part-Time

9=Other_____

10=Unknown

Last grade enrolled in school _____

Academic performance 1=Good (A's-B's) 2=Fair (C's) 3=Bad (D's-F''s)

Any known physical abuse in family/domestic violence? 1=Yes 2=No 3=Don't Know

Physical abuse of offender 1=Yes 2=No 3=Don't Know

By offender 1=Yes 2=No 3=Don't Know

Sexual abuse in family? 1=Yes 2=No 3=Don't Know

Of offender 1=Yes 2=No 3=Don't Know

By offender 1=Yes 2=No 3=Don't Know

Substance abuse in family? 1=Yes 2=No 3=Don't Know

If yes, by whom? 1= Offender 2=Mother 3=Father 4=Other Family Member

Criminal history in family? 1=Yes 2=No 3=Don't Know

_____ If yes, by whom? 1=Mother 2=Father 3=Other Family Member

CASE CHARACTERISTICS

Was youth screened for detention? 1=Yes 2=No

If yes, what was the outcome of that screening?

1=Detention 2=Non-secure custody 3=Release

If placed in JTDC or non-secure custody, what was the outcome of the detention hearing?

1=Juvenile Sent/Returned To Detention Center

2=Home Confinement (Not ELMO)

3=Electronic Monitoring

4=Released To Parental/Guardian Custody Without Home Confinement

5=Other_____

Type of representation: 1=Public Defender

2=Private Counsel

3=No Representation

4=Unknown

Persons present at court hearing_____

Demeanor/appearance in court_____

_____

Was an arraignment hearing held? 1=Yes 2=No

What was the result of the arraignment hearing?
1=Assigned To Geographic Calendar For Trial
2=Charges Dropped
3=Plea Accepted, Juvenile Found Guilty
4=Other_____

If plea was accepted, what was the sentence?
1=Probation/Conditional Discharge
2=Placed in Detention Center
3=Residential Placement
4=Placed with DCFS
5=Ordered to Substance Abuse Assessment
6=IDOC placement
7=Ordered to Counseling/Mental Health Treatment Program
8=Restitution
9=Community Service
10=Other_____

Type of representation: 1=Public Defender

2=Private Counsel

3=No Representation

4=Unknown

Persons present at court hearing_____

Demeanor/appearance in court_____

_____

Was a trial held on the charges alleged in the delinquency petition? 1=Yes 2=No

What was the result of the trial?
1=Continuance (no ruling)

2=Continued Under Supervision

3=Charges Dropped

4=Acquitted

5=Found Guilty, Sentencing Hearing Ordered

6=Found Guilty, Sentence Ordered by Court

7=Other_____

Type of representation: 1=Public Defender

2=Private Counsel

3=No Representation

4=Unknown

Persons present at court hearing_____

Demeanor/appearance in court_____

_____

Was a separate sentencing hearing held? 1=Yes 2=No

What sentence resulted from either the sentencing hearing of a combined trial/sentencing hearing?

1=Probation/Conditional Discharge
2=Placed in Detention Center
3=Residential Placement
4=Placed with DCFS
5=Ordered to Substance Abuse Assessment
6=IDOC placement
7=Ordered to Counseling/Mental Health Treatment Program
8=Restitution
9=Community Service
10=Other_____

Type of representation 1=Public Defender

2=Private Counsel

3=No Representation

4=Unknown

Persons present at court hearing_____

Demeanor/appearance in court_____

_____

Appendix C

Technical Appendix Describing Statistical Analyses

The purpose of this appendix is to provide additional background and information on the statistical analyses that were used in this document to draw conclusions. As such, this appendix is partially intended for the reader who, prior to reading this document, was unfamiliar with one or more of the statistical analyses.

In addition to providing background and information on the statistical analyses, this appendix also provides details on how the analyses were conducted. Thus, this appendix is also intended for readers who are familiar with the statistical analyses and are interested in knowing how the analyses were conducted.

Multinomial Logistic Regression

Multinomial logistic regression was used in Component One of this document to determine the importance or race in predicting case outcomes for juveniles who have been referred to court. Similarly, multinomial logistic regression was used in Component Three to determine the importance of race in predicting post-interview decisions made by juvenile investigators.

There are a number of statistical approaches that fall under the umbrella of *regression* analyses. Each of these approaches is loosely or directly based on the concept of *correlation.* When two variables are correlated, they increase or decrease together. For example, height in inches is likely strongly correlated with shoe size. If one were to record the height and shoe size of 200 people, one could calculate a simple correlation statistic that demonstrates that people with larger shoe sizes tend to be taller.

Regression analyses tend to expand on the concept of correlation in two ways: (1) they use correlation to *predict* a variable, and (2) they often examine the importance of *two or more* variables in predicting another variable. For example, imagine that one wants to predict one's income. One could conduct a regression analysis that examines the importance of two unique variables in predicting income, perhaps parental income and one's IQ. The two variables must be unique because if they are strongly correlated with each other, then they may "offset" each other or one of the variables may "dominate" the other and the results of the analysis will not yield a true picture of the impact that each of the two variables have in predicting income. For the example, there may be a small, but likely not exceedingly strong relationship between parental income and one's IQ, so they could conceivably both be used in a regression analysis used to predict income.

Ideally, in order to conduct a regression analysis, it must be assumed that the variables included in the analysis *lead to* or *result in* the level of the variable being predicted. One must be able to conclude that levels of parental income and IQ lead to a particular income. This often implies a separation in time in the variables being used to predict and

the variable being predicted, with the variables being used to predict occurring earlier in time.

Regression analyses can be used for more than one purpose. They can be used to find the best combination of variables that predict another variable. Or, they can be used to determine the importance of an available set of variables in predicting another variable, without a primary concern for finding the best possible combination of variables.

When one conducts a regression analysis, the output of the analysis provides a *model* based on all the variables included in the analysis. The model essentially assigns a coefficient to each of the variables being used to predict. The coefficients provide a weight, which aids in providing an indication of the importance of the variable as a predictor. The coefficient is the unique importance of the variable, independent from the importance of all the other predicting variables used in the analysis. Larger weights tend to be more important in predicting the outcome.

The output also provides a *significance test* for each variable being used to predict. The significance test determines, using a threshold based on probability, whether the coefficient is large enough to presume that the variable plays anything more than a negligible role as a predictor. In essence, significance tests determine whether a weight is large enough to be classified as important.

Types of Regression Analyses

All types of regression analyses have the general characteristics described above. One important factor that distinguishes between different types of regression analyses is the nature of the variable that is being predicted. If the variable being predicted includes a wide spectrum of numerical possibilities that can easily be discerned based on their magnitude (i.e., one can tell whether one possibility is larger or smaller than another possibility), then one would conduct a regression analysis that is commonly referred to as a *multiple regression* analysis. If one were trying to predict income, then one would conduct a multiple regression analysis.

If the variable being predicted is not numerical, but is instead composed of distinct categories, then one would choose to conduct a *logistic regression* analysis. For example, if one were interested in learning the impact of a number of variables in predicting political affiliation (Republican vs. Democrat) then one would use a logistic regression analysis.

In some instances, one may be interested in predicting membership in more than two categories (for example Republican vs. Democrat vs. Libertarian). When one is trying to predict more than two categories, one uses an expansion of logistic regression known as *multinomial logistic regression*. Such was the case for the analyses in this document, as the variables being predicted included three of four categories.

Interpreting Multinomial Logistic Regression Analyses

Although logistic regression and multinomial logistic regression are conceptually based on the concept of correlation, technically, the analyses use *odds and probabilities* and the logarithm of odds to determine coefficients. Results of multinomial logistic regression analyses can be interpreted using several statistics, each of which are based on odds and probabilities.

The two primary statistics used in this document were the *Wald statistic* and the *–2 log likelihood value*. Both of these statistics can be used to determine the impact that individual variables have in predicting membership in a category.

The Wald statistic is calculated after a coefficient is determined based on odds and probabilities. It divides the coefficient by an estimate of degree of potential error that may have been associated with the calculation of the coefficient. This number is then considered in light of significance thresholds.

When one is interested in using multinomial logistic regression to find the best combination of variables that predict membership in particular categories, then one would examine *goodness of fit* statistics. Goodness of fit statistics provide a measure that enables one to determine how well the variables collectively predict membership in the categories being examined. For multinomial logistic regression, a commonly used goodness of fit statistic is the *log likelihood*. The formulas used to calculate the log likelihood can be modified to calculate –2 log likelihood for each variable being used to predict membership. –2 log likelihood provides information on the quality of the overall model, with the exclusion of one variable. By examining the extent to which the model suffers by excluding the variable, one can determine the importance of the variable as a predictor.

Preliminary Work

Most statistical analyses have a set of assumptions or desirable criteria which, if not fulfilled, can sacrifice the quality and accuracy of the analysis. Multinomial logistic regression is no exception to this. Readers familiar with multinomial logistic regression may be interested in knowing that research staff examined whether each multinomial logistic regression analysis conducted for this document met many of these assumptions.

The following assumptions were examined: (1) ratio of cases to variables, (2) linearity in the logit, (3) absence of multicollinearity, (4) absence of outliers in the solution, and (5) independence of errors. In order to examine linearity in the logit, absence of multicollinearity, and absence of outliers in the solution, preliminary statistics were calculated. Procedures used to examine whether each of the assumptions were met were based on recommendations provided in a multivariate statistics textbook, *Using Multivariate Statistics* by Barbara G. Tabachnick and Linda S. Fidell (2001).[21]

[21] Tabachnick, B.G., & Fidell, L. S. (2001). Using Multivariate Statistics. Allyn & Bacon: Needham Heights, MA.

Multinomial logistic regression has a number of additional assumptions that were not explicitly examined, because it was obviously apparent that the analysis did not violate the assumption.

Conducting the Multinomial Logistic Regression Analyses

One purpose of multinomial logistic regression analysis is to determine the importance of a number of variables in predicting membership in three or more categories. In the output of multinomial logistic regression, Wald statistics are listed based on combinations of two of the three categories. So, if the categories are Democrat, Republican, and Libertarian, then the output might use Democrat as a *reference category* and the output would list results comparing Democrat to Republican and Democrat to Libertarian. To obtain comparisons between Republicans to Libertarians one would have to manipulate the reference category.

Similarly, if a variable being used to predict categories has three or more distinct categories then results are reported comparing two categories, using a reference category. So, if one uses race (Caucasian vs. African-American vs. Hispanic) to predict political affiliation, then one of the three racial categories would be used as a reference category. So, for example, if African-American and Democrat are the reference categories, then the output would provide four Wald statistics: (1) whether being Caucasian vs. African-American impacts the likelihood of identifying as a Democrat vs. a Republican, (2) whether being Caucasian vs. African-American impacts the likelihood of identifying as a Democrat vs. a Libertarian, (3) whether being Hispanic vs. African-American impacts the likelihood of identifying as a Democrat vs. a Republican, and (4) whether being Hispanic vs. African-American impacts the likelihood of identifying as a Democrat vs. a Libertarian.

It is also possible to use variables that do not include a small number of discrete categories in multinomial logistic regression analyses. For example, age includes a relatively large number of values (1 year old, 2 years old, etc.), each of which has a distinct magnitude (2 year olds are older than 1 year olds). One could use age to predict political affiliation. In such instances, the variable would be entered as a *covariate*, or a variable that examines whether increases or decreases in the variables are related to the categories being predicted.

Cluster Analysis

Cluster analysis was used in Component Two of this document to classify survey respondents (juvenile justice professionals) according to the racial composition of their caseload.

Cluster analysis is a statistical analysis that is used to classify cases into groups, or clusters, based on how similar or different they are on a set of variables. A case refers to

every individual person or object that one has data on. In the context of this document, a case would be a single survey respondent.

As an example, imagine that a market researcher wants to classify people in accordance with their preference for snack foods, so that the researcher can determine the type of people to target for particular brands of snack foods. The market researcher distributes a survey assessing preferences for three types of snacks: salty, sweet, and healthy. Cluster analysis could be used to classify people as "salty snackers", "salty and healthy snackers", etc. Once people are classified into these groups, the market researcher can look at other variables, such as age, race, etc., to determine if different types of snackers share certain demographic characteristics.

Cluster analysis uses a concept known as *squared Euclidean distance* to determine how similar or different particular cases are on the variables of interest. Table C-1 shows a simplified example of how squared Euclidean distance is calculated.

Table C-1: Squared Euclidean Distance Example

	Variable 1	**Variable 2**
Person 1 Scores	100	6
Person 2 Scores	150	8
Difference Person 1 and Person 2	50	2
Squared Difference	2500	4
Squared Euclidean Distance = 2500 + 4 = 2504		

One problem with squared Euclidean distance is that variables that are measured differently will have a different level of impact on the final squared Euclidean distance value. The example in Table C-1 shows how this can occur, as Variable 1 contributed 2500 to the squared Euclidean distance, whereas Variable 2 contributed only 4. For this reason, prior to calculation, variables used to calculate squared Euclidean distances are often *standardized*, or converted such that they are measured on the same scale. The variables used in Component Two of this document were standardized.

Clustering Approaches

Once squared Euclidean distances are calculated for each combination of two cases, they are used to combine the cases into clusters. There a number of different methods for combining cases into clusters. Many of the methods start with each case being separate and, at each stage of the analysis, combine cases into bigger and bigger clusters, with the analysis terminating when every case is included in a single cluster. One notable difference between types of clustering methods is that some methods combine cases based on how similar they are (taking similar cases and combining them), while others combine cases by examining how different the cases are, and excluding cases that are too different from the cluster.

For the cluster analysis used in Component Two, there was no theoretical or logical reason to use a particular method. Three methods were used: (1) the average linkage between groups method, (2) the centroid method, and (3) the Ward's method. The three methods use different calculations to combine cases based on how similar they are. The three methods yielded similar results.

Cluster analysis does not include a significance test. Moreover, because the analysis does not terminate until all the cases form one large cluster, results of a cluster analysis must be examined to determine how many clusters represent the data. Logically, this is the point at which the clusters become so large that they no longer have any meaning. Two tools for determining how many clusters represent the data are *agglomeration schedules* and *dendrograms.*

Both of these tools were used for the cluster analysis in this document. An agglomeration schedule is a table that, among other statistics, provides squared Euclidean distances for the cases added to clusters at each stage of the analysis. One cue for determining that the clusters are becoming too large is if there is a large increase in the squared Euclidean distance of a case added at one stage relative to the squared Euclidean distance at the next stage.

A dendogram is a diagram with lines connecting cases at the point they were included in the same cluster. The lines indicating that cases were combined in the early stages of the analysis tend to indicate clusters that best represent the data.

Preliminary Work

Cluster analysis has a set of assumptions that should be fulfilled. Notable assumptions are: (1) absence of multicollinearity, and (2) absence of outliers. These two assumptions were tested, using guidelines recommended by Tabachnick and Fidell (2001).

Conducting and Interpreting the Cluster Analysis

The statistical software used to conduct the cluster analysis has a difficult time handling cluster analyses for a large number of cases using the three methods listed above: the average linkage between groups method, the centroid method, and the Ward's method. The surveys were completed by 535 juvenile justice professionals, far too many for the three methods. The software recommends the use of a different method, k-means, a form of the centroid method, for larger samples. However, the k-means method requires that one specify the number of clusters in advance.

Because, for this document, there was no way to presume the number of clusters in advance, the three methods listed above were used on multiple random samples of 50 cases selected from the 535 completed surveys. Three random samples were selected and, for each random sample, a cluster analysis was conducted using the three methods listed above. Each of these analyses led to the same conclusion: the data indicated four clusters.

After it was determined that the data was best represented by four clusters, a k-means cluster analysis was conducted on all 535 surveys, requesting four clusters.

The four clusters can be classified as follows: (1) a high African-American caseload cluster, (2) a high Hispanic caseload cluster, (3) a high Asian caseload cluster, and (4) all others.

Examination of the cases that were classified into these clusters suggested that, within each cluster there were qualitatively distinct types of cases that may be worth separating. Attempts to re-run the k-means analysis requesting a larger number of clusters did not yield additional clusters that were interpretable. Thus, a decision was made to use the four clusters as a starting point for manually separating the cases into the nine caseload racial composition categories used in Component Two of this document.

The categories included in Component Two were: (1) strong African-American presence with few individuals from other minority racial groups in the caseload, (2) strong Hispanic presence with few individuals from other minority racial groups in the caseload, (3) strong Asian presence with few individuals from other minority racial groups in the caseload, (4) high majority Caucasian caseload, (5) approximately equal strong African-American and Hispanic presence, (6) approximately equal strong African-American and Asian presence, (7) strong African-American presence with a notable number of individuals from other minority racial groups in the caseload, (8) strong Hispanic presence with a notable number of individuals from other minority racial groups in the caseload, and (9) strong Asian presence with a notable number of individuals from other minority racial groups in the caseload.

The criteria adopted for classifying respondents into the nine categories are as follows. In order to be classified into one of the "strong presence and few others" categories (categories 1 to 3) there must have been greater than a 5 to 1 ratio between the percentage reported in the strong presence minority race and those in the other two minority racial groups (Hispanic and Asian) and the strong presence race must constitute at least 40% of the respondent's caseload. In order to be classified into the high majority Caucasian caseload category (category 4), the respondent must have reported that there are 7% or fewer individuals from each of the three minority racial groups (African-American, Hispanic, and Asian) in his or her caseload. In order to be classified into one of the "approximately equal" categories (categories 5 and 6), there must have been less than a 2 to 1 ratio between the equal minority racial groups and, collectively, the equal minority racial groups must constitute at least 70% of the respondent's total caseload. In order to be classified into one of the "strong presence with a notable number of others" categories (categories 7 to 9) there must have been greater than a 2 to 1 but not exceeding 5 to 1 ratio between the percentage reported in the strong presence minority race and those in the other two minority racial groups and the strong presence minority race must constitute at least 40% of the respondent's caseload.

Chi-Square Analysis

Chi-square analysis was used in Component Two of this document to examine variation in survey responses by profession and by respondent race. Chi-square analysis was used in Component Three of this document to examine variation in survey responses by geographic location and by juvenile race.

Chi-square analysis is a form of statistical analysis that is often used when one wants to examine two variables that are composed of distinct categories (as opposed to being composed of a wide spectrum of numerical possibilities). When one is interested in using chi-square analysis for this purpose, then one would use a specific type of chi-square analysis often referred to as the *chi-square test for independence*. There is more than one type of chi-square analysis, and there are a number of special applications of chi-square analysis.

The chi-square test for independence is used to examine whether there is a relationship between two variables that are composed of distinct categories. For example, in Component Two of this document, chi-square was used to examine responses to survey items assessing perceptions of racial biases and issues in the Cook County juvenile justice system. Responses were compared for each combination of two professions who were asked to respond to the survey item.

Table C-2 shows responses to the survey item "Minority youth are treated differently from white youth in the juvenile justice system" (strongly agree, agree, disagree, strongly disagree) for patrol officers and probation officers. Specifically, the table shows the number or frequency of responses by patrol officers and probation officers in each of the four response categories, excluding patrol officers and probation officers who opted not to respond to the survey item.

Table C-2: An Example of Data Used in a Chi-Square Analysis

	Strongly Agree	Agree	Disagree	Strongly Disagree
Patrol Officers	16	57	132	47
Probation Officers	34	47	44	11

The chi-square analysis examining the information in Table C-2 would use the numbers in each of the cells to determine whether the two variables (in this case, profession, or patrol officer vs. probation officer, and response to the survey item) are related. Table C-3 shows, hypothetically, an example of the percentage of responses in each response category for the two professions that might occur if the two variables *are not related*. Table C-4 shows, hypothetically, an example of the percentage of responses in each response category for the two professions that might occur if the two variables *are related*.

Table C-3: An Example of Percentages if Two Variables are Unrelated

	Strongly Agree	Agree	Disagree	Strongly Disagree
Patrol Officers	25%	25%	25%	25%
Probation Officers	25%	25%	25%	25%

Table C-4: An Example of Percentages if Two Variables are Related

	Strongly Agree	Agree	Disagree	Strongly Disagree
Patrol Officers	10%	20%	20%	50%
Probation Officers	50%	20%	20%	10%

Table C-3 shows that, if the two professions tend to use the response categories in the same manner, then the two variables (profession and response) are not related but, instead, are independent. In such instances, the chi-square analysis will not yield a statistically significant result. Table C-4 shows that, if the two professions tend to use the response categories differently, then the two variables are related. In such instances, the chi-square analysis will yield a statistically significant result.

The chi-square analysis uses the following steps to determine statistical significance: (1) a formula is used to calculate an *expected frequency*, or frequency if the two variables *are not* related, for each cell, such as the cells in Table C-2, (2) the expected frequencies are compared to the actual frequencies in a formula that yields a chi-square value, and (3) probability is used to determine, based on the chi-square value, the likelihood that the variables are unrelated. A cut-off probability is used to distinguish between instances when one should make the claim that the variables are unrelated and instances when one should make the claim that the variables are related.

Conducting the Chi-Square Analyses

A primary concern when conducting chi-square analyses is that there are sufficiently large frequencies in each of the table cells being examined. For example, if only one patrol officer responded "strongly disagree", it would have been problematic for the analysis. This is because the expected frequencies will also be small and, given the nature of the formula used to compare expected frequencies and actual frequencies, small expected frequencies "stack the deck", making it more likely that the analysis will find that the two variables are related. The standard rule is that the analysis should not be used if the expected frequency for any cell is not at least five.

One solution to the problem of low expected frequencies is to combine categories for one of the variables. For example, if only one patrol officer responded "strongly disagree" then, in order to obtain large enough expected frequencies for each cell, one might combine responses of "strongly disagree" with the neighboring category "disagree". Collectively, there may be enough "strongly disagree" and "disagree" responses such that there will be sufficiently large expected frequencies for cells involving the new, combined categories.

For the chi-square analyses described in this document, there were a notable number of instances when expected frequencies were too low. In every instance when expected frequencies were too low, categories were combined. Typically, the "strongly disagree" and "disagree" categories were combined. For a number of instances the "strongly agree" and "agree" categories were combined.

For the most part, expected frequencies were sufficiently large after combining categories. However, there were a small number of instances when, even after combining categories, expected frequencies were not sufficiently large. In these instances, results of chi-square analyses are not reported in the document. These instances are noted in the text and tables of the document by stating that a chi-square analysis could not be conducted because an assumption of the analysis was violated.

Standard Error Approach

A standard error-based approach was used in Component Two of this document to examine variation in survey responses by caseload racial composition.

The logic underlying the standard error approach stems from the concept of *sampling error*. Every applicable juvenile justice professional in a particular profession who could potentially have responded to the survey represents the *population* of respondents for that profession. If surveys are collected from less than the entire population, then a *sample* has been obtained from the population as a whole.

If one obtains information from a sample as opposed to from an entire population, it leaves an element of doubt as to how well the information that has been obtained reflects the entire population. Sampling error attempts to take into account how different responses could potentially have been had information been obtained from the population as a whole.

A commonly used measure of sampling error is the standard error. Standard error is calculated using a formula that takes into account: (1) the average, or mean, response to a survey item across the whole sample, (2) the sample size, and (3) the extent to which individual responses deviate from the average response in the sample.

When the standard error is calculated, it may be used to create *boundaries* around a result. For example, if one assigns numbers to response categories for the racial biases and issues survey items, such that strongly agree = 1, agree = 2, disagree = 3, and strongly disagree = 4, then one can calculate an average response. If the average response is 3.00 and the standard error is 0.10, then one can use the standard error to create boundaries around the average response. One can create boundaries using one standard error or two standard errors. The boundaries for one standard error would be 2.90 to 3.10 (3.00 plus or minus 0.10). The boundaries for two standard errors would be 2.80 to 3.20 (3.00 plus or minus 0.20).

Applying the Standard Error Approach

The standard error approach was used in Component Two of this document to examine variation by caseload racial composition. The standard error approach was used for this aspect of Component Two in particular because there were too many instances when expected frequencies were too low to conduct chi-square analyses, even when combining categories.

To examine variation by caseload racial composition, boundaries were created around average responses by those in five of the nine caseload racial composition categories (those mentioned in the text as having a sufficient number of respondents). The boundaries were based on two standard errors.

The following two examples demonstrate how boundaries based on sampling error were used to examine whether there were noteworthy differences between caseload racial composition categories in responses to survey items on racial biases and issues.

Example 1: A notable difference between caseload racial composition categories.

The average response by those in the "Strong African-American presence, few others" category to the survey item "Minority youth are treated differently from white youth in the juvenile justice system" was **2.44**. The standard error for this survey item was **0.07**.

The average response by those in the "High Majority Caucasian" category to the survey item "Minority youth are treated differently from white youth in the juvenile justice system" was **2.94**. The standard error for this survey item was **0.13**.

If one were to visually display the average response with boundaries of two standard errors for each of these two categories, it may be presented as follows:

Strong Afr.-Am., few others: **2.30------2.44------2.58**

High Majority Caucasian: **2.68----------2.94----------3.20**

Looking at the visual display, one can see that there is *no overlap* between any of the numbers included in the boundaries for the two categories. When this is the case, one can infer that there is a *notable difference* between caseload racial composition categories in responses to the survey item.

Example 2: No notable difference between caseload racial composition categories.

The average response by those in the "Strong African-American presence, few others" category to the survey item "For similar behaviors, white youth are arrested less often than minority youth" was **3.00**. The standard error for this survey item was **0.08**.

The average response by those in the "High Majority Caucasian" category to the survey item "For similar behaviors, white youth are arrested less often than minority youth" was **3.13**. The standard error for this survey item was **0.11**.

The visual display of the average response with boundaries of two standard errors for each of these two categories, may be presented as follows:

Strong Afr.-Am., few others: **2.84---------3.00------3.16**

High Majority Caucasian: **2.91----------3.13----------3.35**

Looking at the visual display, one can see that there is *overlap* between the numbers included in the boundaries for the two categories. When this is the case, one can infer that there is *no notable difference* between caseload racial composition categories in responses to the survey item.

Every combination of two caseload racial composition categories for each of the survey items on racial biases and issues were examined using this approach.

Principal Components Analysis

Principal components analysis was used in Component Two of this document to determine which juvenile delinquency risk factors were deemed most important by juvenile justice system professionals and to combine the risk factors into conceptually distinct groups.

Principal components analysis is a statistical technique that is used to classify variables into groups based on how strongly they are correlated with each other. When two variables are positively correlated, it means that as one variable either increases or decreases in value, the other variable tends to move in the same direction.

Variables that are strongly correlated form a component. Principal components analysis is often used to condense a large number of variables into a small number of logical, conceptually distinct components. The components should "make sense" or be meaningful. That is, one should be able to look at the components and understand why the variables that constitute the components are related to each other.

Principal components analysis is closely related to another statistical technique known as factor analysis. Principal components analysis is the more appropriate statistical technique when one is simply interested in condensing variables, as opposed to testing a hypothesis regarding how the variables will combine. Such was the case for this document. Thus, principal components analysis was chosen over factor analysis.

The principal components analysis starts by developing a *correlation matrix* or a *covariance matrix* (covariance is a concept similar to correlation). Both these types of matrices list a set of variables in both columns and rows, with corresponding correlations or covariances in the cells. After the matrix is developed, rather complex matrix algebra is used to combine the variables that are included in the matrix into components. The matrix algebra finds the components that maximize the correlations between variables in each component and minimize the correlations between variables in different components.

Central to principal components analysis and the related algebra are *eigenvalues.* When one conducts a principal components analysis, the computer output provides a large number of possible components. Eigenvalues are used to determine how many components best characterize the data. For this document, eigenvalues indicated four components.

Rotation

The "finishing touch" of a principal components analysis is the *rotation* phase. This is the phase that maximizes correlations between variables in each component and minimizes the correlations between variables in different components. Researchers utilizing principal components have the option of using various different types of rotation techniques. A primary difference between various rotation techniques is whether rotation is used to ensure that there is no correlation at all between different components or whether rotation is used to ensure that there is little correlation, but perhaps some, correlation between components. For this document, the latter type of rotation was used, as there was reason to believe that juvenile justice professionals would find multiple juvenile delinquency risk factors important and, therefore, there would be at least some correlation between each of the risk factor survey items. A rotation technique known as *oblimin* rotation was used for this document.

Interpreting the Principal Components Analysis

After the number of components are determined, the next step is to identify which variables belong in each component. For this purpose, *factor loadings* are used. In simplest terms, factor loadings are numbers that allow one to determine how well a variable fits in each of the components. In more complex terms, a mathematical model is created for each component, in which a weight is assigned to each variable. The weights are the factor loadings. In general, a variable belongs in a component if the factor loading is greater than 0.5 or less than –0.5. Using this rule, variables were assigned to the four components (see Table 24).

Preliminary Work

Principal components analysis has a number of assumptions that should be met. For a number of these assumptions, it was apparent that the analysis in this document would not violate the assumption. For others, preliminary work was completed to test the assumptions. The following assumptions were tested: (1) normality, (2) linearity, (3) absence of outliers among cases, and (4) absence of multicollinearity and singularity. As a result of these tests, it was necessary to eliminate several survey respondents from the analysis because they were multivariate outliers. It was also necessary to conduct a logarithmic transformation of the data to ensure normality.

Appendix D

Example Survey Instrument – Component Two

ILLNOIS CRIMINAL JUSTICE INFORMATION AUTHORITY:
ANALYSIS OF CASE PROCESSING IN THE COOK COUNTY JUVENILE JUSTICE SYSTEM
PATROL OFFICER SURVEY

SECTION 1: Procedural Questions

Please write/circle your response for each question.

1. How are you most likely to come in contact with a juvenile?

   Observing Illegal Behavior Responding to a Call Serving a Warrant
   Other_____

2. Among the juveniles with whom you had contact during the last year, estimate the percentage who were minorities.

   _____ % African-American _____ % Hispanic
   _____ % Asian _____ % Other non-Caucasian

3. In the last three years, how many special trainings or workshops have you attended on the handling of minority youths?

   Number _____

4. Among the juveniles with whom you had contact during the last year, estimate the percentage who were female: _____%

5. In the last three years, how many special trainings or workshops have you attended on the handling of female youths?

   Number _____

6. How often do you issue a warning to a juvenile in a situation where you could have made an official arrest?

Less than 10% of the time	10-25% of the time	26-50% of the time	51-75% of the time	Greater than 75% of the time

7. In deciding whether to issue a warning in lieu of making an arrest, how important is:

   A. The age of the juvenile?

Very Important	Somewhat Important	Not Sure	Somewhat Unimportant	Not Important

B. The gender of the juvenile?

Very Important	Somewhat Important	Not Sure	Somewhat Unimportant	Not Important

C. The seriousness of the offense?

Very Important	Somewhat Important	Not Sure	Somewhat Unimportant	Not Important

D. The extent of the victim's injuries?

Very Important	Somewhat Important	Not Sure	Somewhat Unimportant	Not Important

E. Whether or not the offense was committed in an aggressive or premeditated manner?

Very Important	Somewhat Important	Not Sure	Somewhat Unimportant	Not Important

F. Whether or not the juvenile used or carried a weapon during the offense?

Very Important	Somewhat Important	Not Sure	Somewhat Unimportant	Not Important

G. The culpability of the juvenile in committing the alleged offense?

Very Important	Somewhat Important	Not Sure	Somewhat Unimportant	Not Important

H. The number of prior arrests of the juvenile?

Very Important	Somewhat Important	Not Sure	Somewhat Unimportant	Not Important

I. The types of prior arrests?

Very Important	Somewhat Important	Not Sure	Somewhat Unimportant	Not Important

J. The number of prior contacts with the juvenile?

Very Important	Somewhat Important	Not Sure	Somewhat Unimportant	Not Important

K. The types of prior contacts with the juvenile?

Very Important	Somewhat Important	Not Sure	Somewhat Unimportant	Not Important

L. The attitude of the juvenile?

Very Important	Somewhat Important	Not Sure	Somewhat Unimportant	Not Important

M. The victim's input?

Very Important	Somewhat Important	Not Sure	Somewhat Unimportant	Not Important

SECTION 2: Possible Predictors or Explanations of Delinquent Behavior

Please write/circle your response for each question.

1. How important do you consider the following factors to be in explaining a juvenile's delinquent behavior:

A. Family living in poverty?

Very Important	Somewhat Important	Not Sure	Some what Unimportant	Not Important

B. Living with relatives other than parents?

Very Important	Somewhat Important	Not Sure	Somewhat Unimportant	Not Important

C. Living with mother only?

Very Important	Somewhat Important	Not Sure	Somewhat Unimportant	Not Important

D. Lack of parental supervision?

Very Important	Somewhat Important	Not Sure	Somewhat Unimportant	Not Important

E. Lack of parental discipline?

Very Important	Somewhat Important	Not Sure	Somewhat Unimportant	Not Important

F. Observing domestic violence in the home?

Very Important	Somewhat Important	Not Sure	Somewhat Unimportant	Not Important

G. Being a victim of child abuse?

Very Important	Somewhat Important	Not Sure	Somewhat Unimportant	Not Important

H. Alcohol or drug abuse by parents?

Very Important	Somewhat Important	Not Sure	Somewhat Unimportant	Not Important

I. Having siblings who are delinquent?

Very Important	Somewhat Important	Not Sure	Somewhat Unimportant	Not Important

J. Living in a high crime neighborhood?

Very Important	Somewhat Important	Not Sure	Somewhat Unimportant	Not Important

K. Poor performance in school?

Very Important	Somewhat Important	Not Sure	Somewhat Unimportant	Not Important

L. Having learning disabilities?

Very Important	Somewhat Important	Not Sure	Somewhat Unimportant	Not Important

M. Schools with insufficient or inadequate curriculum?

Very Important	Somewhat Important	Not Sure	Somewhat Unimportant	Not Important

N. Schools with insufficient or inadequate after-school programs/activities?

Very Important	Somewhat Important	Not Sure	Somewhat Unimportant	Not Important

O. Not knowing positive ways to interact with other youths?

Very Important	Somewhat Important	Not Sure	Somewhat Unimportant	Not Important

P. The influence of gangs?

Very Important	Somewhat Important	Not Sure	Somewhat Unimportant	Not Important

Q. The influence of other negative peer groups?

Very Important	Somewhat Important	Not Sure	Somewhat Unimportant	Not Important

R. Abuse of alcohol or drugs by the juvenile?

Very Important	Somewhat Important	Not Sure	Somewhat Unimportant	Not Important

S. Feelings of discrimination?

Very Important	Somewhat Important	Not Sure	Somewhat Unimportant	Not Important

SECTION 3: Gender and Race/Ethnicity Issues

Please write/circle your response for each question.

1. Minority youth are treated differently from white youth in the juvenile justice system.

   Strongly Agree Agree Disagree Strongly Disagree

2. Race/ethnicity of the suspect play a role in deciding which youths are referred to the court.

   Strongly Agree Agree Disagree Strongly Disagree

3. Females are often treated differently from males in the juvenile justice system.

   Strongly Agree Agree Disagree Strongly Disagree

4. The gender of the suspect plays a role in deciding which youth are referred to the court.

   Strongly Agree Agree Disagree Strongly Disagree

5. Minority youths versus white youths are more likely to come from a single parent family.

   Strongly Agree Agree Disagree Strongly Disagree

6. Minority families versus white families are less trustful of the juvenile justice system.

   Strongly Agree Agree Disagree Strongly Disagree

7. Minority youth versus white youth are less willing to acknowledge guilt.

   Strongly Agree Agree Disagree Strongly Disagree

8. Minority youth versus white youth are more likely to have a negative attitude towards authority.

   Strongly Agree Agree Disagree Strongly Disagree

9. Minority youth and white youth commit different types of crimes.

   Strongly Agree Agree Disagree Strongly Disagree

10. Minority youth commit more crimes than white youth.

Strongly Agree Agree Disagree Strongly Disagree

11. For similar behaviors, police officers arrest white youth less often than minority youth.

Strongly Agree Agree Disagree Strongly Disagree

12. For similar behaviors, police officers arrest male youths less often than female youths.

Strongly Agree Agree Disagree Strongly Disagree

13. Girls need the protection of the courts more than boys do.

Strongly Agree Agree Disagree Strongly Disagree

14. In general, boys commit more serious crimes than girls do.

Strongly Agree Agree Disagree Strongly Disagree

15. Minority youths use drugs more than whites.

Strongly Agree Agree Disagree Strongly Disagree

16. For the same crimes, minorities are referred to court more often than whites.

Strongly Agree Agree Disagree Strongly Disagree

SECTION 4: Demographic Information

Please write/circle your response for each question.

1. How long have you been a Police Officer? _____ Year(s), _____Month(s)
2. How much formal education have you completed?

Some college Associate's Bachelor's Master's Doctorate Other_____

3. What is your age? _____
4. Gender: Male Female
5. With what racial group do you most identify?

White Black Hispanic Asian American Indian Other_____

6. What is your marital status?

Married Widowed Divorced Separated Never Married

7. Do you have children? Yes No

Appendix E

Juvenile Interview Survey Instrument

ILLINOIS CRIMINAL JUSTICE INFORMATION AUTHORITY:
ANALYSIS OF CASE PROCESSING IN THE COOK COUNTY JUVENILE JUSTICE SYSTEM
YOUTH OFFICER DECISION FORM

DIRECTIONS: PLEASE TAKE A MOMENT TO FILL OUT THIS SHORT FORM AFTER YOUR INTERVIEW WITH EACH JUVENILE TAKEN INTO POLICE CUSTODY.

POLICE DEPA RTMENT:_____ DATE OF INTERVIEW:_____

TIME OF INTERVIEW:_____

YOUTH:

AGE: _____ GENDER: _____

RACE: _____

OFFENSE:

MOST SERIOUS OFFENSE:

_____

WEAPON INVOLVED? _____YES_____NO

IF YES, WHAT TYPE? _____

INJURIES TO VICTIM?: _____YES_____NO

IF YES, HOSPITALIZATION REQUIRED?: _____YES_____NO

DELINQUENCY HISTORY:

NUMBER OF PREVIOUS ARRESTS : _____FELONIES _____MISDEMEANORS

INTERVIEW:

DEMEANOR/ATTITUDE OF JUVENILE (CIRCLE ONE):

1	2	3	4	5
VERY COOPERATIVE	SOMEWHAT COOPERATIVE	NEUTRAL	SOMEWHAT UNCOOPERATIVE	VERY UNCOOPERATIVE

PARENTS / GUARDIAN PRESENT?: _____YES _____NO

ATTY. PRESENT?: _____YES _____NO

DEMEANOR/ATTITUDE OF PARENT/GUARDIAN (CIRCLE ONE):

1	2	3	4	5
VERY COOPERATIVE	SOMEWHAT COOPERATIVE	NEUTRAL	SOMEWHAT UNCOOPERATIVE	VERY UNCOOPERATIVE

POLICE DISPOSITION OF CASE:

_____FORMAL STA. ADJ. WITH PROGRAM REFERRAL
_____FORMAL STA. ADJ. WITH OUT PROGRAM REFERRAL
_____INFORMAL STA. ADJ. WITH PROGRAM REFERRAL
_____INFORMAL STA. ADJ. WITHOUT PROGRAM REFERRAL
_____REFER TO COURT

PLEASE RANK THE THREE MOST IMPORTANT FACTORS IN MAKING YOUR DECISION:
_____SERIOUSNESS OF OFFENSE
_____PRIOR HISTORY OF MINOR
_____AGE OF MINOR
_____CULPABILITY OF MINOR IN COMMITTING OFFENSE
_____IF OFFENSE COMMITTED IN AN AGGRESSIVE MANNER
_____MINOR USED OR POSSESSED A DEADLY WEAPON
_____OTHER (PLEASE SPECIFY)_____

POLICE DETENTION RECOMMENDATION:

WAS DETENTION REQUESTED _____YES _____NO
NUMBER OF POINTS PER DETENTION SCREENING RISK ASSESSMENT INSTRUMENT_____
_____DETENTION APPROVED _____YES _____ NO

IF **YES**, WHERE DETAINED _____CCJTDF _____SAURA CENTER _____ ST. MALACHY
_____HOME CONFINEMENT

IF **NO**, RELEASED TO _____PARENT/GUARDIAN _____OTHER