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# The Role of Race/Ethnicity and Risk Assessment on Juvenile Case Outcomes

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The Role of Race/Ethnicity and Risk Assessment on Juvenile Case Outcomes

by

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A thesis submitted in partial fulfillment  
of the requirements for the degree of  
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Department of Criminology  
College of Behavioral and Community Sciences  
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## DEDICATION

For Brendan.

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## ABSTRACT

Guided by traditional and micro-level theories, the present study seeks to identify the relationship between race/ethnicity and risk factors in the Florida juvenile justice system. Central to this explanation is the understanding that racial biases and stereotypes have been shown to influence the decision-making of probation officers. The objectives are to examine the extent that race and risk factors influence court outcomes, in addition to the extent to which individual level risk factors influence court outcomes. The results provide insight into the relationship between the influence of racial biases and stereotypes of probation officers and juvenile risk assessment scoring.

## CHAPTER 1

### INTRODUCTION

It has been established that there is an overrepresentation of minorities in the juvenile justice system (Bishop & Frazier, 1996; Bridges et al., 1993; Dillard, 2013; Dressler et al., 2005; Piquero, 2008; Pope & Feyerherm, 1990; Secret & Johnson, 1997; Stahl et al., 2006). For example, the Sentencing Project reported that of the 48,043 youth held in juvenile facilities, 44 percent of those youth were African American, while African American youth comprise only 16 percent of all youth in the United States (The Sentencing Project, 2017). As a result of overrepresentation, the field has attempted to better understand the causes and situations in which minorities may be treated differently in relation to White youth (Bishop & Frazier, 1989; Leiber, 2002; Lowery, 2016). Additionally, the Office of Juvenile Justice and Delinquency Prevention (OJJDP) has attempted to reduce the overrepresentation of minority youth in the juvenile justice system, also referred to as Disproportionate Minority Contact (DMC).

There has been increasing literature examining the role of court actors and their influence on court outcomes and decision-making (Leiber & Fox, 2005; Leiber et al., 2009; Fader et al., 2014). It is important to note that while there are many court actors influencing decision-making, the current thesis focuses on the role and influence of probation officers. Probation officers are the staff members evaluating juveniles using risk assessment tools in most jurisdictions. Judges rely heavily on probation officers' recommendations, typically regarding the youth's predicted level of risk to recidivate. Prior research has demonstrated that probation officers portray Black youths differently than White youths in their written court reports (Bridges & Steen, 1998).

Black offenders are also frequently classified as having a higher risk of recidivism than similarly situated White offenders in risk assessments (Laskorunsky, forthcoming). This line of research has found that Black youth are more likely to be referred at intake than their similarly situated White youth (Leiber & Johnson, 2008). These findings lay the background for the present study.

In addition to the increase in interest examining court actors' decision-making, there has also been an increased interest in risk assessments given their recent popularity. The use of risk assessments has grown from 33 percent of state juvenile justice systems in 1990 to nearly 90 percent of jurisdictions today (Griffin & Bozynski, 2003; Schwalbe, 2008; Wachter, 2015). For example, Florida uses the Positive Achievement Change Tool (PACT) risk assessment, which provides a risk score for every juvenile at intake and is used in determining a youth's case outcome. These risk score decisions typically involve determinations of which youth pose a threat to public safety and are most likely to benefit from interventions (Fagan & Zimring, 2000; Mulvey, 2005).

The focus of this current thesis is to evaluate the Florida PACT concerning the treatment and assessment of youth and in particular minority youth. While the PACT has been used to predict recidivism and identify treatment needs, it has also been adopted to reduce the possibility of biased placement outcomes (Baird et al., 2013). However, there is no prior literature that examines the ability of the risk assessments to control for these biases. Risk assessment may be critical in mitigating Disproportionate Minority Contact (DMC), given that it has the potential to increase objectivity, equity, and consistency in decision-making, therefore decreasing the overrepresentation of minority youth (Gottfredson & Moriarty, 2006; Mallet & Stoddard-Dare, 2010). But the use of objective and subjective portions of the PACT assessment could allow for of extra-legal factors such as race/ethnicity, gender, family status, and attitudes to influence the

evaluation process. While these risk factors are in line with *parens patriae*, these extra-legal factors can contribute to the overrepresentation of minority youth. Some scholars and policy makers fear that modern instruments, such as risk assessment, place minority youth in higher risk categories (Annie E Casey Foundation, 2006; Hoytt et al., 2002; Schwalbe et al., 2007).

Specifically, questions about the juvenile's family life, school status, and other attributes, such as area of residence, may affect both recidivism and be more closely associated with some racial groups (Brown, 2007). A policy of employing risk assessments in decision-making may indirectly disadvantage Black and Hispanic youth (Moore & Padavic, 2011; Leiber & Bogges, 2012).

The present thesis references the discrimination-disparity continuum (Walker, Spohn, Delone, 2012). Disparity refers to a difference among groups but this does not necessarily involve unfair treatment, whereas discrimination is a difference based on differential treatment of groups (Walker, Spohn, Delone, 2012). The present thesis also identifies the distinction between systematic and institutionalized discrimination. Systematic discrimination occurs at all stages of the criminal justice system, at all times, in all places (Walker, Spohn, Delone, 2012).

Institutionalized discrimination is the result of the application of racially neutral factors, such as prior criminal record, employment status, and demeanor (Walker, Spohn, Delone, 2012). The present thesis argues in line with institutionalized discrimination given that this discrimination may manifest with the risk assessment tools through the domains.

Officials' perceptions of offenders impact their classification, assessment, and final recommendations for punishment (Bridges & Steen, 1998). As the juvenile probation officer is assessing the youth via the PACT, the officer is observing the youth's demeanor, attitudes, and behavior, in addition to seeing gender, race, and appearance. Subsequently, unjust biases may

form about the youth and these biases could affect the scoring on the assessment. For the present thesis, bias is defined as the unjust treatment of minority juveniles and defendants (Mitchell et al., 2005). It is important to mention that bias may not always be necessarily negative, for example biases are often short cuts in thinking that allow someone to decide quickly without much thought – sometimes this could lead to errors and sometimes it may not. For the purpose of the present thesis, bias is assumed to assist in the decision-making processes of court actors with the understanding that these biases may or may not be harmful to the processing of juveniles. Aversive racism is a psychological perspective that focuses on implicit bias instead of explicit bias (Gaertner & Dovidio, 1986). Evidence suggests that implicit and subtle biases are apparent in the perceptions of individuals who still respond to cues in a prejudicial manner (Gaertner & Dovidio, 2005; Peck & Jennings, 2016). The overrepresentation of youth of color in the juvenile justice system is the percentage of youth of color at a particular decision point in the juvenile justice system is higher than the percentage of youth in the general population or at a previous decision point in the system (Soler, Shoenberg, and Schindler, 2009). The Relative Rate Index (RRI) measures overrepresentation and is gauge of disparities traditionally used by the federal Office of Juvenile Justice and Delinquency Prevention. Bias, or disparate treatment of youth of color compared to white youth, happens when youth of color are treated more harshly than similarly situated White youth. Lastly, implicit biases involve the use, unconsciously, of stereotypes (Solar, 2014).

Additionally, finding bias in decision-making may not always be negative or unjust. Prior research has demonstrated the existence of these biases in juvenile probation officers, yet there is a gap in the literature about the ability of the risk assessment tools to control for this (Bridges &

Steen, 1998). In this line of research, it is assumed that probation officers have the skills and predictive power to both assess and label youths' character and future behavior (Harris, 2009).

Juvenile probation officers and non-clinical staff employ the risk assessment tools in most jurisdictions. These tools are used to guide decision making and prior research has shown that officers and staff have the authority to significantly affect decision-making and service delivery at each stage of processing (Bilchik, 1999). With regard to judicial decision-making, judges have been found to heavily rely on probation officer recommendations to choose an appropriate route for the juvenile within the justice system (Harris, 2009). In efforts to better understand the role of probation officers and their use of the PACT, a body of literature examined the foci that guide probation officers in their decision-making by using attributions and focal concerns and the role of race and ethnic stereotyping of minority youth by decision-makers (Albonetti, 1991, 1997; Steen et al., 2005; Steffensmeier et al., 1998).

Guided by aforementioned theoretical frameworks (attribution, focal concerns, and symbolic threat) and the results of previous literature (Bridges & Steen, 1998; Leiber & Boggess, 2012; Baglivio & Jackowski, 2013), the current thesis seeks to identify the relationship between race/ethnicity, risk factors, and reliance on the PACT in court outcomes. In sum, although the validity of risk assessments and the differential treatment of minority juveniles have been investigated separately in prior research (Stehno, 1982; Schwalbe 2007, 2008; Poe-Yamagata, 2009; Pope & Feyerherm, 1995; Bridges & Steen, 1998; Schwalbe et al., 2004, 2007; Vincent et al., 2011; Knapp et al., 2012), none have examined the role of risk assessments in the differential treatment of minority offenders. As such, the current thesis attempts to fill this gap in the literature by providing an analysis of juvenile offenders in Florida. Furthermore, the PACT scores are examined, in addition to the juvenile's records and information (race, gender, family

status, school status, etc.). The results have implications for better understanding the decision-making processes within the intake stage, risk assessment practices, and treatment of Whites, Blacks, and Hispanics in juvenile justice proceedings.

## CHAPTER 2

### RISK ASSESSMENT

#### Introduction to risk assessment

This chapter will serve as an introduction to risk assessment tools employed in the United States. Juvenile courts began exploring the use of risk assessment tools throughout the 1970s and were a part of a broader practice reform effort of 1998 by the Office of Juvenile Justice and Delinquency Prevention (OJJDP; Development Services Group, Inc. 2015). This reform effort (Comprehensive Strategy for Serious, Violent, and Chronic Juvenile Offenders) built upon the efforts of the National Institute of Corrections' Model Probation/Parole Management Project that combined risk assessment, effective treatment planning, and risk-need based supervision (Band et al., 2013). Risk assessment use has grown from 33 percent of state juvenile justice system in the United States in 1990 to 86 percent by 2003 (Schwalbe, 2007; Griffin & Bozynski, 2003; Towberman, 1992). This growth is credited to the promises made of risk assessment instruments; identify high-risk offenders for rehabilitation (Schwalbe, 2007). The following chapter provides a history of risk assessment and the increasing widespread use of these tools in justice systems throughout the country and will conclude with a discussion of the PACT.

#### History of risk assessment

##### *Four generations of risk assessment*

Since the 1990s, there have been four generations of the risk assessment model: professional judgment, evidence-based tools, evidence-based and dynamic, and systematic and



comprehensive (Schwalbe, 2007). Beginning with the first generation, correctional and clinical staffs were unstructured in their decision-making and relied on their professional judgment of the offending behavior. Staffs were making decisions regarding an inmates security and supervision, beginning first within the adult system. This “professional judgment” being used in decisions was based upon staff’s personal training and experience and staff had discretion in their decision-making. This approach has also been called “structured clinical judgment” (Andrews, Bonta, Wormith, 2006; Webster et al., 1997).

From this professional judgment process, risk assessment transitioned from professional judgment to “actuarial, evidence-based science.” Second generation assessments stemmed from a movement during the 1970s and 1980s towards validated assessment research, or empirically based risk instruments. The new actuarial risk assessments were focused on individual factors, such as an offender’s history of substance abuse, in efforts to assign a quantitative risk score. As these reliable actuarial risk assessments became more widely used, two features presented themselves as limitations: atheoretical and static factors.

The static risk factors are historical characteristics of the offense, past behavior, and parents’ behavior juveniles that are unable to be changed; for example, a juvenile’s age at first offense, history of violent behavior, and parental criminality (OJJDP). While static risk factors do not generally serve as causal variables, they can often times serve as markers for the probability of future offering and antisocial behavior (Vincent, Chapman, & Cook, 2010).

In the late 1970s and early 1980s, dynamic factors were introduced (Bonta & Wormith 2007) into the risk assessments. These third-generation assessments were revised to include dynamic factors and added questions including current and ‘ever changing’ situations. For example, current employment, criminal friends, and family relationships were added to risk

assessments and the “need” portion of “risk need” was introduced. Dynamic risk factors are those that can change through a treatment or a developmental process; for example, poor parenting practices, substance use, association with delinquent peers, and poor academic performance (Vincent, Guy, and Grisso, 2012). The PACT uses static, dynamic, and protective factors in addition to ranking criminogenic needs to create a case plan for the juvenile. By including offender characteristics, correctional staffs were able to provide more tailored and individualized treatments focused on “needs.” Theoretically based questions were also introduced (Andrews & Bonta, 1995). Validity/the ability to accurately predict recidivism was greatly increased as a result of these efforts and by adding these dynamic risk factors there was a reduction in an offender’s “risk” (Bonta, 2002).

Currently, fourth generation risk assessment tools are used in the field. This generation of risk assessment guides and follows service and supervision from intake through case closure (Andrews, Bonta, Wormith, 2006). Systematic intervention and monitoring with the assessment of a broader range of risk factors (Andrews, Bonta, Wormith, 2006). Table 1 lists the major risk/need factors of fourth generation risk assessment (Bonta & Andrews, 2006).

Table 1. “The seven major risk/need factors” (Bonta & Andrews, 2006)

<b>Major risk/need factor</b>	<b>Indicators</b>	<b>Intervention goals</b>
Antisocial personality pattern	Impulsive, adventurous pleasure seeking, restlessly aggressive and irritable	Build self management skills, teach anger management
Pro-criminal attitudes	Rationalizations for crime, negative attitudes towards the law	Counter rationalizations with pro-social attitudes; build up a pro-social identity
Social supports for crime	Criminal friends, isolation from pro-social others	Replace pro-criminal friends and associates with pro-social friends and associates
Substance abuse	Abuse of alcohol and/or drugs	Reduce substance use, enhance alternatives to substance use
Family/marital relationships	Inappropriate parental monitoring and disciplining, poor family relationships	Teaching parenting skills, enhance warmth and caring
Schoolwork	Poor performance, low levels of satisfactions	Enhance work/study skills, nurture interpersonal relationships within the context of work and school
Pro-social recreational activities	Lack of involvement in pro-social recreational/leisure activities	Encourage participation in pro-social recreational activities, teach pro-social hobbies and sports

### *Implementing and Administering Risk/Need Assessment Instruments*

The two approaches to implementing and administering risk/needs assessments are the actuarial approach and the structured professional judgment approach (Schwalbe, 2007).

Practitioners using an actuarial approach score assessments based on algorithms designed

to calculate a risk score. This risk score is cross-referenced with an actuarial table used to estimate risk over a set time frame (i.e., 5 or 10 years). Desmarais and Singh examined 47 predictive validity studies published between 1990 and 2011. Desmarais and Singh (2013) explain the actuarial risk assessment process as follows: “[I]f an offender receives a score of +5 on an instrument, which is translated into a risk estimate of 60 percent over 10 years, this means that 60 percent of those individuals who received a score of +5 in the instrument’s original study went on to recidivate within that time. This does not mean that the offender has a 60 percent chance of recidivating over a period of 10 years.” [2013, 5]. The structured professional judgment approach, however, allows for more discretion by the practitioner, who controls which risk factors to consider and the way in which they should be measured. Then the practitioner categorizes the risk level. When choosing the final level of risk for the juvenile, the practitioner uses the relevance of items to an individual youth as well as any other factors specific to the youth that may not be on the assessment (Desmarais and Singh, 2013).

The foundational principle of evidence-based practices (EBP) is to use actuarial risk and needs assessment instruments (PACT Assessment System Overview). The Florida Department of Juvenile Justice (DJJ) has focused on implementing evidence-based practices given that the implementation provides many benefits, including a consistent unit of measurement to study the efficacy of subsequent casework, programming oversight, a common language to enhance communication, and streamlined information gathering with the use of the same tool and reports (PACT Assessment System Overview). In other words, evidence based practices made this process more consistent and accurate.

### *Risk- Need- Responsivity (RNR) Model*

The risk-need-responsivity (RNR) model was developed during the 1980s-1990s by Andrews, Bonta, and Hodge and has been increasingly used to assess and rehabilitate criminals in both Canada and the United States (Bonta & Andrews, 2006). As further explained in the following section, the Florida PACT is based on the RNR model. The Risk-Need-Responsivity model has three core principles: risk, need, and responsivity. Since the RNR's formalization in 1990, there have been numerous principles added in efforts to strengthen the model and its application. For example, providing policies and leadership that facilitate and enable effective interventions is an additional principle added to the model (Andrews, 2001; Bonta & Andrews, 2006). The risk principle states that the level of service provided and the offender's risk to reoffend must match, meaning recidivism can be reduced if the level of treatment provided is reflective of the offender's risk to re-offend (Bonta & Andrews, 2006). This principle has two parts: the level of treatment and the offender's risk to reoffend (Bonta & Andrews, 2006).

In addition to the risk principle, the need principle states that the focus of correctional treatment must be on criminogenic needs, meaning the dynamic factors with a direct link to criminal behavior. Staff must assess and identify criminogenic needs in order to target them in treatment. The need principle identifies seven criminogenic risk/need factors that are worth assessing and targeting in interventions (Bonta & Andrews, 2006). Reference Table 1 for these risk/need factors.

The third and final RNR principle, responsivity, aims to provide cognitive behavioral treatment and individualized intervention in order to maximize the offender's learning and development. The responsivity principle is further broken down into two principles: the relationship principle and the structuring principle. The relationship principle requires

establishing a ‘warm, respectful, and collaborative working alliance with the client’ and the structuring principle influences the ‘direction of change towards the prosocial through appropriate modeling, reinforcement, and problem solving’ (Bonta & Andrews, 2006). It is also important to discuss general and specific responsivity. General responsivity uses cognitive social learning methods, which are not dependent on the type of offender. Specific responsivity is tailored to the individual offender, taking into account their strengths, learning style, personality, motivation, & gender/race characteristics (Andrews, Bonta, & Wormith, 2006).

#### *Florida Positive Achievement Change Tool (PACT)*

The present study uses the Positive Achievement Change Tool, or PACT, employed by the Florida Department of Juvenile Justice. And since the Florida PACT is the risk assessment tool utilized by the present thesis, the following sections will detail the history of the PACT and the previous validity testing of the PACT. This tool is heavily adopted from the Washington State Institute for Public Policy (WSJCA) and is outlined from “What Works” literature (Andrews & Bonta, 2006).

The Florida Department of Juvenile Justice uses a “comprehensive assessment and case management process that addresses both criminogenic needs and protective factors, from the moment a youth enters the system to the moment they exit” (Florida Department of Juvenile Justice). The department uses a case-planning tool, the Youth Empowered Success (YES) Plan and the Florida Positive Achievement Change Tool (PACT) in order to evaluate juveniles upon their arrival. The PACT is broken down into the Residential PACT (R-PACT) and the Community PACT (C-PACT) based on the juvenile’s residential status, and is further broken down into a pre-screening assessment and a full assessment dependent on the juvenile’s original score. Both produce a criminal history score (based on prior offending and juvenile justice

system placements) and a social history score (individual, family, and environmental risk factors), which are then used to determine a level of risk: low, moderate, moderate-high, and high risk (Baglivio & Jackowski, 2013).

The PACT pre-screen contains 46 items while the full assessment contains 126 items, both assessments are aimed at producing an overall risk to re-offend risk level or classification: low, moderate, moderate high, and high. It is important to note that juveniles who score low or moderate risk are reevaluated every 180 days, whereas juveniles scoring moderate-high or high are evaluated with the full assessment every 126 days. Youth are reassessed more frequently if they received the full assessment given the assumption that they are a higher risk and need more assessment than lower risk youth. The pre-screen contains 4 domains: record of referrals, social history, mental health, and attitude and behavior indicators. The full assessment contains 12 domains: record of referrals, gender, school history, current school status, historic use of free time, current use of free time, employment history, current employment, history of relationships, current relationships, family history, current living arrangements, alcohol and drug history, current alcohol and drugs, mental health history, current mental health, attitude and behaviors, aggression, skills (Baglivio & Jackowski, 2013). The PACT scoring uses a table to measure scores, please see Table 2 and Figure 1 below (Baglivio & Jackowski, 2013). The criminal history score is on a scale from 0-5, 6-8, 9-11, and 12-31 and the social history risk score is on a scale from 0-5, 6-9, and 10-18. For example, if a youth scored a criminal history score of 7 (column 1) and a social history score of 12 (column 4), the youth would receive a “moderate” risk classification (column 4). Then, looking at Figure 1, a “moderate” level youth would score anywhere from Level 1 to Level 4 (column 3) depending on the most serious presenting offense (column 1). Table 2 is meant to serve as a guide in identifying a risk level for the youth while

Figure 1 shows the DJJ level recommendation. The key for Figure 1 is a great resource to understand the structured decision-making guide based on the youth's DJJ level.

Table 2a. PACT Scoring Matrix and Domains (adapted from Baglivio & Jackowski, 2013; p.30)

Criminal History Score	Social History Risk Score		
	0-5	6-9	10-18
0-5	Low	Low	Moderate
6-8	Low	Moderate	Moderate-high
9-11	Moderate	Moderate-high	High
12-31	Moderate-high	High	High

Table 2b. PACT Scoring Matrix and Domains (adapted from Baglivio & Jackowski, 2013; p.30)

Pre-Screen		Full Assessment	
Domain #	Domain Name	Domain #	Domain Name
1	Record of Referrals	1	Record of Referrals
2	Social History	2	Gender
3	Mental Health	3A	School History
4	Attitude/Behaviors	3B	Current School Status
		4A	Historic Use of Free Time
		4B	Current Use of Free Time
		5A	Employment History
		5B	Current Employment
		6A	History of Relationships
		6B	Current Relationships
		7A	Family History
		7B	Current Living Arrangements
		8A	Alcohol and Drug History
		8B	Current Alcohol and Drugs
		9A	Mental Health History
		9B	Current Mental Health
		10	Attitudes/Behaviors
		11	Aggression
		12	Skills



Most Serious Presenting Offense	PACT Risk Level to Reoffend			
	Low Risk to Reoffend	Moderate Risk to Reoffend	Moderate-High Risk to Reoffend	High Risk to Reoffend
Civil Citation Eligible <sup>1</sup>	Level 1	Level 1	N/A	N/A
Minor <sup>2</sup>	Level 2 or 3a	Level 2 or 3a	Level 2 or 3a-c	Level 3a-c or 4
Serious <sup>3</sup>	Level 2 or 3a	Level 2 or 3a-b	Level 3a-c or 4	Level 3a-c or 4
Violent <sup>4</sup>	Level 2 or 3a-b	Level 2, 3a-c, or 4	Level 3a-c, 4, or 5	Level 3a-c, 4, or 5

Figure 1. Florida Department of Juvenile Justice Disposition Recommendation Matrix (adapted from Baglivio & Jackowski, 2013; p.30)

1 – Eligibility for civil citation is outlined in F.S.985.12. Youth deemed ineligible for civil citation (based on community standards) should be reviewed under the “Minor” offense category based on the PACT risk level to reoffend.

2 – All misdemeanor offenses

3 – Felony offenses that do not include violence

4 – Violent felony offenses (do not include misdemeanor assault and battery which are captured under “Minor”)

<b>Level 1</b> – Alternatives to Arrest	<b>Level 2</b> – Diversion & Non-DJJ Probation
<b>Level 3</b> – Community Supervision	<b>Level 4</b> – Non-Secure Residential Commitment
(3a) – Probation Supervision	<b>Level 5</b> – Secure Residential Commitment (High & Maximum Risk Programs)
(3b) – Probation Enhancement Services (ART, EPICS, LifeSkills, etc.)	
(3c) – Day Treatment, MST, FFT, Minimum Risk Commitment	

### *History of the PACT*

Moving now to the history of the PACT, the Department of Juvenile Justice of Florida (FDJJ) has been using the PACT since 2002, both with the community and residential PACT, to identify risk, needs and protective factors of juveniles in the juvenile justice system. This actuarial assessment instrument was heavily adopted from the Washington State Institute for Public Policy (WSJCA) and is based on a matrix of the criminal history and social history scores of the juvenile (Baglivio & Jackowski, 2013). The present thesis specifically utilized the scoring matrix employed by Washington State to create the scoring matrix for the PACT, as discussed in the Methods section.

The PACT pre-screen is administered to all youth referred for delinquency when delivered to a juvenile assessment center, detention center or police-booking unit in the state of Florida. The PACT takes approximately 25 minutes and may be used by non-clinical staff in juvenile intake, diversion, probation, detention, group home placement, and aftercare setting. For a probation officer to be considered 'effective' in administering the PACT, the officer must have received at least two days of training on risk assessment theory, case planning and technique of motivational interviewing (Barnoski, 1997).

As previously indicated, the PACT is guided by the principles of the Risk-Need-Responsivity framework. There are parallels between the seven major risk/need factors of the RNR and the domains of the PACT. Recall that the seven major risk/need factors of the RNR are: antisocial personality pattern, procriminal attitudes, social supports for crime, substance abuse, family/marital relationships, school/work, and prosocial recreational activities. The R-PACT has the following domains: Record of referrals, gender, school history, current school status, historic use of free time, current use of structured/unstructured recreational/leisure time, employment history, employability, history of relationships, family history, current parent/caretaker relationships, alcohol and drug history, mental health history, current attitudes/behaviors, current aggression, current skills, amongst other domains. The PACT uses the RNR major risk/need factors as a framework for its domains and scoring procedures.

#### *Validity testing of the PACT*

The PACT was validated by the Justice Research Center (JRC) in February 2012 and Baglivio in August 2013. Focusing first on the JRC validation, this evaluation focused on validity and reliability of the PACT in three phases: Phase 1 assessed the validity of the PACT in

accurately predicting recidivism, Phase 2 assessed the utility and parsimony of PACT scoring, and Phase 3 examined consistency of inter-rater reliability (Early, Hand, Blankenship, 2012).

Phase 1 used both bivariate and multivariate analyses to evaluate whether the PACT effectively identifies risk-level subgroups within the Florida juvenile offender population that are predictive of subsequent rates of re-offending (Early, Hand, Blankenship, 2012). The study assessed the validity of the PACT for both the overall juvenile offender population and subsamples of gender, race, ethnicity, age and supervision placement. Using 80,192 PACT assessments from the years 2007-2009, the JRC found that overall risk to reoffend level, criminal history score, and social history score were all significant predictors of recidivism in both groups. The strongest predictor for the full sample of releases was gender, followed by race, prior adjudicated misdemeanors, jail imprisonment history of current household members, and school enrollment, conduct, and performance and attendance (Early, Hand, Blankenship, 2012).

Phase 2 examined both the criminal history and social history scales to assess whether the questions used in PACT domains represent distinct constructs or measures. Confirmatory factor analysis was used to assess the PACT domains, followed by exploratory factor analysis to evaluate whether other factors or domains included in the PACT assessment might be considered for inclusion in the scoring of the criminal history and social history scores, as well as the overall level of risk to re-offend (Early, Hand, Blankenship, 2012). Phase 2 findings revealed an internal consistency ( $\alpha = 0.706$ ) for the criminal history score, which indicates a distinct risk construct representing prior delinquency involvement (Early, Hand, Blankenship, 2012). The following factors accounted for 64 percent variance among the measures in criminal history scale: low-level misdemeanors, felony offenses, history of escape, detention and commitment, and referral for weapons offenses. Forty-five percent of the variance among the measures in the

social history score is due to the following fact: a defiant youth with multiple problems in multiple settings (school, home, peer relationships, and/or drug or alcohol abuse), girls with mental health issues who have experienced abuse and/or run away, and youth with histories of neglect or abuse with out of home child welfare placements.

Phase 3 used a random sample of staff raters to examine the inter-rater agreement in administering the PACT. The staff viewed two videotaped PACT interviews involving both a male and female youth, and then completed a community PACT full assessment for each youth. Recall that youths scoring a moderate-high or high-risk score on the pre-screen PACT are then reassessed with the full PACT, and again every 90 days. Florida's Juvenile Justice Information System auto-populates the criminal and social history scores, thus maintaining consistency in scoring these domains; the reliability assessed rater agreement on the remaining ten social history items used in scoring the PACT. The Phase 3 study found 90 percent agreement in assessing the youth's history of physical or sexual abuse, history of neglect, and history of mental health problems. There was 90 percent or higher agreement when rating the males PACT, specifically for the following five social history indicators: history of child welfare out of home placements, history of running away or being kicked out of the home, history of physical or sexual abuse, history of neglect, and history of mental health problems. The female PACT scoring had less consistency (percentage not specified in the report) and raters were 'split' on their scoring in the following four social history indicators: history of out of home placement, history of running away, parental authority and control, and current alcohol/drug use. Recall that Phase 1 found that the strongest predictor for the full sample of releases was gender.

Additionally, Morton (2009) measured the inter-rater reliability (IRR) of the Offender Assessment System (OASys) using 178 staff members. Participants viewed one of three

interviews and completed an assessment based on the information viewed. It is not specified what the demographics of each juvenile in the tapes were. Morton found moderate reliability of OASys with the most reliable sections being accommodation, lifestyle and associates, and drug misuse. The least reliable sections were financial management, alcohol misuse, thinking and behavior, and risk of serious harm; the implications from this poor agreement is that similar offenders may be assessed differently and could even lead to the poor targeting of resources (Morton, 2009).

Overall, the JRC testing offered a very thorough validation of the PACT and its scoring in all three phases. The overview of C-PACT validation studies performed by Michael Baglivio was published in an executive summary in August 2013. In the published overview of studies, Baglivio's results revealed overall risk to reoffend was found to be a significant predictor of reoffending, for both male and female youth. Additionally, for both males and females, the relationship between social history and recidivism is stronger than that between criminal history recidivism. The second study found, with 95 percent confidence intervals, all subgroups on thirteen of nineteen measures examined that those items behaved identically for each gender/race/ethnicity subgroup. Criminal history was found to be the most prevalent predictor across subgroups. The study concluded that the C-PACT tool equally classifies the risk to reoffend across race/ethnicity and gender subgroups (Baglivio, 2013).

In summary, Chapter 2 provides an overview of risk assessment tools employed in the United States. The history of risk assessments began with professional judgment and currently fourth generation tools are used across the country. Efforts currently utilize seven major risk/need factors to determine the appropriate risk level for each youth (Table 2). The implementation of risk/need assessments, evidence based practices (EBP), and the Risk-Need-

Responsivity (RNR) models are all utilized by the PACT. The PACT is broken down into the C-PACT and the R-PACT, depending on the youth's detention status. Further, the pre and full PACT are both used as well, based on the youth's risk level at intake. The PACT has been validity tested twice and is consistently used across Florida, thus the PACT is evaluated in the present thesis.

## CHAPTER 3

### THEORETICAL BACKGROUND

Due to the *parens patriae* doctrine of the juvenile court, the state acts in *loco parentis* or as a substitute guardian to the juvenile and has the authority to intervene on behalf of the juvenile, holding the best interest of the juvenile in mind (Feld, 1999; Weisheit & Alexander, 1988; Platt, 1969). However, this legally permitted discretion can prompt decisions made by probation officers and intake workers early on in the process to be especially crucial (Freiburger & Jordan, 2011). This discretion of probation officers can allow for biases and stereotyping, assuming that discretion is inherently biased (Leiber, 2003). For example, in the case that a minority offender is stereotyped as predatory or disposed to chronic criminal offending, they are seen as more criminal and therefore as deserving of more severe penalties in comparison to their non-minorities (Peterson & Hagan, 1984). As further explained throughout the next section, there is extensive literature showing the presence of and reliance on stereotypes by decision-makers and the subsequent influence of these stereotypes over court outcomes. While the current thesis does not directly test theory, the following traditional theories set the background of court outcomes for understanding the influence of race, stereotyping, and juvenile justice decision-making.

## Traditional theories

### *Consensus and Conflict Theories*

Traditional perspectives used to study the relationship between race and decision-making in the juvenile justice system have typically been based on the consensus and conflict perspectives (Hagan, 1974; Myers, 1979; Tittle & Curran, 1988; Engen et al., 2002).

Traditionally used to explain racial bias in the criminal justice system as a random and irregular occurrence, the consensus theoretical model makes the argument that the law, punishment, and treatment of offenders are based on a general consensus of societal ideas and norms (Durkheim, 1964; Hagan, 1989). This approach views the justice system as treating all offenders equally, regardless of their race, gender, or socioeconomic status (Bridges & Crutchfield, 1988). As a result, racial disparities in the juvenile justice system are seen as being attributed to the higher rates of participation in illegal activity by minority groups compared to Whites. (Tracy, 2005; Hindelang, 1978). Individual acts of racial and ethnic bias are viewed as a random occurrences, given that legally relevant criteria constrain the discretion of decision makers and additionally promotes objective and egalitarian decisions (Wilbanks, 1987; Leiber, 2003).

The alternative viewpoint to the consensus approach is the conflict perspective, which argues there is no consensus about normative behavior within society (Hagan, 1974; Leiber & Peck, 2014). The traditional interpretation of conflict theory is the premise that the powerless represent a threat to the powerful group in society; therefore, these groups must be subject to formal social control (Turk, 1969). Furthermore, the majority maintains their own interest and power through political and economics in society, thus controlling the minority group. The majority group has the ability to adversely label the minority group to keep them powerless. For



example labels would include criminal, delinquent, and deviant (Hagan, 1974; Leiber & Peck, 2014).

An additional perspective to the conflict theory is labeling theory, since both perspectives contend that crime is a political concept, a label imposed by those in positions of power (Hagan, 1974; Leiber, 2003). As a result, both theories argue that social structure has a direct impact on social control given that those in positions of power are likely to label the less powerful as deviant; the less powerful are most likely to be the poor and minorities in a community (Becker, 1963; Liska, 1994). Addressing the structural component to consensus theory, those who live in poverty are more motivated to commit crime, and racial/ethnic minorities are more likely to live in poverty. Thus any racial 'bias' is a function of structural factors, not implicit or explicit racial bias in the criminal justice system. Labeling theory itself traditionally stresses stereotyping, status or personal resources, and disadvantaged groups' skills in offsetting or resisting efforts of state control (Farnworth et al., 1991; Leiber, 2003).

Research on racial issues in juvenile justice processing usually draw one or more perspectives (Leiber, 2003; Hagan, 1974; Myers, 1979; Tittle & Curran, 1988; Engen et al., 2002). Over the last 20 years or so, however, a focus on the stereotyping of minority juveniles by decision-makers and the contexts that foster such stereotyping have framed studies of race/ethnicity of juvenile justice decision-making making (Bridges & Steen, 1998; Graham & Lowery, 2004)

#### *Theories Emphasizing Racial/Ethnic Stereotyping*

In addition to traditional theories, some more contextual perspectives that are more in line with the conflict approach were also utilized. Attribution theory, focal concerns perspective, and the symbolic threat thesis and their emphases on racial stereotyping serve as

guiding frameworks for the current thesis. The following section provides an overview of this literature.

### *Attribution theory*

Albonetti's (1991) attribution theory explains that judges attempt to manage uncertainty in decision-making by developing and relying on "patterned responses." These responses are the result of an attribution process that involves assessments of the offender's assumed likelihood of committing a future crime (Albonetti, 1991). In addition to these "patterned responses," court actors act within a "bounded rationality" to predict future behavior of offenders, which are based on a subset of attributed factors. Fontaine and Emily (1978), for example, found that judges attribute meaning to both past and future behavior consistent with stereotypes associated with membership in various social categories. The attribution model proposes that decision-makers assume a causal search to determine why outcomes occur by forming attributions (Barron & Hartnagel, 1997). This process is further explained by the research of Fiske and Taylor (1978), who state that attribution theory explains the process through which individuals arrive at causal explanations for events. Within this process, persons/decision-makers assess both internal and external characteristics in order to identify how responsible the individual is for their wrongdoing/act. Internal characteristics are those within the individual, including attitudes and internal disposition, while those external are characteristics within the environment, including situational factors surrounding the act itself (Bridges & Steen, 1998).

In the case that one's act is viewed as a result of external factors, they will generally be held less responsible than those whose acts are viewed as a result of internal factors (Rotter, 1966). In attempts to better understand the judgments about offenders by decision-makers, it is important to note that internal factors are crucial to this process. The offenders who are

disrespectful to the law, their victims, or the legal process are perceived as more responsible for their acts and subsequently viewed as being at high risk of reoffending (Albonetti, 1991; Drass & Spencer, 1987; Emerson, 1969; Spencer, 1983). This observed disrespect is processed as internal characteristics and has the potential to be a more common observation of minority offenders by decision-makers (Albonetti, 1991). Further, individuals who are attributed with both a stable and a consistent predisposition for criminal activity, thus labeled as dangerous, will receive more severe sentences (Albonetti, 1991). Albonetti (1991) suggests that attributions could be as influential as case-related characteristics. As a result of this possible influence, the attribution theory is used to guide the present study.

Stereotypes are additionally utilized by judges that link race, gender, and prior outcomes to the likelihood of future criminal activity/risk of recidivism (Albonetti, 1991). In addition to judges, other court actors such as probation officers regularly use attributions to understand and categorize juvenile cases. Harris (2009) found that these attributions were value and assumption based phrases, which signaled officers' perceptions about the locus, stability and controllability of delinquency, and the youth's overall character. Bridges and Steen (1998) further explain the reliance on racial stereotypes by decision-makers through the following results. Probation officers were found to use differential causal attributions to assess the delinquent behavior of Blacks and Whites, and Black youth involved in delinquency was viewed as internal or dispositional attributions and White youth were viewed as affected by external attributions. The internal attributions were perceived as a lack of individual responsibility and the external attributions were due to impoverished conditions.

Also important to attribution theory is labeling theory and the integrated framework of the two theories. This integration by Albonetti and Hepburn (1996) was used to study the

differential referral process for minority adult offenders. It was found that Black offenders were less likely to have their cases deferred and to be recommended in treatment than White offenders. Albonetti and Hepburn (1996) explained these findings by suggesting that decision-makers stereotyped Blacks as poor subjects for rehabilitation. This suggestion lends itself to the present study, given that Black youth should be recommended for rehabilitation at a comparable rate to White youth. The present thesis aims to evaluate the classification risk levels of both White and Black youth.

### *Focal concerns perspective*

Continuing in the understanding the influence and role of stereotyping and biases in juvenile justice decision-making, the focal concerns perspective serves to explain the three main focuses of decision-makers. The three focal concerns are the offender's blameworthiness and the degree of harm caused the victim, protection of the community, and practical implications of sentencing decisions (Steffensmeier et al. 1998).

*Blameworthiness*, as stated by Steffensmeier, Ulmer, and Krameris (1998) viewed as the defendant's potential increases depending on their culpability and degree of injury or harm caused. This is associated with the retributive philosophy of the punishment needing to fit the crime. In addition to the offense severity, blameworthiness can also be viewed as a defendant's criminal history, prior victimization, and the offender's role in the offense. Criminal history is perceived as increasing perceptions of blameworthiness and risk, while prior victimization at the hands of others tends to ease the perceived blameworthiness. The offender's role in the offense lends itself to whether the offender is a leader, organizer, or a follower.

The second concern, *protection of the community*, draws on similar attributions as blameworthiness, however it specifically focuses on the need to incapacitate the offender, or to

discourage would-be offenders from a similar offense. Steffensmeier references Albonetti (1991) in the dangerousness or risk of an offender being based on attributions predicted by the nature of the offense, case information, criminal history, facts of the crime, and on characteristics of the offender (drug use, education, employment, or family history). These factors are taken into account by judges in efforts to protect the community and deter others from committing the crime or recidivating.

Lastly, *practical constraints and consequences* are also influential concerns for decision-making. It is important to note that these constraints can be both organizational and individual. Organizational concerns include continuing working relationships among courtroom actors, guaranteeing the constant movement of cases, and being sensitive to correctional crowding and resources (Dixon, 1995; Flemming et al., 1992; Steffensmeier et al., 1993; Ulmer, 1995; Ulmer & Kramer, 1996; Eisenstein & Jacob, 1977). Individual concerns include the offender's ability to 'do the time,' health, special needs, costs, and familial ties (Daly, 1987; Hogarth, 1971; Steffensmeier, 1980; Steffensmeier et al., 1995). Additionally, decision-makers develop "perceptual shorthand" based on stereotypes and attributions that are linked to offender characteristics, such as race, sex, and age (Hartley et al., 2007). While sex/gender is not incorporated in the present study, the extra-legal factors of race, sex, and age have been found to interact and influence sentencing due to images or attributions of being dangerous or crime prone (Steffensmeier et al., 1998).

Harris (2009) states that the best way to understand the juvenile justice decision-making process is through the focal concerns perspective. As previously stated, probation officers rely on perceptual shorthand to assist with the assessment of juvenile offenders. This essentially is attaching non-legal factors to processing outcomes. Steffensmeier, Ulmer, and Krameris (1998)

found four key results tying focal concerns perspective to the effects of race and stereotyping. First, they found that young Black males are sentenced more harshly than any other group, race being most influential in the sentencing of younger males, the influence of an offender's age on sentencing is greater among males, and the main effects were race, gender, and age. Second, Steffensmeier, Ulmer, and Krameris (1998) found relatively modest direct effects of race, age, and sex, which was argued that "the interconnected effects culminate in the disproportionately severe sentencing of young Black males (Hartley et al., 2007). Similar results supporting the focal concerns perspective were found by additional literature (Spohn & Hollerman, 2000; Steffensmeier & Demuth, 2000). These results are further explained as young Black males received more severe sentences than any other age, race, or gender combination. Through qualitative interviews, Steffensmeier (1998) further confirmed the argument that decision-makers stereotyped young Black males as dangerous and unsuitable for release into society. Judges view youthful offenders as being more dangerous, committed to street life, and less reformable than women and other offenders. Additionally, judges may also see young Black men as doing time more easily than young White men and interpret their demeanor as indicating less remorse than White men (Steffensmeier et al., 1998).

It is important to note the similarities between the focal concerns perspective and attribution theory. Steffensmeier, Ulmer, and Krameris (1998) used the focal concerns perspective with interpretation of attribution to examine the efforts of being young, Black, and male. As previously discussed, the attribution theory (Albonetti, 1991) explains the "perceptual shorthand" used by decision-makers and their reliance on a subset of attributed factors for offenders. This "perceptual shorthand" parallels the "patterned responses" used by decision-makers, as explained through the focal concerns perspective. Steffensmeier, Ulmer, and Kramer

(1998) incorporate Albonetti’s definition of “perceptual shorthand,” which is hypothesized to allow for the incorporation of extra-legal factors such as sex, race, ethnicity, and age. It is argued that this perceptual shorthand opens the door for disparity in sentences and the potential for discrimination (Hartley, 2007). As shown in Figure 2, guided by focal concerns, court actors use causal attributions to arrive at sentencing (outcome) decisions. Causal attributions (planning, sophistication, intent, and danger) are used by court actors to assist them with decision-making (Crittendon, 1983; Heider, 1958; Scott & Lynman, 1968). In addition to those shown in Figure 2, some causal attributions are also accounts, justifications, excuses, or reasons (Harris, 2009).

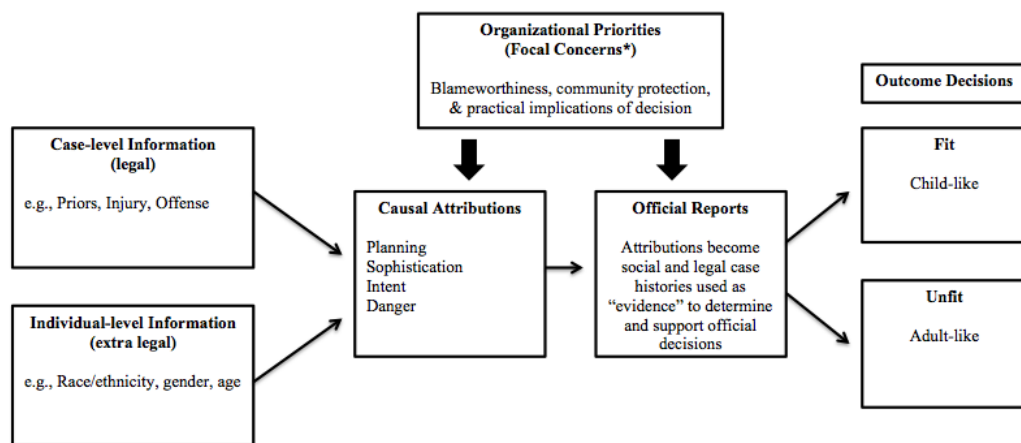


Figure 2. Theoretical framework adapted from Harris (2009; p. 253)

It is important to note the shortcomings and limitations of these perspectives. There are three main shortcomings of the focal concerns perspective. Given that this theory lacks theoretical development by criminologists, there is not an explicit thesis or established propositions supporting this framework. Additionally, the concepts still require further definition and efforts. Lastly, the framework lacks generalizability since the majority of research testing

uses the Pennsylvania Sentencing Commission data, thus limiting the generalizability of these efforts (Hartley et al., 2007).

Despite these limitations, the consideration of attribution theory and focal concerns theory provide insights into the factors that might influence probation officer assessments of youth, especially minority youth. Therefore, the aforementioned perspectives are relied upon by the present thesis.

### *Symbolic threat theory*

The symbolic threat thesis focuses on characteristics of minority juveniles and stereotypes of threat or danger. In addition to focusing on characteristics of youth and especially minority youth, the social psychological emotions of juvenile court officers are focused on in this theory (Leiber & Fox, 2005). These emotions of the juvenile court officers, specifically probation officers, are often times fear of the youth. These negative emotions are visible in beliefs that minority youth pose symbolic threats to middle class standards and public safety (Leiber & Fox, 2005). This perspective is also believed to be fostered by negative perceptions of Blacks and the corresponding stereotypes made by decision-makers (Tittle & Curran, 1988).

Similar to the attribution and focal concerns perspectives, the symbolic threat theory states that juvenile court officials and decision-makers develop "perceptual shorthand" that relates characteristics of minority youth to emotions of fear and resentment (Tittle & Curran, 1988). This assumed fear is the result of a threatened middle-class due to the presence of minority youth and the fear of crime (Sampson & Laub, 1993) For example, minorities have been shown to be perceived differently than Whites, regardless of having similar offense histories; minorities are often perceived as presenting images of both threat and danger (Bridges & Steen, 1998; Bridges, Crutchfield, & Simpson, 1987; Bridges & Conley, 1995; Farrell &



Swigert, 1978; Tonry, 1995). Tittle and Curran (1988) found that nonwhite youth symbolize resentment or fear provoking qualities such as aggressiveness, sexuality, and absence of personal discipline; this fear and/or resentment translating into decision-makers responding differently towards nonwhite youth. Probation officers were found to describe minority youth as ‘character flawed’ and ‘more dangerous’ than similarly situated Whites, which are likely to influence their decision-making (Tittle & Curran, 1988; Bridges, Conley, Engen & Price-Spratten, 1995; Graham & Lowery, 2004). Further explained, it is contended that due to minorities symbolizing ‘resentment-provoking or fear provoking qualities like aggressiveness, sexuality, and without personal discipline’ (Tittle & Curran, 1988), they have an increased likelihood of receiving more severe outcomes relative to other youth (Leiber & Mack, 2003).

Using attribution, focal concerns, and symbolic threat theories as explanatory lenses, the current thesis suggests that court actors employ a racialized perceptual shorthand of youthful offenders that attributes both higher levels of blame and lower evaluations of reformability of minority youth. As a result, minority youth are more likely to receive higher risk assessment scores and subsequent court outcomes.

## CHAPTER 4

### LITERATURE REVIEW

Of the existing literature examining risk assessments, the primary focus is most typically of the validity of the instrument and its predictive accuracy (Schwalbe, 2007, 2008; Schwalbe et al., 2004, 2007; Vincent et al., 2011; Knapp et al., 2012). Of this literature, most all risk assessments have been found to be valid in their predictive ability of risk assessment scores (Baglivio, 2009; Baglivio & Jackowski, 2013). However, the current thesis argues that regardless of a risk assessment's predictive ability, the existence and possible allowance of stereotypes and bias toward youth by decision-makers may be present in such assessments.

As referenced, while there are many risk assessments employed in the United States, the current thesis focuses on the Florida PACT. The PACT is one of the larger risk assessment instruments and is similar to the Youth Level of Service/Case Management Inventory (YLS/CMI). Prior research has shown larger instruments may be more sensitive to variations in risk across gender and race due to the measurement of a more comprehensive range of risk factors (Schwalbe, Fraser, & Day, 2007). The PACT is similar to most other risk assessments in its core principles of risk, need, and responsivity, given that it is in place to better understand the risk of recidivism in offenders. Risk assessments are typically viewed in one of two ways in literature:

1. Risk assessment have the potential to reduce racial/ethnic disparities because they provide a uniform way to assess offenders without wholly relying on decision-makers' assessments, which might be influenced by bias (Schwalbe et al., 2006).

2. Risk assessment instruments have the potential to exacerbate disparities because race and ethnicity predict some of the items, indirectly placing racial/ethnic minorities at a greater risk of a harsher punishment (Hoytt et al., 2002; Moore, 1986; Mulvey & Iselin, 2008; Muncie, 2006).

The current thesis predicts in line with the second viewpoint given that the PACT uses subjective sections that rely entirely on the probation officer's observations and perceptions of the juvenile. Due to the lack of prior literature examining the role of risk assessments in the differential treatment of minority offenders in the juvenile justice system, the current thesis seeks to fill this gap in the literature. In the section to follow, literature will be discussed pertaining to the PACT itself and the corresponding prior literature, as well as prior literature regarding the presence of racial/ethnic disparities in the juvenile justice system that is often guided by attribution theory, focal concerns, or symbolic threat perspective. The section concludes with a discussion on the limited amount of past research on race/ethnicity, risk assessment, and juvenile justice court outcomes.

Risk assessment

#### *PACT Prior Literature*

Outside of the work of Baglivio and Baird, there is limited prior literature focusing on the PACT risk assessment tool. Baglivio and Jackowski (2013) have worked to validate and examine the PACT, while Baird, Johnson, Bogie, Dankert, and Scharenbroch (2013) efforts have been aimed at analyzing and critiquing risk assessment models, including the PACT.

Baglivio (2007, 2009) validated the PACT and explored gender differences in predicting recidivism risk. Baglivio (2007) was one of the first research studies to find an assessment

instrument capable of predicting female re-offending for an entire sample. As a result, the analysis found the PACT to be a valid predictor of both male and female recidivism. No support was found for the argument of “gender-specific” assessments. Baglivio (2009) also validated the PACT and found that the factors predicting female delinquency did not reflect those predictive of male delinquency. This study also found that both male and female juvenile scores of environmental and personal characteristics had a stronger relationship with recidivism than did a score of criminal history. Baglivio and Jackowski (2013) examined the validity of the PACT assessment tool across gender and race/ethnicity. The study used all youth who completed probation during 2007-2008 within Florida; this was a rich sample due to Florida’s rural and urban communities. The scope of this survey was quite large at 15,072 youths made up of 34.1 percent White non-Hispanic males, 28.1 percent Black males, 12 percent Hispanic males, 11.5 percent Black females, 11 percent White non-Hispanic females, and 2.7 percent Hispanic females. The study followed youth for 12 months post completion and observed subsequent offending. Baglivio and Jackowski rejected that recidivism increased as PACT scores increased; such findings were good for the validation of the instrument. This study also found that Black male groups scored as high risk compared to all other groups, and more Black females scored high risk than other female subgroups. These findings are also consistent with theory reported by Schwalbe, Fraser, Day, and Cooley (2006).

Baird (2009) offers a critique of risk assessment models used in the justice system based on evidence-based practices (EBP). Given that the PACT, similar to the YASI and LSI-R tools, focuses on differences between static and dynamic factors, additional risk reduction factors have been added, usually arranged in domains. Baird cites that the shorter versions of risk assessment

tools (recall the PACT has both a pre-screen and a full assessment) have significantly stronger relationships than the full assessments (Wagner, 2008).

#### *Inter-rater reliability (IRR) and validity testing*

There is a fairly extensive literature regarding both validity testing and inter-rater reliability (IRR) of risk assessments. While the notion of implementing risk for recidivism assessment tools in juvenile probation, on the surface, seems like it would increase the consistency and validity of decision-making, these tools could have deleterious effects if the tools are unreliable or invalid (Vincent et al., 2011). Among the instruments that have demonstrated sound inter-rater reliability, reliability has only been established in “laboratory-like settings” where trained research assistants who had completed the assessments based on the file review were used (Vincent et al., 2011). The only study to establish inter-rater reliability was conducted by Vincent, Terry, and Maney (2009). Thus demonstrating a lack of inter-rater reliability and a gap in the literature. Additionally, instruments with high levels of predictive validity increase the capacity of the courts to identify high-risk offenders and subsequently, allocate court resources to these offenders (Schwalbe, Fraser, Day, 2007).

Schwalbe has been very influential in the field of risk assessment validity testing, of the North Carolina Assessment of Risk (NCAR), Arizona’s Risk/Needs Assessment Instrument, and the Joint Risk Matrix (JRM) (Schwalbe et al., 2004, 2007; Schwalbe 2009). Additionally, Schwalbe has conducted two meta-analyses of risk assessment tools, one focusing on 28 risk assessments, and one focusing on the predictive validity of gender (Schwalbe 2007; 2008). In the meta-analysis examining risk assessment predictive validity of male and female offenders, Schwalbe examined nineteen studies with an average predictive validity of  $r=.25$ . Schwalbe’s results support the use of risk-assessment instruments with both male and female offenders given

that predictive validity did not vary by gender. A limitation of this study however was the absence of a thorough analysis of the potential moderating effects of gender (Schwalbe 2007). Schwalbe (2006) stated that the goal of promoting racial, ethnic, and gender equality might remain unfulfilled if the predictive validity of risk assessment instruments differs by gender or race/ethnicity.

The few available studies of inter-rater reliability in offender risk assessments are limited in the generalizability of their results (Baird, 2009). For example, Knaap and colleagues (2012) conducted a study of inter-rater reliability in Dutch offender risk assessments. 38 raters independently assessed 75 offenders. The results show substantial reliability for risk of reconviction and moderate reliability to substantial reliability for offender needs (i.e. accommodation, finances, education). In addition, this conclusion leads that greater external validity does not negatively influence interrater reliability results. Knaap and colleagues cite the limitations to research on previous inter-rater reliability and the possibility of overestimating or underestimating the instruments' reliability as justification for their study. Inadequate sample size, a very long period between assessments, and no independent interviewing of offenders by the raters involved in the study are all prior limitations this study sought to avoid. Regardless of the scarcity of research, the need to examine the reliability of an instrument is a critical element in considering its overall accuracy in rating offender risk to re-offend (Baird, 2009).

The viewpoint that inter-rater reliability in offender risk assessment studies is not generalizable is additionally supported due to the limitations of validation studies conducted nation wide. While a study can be found to be moderately or sufficiently valid, that validation only speaks to that one risk assessment tool. As Baird, Johnson, Bogie, Dankert, and Scharenbroch (2013) show, there are numerous risk assessment tools and most all have been

validity tested in some way. Additionally, Knapp, Chait, Pappadopulos, Crystal, and Jensen (2012) note that while risk assessment research has focused heavily on the predictive validity of instruments, examinations of reliability have generally been neglected in literature. The need to examine the reliability of an instrument is a critical element in considering its overall accuracy in rating offender risk to re-offend (Baird, 2009).

Vincent, Chapman, and Cook (2011) conducted a validation study of the Structured Assessment of Violent Risk in Youth (SAVRY) using a five year follow up period examining the differential validity of race-ethnicity. This study was comprised of two complimentary studies investigating the inter-rater reliability and performance of juvenile justice personnel when administering the SAVRY. The second study is especially useful to the present study due to its evaluation of the juvenile justice personnel in their use of the risk assessment.

The results suggested that juvenile justice personnel could in fact use the SAVRY and structured professional judgment reliably in the field. Vincent, Chapman, and Cook (2011) found seven of the thirty SAVRY items to be consistently difficult for raters. Past supervision/intervention failures, parental/caregiver criminality, and early caregiver disruption were rated incorrectly for over half of the cases. Childhood history of maltreatment, risk taking/impulsivity, strong attachment and bonds, and positive attitudes towards intervention and authority were rated incorrectly by 40-49 percent of raters (Vincent et al., 2011). Raters [probation officers] had a challenging time understanding and defining specific items on risk assessment tools. While this directly lends itself to inter-rater reliability concerns, it also speaks to the validity of the risk assessment as a whole. If each rater were consistently interpreting an item differently on the assessment, this would result in variation among juvenile's risk assessment scores and subsequent judicial outcomes. Additionally, this speaks to the

generalization of both risk assessments and the validity testing of those risk assessments. For example, if one jurisdiction has been trained to interpret an item differently than raters at another jurisdiction, variability would reflect in risk assessment procedures, scores, and outcomes within a county/region.

## Race/ethnic and juvenile justice court processing

### *Race/Ethnicity and Bias/stereotyping*

The main issue is whether the use of risk assessment in decision-making affects racial disparities in imprisonment, given that young Black men are about six times more likely to be imprisoned than young White men (Carson, 2015). Historically, minority youth have experienced harsher punishments and more negative outcomes than White youth even when risk assessment is used (Campbell et al., forthcoming). Although limited, previous literature has also looked at the effects of race/ethnicity on risk assessments.

Beginning with Campbell et al. (forthcoming), this study examined the role of ethnicity in program referrals at judicial disposition with juvenile offenders using the YLS/CMI. The study, guided by the deviant peer theory, sought to determine if ethnicity predicted program referral when accounting for risk assessment and if program referrals predicted recidivism. The YLS/CMI was used to determine (1) if ethnicity predicted program referral when accounting for risk assessment and (2) if program referral predicted recidivism. Results indicated that ethnicity predicted program referral, and program referral predicted recidivism. The study also found that risk assessment was central to decision-making and ethnicity was involved in the decision-making of staff. While this study, and many others, focuses on the back end of the judicial system, the current thesis focuses on decision-making at intake, where the PACT takes place.



Mallett and Stoddard-Dare (2010) sought to determine if DMC impacts secure detention placement when a standardized risk assessment is used. The results indicated that African American youth were two times more likely to receive secure detention center placement than non-African American youth. It is also suggested that the use of a standardized instrument such as the Y-LSI may reduce but does not eliminate DMC (Mallet & Stoddard-Dare, 2010).

Additionally, Leiber and Boggess (2012) examined the relationships between race and probation violations with preadjudication secure detention decision and detention hearings using a detention-screening instrument. Minimal support was found for the belief that being minority would increase the chances of being detained and detained at the 24-hour detention hearing when involved in probation violations. The study also found that race was influential in combination with legal criteria in one of three jurisdictions. A limitation of this study is that it stopped short of teasing apart the factors of the detention-screening instrument in order to further evaluate the relationship of race/ethnicity and risk factors; this limitation lends itself to the present study.

Graham and Lowery (2004) used the belief that racial stereotypes play out in particular ways when applied to legal decisions about African American youthful offenders, and that those decisions are discrepant with society's view of adolescence. The authors used the hypothesis that the shared cultural belief about adolescents (that they are immature and less culpable than adults) is superseded by another more pernicious belief (that they are violent, aggressive, dangerous, and possess adult-like criminal history). To test this hypothesis, two experiments were used. Both experiments looked at the affect of unconscious racial stereotypes on police officers (Experiment 1) and juvenile probation officers (Experiment 2) and their perceptions and treatment of juvenile offenders. This study is particularly applicable given that actual decision-makers were used instead of the common sample of college students. Participants in the study were given

hypothetical situations and were asked to make judgments regarding the offender's culpability, expected recidivism, and deserved punishment. The results of this study offer insights into racial disparities in the juvenile justice system. Graham and Lowery found that police officers and juvenile probation officers held negative stereotypes towards Black juvenile offenders and, as a result, were more likely to endorse harsher punishments for Black youth than for their counterparts.

### *Probation officers*

In addition to the gap in literature regarding the PACT assessment tool, there is a far-reaching gap of literature examining the role of probation officers and the use of risk assessment. Racial differences have been found in predictive ability and risk factor significance for several tools (Fass, Helibrun, DeMatteo, & Fretz, 2008). Bridges and Steen (1998) investigated how court officials' perceptions of offenders influenced their classification, assessment, and final recommendation for punishment. Little evidence exists on how court officials' perceptions of offenders influence their classification, assessment, and final recommendations for punishment. The study points out that of the previous studies in this field, few identify the mechanisms by which the accused's race influences official assessments of youths and their cases (Emerson, 1981; Fagan et al., 1987; Farrell & Swigert, 1978).

Bridges and Steen (1998) also argue that differential perceptions of youth and their crimes may legitimize racial disparities in official assessments of a youth's dangerousness and risk of future criminal behavior. In support of their study, it is explained that court officials make judgments about character – a youth's attitudes, motivations, and background – that influence the outcome of legal proceedings. Two hundred and thirty three narrative reports written by probation officers in three counties were used in the study. The reports offer summary

information about a youth's social history and typically conclude with the probation officers assessment of the likelihood of criminal recidivism and recommendations for sentencing.

Bridges and Steen examined three issues: (1) whether a youth's race is related to officials' attributions about youths, (2) whether attributions influence assessments of the risk of future crime and recommended sentences, and (2) whether attributions mediate the relationship between an offender's race and officials' assessments of risk and recommended sentences.

Reports on Black youths were more likely to include negative internal attributions than reports on White youths. Officers' assessments of the risk of reoffending differed significantly by race; Black youths were judged to have a higher risk of reoffending than were White youths.

Three noteworthy findings emerged from the study: (1) probation officers consistently portray Black youths differently than White youth in their written reports, (2) attributions about youth shape assessments of the treat of future crime and sentence recommendations, and (3) attributions about youths and their crimes are a mechanism by which race influences judgments of dangerousness and sentencing recommendations. Additionally, the results showed that there were pronounced differences in officers' attributions about the causes of crime by White versus minority youth (Bridges & Steen, 1998).

#### Risk and race/ethnicity

The previous described studies examined various constructs of the influence of risk assessment tools within the justice system. Stereotypes have been found to exist and manifest throughout the decision-making process, influencing court outcomes. Although such research has provided considerable literature and advanced understanding of stereotyping and bias, the interplay between risk assessment and race has yet to be thoroughly explored. As referenced,

Leiber and Boggess (2012), for example, did not tease apart the factors of the detention-screening instrument and there are no known studies that include this method. This is the basis for the current thesis and will lend considerably to an improved understanding of stereotyping and risk assessment tools. Additionally, evaluations of the PACT have failed to find whether the differences found between gender and race/ethnicity subgroups were due to the shortcomings of the instrument or to external factors in the juvenile justice system itself (Baglivio & Jackowski, 2013).

In the case that predictive validity differs markedly across gender or race/ethnicity, errors in classification may differ by such factors. Depending on the nature of the errors, risk assessment tools hold the potential to exacerbate disparities, in court dispositions, particularly gender and race/ethnicity (Schwalbe et al., 2007). The work of Schwalbe, Fraser, and Day (2007) found that one statistical solution is to treat demographic variables as risk factors in such instruments. However, to the extent that risk assessments influence judicial disparities regarding confinement and the restriction of civil liberties, this approach raises intractable ethical problems.

Although race is omitted from these instruments, critics assert that many risk factors that are sometimes included (marital history, employment status, neighborhood disadvantages) are “proxies” for minority race and poverty (Starr, 2014; Harcourt, 2014; Silver & Miller, 2002). This race proxy debate is further expressed by Harcourt (2010), where it is explained that risk today has collapsed into prior criminal history and criminal history. The combination of these two trends means that using risk-assessment tools may significantly aggravate racial disparities in our juvenile justice system. In the view of Former Attorney General Eric Holder (2014), risk assessment

“...may exacerbate unwarranted and unjust disparities that are already far too common in our criminal justice system and in our society. Criminal sentences must be based on the facts, the law, the actual crimes committed, the circumstances surrounding each individual case, and the defendant’s history of criminal conduct. They should not be based on unchangeable factors that a person cannot control, or on the possibility of a future crime that has not taken place (Holder, Eric 2014).

Risk assessment could *exacerbate* racial disparities, as Holder speculates. But risk assessment could instead have *no effect* on – or even *reduce* disparities – as others have predicted (Hoge, 2002; Gottfredson & Gottfredson, 1988). Skeem, Edens, Camp, and Colwell (2004) found negligible differences ( $d = .06$ ) between Black and White groups on a multi-item criminal history scale (i.e., early conduct problems, juvenile delinquency, revocation of conditional releases, poor anger controls, criminal versatility) that robustly predicts recidivism (Walters, 2012).

The systematic bias toward youth of color may be legitimized by objective assessments and delinquency predictors (Brown, 2007). The juvenile justice system may have created a ‘still existing color line’ rather than rehabilitating troubled youth, where White youth receive rehabilitation and by contrast minority youth (primarily Black youth) are subjected to punishment and social control (Tanenhaus, 2004). This concept of ‘differential rehabilitation treatment’ is present in the juvenile justice system when minority youth disproportionately come into contact with or receive harsher punishment than their non-minority counterparts (Engen et al., 2002; Pope et al., 2002).

There is the additional argument that the very use of risk assessment in the juvenile court acts to continue a century long tradition of using law enforcement to contain, control, and

dispose of urban youth of color (Brown, 2007). While this is a further stance on the effects of risk assessment than the current thesis takes, it is an example of the arguments against such tools. Further explained, risk classifications are viewed as acting in concert with broader social discourses to pathologies' and criminalize youth of color (Brown, 2007).

In summary, Chapter 4 provided an overview of the current literature referenced by the present thesis. The present thesis employs the viewpoint that risk assessment instruments have the potential to exacerbate disparities because race and ethnicity predict some of the items, indirectly placing minorities at a greater risk of a harsher punishment (Hoytt et al., 2002). Prior literature on the PACT primarily comes from Baglivio (2009; 2013) and Baird (2009). Inter rater reliability (IRR) and validity testing is also referenced in this chapter, in addition to literature regarding race/ethnicity and juvenile justice proceedings. Again, the decision-making of the probation officer is a main focus of the present thesis given their influence on the youth's risk classification and the judge's decision-making.

## CHAPTER 5

### RESEARCH QUESTIONS

As previously discussed, risk assessments have two purposes: treatment response and structure decision-making (Andrews, 2001; Bonta & Andrews, 2006; Vincent, Chapman, & Cook, 2010). While a significant number of studies examined the validity of the instrument in the way the instrument pertains to recidivism and risk level, the impact of assessment tools to reduce race/ethnic bias in the part of juvenile justice decision-makers has not been explored. This void in the literature is significant because significant patterns of racial/ethnic disparity have emerged throughout the various stages in case processing (Bishop & Frazier, 1989; Leiber, 2002; Lowery, 2016).

#### Part A: Risk levels

*Q1: Is there a difference between pre and full PACT assessments as it relates to Risk level?*

*Related, is there a race effect reflected in the pre and full PACT assessments?*

First and foremost, the present study seeks to understand whether the PACT is an effective tool used by the Florida Department of Juvenile Justice. The pre screen assessment is administered to every juvenile at intake and if the youth scores a moderate-high or high risk level, the youth is then assessed with the full instrument. I attempted to understand if low risk youth are receiving the full screen assessment when they do not qualify as high enough risk to receive this assessment. Looking specifically at race/ethnicity, are Black youth (regardless of risk level) receiving the full assessment when they only qualify for the pre assessment. In order to evaluate how effective the PACT is, the present thesis will evaluate if there are any statistically

significant differences in risk levels, and race/ethnicity. First, are both pre and full assessments producing the expected risk levels? Meaning someone who only receives the pre assessment should be a low or moderate risk, thus receiving more lenient outcomes, while someone who receives a full assessment should receive more intensive services. Once this has been evaluated, both pre and full assessments will be tested for differences by race/ethnicity. Specifically are youth treated equally regardless of race/ethnicity?

It was important to establish the difference between pre and full assessments since Florida juvenile probation staff reported not having an opportunity to override risk scores/Risk levels. This first step of analysis was needed to confirm that youth receiving the full PACT assessment were only youth qualified for this assessment. Therefore, it is expected that there would be an accurate distribution of youth receiving a moderate-high and high-risk level at the pre screen and youth receiving the full screen tool. The number of juveniles who scored a low or moderate risk level on the pre screen assessment but still received the full assessment is less than 1 percent of the sample (N=815) and the racial composition mirrored the entire sample, indicating no racial motivators for this override.

Once this step of analysis has been completed, the effect of race/ethnicity in the pre and full assessments is evaluated. Recall that the racial makeup of the sample is 36 percent White, 51 percent Black, and 13 percent Hispanic. While acknowledging that African American youth make up 16 percent of youth in the United States in 2017 (Sentencing Project, 2017) and made up 17 percent of youth in 2010 (Sentencing Project, 2014), the present thesis will use the sample's make up as a reference point when evaluating racial/ethnic effects. Meaning the base rate of Black youth in the sample is 46 percent so any disparity from this rate will be reviewed.



*Q2: Is race/ethnicity a statistically significant predictor of Risk levels in either the pre or full assessments?*

In the second step of the present thesis, the effect of race/ethnicity on Risk level is tested. Is there a significant race effect on Risk levels? In 2009, the Relative Rate Index (RRI) for case processing in Florida shows trends of disproportionate minority overrepresentation. The referral rate for minority youth was 1.6 total, specifically 2.8 for Black youth, and 1.1 for Hispanic youth compared to White youth (Puzzanchera & Hockenberry, 2017). Unfortunately, these trends have only gotten worse for Black youth, as 2014 rates show Black youth 3.1 times more likely to receive a referral than a White youth. However, it is important to acknowledge that these differences may not be the result of racial/ethnic bias and stereotyping but instead by differential offending rates between minority and non-minority youth.

These differences may be explained by differences in delinquent offending between each racial/ethnic group (Sampson & Wilson, 1995; Brame et al., 2014). However, based on prior literature and the evidence of race/ethnic stereotyping (Leiber, 2003; Freiburger & Jordan, 2011; Peterson & Hagan, 1984), Black and Hispanic youth may be responded to more harshly than comparable Whites. That is, Black and Hispanic youth may be unjustly viewed by probation officers as criminal, dangerous, and in need of interventions (Bridges & Steen, 1998; Laskorunsky, forthcoming). Due to prior literature and the reported RRI in Florida between 2009 and 2010, the present thesis expects to find racial/ethnic differences in overall Risk levels. Specifically, it is expected that minority youth will receive higher risk levels than non-minority youth.

*Q3: What is the influence of each domain on Risk levels? Related, what is the relationship between each domain, race/ethnicity and Risk level?*

After determining whether the PACT itself is reliable regarding Risk levels and race/ethnic influence, the present thesis evaluates the influence of each domain on scoring. Specifically, what is the relationship between domains and Risk level? The influence of each domain is evaluated in relation to the overall Risk level. In line with previous literature and Question 1 and 2, Question 3 predicts that there will be a racial/ethnic effect on specific domains and overall Risk levels. It is expected that some domains could have more of an influence on Risk level than others. Specifically, some domains have been found in prior literature to act as a proxy for race, or be tainted by race. For example, domains focusing on a youth's family structure have been found to effect Black youth more severely than White youth; specifically due to the higher rates of female headed households in the Black community which is a risk for delinquency (Leiber & Johnson, 2008). Additionally, prior literature has shown arrest rates are higher/more frequent for Black youth, therefore the prior record domains are more likely to negatively effect the risk level for Black youth, even though this is a legitimate risk factor.

Next, the relationship between race/ethnicity and total recommendation is evaluated within each domain. The total recommendation variable was created by replicating the Washington State scoring matrix in efforts to have a numerical score for every youth. The methods behind this variable and the Washington State matrix will be discussed in the methods section. Due to these prior examples of race/ethnicity effecting juveniles, the present thesis expects to find results in line with such findings. Additionally, prior literature has shown probation officers to view minority youth differently than non-minority youth in their written reports (Bridges & Steen, 1998). Due to this, it is anticipated that domains of a more subjective nature, such as attitudes/behaviors and aggression to be harmful or harsher towards minority youth.

## Part B: Court Outcomes

In line with recommendation matrixes (the youth's final disposition/outcome) from the Florida Department of Juvenile Justice (DJJ) and prior literature, a high-risk score should indicate harsher sentencing. Given that the PACT is first administered at intake, the current thesis begins with intake processing. The data follows each juvenile through the juvenile justice system, including adjudication and judicial disposition. Mirroring efforts by Baglivio and Jackowski (2013) and previous validation studies of large assessments, the present thesis will test the predictive ability of the PACT on court outcomes.

### *Q4: Does race/ethnicity impact the court outcomes of juveniles?*

Focusing now on the court outcomes of juveniles, the present thesis will evaluate the relationship between race/ethnicity and court outcomes. The influence of race/ethnicity will be tested at intake, adjudication, and judicial disposition. Prior literature has found that minority youth can be treated more harshly in juvenile court outcomes than their White counterparts (Rodriguez, 2010; Leiber, 1994; Leiber & Fox, 2005). For example, Farnworth and Horan (1980) found that Black defendants face different processes than White at numerous stages of the criminal justice process; when racial differences in processing occur, they are likely to occur at stages prior to final sentencing. Due to this prior literature, the present thesis expects to find a difference in the ways in which minority and non-minority youth are handled at decision-making stages.

### *Q5: Does the PACT impact court outcomes?*

Mirroring the methods used in Question 4, Question 5 evaluates the influence of the Risk level at intake, adjudication, and judicial disposition. Prior literature has tested the validity of the PACT and found the PACT to be a valid risk assessment tool in predicting court outcomes for

juveniles (Baglivio & Jackowski, 2013). Due to this prior literature, it is expected that the Risk level will have an influence on court outcomes. The presence of the PACT should be used by decision-makers in their assessment of juveniles throughout various decision-making stages and it is anticipated to find evidence of this throughout the analyses.

*Q6: What joint role do race/ethnicity and the PACT have on court outcomes?*

Taking the efforts of Questions 4 and 5, what joint role does race/ethnicity and the PACT have on court outcomes at intake, adjudication, and judicial disposition? Interaction terms will be created and if they are found to be statistically significant and improve the Cox and Snell's pseudo  $R^2$  of the model, they will be added to the original model. However, if the interaction terms are not found to be significant and influential, they will be removed and will not be included in the additive model.

Given that prior literature has found race/ethnicity to have an effect on court outcomes, it is anticipated that the joint role of race/ethnicity and Risk levels will have an effect on court outcomes. The PACT assessment tool has been previously validated (Baglivio & Jackowski, 2013), therefore it is expected that the PACT will have some level of effect on the court outcomes. This effect is especially expected when combined with race/ethnicity, which has been found to effect minority youth more harshly than non-minority youth.

*Q7: What specific factors (domains) of the PACT have the most influence on court outcomes, and how do they play out for White, Black, and Hispanic youth?*

Similar to the methods used in Question 3, what specific factors (domains) of the PACT are influential on court outcomes, and how do they play out for White, Black, and Hispanic youth? The influence of each of the domains is tested at each of the decision-making stages, and then these influences were further broken out by race/ethnicity. It is expected that the present thesis

will find specific domains to have more of an impact on court outcomes, similarly as expected in Question 3. Prior literature has shown specific factors, such as prior record (Harris, 2009) and family dynamic (Leiber & Johnson, 2008) to effect minority youth more harshly. It is anticipated that these findings will be found at intake, adjudication, and judicial disposition. Specifically, it is again predicted that minority youth will be treated more harshly than non-minority youth.

It is important to again note that while the present thesis expects to find evidence of minority youth receiving harsher outcomes, this may not be due to bias or stereotyping of the decision-makers. It is possible that minority youth will receive harsher outcomes due to differential offending and therefore could be committing more serious crimes that are being met with equally as serious court outcomes.

## CHAPTER 6

### METHODS

The present thesis analyzed data from a sample of 148,330 juveniles who were processed at intake in the state of Florida in 2009 to 2010. The present thesis examines the interplay between the risk assessment score in the Florida PACT with being a White, African American, and Hispanic youth and court outcomes. Guided by racial or ethnic stereotyping and previous findings, the present thesis intends to determine the ability of risk assessments to control for race or ethnic biases as well as possibly enhance race/ethnic biases. The seven research questions of the present thesis are separated by Part A Risk levels and Part B court outcomes.

Two datasets from the Florida Department of Juvenile Justice (DJJ) were combined for the present thesis. The original dataset (N=271,880 referrals) contains all juveniles referred to juvenile court in Florida in 2009 and 2010 who received the PACT, and the second contains the judicial outcomes of all juveniles in Florida from 2009 and 2010. All 'missing' PACT data and cases where court data was not present were removed due to an inability to match a PACT assessment to the match ID. The offense database contained 409,611 cases and the PACT database contained 185,350 cases. Once I merged based on the match ID, the dataset contained 271,880 cases. All cases without PACT data were then removed, and I then moved on to clean the data based on pre and full assessments.

Based on prior literature (Baglivio, 2009), I utilized only the first pre assessment and first full assessment for each juvenile, per referral. If the juvenile did not qualify for or receive a full assessment, the first pre screen assessment was kept. When using the domains to predict

outcomes, the sample size changed due to pre screen youth having only four domain scores. Both assessments needed to be utilized to understand the relationship between the two types of assessments, as posed by Question 1. It is important to note that this process was repeated per referral for each juvenile; many juveniles received more than one assessment per each referral. For example, a pre screen assessment was used, followed by multiple full assessments, therefore only the first pre assessment and first full assessment per each referral remained in the dataset. In the case that there were multiple referrals, referrals that were under 14 days apart were removed to prevent duplicate referrals. As a result of this step of data cleaning, the data contained only one pre assessment and one full assessment per referral for each juvenile processed during 2009 and 2010 in Florida. The final sample of referrals is 148,330.

Once the entire dataset had been preliminarily cleaned, the database was separated into a 'pre screen' and a 'full screen' database. This step was completed by using the 'PACT Type' variable (1=pre screen, 2=full screen); this resulted in 122,880 cases for the pre screen dataset and 25,450 cases for the full screen dataset. The decision to separate the dataset by PACT type was due to the need to create a separate scoring matrix for both assessment types and this was viewed as a better option than just using the PACT type as a variable only. Baglivio (2009) kept the two models together for analysis since the full instrument contains all questions from the pre screen instrument. However, this thesis is interested in the difference between the types of PACT assessment employed.

Two observations of irregularities were found during initial data cleaning:

1. Many juveniles were not receiving the pre screen at all and were automatically only receiving the full screen,

2. Many juveniles had irregular patterns with their assessment type, meaning some juveniles would receive a full screen, then pre screen, and then full screen again, all within the same referral type.

As a result of these irregular trends, DJJ employees within Florida were contacted to better understand why a juvenile would receive a full PACT before first receiving a pre screen assessment, and why a juvenile would receive multiple types of assessments per one referral; I have yet to receive a response. Again, I did keep a pre and a full per each referral if both were available. Due to the scope of the present thesis, these patterns are noted but not further evaluated. The implications will be discussed later in the discussion section of the thesis.

A limitation of the present thesis is the missing data and the failure to account for this data. Specifically, since STATA was used for the present thesis, listwise deletion was automatically employed which removed an entire case when there is missing data in one of the variables being used in the model. Since missing data was not accounted for in the models, there could be unknown differences between those who are included in the models versus those who are not due to the missing data. In the future, I would like to use multiple imputation (MI) to make a full dataset without missing data based on the data that is missing, however this was not used in the present thesis.

### *Variables*

The variables of interest come from both the pre screen and full screen databases. The inclusion of these variables is also consistent with the theoretical framework (Bridges & Steen, 1998; Leiber & Boggess, 2012) and prior literature (Baglivio, 2009; Baglivio & Jackowski, 2013).



**Table 3.** List of Non-Domain Variables (N=148,330)

Variable		Full	W	B	H	
		(1)	(2)	(3)	(4)	
<b>Independent Variables</b>						
Race/Ethnicity <sup>a</sup>						
	White	1	58,274	58,274		
	Black	2		68,685	68,685	
	Hispanic	3	21,371		21,371	
PACT						
	PACT Type	1 – Pre	122,880	49,142	55,684	18,054
		2 – Full	25,450	9,132	13,001	3,317
	Social History	low to high	0 to 18	0 to 18	0 to 18	0 to 18
	Criminal History	low to high	0 to 31	0 to 29	0 to 30	0 to 29
	Prior Referrals	1 – None or 1	66,091	29,525	26,143	10,423
		2 – 2	39,525	15,186	18,526	5,813
		3 – 3 or more	42,714	13,563	24,016	5,135
	Risk level	1 – Low	83,901	36,963	34,074	12,864
		2 – Moderate	24,354	8,941	11,763	3,650
		3 – Mod-High	23,148	6,675	13,719	2,754
		4 – High	16,927	5,695	9,129	2,103
	Total Score	low to high	-138 to 99	-137 to 93	-121 to 99	-138 to 88
<b>Controls</b>						
	Gender	1 – Male	112,473	42,698	52,558	17,217
		2 – Female	35,857	15,576	16,127	4,154
	Age	1 – 12 and under	4,992	1,811	2,647	534
		2 – 13 to 14	23,990	8,739	11,881	3,370
		3 – 15	23,833	8,992	11,556	3,285
		4 – 16	30,219	11,883	13,887	4,449
		5 – Over 16	33,772	13,921	14,707	5,144
	Age of first offense	1 – 12 and under	37,976	12,120	21,808	4,048
		2 – 13 to 14	54,518	20,061	26,162	8,295
		3 – 15	25,067	11,125	9,999	3,943
		4 – 16	19,017	8,973	6,954	3,090
		5 – Over 16	11,752	5,995	3,762	1,995
<b>Dependent Variables</b>						
	Detention	1 – No	92,429	39,475	38,918	14,036
		2 – Yes	55,901	18,799	29,767	7,335
	Intake	1 – No	43,346	16,841	20,193	6,312
		2 – Yes	73,424	28,499	34,460	10,465
	Adjudication	1 – No	20,066	6,850	10,064	3,152
		2 – Yes	53,358	21,649	24,396	7,313
	Disposition	1 – Community based	41,038	17,441	17,712	5,885
		2 – Out of home	12,320	4,208	6,684	1,428

<sup>a</sup> Dummy variables for Black and Hispanic were also used

Table 3 provides a listing of the non-domain variables of interest differentiated by race/ethnicity. 'Race/ethnicity' was created (1=White, 2=Black, 3=Hispanic) and treated as an independent variable. The sample is comprised of 58,274 White youth, 68,685 Black youth, and 21,371 Hispanic youth. Thirty nine percent of juveniles are White, 46 percent are Black, and 15 percent are Hispanic. Dummy codes were also created for both Black (1=White and Hispanic, 2=Black) and Hispanic (1=White and Black, 2=Hispanic).

As referenced, the PACT Type variable is coded as 1=pre screen, 2=full screen. Table 3 shows that 49,142 White youth received the pre assessment and 9,132 received the full. Black youth, however, comprise 51 percent of the youth receiving a full screen assessment; 13,001 Black youth receive the full assessment and 55,684 receive the pre assessment. Consistent with the racial/ethnic composition of the dataset, 18,054 Hispanic youth received the pre assessment and 3,317 youth received the full assessment.

Social history score and criminal history score are nominal variables from the DJJ data and are used for both Pre and Full screen assessments. The criminal history score ranges from 0-31 and a higher score indicates greater previous referral seriousness. Social history score ranges from 0-18 and a higher score indicates more risk factors present in the youth's social environment (Baglivio, 2009). Criminal history is based on prior offending and juvenile justice system placements (Baglivio & Jackowski, 2013); most information from the criminal history is from the first domain (record of prior referrals). Social history is informed by the individual, family, and environmental risk factors. Therefore, the present thesis uses social history and criminal history scores as independent variables (Baglivio, 2009).

Prior referrals are coded as none or 1 referral (1), 2 referrals (2), and 3 or more referrals (3). In the entire sample, 66,901 youth had one or no prior referral, 39,525 youth had two prior referrals, and 42,714 youth had three or more prior referrals.

The risk level variable was originally a string variable and due to the type of analysis used the variable was instead altered to a numeric variable (the destring command was used) and is coded as 1=low, 2=moderate, 3=moderate-high, and 4=high. Risk level is also treated as a categorical value. The decision to treat this variable as a categorical variable instead of a rank ordered variable is further discussed in the analysis section. In the entire dataset, 83,901 youth received a low risk score, 24,354 youth received a moderate risk score, 23,148 youth received a moderate-high risk score, and 16,927 youth received a high risk score. It is important to note that 13,719 Black youth received a moderate-high risk score, in comparison to 34,074 low scores, 11,763 moderate scores, and 9,129 high scores. This finding is further discussed and evaluated in the analysis section.

Total score was also created separately for the pre screen and the full screen databases due to the difference in scoring used in both assessments. The total score for each youth is auto populated by the JJIS, thus only providing an overall categorical risk classification (Baglivio, 2009). Upon attempts to create a total score that is based on the scoring matrix used by FL DJJ, there is no numeric scoring guide or scoring matrix available. Both a social history and a criminal history score is used for the PACT. This numeric scoring system is irregular with a categorical outcome (recall that the Risk level is a categorical variable with low, moderate, moderate-high, and high as the scoring options). Upon contacting a FL DJJ employee for a request for this scoring guide, the following response was received: “We don’t typically share the scoring information because we really work to keep the actual scoring out of the hands of our

staff. I've attached the scoring manual from Washington. It is almost identical to ours," (contact withheld). The Washington State scoring manual is provided in Appendix 3. The fact that the PACT is heavily adopted from the Washington State assessment tool (Baglivio, 2007) and that a FL DJJ employee provided the Washington State scoring manual, the decision was made to replicate this tool and use it as the total score manual for this thesis. The only noted differences between the Washington State tool and the PACT were within Domain 9A (History of witnessing violence, history of anger/irritability, history of depression/anxiety, history of somatic complaints, history of thought disturbance, history of traumatic experience) from the full screen in that the PACT had more questions than the Washington State tool. Scoring practices were replicated from Domain 9A and 9B in efforts to keep a consistent scoring practice throughout the assessment. Additionally there were a few rearranged questions between the two assessments. These changes, however, did not influence the scores of each effected domain.

The independent variable controls are gender, which is auto-populated from JJIS, and age at first offense. The dataset is comprised of 112,473 male youth (76 percent) and 35,857 female youth (26 percent). Age and age at first offense are both included in efforts to observe the criminal history of the juvenile thus far. Age is measured as a continuous variable ranging from age 5 to 18, and age at first offense ranges from 12 and under to over 16. 29 percent of youth were over 16 years old at the time of their referral. 37 percent of youth were between 13 and 14 at the age of their first offense, and this finding held true for all race/ethnicity groups.

The dependent variables of interest are detention in research question two of Part B, (1=no, 2=yes), intake (1=release/diversion, 2=referral), adjudication (1=no, 2=yes), and disposition (1=community based supervision, 2=out of home placement). All juveniles who received a waiver to adult court or the client was deceased were removed. Sixty-three percent of

youth went on from intake, seventy-three percent of youth were adjudicated delinquent, and only twenty-three percent received out of home placement (77 percent remained in the community).

Due to the number of domains included in the full screen assessment, Table 4 and Table 5 show the mean, standard deviation, and range of all domain variables broken down by race/ethnicity. Scores range from low to high. Domain variables are utilized in both the pre screen and full screen databases, the only differences being the domains in each assessment. For example, the pre screen assessment has only four domains where as the full screen assessment has twenty-four. All of the domains are included as variables in an effort to examine the effect of each domain on the total risk score for juveniles, specifically evaluated further by race/ethnicity. Please reference Chapter 2 for more information about the composition of the domains.

In the pre screen assessment (Table 4), the scores for the domain Record of Referrals range from 0 to 30, with the mean of scores being 6.71. Both White and Hispanic youth score below the mean for record of referrals, while Black youth score above the mean, indicating that Black youth have higher referral rates than White and Hispanic youth. When interpreting the negative scores in Tables 2-4, it is important to reference Appendix 3 to understand the scoring matrix. The state of Washington used a 'risk' and a 'protective' score option for each question. The 'protective' scores were applied to the FL PACT as negative scores in efforts to maintain consistency with the state of Washington matrix. A scale consists of the sum of the scores associated with each item that is included in the scale. The protective scores were positive responses such as 'no expulsions/suspensions,' 'enrolled in the last 6 months of school' or 'graduated/GED,' 'believes in getting education of value,' 'believes school is encouraging,' 'close to 1-4 adults at school,' and 'recognition for good student school behavior.' Total scores range from low to high.

Looking at Table 4, social history, the mean for the full model is -7.48 on a range from -27 to 30. The means across races are all negative, which would indicate that most youth in the pre-screen database are scoring positive results on the pre screen instrument. In the full screen instrument, the full mean is -3.47 on a range from -26 to 30. The mean for White youth is -1.80, the mean for Black youth is -4.51, and the mean for Hispanic youth is -4.02. These scoring themes continue for Table 4, specifically with Mental Health and Attitude/Behavior Indicators. It is important to note that the social history score and criminal history score shown in Table 3 is auto populated through JJIS and is not a score used in the Total Score variable.

**Table 4.** Pre screen Domain Distributions Differentiated by Race/Ethnicity

Variable	Full Sample <sup>a</sup> (1)	White <sup>b</sup> (2)	Black (3)	Hispanic (4)
Record of referrals	6.71 <sup>c</sup> (4.69) (0 to 30)	5.69 (4.05) (0 to 29)	7.77 (5.10) (0 to 30)	6.20 (4.25) (0 to 29)
Social History	-7.48 (8.64) (-27 to 30)	-6.86 (9.05) (-27 to 27)	-8.01 (8.31) (-27 to 30)	-7.51 (8.39) (-27 to 27)
Mental Health	-2.64 (2.28) (-5 to 8)	-2.41 (2.46) (-5 to 8)	-2.79 (2.14) (-5 to 7)	-2.81 (2.20) (-5 to 7)
Attitude/Behavior Indicators	-1.93 (4.51) (-7 to 10)	-2.26 (4.46) (-7 to 10)	-1.57 (4.53) (-7 to 10)	-2.13 (4.50) (-7 to 10)

<sup>a</sup> N=122,880, White N=49,142, Black N=55,684, Hispanic N=18,054

<sup>b</sup> White 40 percent, Black 45 percent, Hispanic 15 percent

<sup>c</sup> Mean, standard deviation, range

Table 5 shows scoring trends similar to those in Table 4, with only Record of Referrals and Current Alcohol/Drug Use having a positive mean. Table 5 displayed interesting findings regarding the mean scores by race/ethnicity. For example, it was predicted that non-White youth would score higher than White youth in the domain scores. Table 5 however showed that White

youth scored higher risk in the following categories: past relationships, family history, living arrangements, alcohol/drug history, current alcohol/drug use, and mental health history. Black youth scored higher risk for record of referrals, school history, current school status, employment history, current employment, current relationships, current mental health, attitudes/behaviors, aggression, and skills. Hispanic youth scored the highest risk scores for gender, current school status, past use of free time, and current use of free time. These findings of the irregular means will be further explored with regression in the analysis section.

**Table 5.** Full screen Domain Distributions Differentiated by Race/Ethnicity

Variable	Full Sample <sup>a</sup> (1)	White <sup>b</sup> (2)	Black (3)	Hispanic (4)
Record of referrals	10.90 <sup>c</sup> (5.15) (0 to 29)	9.84 (4.85) (0 to 27)	11.88 (5.24) (0 to 29)	10.03 (4.83) (0 to 29)
Gender	0.65 (0.76) (-1 or 1)	0.61 (0.79) (-1 or 1)	0.66 (0.75) (-1 or 1)	0.75 (0.67) (-1 or 1)
School history	1.23 (2.38) (-4 to 7)	1.16 (2.51) (-4 to 7)	1.27 (2.22) (-4 to 7)	1.25 (2.57) (-4 to 7)
Current school status	1.03 (7.00) (-17 to 22)	0.96 (7.02) (-17 to 21)	1.12 (7.03) (-17 to 22)	0.87 (6.84) (-17 to 21)
Past use of free time	-1.60 (1.25) (-4 to 0)	-1.63 (1.27) (-4 to 0)	-1.64 (1.23) (-4 to 0)	-1.39 (1.24) (-4 to 0)
Current use of free time	-2.31 (1.64) (-6 to 0)	-2.31 (1.67) (-6 to 0)	-2.33 (1.62) (-6 to 0)	-2.18 (1.66) (-6 to 0)
Employment history	-0.11 (0.50) (-3 to 3)	-0.15 (0.59) (-3 to 3)	-0.07 (0.40) (-3 to 3)	-0.19 (0.56) (-3 to 3)
Current employment	-1.44 (1.66) (-7 to 0)	-1.64 (1.85) (-7 to 0)	-1.26 (1.45) (-7 to 0)	-1.65 (1.83) (-7 to 0)

**Table 5.** Continued

Variable	Full Sample <sup>a</sup> (1)	White <sup>b</sup> (2)	Black (3)	Hispanic (4)
Past relationships	-0.16 (1.09) (-4 to 3)	-0.11 (1.10) (-4 to 3)	-0.19 (1.09) (-4 to 3)	-0.19 (1.07) (-4 to 3)
Current relationships	-1.11 (3.34) (-10 to 8)	-1.12 (3.45) (-10 to 8)	-1.10 (3.27) (-10 to 8)	-1.12 (3.28) (-10 to 7)
Family history	-2.05 (2.98) (-5 to 10)	-1.62 (3.18) (-5 to 10)	-2.24 (2.87) (-5 to 9)	-2.48 (2.67) (-5 to 9)
Living arrangements	-3.26 (7.02) (-19 to 21)	-3.13 (7.38) (-19 to 21)	-3.27 (6.83) (-19 to 20)	-3.58 (6.73) (-18 to 21)
Alcohol/drug history	-2.88 (2.86) (-11 to 7)	-2.65 (2.73) (-11 to 7)	-3.07 (2.93) (-11 to 7)	-2.76 (2.92) (-11 to 7)
Current alcohol/drug use	0.79 (1.43) (-2 to 8)	0.91 (1.54) (-2 to 8)	0.68 (1.32) (-2 to 8)	0.89 (1.50) (-2 to 8)
Mental health history	-9.03 (4.63) (-13 to 11)	-7.78 (5.16) (-13 to 11)	-9.72 (4.17) (-13 to 10)	-9.75 (3.96) (-13 to 8)
Current mental health	-0.09 (0.77) (-3 to 4)	-0.16 (0.95) (-3 to 4)	-0.04 (0.65) (-3 to 4)	-0.08 (0.62) (-3 to 4)
Attitudes/behaviors	-2.25 (8.97) (-18 to 21)	-2.24 (9.09) (-18 to 21)	-2.16 (8.89) (-18 to 21)	-2.63 (8.92) (-18 to 19)
Aggression	-0.26 (5.13) (-8 to 11)	-0.34 (5.15) (-8 to 10)	-0.10 (5.12) (-8 to 11)	-0.68 (5.11) (-8 to 10)
Skills	-3.54 (10.81) (-28 to 18)	-4.35 (10.84) (-28 to 18)	-2.85 (10.81) (-28 to 18)	-4.01 (10.55) (-28 to 18)

<sup>a</sup> N=25,450 White N=9,132, Black N=13,001, Hispanic N=3,317

<sup>b</sup> White 36 percent, Black 51 percent, Hispanic 13 percent

<sup>c</sup> Mean, standard deviation, range



## Analysis Plan and Procedures

The analysis is framed by seven primary research questions. The first step in the analysis focuses on the risk level, specifically the PACT itself (i.e., which type of PACT used), the relationship to the final risk level, and associations with race/ethnicity of the juvenile. The next step of the present thesis is to assess the influence of Risk levels on court outcomes. Beginning with the first research question, *is there a difference between pre and full PACT assessments?*, crosstabs were utilized. Specifically, I examined the relationship between the type of PACT and Risk level, and then the type of PACT and race/ethnicity. Crosstabs were also conducted on the type of PACT received and race/ethnicity.

I addressed the second research question, *What is the effect of race/ethnicity on Risk level?* and again crosstabs were run, this time by risk level and race/ethnicity within the entire dataset. This step was more of an association since examining through bivariate analyses. After evaluating the frequency distributions and crosstabs discussed above, each domain within the PACT (both pre and full) was included to assess its influence on the Risk level.

The relationships between (1) the domain and the Risk level and (2) race/ethnicity and the Risk level are evaluated in research question three, *what is the influence of each domain on scoring?* Meaning, what influence does each domain have on the youth's overall risk level. Each domain was scored using the Washington State assessment-scoring manual, which assisted in creating a total score for each PACT assessment (Appendix 3). Once all domain scoring was completed, zero order correlations were run to assess for associations between each domain, Risk level and race/ethnicity. This was repeated with both the pre screen and full screen assessments. Once the above steps were completed, ordered logistic regression and multinomial regression models were completed. For variables that are dichotomous or categorical, a polychoric

correlation was used. In order to test for multicollinearity, a variance inflation factor (VIF) was run on both regression models resulting in a mean VIF of 1.31 (pre) and 1.50 (full), which both pass the multicollinearity test (McClendon, 2002).

Ordered logistic regression was then run on both databases again using Risk level and race/ethnicity (using the race/ethnicity dummy variables Black and Hispanic). Ordered logistic regression was first employed with the assumption that the Risk level is rank ordered from low to high. However, once a Brant test was run and the p value of 0.00 violated the key assumption of ordered logistic regression, multinomial regression was instead used (McClendon, 2002). The first set of multinomial regression models utilized the 'low' Risk level score as the reference category. Due to the patterns of frequency distributions in the 'moderate-high' categories, another set of analysis were run with this category serving as the reference category. Multinomial regression was then differentiated by each race/ethnicity group with the reference category being first low and then moderate-high Risk level scores. Another set of multinomial regression was then run, however instead of including each domain in the model, the total score variable was included.

## CHAPTER 8

### RESULTS

#### Part A: Risk levels

##### *Pre assessments versus full assessments (PACT type)*

Table 6 presents the results from the frequency distributions and cross tabulations in effort to answer the first research question: *is there a difference between pre and full PACT assessments by Risk level score and by race/ethnicity?* Looking at question one, Table 6 shows that 64 percent of juveniles receiving the ‘low’ risk category, whereas 34 percent of juveniles receiving the full assessment received the ‘moderate-high’ risk category. Only 20 percent of youth who received the pre screen qualified for the full assessment (moderate-high and high categories). Further, 16 percent of pre screen youth received moderate scores, 12 percent received moderate-high scores, and 8 percent received high scores.

**Table 6.** Type of PACT (Pre/Full) and Risk level (N=148,330)<sup>a</sup>

Risk level	Pre (1)	Full (2)
Low	78,255 <sup>b</sup> (93%) (64%)	5,646 (7%) (22%)
Moderate	19,990 (82%) (16%)	4,364 (18%) (17%)
Moderate-High	14,603 (63%) (12%)	8,545 (37%) (34%)
High	10,032 (59%) (8%)	6,895 (41%) (27%)
Chi square	1900	
Likelihood ratio	1800	
Cramer's V	0.36	

a. Recall that 39 percent of the sample is White, 46 percent is Black, and 15 percent is Hispanic

b. Number, percentage represents the percent within Risk level, percentage represents the percent within the type of PACT (Pre/Full)

In comparison, 27 percent of juveniles who were evaluated using a full assessment received a 'low' score, 27 percent receive a 'high' score and 17 percent receive a 'moderate' score. Overall, it appears that White youth are the most likely to receive a low category within the pre screen, and Black youth are most likely to receive a moderate-high category within the full screen. Next, crosstabs were run using the type of PACT received and race/ethnicity (Table 7). It is shown that 84 percent of White juveniles receive the pre assessment and 16 percent receive the full assessment. Black juveniles receive the pre assessment 45 percent and 51 percent receive the full assessment. Recall that 39 percent of the sample is White, 47 percent Black and 14 percent Hispanic. The racial composition of the entire dataset is fairly represented by the breakdown of the pre and full assessments; no significant discrepancies were observed.

**Table 7. Race/ethnicity and Type of PACT (Pre/Full) (N=148,330)<sup>a</sup>**

Race/Ethnicity	Pre (1)	Full (2)
White	49,142 <sup>b</sup> (84%) (40%)	9,132 (16%) (36%)
Black	55,684 (67%) (45%)	13,001 (19%) (51%)
Hispanic	18,054 (84%) (15%)	3,317 (16%) (13%)
Chi Square	282.43	
Likelihood ratio	281.76	
Cramer's V	0.04	

a. Recall that 39 percent of the sample is White, 46 percent is Black, and 15 percent is Hispanic

b. Number, percentage represents the percent within Risk level, percentage represents the percent within the race/ethnicity

The crosstabs (Table 6 and 7) show that there is little variance between the type of PACT used and both PACT score and race/ethnicity. The scoring trends of a pre screen assessment and the Risk level are to be expected; the majority of juveniles scored receive a lower score (low and moderate) and a small percent of juveniles receive a higher score that qualifies them for a full assessment (moderate-high and high). Contrary to what data trends were observed while cleaning the data, the total number of juveniles receiving moderate-high and high scores (N=24,635) were 97 percent of the population of juveniles that received the full assessment (N=25,450). Thus, most juveniles receiving the full assessment received a moderate-high or high score in the pre screen assessment.

Evaluating the results of Table 7, results show that there are very little racial differences between the types of PACT received once the racial composition of the sample is taken into

account. Thirty-nine percent of the entire sample is White and 40 percent of youth who received the pre assessment were White and 37 percent of youth who received the full assessment were White. This trend holds true for Black youth: 47 percent of the entire sample is Black, 45 percent of youth who received the pre assessment were Black and 49 percent of youth who received the full assessment were Black. Within Hispanic youth, 15 percent of the entire sample is Hispanic, 15 percent of youth who received the pre assessment were Hispanic and 14 percent of youth who received the full assessment were Hispanic. Additionally, it holds across racial/ethnic groups that nearly 70 percent of the population received a pre screen and nearly 30 percent received a full screen, indicating minimal to no racial difference composition between types of PACT.

In conclusion, it was found that there are minimal differences between racial/ethnic groups within PACT types and Risk levels. Question one evaluated the differences between PACT type (pre and full screen assessments) by Risk level score and race/ethnicity. Crosstabs shown in Table 6 evaluated the differences by pre and full screen assessments and Risk level score, finding very little variation within categories. Part two of question one was evaluated to assess the difference by pre- and full- screen assessments and race/ethnicity, also finding scoring distributions consistent with the racial/ethnic composition of the entire dataset. Moving now to the second question, the next section seeks to answer, *what is the effect of race/ethnicity on Risk level?*

#### *Race/ethnicity and Risk levels*

Table 8 presents the results from the crosstabs showing the relationship between race/ethnicity and Risk level. Within Risk level score for White juveniles, 59 percent received a low risk level, 16 percent moderate, 14 percent moderate-high, and 11 percent high. Within Risk level score for Black juveniles, 46 percent received a low risk level, 17 percent moderate, 23

percent moderate-high, and 14 percent high. Within Risk level score for Hispanic juveniles, 57 percent received a low risk level, 17 percent moderate, 15 percent moderate-high, and 11 percent high. While trends are consistent within racial groups, the effects of race begin to emerge once the racial composition within each Risk level level is evaluated. Within the moderate-high score, 30 percent of juveniles are White, 58 percent of juveniles are Black, and 12 percent of juveniles are Hispanic. Both White and Hispanic youth are underrepresented in this category while Black youth are overrepresented by 11 percent. This is the first instance of racial discrepancies being shown in the moderate-high category and this is a trend that will persist.

**Table 8.** Race/ethnicity and Risk level (N=148,330)

Risk level	White (1)	Black (2)	Hispanic (3)
Low	41,364 <sup>a</sup> (44%) <sup>b</sup> (59%) <sup>c</sup>	38,100 (41%) (46%)	14,562 (16%) (57%)
Moderate	10,989 (37%) (16%)	13,969 (48%) (17%)	4,433 (15%) (17%)
Moderate-High	9,762 (30%) (14%)	18,894 (58%) (23%)	3,953 (12%) (15%)
High	7,531 (34%) (11%)	18,894 (54%) (14%)	3,953 (12%) (11%)
Chi Square	3619.40		
Likelihood Ratio	3628.00		
Cramer's V	0.10		

<sup>a</sup> Number of juveniles within category, <sup>b</sup>percent within risk level (percentages across this row will total 100 percent), <sup>c</sup>percent within the racial/ethnic group (percentages within the column will total 100 percent).

Taking the results from Table 8 one step further, Table 9 shows the results of crosstabs indicating the effect of race/ethnicity on Risk levels, and then broken down by PACT type (pre or full assessment). This table shows comparisons across race/ethnicity within each Risk level score and then within PACT type. For example, Table 9 reveals that 34,628 White youth received a low Risk level score in the pre assessment and 6,736 White youth in the full assessment. Regardless of Black youth making up 46 percent of the population and White youth making up 39 percent, White youth are 44 percent of youth scoring a low risk level in the pre assessment. An interesting finding from Table 9 shows that Hispanic youth make up 34 percent of youth scoring a low Risk level score within the full assessments, yet Hispanic youth only account for 15 percent of the population. The moderate category was nearly spot on with the scoring distributions in comparison to the racial/ethnic composition of the entire sample. Problems begin to arise in the Moderate-High category, where Black youth are receiving this Risk level 60 percent of the sample, whereas White youth makeup only 27 percent and Hispanic 12 percent. Black youth are receiving a Moderate-High Risk level 14 percent more than their racial composition in the database. White and Hispanic youth are underrepresented in this more serious category and it is worth reminding that the Moderate-High and High risk categories require a youth to receive the full assessment. This trend is constant within the full assessment as well: 56 percent of Black youth receive the Moderate-High assessment, whereas 32 percent of White youth and 12 percent of Hispanic youth.

This is an interesting finding given that one would assume that racial disparities would manifest in the extremes, meaning the high Risk level score, versus the lessened Moderate-High category. These scoring patterns still are present within the High category, but not at the high percentages shown in the Moderate-High recommendation. Black youth receive 55 percent of



High scores in the pre assessments and 52 percent in the full assessments. Both White and Hispanic youth are underrepresented in the High category. This finding will be further explored in the multinomial regression models.

**Table 9. PACT Type, Race/Ethnicity, and Risk level (N=148,330)<sup>a</sup>**

Risk level	Pre Assessment (N=122,880)			Full Assessment (N=25,450)		
	White (1)	Black (2)	Hispanic (3)	White (4)	Black (5)	Hispanic (6)
Low	34,628 <sup>a</sup> (44%) <sup>b</sup> (71%) <sup>c</sup>	31,686 (41%) (57%)	11,941 (15%) (66%)	6,736 (43%) (33%)	6,414 (41%) (24%)	2,621 (17%) (34%)
Moderate	7,286 (36%) (15%)	9,633 (48%) (17%)	3,071 (15%) (17%)	3,703 (39%) (18%)	4,336 (46%) (16%)	1,362 (15%) (18%)
Moderate-High	4,000 (27%) (8%)	8,811 (60%) (16%)	1,792 (12%) (10%)	5,762 (32%) (28%)	10,083 (56%) (37%)	2,161 (12%) (28%)
High	3,228 (32%) (7%)	5,554 (55%) (10%)	1,250 (13%) (7%)	4,303 (35%) (21%)	6,411 (52%) (24%)	1,517 (12%) (20%)
Chi Square	2655.06			885.77		
Likelihood Ratio	2664.20			889.18		

<sup>a</sup>Number of juveniles within category, <sup>b</sup>percent within risk level (percentages across this row will total 100 percent), <sup>c</sup>percent within the racial/ethnic group (percentages within the column will total 100 percent).

In sum, the results from the execution of question two; *what is the effect of race/ethnicity on Risk level?* begins to display the racial/ethnic discrepancies within the moderate-high Risk level category. While question one found slight patterns within this category, question two continued to further evaluate these findings. White youth are overrepresented in the low PACT category and Black youth are overrepresented in the moderate-high and high categories. In comparison, Hispanic youth are underrepresented in the moderate-high and high categories. These findings were consistent in both Table 8 and 9: Black youth are consistently overrepresented in both the pre and the full assessments in the moderate-high and high PACT categories. White and Hispanic youth are underrepresented in these categories as well. Recall that the moderate-high and high Risk level scores in the pre screen assessment requires a youth to receive the full assessment as well. Thus, 60 percent of Black youth received the moderate-high score within the pre screen assessment.

Given these repeated results within the moderate-high risk category, multinomial regression is used to evaluate question 3 in greater detail. Now that the racial/ethnic composition of both PACT type and Risk level have been identified, the present thesis moves to question three, which investigates the influence of each domain within the PACT.

#### *Domain influence*

Recall that a significant portion of the present thesis is focused on the influence of each individual domain on the overall Risk level level, as discussed in Chapter 2. After evaluating the frequency distributions and crosstabs discussed above, each domain within the PACT (both pre and full) was examined to assess its influence on the Risk level. This step in the analysis should allow for an inquiry question three: *what is the influence of each domain on scoring?* The following techniques were employed in efforts to sufficiently

evaluate these relationships: Pearson zero order correlations, ordered logistic regression, and multinomial regression models. These influences are explored by (1) the influence of domains on Risk levels and further (2) the relationship between domains and race/ethnicity. I began investigating these relationships by running zero order correlations of the domains and then by using VIF to test for multicollinearity, resulting in a mean VIF of 1.31 (pre) and 1.50 (full), which both pass the multicollinearity test. This was repeated with both the pre screen (Table 10) and full screen (Table 11). This allowed for the identification of statistically significant determinants of Risk level scores, but not yet the magnitude of the relationships.

**Table 10.** Pre-Screen Zero Order Correlation (N=122,880)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Risk level	1.00						
2. Black	-0.13**	1.00					
3. Hispanic	0.03**	-0.38**	1.00				
4. Record of Referrals	0.82**	-0.21**	0.04**	1.00			
5. Social History	0.50**	0.06**	0.00	0.31**	1.00		
6. Mental Health	0.27**	0.06**	0.03**	0.18**	0.44**	1.00	
7. Attitude/Behavior Indicators	0.35**	-0.07**	0.02**	0.27**	0.47**	0.38**	1.00

\*\* p < .01

**Table 11.** Full-Screen Zero-Order Correlations (N=25,450)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1. PACT Rec.	1.00													
2. Black	0.08**	1.00												
3. Hispanic	-0.05**	-0.40**	1.00											
4. Record of Referrals	0.75**	0.19**	-0.07**	1.00										
5. Gender	0.06**	0.01	0.05**	0.11**	1.00									
6. School History	0.21**	0.02**	0.00	0.15**	0.04**	1.00								
7. Current School Status	0.17**	0.01	-0.01	-0.03**	0.01	0.13**	1.00							
8. Past Use of Free Time	0.07**	-0.03**	0.07**	0.01**	-0.04**	0.06**	0.25**	1.00						
9. Current Use of Free Time	0.15**	-0.02**	0.03**	0.05**	-0.04**	0.12**	0.37**	0.54**	1.00					
10. Employment History	0.04**	0.09**	-0.06**	0.03**	-0.02**	0.00	0.10**	0.10**	0.09**	1.00				
11. Current Employment	0.05**	0.12**	-0.05**	-0.02**	-0.01	0.01	0.25**	0.13**	0.13**	0.43**	1.00			
12. Past Relationships	0.10**	-0.03**	-0.01	0.03**	0.00	0.08**	0.23**	0.27**	0.28**	0.10**	0.11**	1.00		
13. Current Relationships	0.17**	0.00**	-0.00**	-0.02**	-0.03**	0.14**	0.48**	0.30**	0.44**	0.14**	0.25**	0.45**	1.00	
14. Family History	0.39**	-0.07**	-0.06**	0.14**	-0.22**	0.11**	0.10**	0.04**	0.09**	0.04**	0.09**	0.04**	0.05**	1.00

\*\* p &lt; .01

Table 10 shows a weak relationship between Black youth and Risk level (-0.13). There is also a very weak relationship between Hispanic youth and Risk levels (0.03), however this relationship is statistically significant as well. Additionally, there is a moderate relationship between Black youth and record of referrals (-0.21). In contrast, this relationship is very weak with Hispanic youth (0.04). A relationship between Black youth and record of referrals is reflective of prior literature, indicating that Black youth are disproportionately arrested and thus more likely to have a prior record than similarly situated White youth. Weak relationships are found between Black youth and all other variables (social history, mental health, and attitude/behavior indicators). Hispanic youth in comparison showed very weak relationships between record of referrals, mental health, and attitude/behavior indicators.

Table 10 shows moderate relationships between each domain and Risk level in the pre screen database. The two strongest associations are between the record of referrals (0.82) and social history (0.50) with the Risk level. Recall that Table 3 and 4 showed that Black youth scored higher mean risk scores in the record of referral domain. The association between Risk level and record of referrals, in addition to previous findings, shows that there is a large influence of the prior record of juveniles and the Risk level. This is a primarily auto-populated domain, comprised of prior record in both juvenile delinquency and a brief school history. This finding could lend itself to an overall cumulative disadvantage if there would be racial disparities early in a youth's juvenile justice experience. This possibility will be further explored in the discussion section.

Attitude/behavior indicators (0.35) and mental health (0.27) offer moderate relationships with Risk level. There were moderate relationships found between the following variables: mental health and social history (0.44), attitude/behavior indicators (0.47), and attitude/behavior

indicators and mental health (0.38). There were weak relationships found between the following variables: mental health and Risk level (0.27), record of referrals and Black youth (-0.21), social history and record of referrals (0.31), and attitude/behavior indicators and record of referrals (0.27).

The trends found in Table 10 continued into Table 11. The relationship between Black youth and Risk level is quite weak (0.08). The relationship between Black youth and Hispanic youth is again strong at -0.40. Additionally, the relationship between Black youth and record of referrals is moderate (0.19). The relationship between Black youth and current employment is weak, but still statistically significant. All relationships with Black youth are statistically significant with the exception of gender and current school status. All relationships with Hispanic youth are statistically significant, excluding school history, current school status, and past relationships. All statistically significant relationships are otherwise very weak, with the strongest being record of referrals (-0.07) and past use of free time (0.07). Table 11 presents the relationships between the domains and Risk level in the full screen database. The three strongest relationships found in Table 11 are between the record of referrals and Risk levels (0.75), current use of free time and past use of free time (0.54), and current relationships and current school status (0.48). The following moderate relationships were found: current use of free time and current school status (0.37), family history and Risk level (0.39), current relationships and past use of free time (0.30), current relationships and current use of free time (0.44), and current relationships and past relationships (0.45).

In short, both tables 10 and 11 show a strong relationship between record of referrals and Risk level (0.82 pre, 0.75 full). Additionally, while very weak relationships were shown between race/ethnicity (Black and Hispanic) and Risk level. Moderate relationships between Black and



Hispanic youth, specifically -0.38 in the pre screen database and -0.40 in the full screen database, were found. This section lends itself as further support for the influence of prior records on overall Risk level.

*The relationship between race/ethnicity and each domain as it relates to risk level*

The current step in analysis evaluates the relationship between race/ethnicity, each domain, and Risk level. After identifying which domains have a strong relationship to one another, specifically Risk level and race/ethnic variables (Black/Hispanic), multinomial regression is utilized to further evaluate these relationships. Multinomial regression is employed in order to predict a dependent variable given one or more independent variables, in this case the Risk level on all domains.

Tables 12 and 13 present the results from two multinomial regression models for both the pre screen and full screen databases where the 'low' risk level was the reference category. When interpreting these results, the reference group, low risk level is 1, while the other categories are represented by 2. However, likely due to the large sample size of the pre screen database (N=122,880), all coefficients shown in Table 12 displayed statistical significance ( $p < 0.01$ ). With this being noted, it is important to reiterate that both the Black and Hispanic youth variables are statistically significant when comparing moderate, moderate-high, and high Risk level levels to the low recommendation level. For example, when low Risk level is relative to moderate Risk level given the other variables in the model are held constant, Black youth receive a higher risk assessment level when compared to White and Hispanic youth; this finding held across all comparison groups. Being Black is associated with a 14 percent increase in being scored as moderate risk instead of low compared to White youth. Similarly, Hispanic youth were found to receive a higher Risk level than White and Black youth across all comparison

groups. Being Hispanic compared to White increases the odds of being scored as high risk instead of low by 49 percent.

**Table 12.** Multinomial Logistic Regression Results for Risk level – Pre Screen Model (N=122,880)

	Low v. Moderate (1)	Low v. Moderate-High (2)	Low v. High (3)
Black	0.13 <sup>a**</sup> (0.03) <sup>b</sup> (1.14) <sup>c</sup>	0.20 <sup>**</sup> (0.05) (1.23)	0.15 <sup>**</sup> (0.06) (1.16)
Hispanic	0.24 <sup>**</sup> (0.04) (1.28)	0.27 <sup>**</sup> (0.06) (1.31)	0.40 <sup>**</sup> (0.08) (1.49)
Record of Referrals	1.24 <sup>**</sup> (0.01) (3.44)	2.43 <sup>**</sup> (0.02) (11.38)	2.71 <sup>**</sup> (0.02) (15.02)
Social History	0.22 <sup>**</sup> (0.01) (1.24)	0.42 <sup>**</sup> (0.00) (1.52)	0.61 <sup>**</sup> (0.00) (1.84)
Mental Health	0.08 <sup>**</sup> (0.01) (1.08)	0.13 <sup>**</sup> (0.01) (1.14)	0.19 <sup>**</sup> (0.01) (1.20)
Attitude/Behavior Indicators	0.03 <sup>**</sup> (0.00) (1.03)	0.06 <sup>**</sup> (0.01) (1.06)	0.11 <sup>**</sup> (0.01) (1.11)
Pseudo r2	.66		

<sup>a</sup> Coefficient, <sup>b</sup>standard error, <sup>c</sup>exponentiated B  
\*\* p<.01

Table 13 displays similar findings to Table 12; however, Table 13 did show fewer effects.

Recall that the low Risk level is the reference category in Table 13. Black youth were found to receive a lower Risk level than White and Hispanic youth across all comparison groups, which is an unlikely finding. Recall that Black youth received a higher Risk level in Table 12, which utilized the pre screen database. Hispanic youth however were found to receive a higher Risk level than White and Black youth across all comparison groups, which is consistent in the findings of Table 12. These findings will be explored further in the analysis of Table 15, where the moderate-high Risk level is the reference category. Being Black is associated with 36

percent decrease in being scored as high risk instead of low compared to White youth. Being Hispanic compared to White increases the odds of being scored as high risk instead of low by 71 percent. Within the low category compared to the moderate category, a statistically significant relationship was found for current employment (-0.07). Within the low compared to moderate-high category: Black youth (-0.24), past use of free time (-0.13), and current employment (-0.10) were statistically significant. Within the low compared to high category, Black youth (-0.44), Hispanic youth (0.54), past use of free time (-0.17), and past relationships (-0.13) were statistically significant. The following variables were statistically significant across comparison groups: record of referrals, gender, school history, current school status, current relationships, family history, living arrangements, alcohol/drug history, current alcohol/drug use, mental health history, attitudes/behaviors, aggression, and skills.

Recall that Table 5 found that White youth had a higher mean score on specific domains within the full screen database. Additionally, White youth were overrepresented in the low Risk level. The domains in which White youth had a higher mean score were also found to be statistically significant in the following cases: past relationships, current relationships, family history, living arrangements, alcohol/drug history, current alcohol/drug use, and mental health history. Following this trend, the domains in which Black youth had a higher mean score were statistically significant for the following variables: school history, current school status, and the subjective domain measures, which include attitudes/behaviors, aggression, and skills. The results from Table 13 further solidify the presence of racial/ethnic differences in their effects on both scoring and domains.

**Table 13.** Multinomial Logistic Regression Results for Risk level – Full-Screen Model (N=25,450)

	Low v. Moderate (1)	Low v. Moderate-High (2)	Low v. High (3)
Black	-0.05 <sup>a</sup> (0.07) (0.95)	-0.24** (0.09) (0.79)	-0.44** (0.10) (0.64)
Hispanic	-0.02 (0.10) (0.98)	0.20 (0.13) (1.22)	0.54** (0.14) (1.71)
Record of Referrals	1.12** (0.02) (3.06)	2.21** (0.03) (9.15)	2.48** (0.03) (11.88)
Gender	0.45** (0.04) (1.57)	0.71** (0.06) (2.04)	1.02** (0.06) (2.78)
School History	0.06** (0.01) (1.07)	0.10** (0.02) (1.01)	0.19** (0.02) (1.21)
Current School Status	0.05** (0.01) (1.05)	0.10** (0.01) (1.11)	0.17** (0.01) (1.18)
Past Use of Free Time	-0.04 (0.03) (0.97)	-0.13** (0.04) (0.88)	-0.17** (0.04) (0.84)
Current Use of Free Time	-0.01 (0.03) (0.99)	0.01 (0.03) (1.01)	-0.03 (0.03) (0.97)
Employment History	-0.04 (0.07) (0.96)	0.02 (0.09) (1.02)	-0.08 (0.10) (0.93)
Current Employment	-0.07** (0.02) (0.93)	-0.10** (0.03) (0.90)	-0.07 (0.03) (0.93)
Past Relationships	-0.07 (0.04) (0.93)	-0.06 (0.04) (0.94)	-0.13** (0.05) (0.88)
Current Relationships	0.12** (0.01) (1.13)	0.19** (0.02) (1.21)	0.28** (0.02) (1.32)
Family History	0.50** (0.02) (1.65)	0.84** (0.02) (2.32)	1.14** (0.02) (3.14)

**Table 13.** Continued

	Low v. Moderate (1)	Low v. Moderate-High (2)	Low v. High (3)
Living Arrangements	0.05** (0.01) (1.06)	0.10** (0.01) (1.11)	0.15** (0.01) (1.16)
Alcohol/ Drug History	0.06** (0.01) (1.06)	0.09** (0.02) (1.09)	0.13** (0.02) (1.14)
Current Alcohol/Drug Use	0.14** (0.02) (1.15)	0.33** (0.03) (1.40)	0.44** (0.03) (1.56)
Mental Health History	0.11** (0.01) (1.11)	0.21** (0.01) (1.23)	0.27** (0.01) (1.31)
Current Mental Health	0.00 (0.05) (1.00)	0.15 (0.06) (1.16)	0.10 (0.07) (1.11)
Attitudes/ Behaviors	0.02** (0.01) (1.02)	0.03** (0.01) (1.03)	0.03** (0.01) (1.03)
Aggression	0.02** (0.01) (1.02)	0.03** (0.01) (1.03)	0.05** (0.01) (1.05)
Skills	-0.01** (0.00) (0.99)	-0.02** (0.01) (0.98)	-0.02* (0.01) (0.98)
Pseudo R <sup>2</sup>	.56		

<sup>a</sup> Coefficient, <sup>b</sup>standard error, <sup>c</sup>exponentiated B  
 \*\* p < .01

Table 14 shows trends similar to Table 12, given that both regression models are utilizing the pre-screen database; most all variables used in the multinomial regression are statistically significant. Inconsistently however, Black and Hispanic youth variables are only significant in the moderate-low compared to low category. Tables 14 (pre) and 15 (full) present the results from two multinomial regression models for both the pre-screen and full- databases where the ‘moderate-high’ Risk level was the reference category. Recall that, Black youth received the

moderate-high Risk level at a significantly higher rate than their White and Hispanic counterparts (Table 9). Due to this finding in both the pre and full screen assessments, multinomial regression models were run using the moderate-high Risk level as the reference category.

Black youth were found receive a higher risk assessment level when compared to White and Hispanic youth across all comparison groups. Specifically, when the moderate-high category is compared against the low category, Black youth received higher Risk levels than White and Hispanic youth. This held true when the moderate-high category was compared against moderate (0.07) and high (0.05). Similarly, Hispanic youth were found to receive a higher Risk level than White and Black youth across all comparison groups excluding the moderate-high and high comparison. In the case that the moderate-high category is compared against the high category, Hispanic youth receive a lower recommendation than White and Black youth.

Table 14 specifically found that Black youth were only found to have statistically significant relationships when comparing moderate-high to low categories. Being Black is associated with 23 percent increase in being scored as moderate risk instead of low compared to White youth. It was anticipated to find more significant racial/ethnic effects within the moderate-high reference group. This finding holds true with Hispanic youth in that this variable is only significant when comparing moderate-high to low. Being Hispanic compared to White increases the odds of being scored as low risk instead of moderate-high by 31 percent. All domains however are statistically significant which lends as support to using the moderate-high risk level as the reference group to the low category. This finding indicates that the moderate-high category may not have a significant effect on race/ethnicity, but consistently

across domains within the pre screen variable. To further investigate this, the multinomial regression model is additionally run with the full screen model (Table 14).

**Table 14.** Multinomial Logistic Regression Results for Risk level –

Pre Screen Model (N=122,880)

	Moderate-High v. Low (1)	Moderate-High v. Moderate (2)	Moderate-High v. High (3)
Black	0.20 <sup>a**</sup> (0.05) (1.23)	0.07 (0.04) (1.08)	0.05 (0.04) (1.05)
Hispanic	0.27 <sup>**</sup> (0.07) (1.31)	0.03 (0.05) (1.03)	-0.13 (0.05) (0.88)
Record of Referrals	-2.43 <sup>**</sup> (0.02) (0.09)	-1.20 <sup>**</sup> (0.01) (0.30)	0.28 <sup>**</sup> (0.00) (1.32)
Social History	-0.42 <sup>**</sup> (0.00) (0.66)	-0.19 <sup>**</sup> (0.00) (0.82)	0.19* (0.00) (1.21)
Mental Health	-0.13 <sup>**</sup> (0.01) (0.88)	0.06 <sup>**</sup> (0.01) (0.94)	0.05* (0.01) (1.05)
Attitude/Behavior Indicators	-0.06 <sup>**</sup> (0.01) (0.94)	0.03 <sup>**</sup> (0.00) (0.97)	0.05 <sup>**</sup> (0.00) (1.05)
Pseudo R2	0.66		

<sup>a</sup> Coefficient <sup>b</sup> standard error <sup>c</sup> exponentiated B  
\*\* .01

Black youth were found to receive higher Risk levels than White and Hispanic youth when moderate-high was compared against both low (0.24) and moderate (0.19) categories. The finding that Black youth receive higher Risk level scores was predicted by the present thesis, which Table 15 confirms. While Table 12 showed the opposite effects, the fact that Black youth have been shown to receive a majority of the moderate-high recommendations lends as support

for the findings in Table 15. An interesting finding, however, indicates that Black youth receive a lower Risk level than White and Hispanic youth when the moderate-high category is compared against the high category. Conversely, Hispanic youth were found to receive a higher Risk level in this situation; when Hispanic youth are compared to White and Black youth in the case that moderate-high is compared against the high category. Hispanic youth received lower Risk levels than White and Black youth when moderate-high was compared against low (-0.20) and moderate (-0.22).

Contrary to the findings in Table 14, the findings in Table 15 show that the Black youth variable is statistically significant in all comparison groups for moderate-high. This lends as support for additionally evaluating the moderate-high category. Being Black is associated with 27 percent increase in being scored as moderate risk instead of low compared to White youth. Being Hispanic compared to White increases the odds of being scored as high risk instead of moderate-high by 40 percent. The Hispanic youth variable however is only statistically significant in the moderate-high comparison group to high. The following variables were statistically significant in all comparison groups: record of referrals, gender, current school status, past use of free time, current relationships, family history, living arrangements, alcohol/drug history, current alcohol/drug use, and mental health history. When moderate-high is compared to low, current employment (0.10), attitudes and behaviors (-0.03), aggression (-0.03), and skills (0.02) were all statistically significant. Current mental health (-0.14) was statistically significant when moderate-high is compared to moderate. In the moderate-high compared to high category, past relationships (-0.07) and aggression (0.02) were statistically significant. Interestingly, the subjective variables (attitudes/behaviors, aggression, and skills) were all statistically significant when moderate-high is compared to low. Consistently, there are



frequently more effects found in the comparison between moderate-high and low; this finding will be further discussed in the discussion section.

**Table 15.** Multinomial Logistic Regression Results for Risk level – Full Model (N=25,450)

	Moderate-High v. Low (1)	Moderate-High v. Moderate (2)	Moderate-High v. High (3)
Black	0.24 <sup>a**</sup> (0.09) (1.27)	0.19** (0.06) (1.21)	-0.21** (0.05) (0.81)
Hispanic	-0.20 (0.13) (0.82)	-0.22 (0.09) (0.81)	0.34** (0.07) (1.40)
Record of Referrals	-2.21** (0.03) (0.11)	-1.10** (0.02) (0.33)	0.26** (0.01) (1.30)
Gender	-0.71** (0.06) (0.49)	-0.26** (0.04) (0.77)	0.31** (0.03) (1.36)
School History	-0.10** (0.02) (0.91)	-0.03 (0.01) (0.97)	0.09** (0.01) (1.09)
Current School Status	-0.10** (0.01) (0.90)	-0.06** (0.00) (0.95)	0.06** (0.00) (1.07)
Past Use of Free Time	0.13** (0.04) (1.13)	0.09** (0.03) (1.09)	-0.05** (0.02) (0.95)
Current Use of Free Time	-0.01 (0.03) (0.99)	-0.02 (0.02) (0.98)	-0.03 (0.02) (0.97)
Employment History	-0.02 (0.09) (0.98)	-0.07 (0.06) (0.94)	-0.10 (0.04) (0.91)
Current Employment	0.10** (0.03) (1.11)	0.03 (0.02) (1.03)	0.03 (0.01) (1.03)
Past Relationships	0.06 (0.04) (1.06)	-0.01 (0.03) (0.99)	-0.07** (0.02) (0.93)
Current Relationships	-0.18** (0.02)	-0.07** (0.01)	0.09** (0.01)

**Table 15.** Continued

	Moderate-High v. Low (1)	Moderate-High v. Moderate (2)	Moderate-High v. High (3)
Family History	(0.83) -0.84** (0.02)	(0.93) -0.34** (0.01)	(1.09) 0.30** (0.01)
Living Arrangements	(0.43) -0.10** (0.01)	(0.71) -0.05** (0.01)	(1.36) 0.05** (0.00)
Alcohol/ Drug History	(0.90) -0.09** (0.02)	(0.96) -0.03** (0.01)	(1.05) 0.04** (0.01)
Current Alcohol/Drug Use	(0.92) -0.33** (0.03)	(0.97) -0.19** (0.02)	(1.04) 0.11** (0.01)
Mental Health History	(0.72) -0.21** (0.01)	(0.82) -0.10** (0.01)	(1.12) 0.06** (0.00)
Current Mental Health	(0.81) -0.15 (0.06)	(0.91) -0.14** (0.04)	(1.07) -0.05 (0.02)
Attitudes/ Behaviors	(0.86) -0.03** (0.01)	(0.87) -0.01 (0.01)	(0.95) 0.01 (0.00)
Aggression	(0.97) -0.03** (0.01)	(0.99) -0.01 (0.01)	(1.01) 0.02** (0.01)
Skills	(0.97) <b>0.02**</b> (0.01)	(0.99) 0.01 (0.00)	(1.02) -0.00 (0.00)
Pseudo R <sup>2</sup>	.56		

a Coefficient, bstandard error, cexponentiated B

\*\* .01

In summary, it is important to note that White youth primarily scored within the low recommendation score, while Black youth primarily scored within the moderate-high recommendation score; thus, both categories were evaluated in relation to all domains. Overall, racial/ethnic effects were inconsistent. While the record of referrals domain was consistently

significant across reference groups and databases. Black and Hispanic variables were statistically significant in the pre screen model across all categories (Table 12), while inconsistently significant throughout all other regression models. In an effort to better understand these inconsistencies in significance, the following section parses out each racial/ethnic group per each regression model.

#### *Multinomial Logistic Regression Results for Risk level by race/ethnicity*

As referenced, the following models were utilized in efforts to answer question three, *what is the influence of each domain on scoring?* Given the inconsistent results regarding racial/ethnic relationships to Risk level and within individual domains, the present section ran each model with race/ethnicity teased out. Table 16 presents the results from multinomial regression for Risk level by race/ethnicity for the pre screen database with both low (part A) and moderate-high (part B) employed as the reference category.

Within part A of Table 16, Black youth received higher recommendations for record of referrals across all PACT category comparisons. For example, Black youth received higher scores for the record of referrals domain (domain 1 in the pre screen assessment) compared to White youth (1.13) and Hispanic youth (1.23) when the low category is compared to the moderate category (1.36). This trend was consistent in the moderate-high and high category comparisons as well. Interestingly, all racial/ethnic groups had a 0.22 score for the social history domain when the low category is compared to the moderate, showing no racial variance. Also an interesting finding is the score for Black youth within the attitudes/behavior indicators variable. Recall that the present thesis labels this domain as more of a subjective than an objective domain, thus possibly vulnerable to bias. Within the pre screen database, Black youth actually received lower scores in comparison to White and Hispanic youth, across all comparison groups.

Looking at part B, Black youth received higher scores within the record of referral category in comparison to White (-2.30) and Hispanic (-2.33) youth within the moderate-high to low comparison group (-2.61). This trend holds within the moderate-high and moderate comparison group, but not within the moderate-high and high comparison group. Black youth receive a lower rate (0.22) than White (0.44) and Hispanic (0.33) youth. The finding in part A regarding Black youth scoring lower than White and Hispanic youth in the attitudes/behavior indicator domain holds in part B as well.

Beginning with part A, all variables are statistically significant other than mental health (0.13) and attitudes/behavior indicators (0.04) in the low compared to moderate-high category. In part B, all variables are statistically significant. As previously referenced, the pre screen model has such a large sample size (N=122,880) that significance is less influential. Due to this, the results in Table 17 are more indicative of the overall trends of the present thesis.

**Table 16.** Pre-Screen Multinomial Logistic Regression Results for Risk level by Race/Ethnicity (N=122, 880)

	Low v. Moderate		
	White <sup>a</sup>	Black	Hispanic
Record of Referrals	1.13 <sup>b**</sup> (0.01) (3.10)	1.36 <sup>**</sup> (0.02) (3.88)	1.23 <sup>**</sup> (0.03) (3.42)
Social History	0.22 <sup>**</sup> (0.00) (1.25)	0.22 <sup>**</sup> (0.00) (1.25)	0.22 <sup>**</sup> (0.01) (1.25)
Mental Health	0.07 <sup>**</sup> (0.01) (1.07)	0.08 <sup>**</sup> (0.01) (1.08)	0.07 <sup>**</sup> (0.02) (1.07)
Attitudes/ Behavior Indicators	0.04 <sup>**</sup> (0.00) (1.04)	0.01 <sup>**</sup> (0.00) (1.01)	0.04 <sup>**</sup> (0.01) (1.04)
Pseudo R2	.65	.67	.65

<sup>a</sup> White (N=49,142), Black (N=55,684), Hispanic (N=18,054)

<sup>b</sup> Coefficient, standard error, exponential B

Both Table 17 and 18 present the results from the multinomial regression results for Risk level by race ethnicity for the full screen database. Table 17 presents this model using the low PACT category as the reference group, while Table 18 presents this model using the moderate-high category as the reference group.

Black youth received higher scores than White and Hispanic youth within the record of referrals domain across all comparison groups. Record of referrals has consistently held as an influential domain in Risk level, again an indication of the effects of a youth's prior record. Hispanic youth received higher scores than White and Black youth within the record of referrals domain across all comparison groups. Recall that Hispanic youth had the highest mean average for the gender variable.

Consistent with prior models, the record of referrals, gender, family history, living arrangements, and mental health history were statistically significant across *all* racial/ethnic groups and in *all* comparison groups. Additionally, strong relationships were found within the history and current use of alcohol/drugs, current school status, and current relationship variables. While not a focus of the current thesis, a reoccurring finding throughout models is the significance of both the history and current use of alcohol/drugs. Prior literature has indicated the difference between racial/ethnic groups in their choice of alcohol or drugs in adolescence. This finding will be further explored in the discussion section. Overall, Table 17 indicates modest relationships between racial/ethnic groups and domains within the full screen database with the low Risk level level serving as the reference group.

**Table 17.** Full-Screen Multinomial Logistic Regression Results for Risk level by Race/Ethnicity (N=25,450)

	Low v. Moderate			Low v. Moderate-High		
	White <sup>a</sup>	Black	Hispanic	White	Black	Hispanic
Record of Referrals	0.98** <sup>b</sup> (0.03) (2.67)	1.31** (0.04) (3.71)	1.09** (0.06) (2.98)	2.04** (0.05) (7.74)	2.46** (0.05) (11.73)	2.19** (0.08) (8.95)
Gender	0.37** (0.06) (1.45)	0.52** (0.07) (1.68)	0.69** (0.14) (2.00)	0.60** (0.09) (1.83)	0.81** (0.09) (2.26)	1.02** (0.18) (2.78)
School History	0.08** (0.02) (1.08)	0.03 (0.02) (1.03)	0.09** (0.03) (1.10)	0.08** (0.03) (1.09)	0.06 (0.03) (1.06)	0.23** (0.04) (1.26)
Current School Status	0.04** (0.01) (1.05)	0.17** (0.01) (1.07)	0.05** (0.01) (1.05)	0.10** (0.01) (1.12)	0.11 (0.01) (1.12)	0.09** (0.02) (1.09)
Past Use of Free Time	-0.12 (0.05) (0.89)	0.01 (0.05) (1.01)	0.06 (0.09) (1.06)	-0.23** (0.06) (0.79)	-0.09 (0.06) (0.92)	0.09 (0.12) (1.10)
Current Use of Free Time	-0.00 (0.04) (1.00)	-0.00 (0.04) (1.00)	-0.06 (0.07) (0.95)	-0.01 (0.05) (0.99)	0.05 (0.05) (1.05)	-0.09 (0.09) (0.91)
Employment History	-0.15 (0.10) (0.86)	0.12 (0.14) (1.13)	-0.12 (0.18) (0.88)	0.05 (0.13) (1.05)	0.08 (0.17) (1.08)	-0.14 (0.23) (0.87)
Current Employment	-0.04 (0.03) (0.96)	-0.15** (0.04) (0.86)	-0.01 (0.06) (0.99)	-0.15** (0.04) (0.86)	-0.10 (0.05) (0.90)	-0.06 (0.07) (0.94)
Past Relationships	0.00 (0.05) (1.00)	-0.12** (0.05) (0.88)	-0.11 (0.09) (0.90)	0.03 (0.07) (1.03)	-0.12 (0.06) (0.88)	-0.15 (0.11) (0.86)

**Table 17. Continued**

	Low v. Moderate			Low v. Moderate-High		
	White <sup>a</sup>	Black	Hispanic	White	Black	Hispanic
Family History	0.44** (0.03) (1.55)	0.57** (0.03) (1.76)	0.59** (0.05) (1.80)	0.75** (0.03) (2.12)	0.92** (0.04) (2.51)	1.03** (0.07) (2.79)
Living Arrangements	0.05** (0.01) (1.05)	0.06** (0.01) (1.06)	0.06** (0.02) (1.06)	0.10** (0.01) (1.11)	0.09** (0.01) (1.10)	0.11** (0.02) (1.11)
Alcohol/ Drug History	0.07** (0.02) (1.08)	0.05** (0.02) (1.06)	-0.00 (0.03) (1.00)	0.10** (0.03) (1.10)	0.08** (0.02) (1.08)	0.06 (0.04) (1.06)
Current Alc./ Drug Use	0.14** (0.04) (1.15)	0.04 (0.04) (1.10)	0.29** (0.06) (1.34)	0.35** (0.04) (1.42)	0.27** (0.05) (1.31)	0.49** (0.08) (1.63)
Mental Health History	0.09** (0.01) (1.10)	0.15** (0.02) (1.16)	0.09** (0.02) (1.09)	0.19** (0.02) (1.21)	0.26** (0.02) (1.30)	0.17** (0.03) (1.19)
Pseudo R2	.56	.57	.57			

<sup>a</sup> Coefficient, standard error, exponential B

<sup>b</sup> White (N=9,132), Black (N=13,001), Hispanic (N=3,317)

\*\* p < .01



Table 18 reflects fairly consistent findings with Table 17 where low was the reference category. Specifically, Black youth have a higher score for record of referrals across the first two comparison groups, however in the moderate-high compared against high group, Black youth actually receive the lowest score for the record of referral domain. Scoring within the gender variable was again found to be consistently highest among Hispanic youth. Current school status is fairly consistent across comparison groups and race/ethnicity.

When the reference category is changed to moderate-high risk, similar statistical significance was found across *all* racial/ethnic categories and *all* comparison groups for the following variables: record of referrals, gender, current school status, current relationships, family history, living arrangements, and mental health history (Table 18). As previously discussed, record of referrals is continuously significant across all racial/ethnic categories and comparison groups. This is the most consistent finding throughout the present thesis. Mental health was again found to be consistently significant, which has emerged as a trend. This trend was first recognized in Table 5 when White youth were identified as the racial/ethnic group that had the highest mean for the mental health domain. This domain will be further evaluated in the discussion section. Additionally, statistically significant effects were also found within the school history and current alcohol/drug use variables. The finding that both school history and current school status were significant lends itself to the possible effect that a juvenile's school experience has on their Risk level and their overall experience in the judicial system. Again, this finding will be further explored. Overall, Table 18 indicates modest findings across racial/ethnic categories with the moderate-high recommendation as the reference category.

**Table 18.** Full-Screen Multinomial Logistic Regression Results for Risk level by Race/Ethnicity (N=25,450)

	Moderate-High v. Low			Moderate-High v. Moderate		
	White <sup>a</sup> (1)	Black (2)	Hispanic (3)	White (1)	Black (2)	Hispanic (3)
Record of Referrals	-2.04** <sup>b</sup> (0.05) (0.13)	-2.46** (0.05) (0.09)	-2.19** (0.08) (0.11)	-1.06** (0.03) (0.35)	-1.51** (0.03) (0.32)	-1.10** (0.06) (0.33)
Gender	-0.60** (0.09) (0.55)	-0.81** (0.09) (0.44)	-1.02** (0.18) (0.36)	-0.23** (0.06) (0.80)	-0.30** (0.06) (0.75)	-0.33** (0.13) (0.72)
School History	-0.08** (0.03) (0.92)	-0.06 (0.03) (0.94)	-0.23** (0.04) (0.79)	-0.00 (0.02) (1.00)	-0.03 (0.02) (0.97)	-0.14** (0.03) (0.87)
Current School Status	-0.11** (0.01) (0.90)	-0.11** (0.01) (0.89)	-0.09** (0.02) (0.91)	-0.07** (0.01) (0.94)	-0.05** (0.01) (0.95)	-0.04** (0.01) (0.96)
Past Use of Free Time	0.23** (0.06) (1.26)	0.09 (0.06) (1.09)	-0.09 (0.12) (0.91)	0.12** (0.04) (1.12)	0.10** (0.04) (1.10)	-0.03 (0.08) (0.97)
Current Use of Free Time	0.01 (0.05) (1.01)	-0.05 (0.05) (0.95)	0.09 (0.09) (1.10)	0.01 (0.04) (1.01)	-0.05 (0.03) (0.95)	0.04 (0.06) (1.04)
Employment History	-0.05 (0.13) (0.95)	-0.08 (0.17) (0.93)	0.14 (0.23) (1.15)	-0.20 (0.09) (0.82)	0.05 (0.10) (1.05)	0.02 (0.17) (1.02)
Current Employment	0.15** (0.04) (1.16)	0.10 (0.05) (1.11)	0.06 (0.07) (1.06)	0.11** (0.03) (1.11)	-0.05 (0.03) (0.96)	0.05 (0.05) (1.05)
Past Relationships	-0.03 (0.07) (0.97)	0.12 (0.06) (1.13)	0.15 (0.11) (1.16)	-0.03 (0.05) (0.97)	-0.00 (0.05) (1.00)	0.04 (0.08) (1.04)

**Table 18.** Continued

	Moderate-High v. Low			Moderate-High v. Moderate		
	White <sup>a</sup> (1)	Black (2)	Hispanic (3)	White (1)	Black (2)	Hispanic (3)
Family History	-0.75** (0.03) (0.47)	-0.92** (0.04) (0.40)	-1.03** (0.07) (0.36)	-0.31** (0.02) (0.73)	-0.35** (0.02) (0.70)	-0.44** (0.04) (0.64)
Living Arrangements	-0.10** (0.01) (0.90)	-0.09** (0.01) (0.91)	-0.11** (0.02) (0.90)	-0.06** (0.01) (0.94)	-0.04** (0.01) (0.96)	-0.04** (0.02) (0.96)
Alcohol/ Drug History	-0.10** (0.03) (0.91)	-0.08** (0.02) (0.92)	-0.06 (0.04) (0.94)	-0.02 (0.02) (0.98)	-0.02 (0.01) (0.98)	-0.06 (0.03) (0.94)
Current Alc./ Drug Use	-0.35** (0.04) (0.70)	-0.27** (0.05) (0.77)	-0.49** (0.08) (0.61)	-0.22** (0.03) (0.81)	-0.18** (0.03) (0.84)	-0.20** (0.05) (0.82)
Mental Health History	-0.19** (0.02) (0.83)	-0.26** (0.02) (0.77)	-0.17** (0.03) (0.84)	-0.10** (0.01) (0.91)	-0.11** (0.01) (0.90)	-0.09** (0.02) (0.92)
Pseudo R2	.56	.57	.57			

<sup>a</sup> Coefficient, standard error, exponential B

<sup>b</sup> White (N=9,132), Black (N=13,001), Hispanic (N=3,317)

\*\* p < .01

As previously explained, the total score variable is a numeric score created by totaling all responses to each domain with the pre and full assessments. This numeric score was created to compare with the Risk level since this is a categorical recommendation. In efforts to further evaluate the relationship between Risk level and the scoring category of the PACT, this section employs the total score variable alongside the racial/ethnic variables in relation to Risk level. Table 19 presents the results from the pre screen model and Table 19 presents the findings from the full screen model.

Black youth received lower scores than White and Hispanic youth within all comparison groups where low is the reference category. However, when the reference category is moderate-high, Black youth receive higher scores in the low (1.32) and moderate (0.70) categories. When moderate-high is compared to high recommendations, Black youth receive lower scores than White and Hispanic youth. Hispanic youth receive scores lower than White and Black youth in all comparison groups when low is the reference category. However, similar to the trends found with Black youth, Hispanic youth receive higher scores in the first two comparison groups but lower scores when moderate-high and high recommendations are compared.

In Table 19, all variables were statistically significant. This table continues the trend of all variables in the pre screen models being statistically significant. The full model provides more indicative results (Table 20).

In Table 20, Black youth received higher scores than White and Hispanic youth across all comparison groups when low is the reference category. However, when moderate-high is the reference category, Black youth actually receive lower scores across all comparison groups. While no scores for Hispanic youth are statistically significant, it is shown that Hispanic youth

receive lower scores than White and Black youth in all comparison groups except when moderate-high is compared against low and high.

In Table 20, however, only the Black youth variable was statistically significant across all comparison groups. In contrast, the Hispanic youth variable was not statistically significant in any comparison group. An interesting finding from Table 20 shows that when the moderate-high category is compared to the moderate category, no statistically significant relationships were found except in the once instance of Black youth (-0.35). When Hispanic youth and total score are within the moderate-high vs. moderate comparison group, no statistically significant relationships were found. Additionally, in Part C when total score is compared across racial/ethnic categories, all three instances of the moderate-high vs. moderate comparison group showed no statistically significant relationship. Otherwise, statistically significant relationships were found in all other comparison groupings shown in Table 20. Overall, this model shows a relationship between Black youth and the Risk level consistently.

**Table 19.** Pre-Screen Multinomial Regression (N=122,880)

*Part A. Full Model*

	<u>Low v.</u>			<u>Moderate-High v.</u>		
	Moderate (1)	Mod.-High (2)	High (3)	Low (1)	Moderate (2)	High (3)
Black	-0.62 <sup>a**</sup> (0.02) (0.54)	-1.32 <sup>**</sup> (0.03) (0.27)	-1.48 <sup>**</sup> (0.04) (0.23)	1.32 <sup>**</sup> (0.03) (3.74)	0.70 <sup>**</sup> (0.04) (2.01)	-0.17 <sup>**</sup> (0.00) (0.85)
Hispanic	-0.37 <sup>**</sup> (0.03) (0.69)	-0.56 <sup>**</sup> (0.04) (0.57)	-0.73 <sup>**</sup> (0.05) (0.48)	0.56 <sup>**</sup> (0.03) (1.75)	0.19 <sup>**</sup> (0.04) (1.21)	-0.17 <sup>**</sup> (0.00) (0.84)
Total Score	0.11 <sup>**</sup> (0.00) (1.12)	0.17 <sup>**</sup> (0.00) (1.18)	0.30 <sup>**</sup> (0.00) (1.35)	-0.17 <sup>**</sup> (0.03) (0.84)	-0.06 <sup>**</sup> (0.05) (0.95)	0.13 <sup>**</sup> (0.00) (1.14)
Pseudo R2	.32			.32		

*Part B. Base Outcome = Low v. Moderate (1), Moderate-High (2), High (3)*

	<u>White</u>			<u>Black</u>		
	(1)	(2)	(3)	(1)	(2)	(3)
Total Score	0.12 <sup>a**</sup> (0.00) (1.12)	0.17 <sup>**</sup> (0.00) (1.18)	0.29 <sup>**</sup> (0.00) (1.33)	0.11 <sup>**</sup> (0.00) (1.12)	0.17 <sup>**</sup> (0.00) (1.18)	0.31 <sup>**</sup> (0.00) (1.36)
Pseudo R2	.32			.31		

*Part C. Base Outcome = Moderate-High v. Low (1), Moderate (2), High (3)*

	<u>White</u>			<u>Black</u>		
	(1)	(2)	(3)	(1)	(2)	(3)
Total Score	-0.17 <sup>a**</sup> (0.00) (0.85)	-0.05 <sup>**</sup> (0.00) (0.95)	0.12 <sup>**</sup> (0.00) (1.13)	-0.17 <sup>**</sup> (0.00) (0.85)	-0.06 <sup>**</sup> (0.00) (0.94)	0.14 <sup>**</sup> (0.00) (1.15)
Pseudo R2	.32			.31		

**Table 20.** Full-Screen Multinomial Regression (N=25,450)

*Part A. Full Model*

	<u>Low v.</u>			<u>Moderate-High v.</u>		
	Moderate (1)	Mod.-High (2)	High (3)	Low (1)	Moderate (2)	High (3)
Black	0.22 <sup>a**</sup> (0.05) (1.25)	0.57 <sup>**</sup> (0.04) (1.78)	0.37 <sup>**</sup> (0.04) (1.45)	-0.57 <sup>**</sup> (0.04) (0.56)	-0.35 <sup>**</sup> (0.04) (0.70)	-0.20 <sup>**</sup> (0.04) (0.81)
Hispanic	-0.11 (0.06) (0.90)	-0.08 (0.06) (0.92)	-0.04 (0.06) (0.96)	0.08 (0.06) (1.08)	-0.03 (0.06) (0.97)	0.04 (0.06) (1.04)
Total Score	0.02 <sup>**</sup> (0.00) (1.02)	0.02 <sup>**</sup> (0.00) (1.02)	0.04 <sup>**</sup> (0.00) (1.04)	-0.02 <sup>**</sup> (0.00) (0.98)	-0.00 (0.00) (1.00)	0.02 <sup>**</sup> (0.00) (1.02)
Pseudo R2	.08			.08		

*Part B. Base Outcome = Low v. Moderate (1), Moderate-High (2), High (3)*

	<u>White<sup>b</sup></u>			<u>Black</u>		
	(1)	(2)	(3)	(1)	(2)	(3)
Total Score	0.02 <sup>a**</sup> (0.00) (1.02)	0.02 <sup>**</sup> (0.00) (1.02)	0.04 <sup>**</sup> (0.00) (1.04)	0.01 <sup>**</sup> (0.00) (1.01)	0.01 <sup>**</sup> (0.00) (1.01)	0.04 <sup>**</sup> (0.00) (1.04)
Pseudo R2	.08			.09		

*Part C. Base Outcome = Moderate-High v. Low (1), Moderate (2), High (3)*

	<u>White</u>			<u>Black</u>		
	(1)	(2)	(3)	(1)	(2)	(3)
Total Score	-0.02 <sup>a**</sup> (0.00) (0.98)	-0.00 (0.00) (1.00)	0.02 <sup>**</sup> (0.00) (1.02)	-0.01 <sup>**</sup> (0.00) (0.99)	-0.00 (0.00) (1.00)	0.03 <sup>**</sup> (0.00) (1.03)
Pseudo R2	.08			.09		

In summary, inconsistent racial/ethnic relationships to Risk level were found throughout questions one through three. Beginning with question one, *is there a difference between pre and full assessments?* both Risk level score and race/ethnicity were evaluated. It was found that there are minimal differences between racial/ethnic groups within PACT types and Risk levels. Additionally, scoring distributions were found to be consistent with the racial/ethnic composition of the entire dataset. Question two, *what is the effect of race/ethnicity on Risk level?* focused on the specific scoring breakdown for pre/full assessments by race/ethnicity. It was found that White youth primarily score within the ‘low’ Risk level category, while Black youth primarily score within the ‘moderate-high’ Risk level category. This finding lent itself to the regression models employed in question three. Question three is aimed at the largest focus of the present thesis, the effect of domains: *what is the influence of each domain on scoring?* First, the relationship between domains and Risk level was explored and second, the relationship between race/ethnicity and total recommendation was analyzed. Given the findings in question two regarding the statistically significant relationship between race/ethnicity and the moderate-high Risk level category, question three employed multinomial regression models aimed at the individual domain variables compared to both low and moderate-high reference categories. Overall, racial/ethnic effects consistently held across the ‘low’ reference category, while they were more inconsistent across the ‘moderate-high’ category. An emerging theme is the significant influence of the record of referrals on youth’s Risk level.



## Part B: Court Outcomes

Part A of the present thesis focused on the Risk level itself: the influence of pre/full assessments, the influence of race/ethnicity, the influence of individual domains on the Risk level and the influence at each of these factors. Part A found inconsistent racial/ethnic relationships to a Risk level. Minimal differences between racial/ethnic groups within PACT types and Risk levels were found and scoring distributions were consistent with the racial/ethnic composition of the entire dataset. One of the most important themes to emerge from Part A is the significant influence of the record of prior referrals on a Risk level.

With the results of Part A in mind, Part B aims to further the present thesis by examining court outcomes. Specifically, do race/ethnicity and Risk level influence court outcomes? Also, do individual domains influence court outcomes and if so, how do they play out for racial/ethnic categories? Overall, modest findings within the intake and adjudication stages are found. The strongest race/ethnicity effects emerged at the judicial disposition stage.

*What factors impact the court outcomes of juveniles?*

Recall that question four asks: does race/ethnicity impact the court outcomes of juveniles? Dummy variables were created for Black and Hispanic youth, while White youth serve as the reference group. Table 21 presents logistic regression results to evaluate the relationship between the key variables of interest.

**Table 21.** Logistic Regression Results Differentiated by Decision-Making Stages – Main Effects

Variable	Intake (1)	Adjudication (2)	Judicial Disposition (3)
Black	-0.01 (0.97)	-0.05** (0.77)	0.03** (1.27)
Hispanic	-0.01 (0.97)	-0.06** (0.73)	0.00 (1.02)
Risk level	0.02** (1.12)	-0.01** (0.97)	0.11** (1.77)
Total Score	-0.00** (1.10)	-0.00** (1.00)	0.00** (1.00)
Detention	0.02** (1.44)	0.01 (1.06)	0.18** (3.18)

Regression coefficient; Exp(B) is in parenthesis ( )

\*\*p < .01

Being a Black youth or a Hispanic youth are not statistically significant determinants of intake decision-making (column 1). At adjudication, both Black and Hispanic youth are less likely to be adjudicated delinquent than White youth (column 2). Further, being Black decreases the odds of being adjudicated by 23 percent and decreases the odds for Hispanic youth by 27 percent. Being Black has a predictive statistically significant effect at judicial disposition (column 3); no such effect exists for being Hispanic at this stage. In short, findings thus far are inconsistent with the prediction that race/ethnicity could predict court outcomes considering the risk level, total score, and detention. A race/ethnicity effect exists at two of the three stages. However, inverse race/ethnicity effects were found at adjudication. In addition, while being Black has positive effects on judicial disposition, being Hispanic is not a statistically significant predictor.

Question 5 seeks to evaluate if the PACT itself influences decision-making at intake, adjudication, and judicial disposition. As shown in Table 21, the Risk level, for the most part, predicts decision-making as one would expect. That is, the higher the Risk

level, the more severe the case outcome. For example, Risk level has predicted statistical significance at intake (column 1) and judicial disposition (column 3). An unexpected inverse relationship exists at adjudication (column 2).

The total score variable was generated as a numeric score to parallel the Risk level. Recall that the Risk level variable is a categorical measure of what level of risk a juvenile is, however, there was no numeric score to reference. The total score variable was subsequently created to serve that purpose and help to make the PACT scoring process easier to understand. Assumedly, total score and Risk level predictability should parallel. However, an inverse effect is shown at intake (column 1). At adjudication (column 2) and judicial disposition (column 3), the effects parallel Risk level and indicate youth receiving harsher outcomes with higher total scores. Total score has predicted statistical significance at all decision-making stages, as does the Risk level.

Whether or not a youth was detained is predictive at both intake (column 1) and judicial disposition (column 3). Detention is not statistically significant in predicting decision-making at adjudication, though detention has a very strong positive effect at judicial disposition. A youth subject to detention increases the orders of an out of home placement by 3.18.

Table 22 shows the Risk level break down by decision-making stages. Recall that 57 percent of youth received the low Risk level, 16 percent received moderate, 16 percent moderate-high, and 11 percent high. Table 21 demonstrates the breakdown of Risk levels by judicial outcomes.

**Table 22.** Risk level Breakdown by Judicial Outcome

Risk level	(1)	Intake (2)	Adjudication (3)	Judicial Disposition
Low		40% No	26% No	92% No
		60% Yes	74% Yes	8% Yes
Moderate		33% No	28% No	75% No
		67% Yes	72% Yes	25% Yes
Moderate-High		33% No	29% No	56% No
		67% Yes	71% Yes	44% Yes
High		33% No	28% No	45% No
		67% Yes	72% Yes	55% Yes

It was important to understand this distribution given recurring effects have been shown at judicial disposition more frequently than at intake and adjudication. Within intake and adjudication, the trends across Risk levels remain fairly consistent. Meaning, one Risk level is not incredibly influential at these two decision-making stages. However, within judicial disposition, there are vastly different patterns across Risk levels. For example, within the low Risk level, 92 percent of youth did not receive out of home placement and remained in the community, while only 8 percent received out of home placement. In comparison, youth within the high Risk level received out of home placement 44 percent of the time. This distribution lends itself to understanding findings at judicial disposition given that Risk level seems to have a strong relationship within judicial disposition.

*What joint role do race/ethnicity and the PACT have on court outcomes?*

After establishing that both race/ethnicity and Risk levels influence court outcomes (Questions 4 and 5), the joint role of race/ethnicity and Risk level has on court outcomes was evaluated in Question 6. This was done by running logistic regression models broken down by creating interaction terms. It is important to note that no term was found to be statistically significant. Due to the number of juveniles in the current

dataset, statistical significance was based on a p value of 0.01 in addition to whether or not the adjusted R<sup>2</sup> was improved with the addition of the interaction term. With this level of criteria, no interaction race/ethnic effects were found that were evaluated at  $p > .01$  and improved the overall fit of the model. Thus, contrary to the expected results, race/ethnicity does not interact with the Risk level, total score, or detention at court outcomes.

Table 23 displays the additive model where 1 represents intake, 2 represents adjudication, and 3 represents judicial disposition. Black youth with a higher Risk level are more likely to be moved along at intake and to receive out of home placement at judicial disposition. An inverse relationship exists for Black youth at adjudication with both Risk level and total score. Black youth who were detained have a positive relationship at intake and judicial disposition.

Similarly, Hispanic youth receiving higher Risk level scores and having been previously detained have an increased likelihood of out of home placement by 2.07 and 3.16, respectively. Being a Hispanic youth is a statistically significant determinant at intake in combination with a higher Risk level. Similar to Black youth, an inverse relationship exists at adjudication with a higher total score.

White youth, similar to Black and Hispanic youth, with higher Risk level scores are more likely to be moved forward at intake and receive out of home placement at judicial disposition.

Harsher outcomes at intake and judicial disposition were shown across races due to a higher Risk level. Detention was also shown to be a statistically significant determinant at a minimum of one decision-making point. Rates of out of home placement

due to being detained are 3.40 for White youth, 3.02 for Black youth, and 3.16 for Hispanic youth.

Trends shown in the additive model were fairly consistent when broken out by race/ethnicity. Risk level is a statistically significant determinant, although not consistently at adjudication. Total score was not a consistent determinate of decision-making, as has been shown throughout the present thesis. Lastly, detention was fairly consistent with trends in the additive model, primarily displaying effects at intake and judicial disposition.

**Table 23.** Logistic Regression Results by Race/Ethnicity

Variable	<u>Full Model</u>			<u>White</u>			<u>Black</u>		
	(1) <sup>a</sup>	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
B	-0.01 <sup>b</sup> (0.97)	-0.05** (0.77)	0.03** (1.27)						
H	-0.01 (0.97)	-0.06** (0.73)	0.00 (1.02)						
Risk Level	0.02** (1.12)	-0.01** (0.97)	0.11** (1.77)	0.28** (1.13)	0.00 (1.01)	0.10** (1.76)			
Total	-0.00** (1.10)	-0.00** (1.00)	0.00** (1.00)	-0.00 (1.00)	-0.00 (1.00)	0.00 (1.00)	(1.00)	(1.00)	(1.00)
Detain	0.02** (1.44)	0.01 (1.06)	0.18** (3.18)	0.03** (1.12)	0.01 (1.06)	0.18 (3.40)	0.02** (1.11)	0.01 (1.06)	0.19** (3.02)

<sup>a</sup> 1: Intake, 2: Adjudication, 3: Judicial Disposition

<sup>b</sup> Regression coefficient; Exp(B) is in parenthesis ( )

\*\*p < .01

*What specific factors (domains) of the PACT have the most influence on court outcomes?*

*How do they play out for White, Black, and Hispanic youth?*

Recall that a main focus for the present thesis is the influence of individual domains within the PACT on court outcomes. For example, subjective domains such as attitude/behavior indicators were predicted to allow for the possibility of any racial/ethnic bias. Question 7 seeks to evaluate the influence of each domain on each of the three court outcomes by using logistic regression. Question 7 also seeks to understand the influence of domains broken down by race/ethnicity. It is also important to note that interaction terms were created for each domain using both the Black and Hispanic dummy variables. No interaction term of any combination was found to be statistically significant, again using the  $p < .01$  and adjusted  $R^2$  statistical significance criteria. To illustrate the non racial/ethnic interaction effects, Table 24 produces logistic regression coefficients differentiated by each racial/ethnic group at the dependent variable. For example, the family history and the mental health domains were frequently found to be statistically significant for Black youth, however, these terms were not supported when broken out by race/ethnicity. Given that no interaction terms held, Table 24 shows the original additive model without any of the interaction terms.

Table 24 showed results consistent with findings thus far in the present thesis. Adjudication was a statistically significant predictor of decision-making for both Black and Hispanic youth (column 2). Specifically, both Black and Hispanic youth were less likely to be adjudicated delinquent. Intake (column 1) and judicial disposition (3) were not statistically significant predictors of decision-making for Black or Hispanic youth. Record of referrals was found to be a statistically significant predictor in all decision-making stages. Youth with a higher record of referrals are more likely to not be referred on at



intake and to not be adjudicated delinquent, however a higher record of referrals demonstrates a high likelihood of receiving out of home placement at judicial disposition. Gender was found to have no influence at intake and adjudication, however at judicial disposition males are more likely to receive out of home placement. School history, current use of free time, current relationships, family history, current drug/alcohol use, current mental health, and attitudes/behaviors were all found to increase the likelihood of receiving out of home placement. It is important to note that the 'A' domains are histories and the 'B' domains are current tendencies. Specifically, domain 9A is mental health history while domain 9B is current mental health. Table 24 shows that 'current' domains have more of an influence on the judicial disposition decision-making stage. This finding is significant in that it could show that the youth's history could be less influential at this later decision-making stage and that the circumstances of the current charge/youth's decisions are more influential. In support of this finding, mental health history actually works in the opposite direction as the current mental health: mental health history leads to receiving community placement at judicial disposition, while current mental health leads to receiving out of home placement.

This is consistent with the findings thus far in Part B: court outcomes. Records of referrals also lead to a lesser finding at intake and adjudication, which is inconsistent with findings thus far and at the judicial disposition stage. Mental health history is the only statistically significant domain to lead to youth being adjudicated delinquent. Overall, modest findings were observed in regards of domain influence on decision-making, with the strongest influences observed at judicial disposition.

**Table 24.** Logistic Regression Results by Domain at Decision-Making Stage

Variable	Intake (1)	Adjudication (2)	Judicial Disposition (3)
Black	-0.01 <sup>a</sup> (0.95)	-0.05** (0.74)	0.01 (1.03)
Hispanic	-0.01 (0.94)	-0.07** (0.69)	0.01 (1.04)
Record of referrals	-0.01** (0.98)	-0.01** (0.97)	0.03** (1.14)
Gender	-0.01 (0.98)	-0.01 (0.95)	0.05** (1.30)
School history	-0.00 (1.00)	-0.01** (0.97)	0.01** (1.05)
Current school status	0.00 (1.00)	0.00 (1.00)	0.01 (1.01)
Past use of free time	0.01 (1.00)	-0.01 (0.98)	-0.01 (0.99)
Current use of free time	-0.01** (0.97)	-0.01 (0.99)	0.02** (1.09)
Employment history	-0.01 (1.00)	-0.01 (0.99)	0.02 (1.09)
Current employment	0.01 (1.01)	0.01 (1.03)	-0.01 (0.99)
Past relationships	-0.01** (0.94)	-0.01** (1.03)	0.01 (1.01)
Current relationships	0.01 (1.01)	0.01 (1.02)	0.01** (1.05)
Family history	-0.01 (0.99)	-0.01** (0.98)	0.01** (1.02)
Living arrangements	0.00 (1.00)	-0.01** (0.99)	0.01 (1.01)
Alcohol/drug history	-0.01 (0.99)	-0.00 (1.00)	-0.01 (1.00)
Current alcohol/drug use	0.01 (1.02)	-0.00 (1.00)	0.01** (1.06)
Mental health history	-0.01 (0.99)	0.01** (1.02)	-0.01** (0.99)
Current mental health	0.01 (1.01)	-0.00 (1.00)	0.01** (1.07)
Attitudes/behaviors	-0.01** (0.99)	0.01 (1.01)	0.01** (1.01)
Aggression	0.01 (1.00)	0.01 (1.01)	-0.01 (0.99)
Skills	0.00 (1.00)	-0.00 (1.00)	-0.01** (0.81)

Pseudo R <sup>2</sup>	0.01	0.01	0.13
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<sup>a</sup>Regression coefficient; Exp(B) is in parenthesis ( )

**\*\*p < .01** Note: The main or additive effects of race/ethnicity and the decision-making stages can be found in Table 19

As mentioned, Table 25 displays the individual domains broken out by race/ethnicity shown at each decision-making stage. Recall that no interaction effects between individual domain and race/ethnicity were found to be statistically significant at  $p > .01$  and influential in the adjusted R<sup>2</sup>. Table 25 demonstrates these non-effects.

Within intake, the only statistically significant relationship within Risk level was found with Black youth at 1.08. Black youth were more likely to be deferred on at intake. Total score yielded no statistically significant effects. Detention produced statistically significant effects with both White and Black youth, but the relationships are inverse. No other statistically significant relationships were found within intake and surprisingly no such relationships were found at the adjudication stage. At judicial disposition, however, statistically significant relationships were shown at detention, all positive and indicating racial/ethnic effects. Gender, as previously found in Part A, was found to be statistically significant for Hispanic youth. Gender has a positive effect at judicial disposition for Hispanic youth. Lastly, the following variables were found to indicate an inverse relationship for White youth at judicial disposition: school history, current school status, past use of free time, current employment, past and current relationships, family history, living arrangements, past and current alcohol/drug use, attitudes/behaviors, aggression, and skills. Overall, it appears a number of domains indicate an inverse relationship on judicial disposition outcomes for White youth and no such results are found for Black and Hispanic youth.

**Table 25.** Logistic Regression Results Differentiated by Race/Ethnicity and Decision-Making Stages

Variable	Intake			Adjudication		
	White (1)	Black (2)	Hispanic (3)	White (1)	Black (2)	Hispanic (3)
Risk level	0.01 (1.04)	0.02** (1.08)	-0.00 (0.98)	0.02 (1.12)	-0.01 (0.94)	-0.03 (0.86)
Total Score	-0.00 (1.00)	0.01 (1.00)	-0.01 (1.00)	-0.01 (1.01)	-0.00 (1.00)	0.02 (0.99)
Detention	-0.06** (0.74)	-0.05** (0.76)	-0.05 (0.79)	-0.01 (0.91)	0.00 (1.01)	-0.05 (0.78)
Record of referrals	-0.01 (0.99)	-0.01 (0.98)	0.01 (1.01)	-0.00 (0.95)	-0.00 (0.99)	-0.02 (1.03)
Gender	0.01 (0.99)	-0.02 (0.94)	0.00 (0.97)	0.00 (0.95)	-0.01 (0.97)	-0.05 (0.88)
School history	0.00 (1.00)	-0.01 (1.00)	0.00 (0.99)	0.00 (0.96)	-0.00 (0.99)	-0.03 (0.98)
Current school status	0.00 (1.00)	-0.01 (0.99)	0.01 (1.01)	0.01 (0.99)	0.00 (1.01)	-0.02 (1.02)
Past use of free time	-0.01 (0.99)	-0.00 (1.01)	0.01 (1.03)	0.00 (0.96)	-0.00 (0.99)	-0.03 (0.97)
Current use of free time	0.00 (1.00)	-0.02 (0.95)	0.00 (0.99)	0.01 (0.99)	0.00 (1.01)	-0.03 (0.98)
Employment history	0.01 (1.01)	0.00 (1.03)	-0.01 (0.91)	-0.00 (0.93)	0.00 (1.01)	0.01 (1.11)
Current employment	0.01 (1.01)	-0.00 (1.01)	0.01 (1.01)	0.02 (1.05)	-0.00 (1.00)	-0.01 (1.05)
Past relationships	-0.01 (0.95)	-0.02 (0.92)	-0.00 (0.97)	0.01 (0.98)	-0.02 (0.92)	-0.01 (1.04)
Current relationships	0.00 (1.01)	-0.01 (1.00)	0.01 (1.00)	0.01 (1.00)	0.01 (1.04)	-0.02 (1.03)
Family history	0.00 (1.00)	-0.01 (0.98)	0.01 (1.01)	0.00 (0.97)	-0.00 (0.99)	-0.02 (0.99)

**Table 25.** Continued

Variable	Intake			Adjudication		
	White (1)	Black (2)	Hispanic (3)	White (1)	Black (2)	Hispanic (3)
Living arrangements	0.00 (1.01)	-0.01 (0.99)	0.01 (1.00)	0.01 (0.98)	-0.00 (0.99)	-0.02 (1.02)
Alcohol/drug history	0.00 (1.01)	-0.01 (0.99)	-0.01 (0.95)	0.00 (0.96)	0.00 (1.02)	-0.01 (1.03)
Current alcohol/drug use	0.01 (1.04)	-0.01 (0.99)	0.02 (1.08)	0.01 (0.98)	0.00 (1.00)	-0.01 (1.03)
Mental health history	0.00 (1.00)	-0.01 (0.99)	0.00 (0.99)	0.01 (1.01)	0.00 (1.03)	-0.02 (1.02)
Current mental health	0.01 (1.04)	-0.01 (0.97)	-0.00 (0.97)	0.00 (0.97)	-0.00 (1.00)	-0.00 (1.10)
Attitudes/behaviors	0.01 (0.99)	-0.01 (0.99)	0.01 (1.00)	0.01 (0.99)	0.00 (1.01)	-0.02 (1.03)
Aggression	0.00 (1.00)	-0.01 (1.00)	0.01 (1.00)	0.01 (1.00)	0.00 (1.02)	-0.02 (1.00)
Skills	0.00 (1.00)	-0.01 (1.00)	0.01 (1.00)	0.01 (1.00)	-0.00 (0.98)	-0.02 (1.00)

Regression coefficient; Exp (B) is in parenthesis ( )

1. White, 2. Black, 3. Hispanic

\*\*p < .01

## *Summary*

This part of the analysis focused on the factors that influence court outcomes. First, racial/ethnic effects were found to influence decision-making. Black and Hispanic youth were less likely to be adjudicated delinquent than White youth. Black youth were more likely than comparable White and Hispanic youth to receive a classification of out of home placement.

Second, the influence of the PACT on court outcomes was evaluated using the Risk level variable. Both Risk levels and the total score variable were found to be influential in decision-making across stages. Risk level showed the most influence at the judicial disposition stage, highlighting that a higher Risk level score resulted in receiving out of home placement. For the most part, the impact of total score on decision-making at these stages parallel the impact of Risk level.

Third, no relationships were found to exist between race/ethnicity, Risk level and total score with court outcomes. These non-findings were not consistent with expectations.

Lastly, the influence of each individual domain was evaluated and further evaluated by race/ethnicity. Overall, modest findings were observed regarding domain influence on decision-making, with the strongest influences observed at judicial disposition. Record of referrals was found to be a statistically significant predictor in all decision-making stages, consistent with the influence previously observed of this domain. Once again, no race/ethnic interaction effects were found.

## CHAPTER 9

### DISCUSSION

The final chapter of the thesis includes a discussion of the results of the analysis. First, a summary of the results presented in Chapter 8 will be described, followed by a discussion of theoretical conclusions based on the theoretical framework. Next, limitations and suggestions for future research will be provided, concluding with implications of the present thesis for both risk assessment and general policy.

Using a theoretical framework based on attribution, focal concerns, and symbolic threat theories, the present thesis examined the relationship between race/ethnicity, Risk levels, and court outcomes. Seven questions guided the present thesis and focused on (1) pre and full assessments, (2) the influence of the individual domains that make up the PACT, and (3) the extent race/ethnicity impacts these relationships. It was anticipated that race/ethnicity would affect both Risk level levels and court outcomes. The subjective nature of the domains that comprise the PACT were expected to be a contributing factor to the anticipated race disparities. Overall, only modest race/ethnic effects were found. In the section to follow, the major themes of the results that emerged will frame the following discussion.

#### Influence of Race/Ethnicity on Risk levels and Court Outcomes

It was anticipated that race/ethnicity would play some role in Risk levels based on prior literature indicating that probation officers may allow biases and stereotyping of the youth to influence their decision-making (Bridges & Steen, 1998; Graham & Lowery,

2004). As anticipated, Black youth were found to be overrepresented in higher Risk level categories. While Black youth made up 46 percent of the present sample, they made up 58 percent up of youth receiving the Moderate-High recommendations and 54 percent of youth receiving the High recommendation. In comparison, White and Hispanic youth were underrepresented at the Moderate-High and High categories.

A further look into the race/ethnic relationship confirmed the scoring of Black youth in the Moderate-High category versus the High category. In predicting a racial/ethnic effect, it was anticipated to be found at the extremes. Specifically, racial disparity were anticipated at the Low and High PACT categories versus the middle categories (Moderate and Moderate-High), which held mildly true. This was partially due to an interpretation of the liberation hypothesis (Kalven & Zeisel, 1966) focusing on the extremes of decision-making. However, Black youth were consistently found to be overrepresented in the Moderate-High PACT category more so than in the High category. White youth are overrepresented in the Low PACT level by 5 percent and Black youth are overrepresented at the High PACT level by 8 percent; however, the biggest overrepresentation manifested at the Moderate-High PACT level for Black youth by 12 percent, which was not anticipated. This unexpected trend was found to hold consistent through nearly all analysis and held as an overall theme of the present thesis. Black youth were overrepresented in the Moderate-High level by 11 percent and 14 percent in both the pre and the full databases, respectively.

Due to this relationship, multinomial regression models were run for both the Low and the Moderate-High categories. For Black youth, when Low was the reference category, being Black was statistically significant across the pre assessment and across the full



assessment except within the Moderate comparison group. When Moderate-High was the reference category, being Black was statistically significant at Low only within the pre-screen database, but across all comparisons within the full database. Looking at the same multinomial models for Hispanic youth, when Low was the reference category, being Hispanic had a statistically significant relationship with Risk level at all comparison categories within the pre-screen assessment and the High category within the full assessment. When Moderate-High was the reference category, being Hispanic had a statistically significant relationship with Low (pre-screen assessment) and High (full assessment). Black youth displayed more of a consistent race/ethnicity effect on Risk levels than Hispanic youth; however, effects were shown in both groups. This supports the assumption that race/ethnicity effects Risk levels.

The influence of race/ethnicity on Risk levels parallels harsher treatment of minority youth found in prior literature. For example, Graham and Lowery (2004) found that probation officers recommended harsher punishments for juvenile offenders from ethnicity minority groups. Bridges and Steen (1998) found that probation officers describe minority youth differently than their non-minority counterparts in their written narratives about the youth. It is important to note that these narratives were not based on structured risk assessments. The theoretical conclusions will be discussed later in this chapter, however, it is important to mention that this difference in written narratives was based on attribution theory (Albonetti, 1991). Within these written court reports, probation officers were found to relate the offending behavior of White youth to external attributions, while relating the offending behavior of minority youth to internal attributions. Examples of external attributes are having problems at school and having delinquent peers while

examples of internal attributes are being aggressive and lack of remorse (Bishop et al., 2010). Albonetti's (1991) attribution theory is the most explanatory for this discrepancy, given that Black youth are more associated with internal attributes versus external attributes. As explained by Harris (2009), these attributes shape officials' assessments of the threat of future crime and sentence recommendations. By viewing youth differently, Black youth could be evidencing higher scores on the Risk levels, though not always the highest recommendation. In total, decision-makers' reliance on stereotypes tied to internal attributions may explain the race/ethnicity effects on the risk levels shown in the present thesis. A majority of questions on domains are not of a subjective nature though and are more objective measures of the youth's likelihood of recidivating and their level of need. Attitudes/behavior indicators could be seen as the most subjective in nature, but when they were statistically significant predictors of risk score or court outcomes, they were some of the smallest effect sizes. Alternatively, another explanation for the reported findings is that Black youth simply exemplify more problematic behavior than White and Hispanic youth. Thus, scoring higher in the risk scores does not reflect bias in the part of decision-makers but real differences in behaviors relative to Whites (Tracy, 2005). And, contrary to expectations, Hispanic youth, for the most part, were found to be more comparable with White youth than with Black youth. Some past research has discovered that Hispanic youth are not perceived as "threatening" (Heggeness & Davis, 2008) and/or come from backgrounds and exhibit behaviors as problematic Black youth (Goff et al., 2014; Wallace et al., 2008).

Part B of the present thesis' analysis focused on court outcomes and specifically, whether or not race/ethnicity affect court outcomes. Being a Black or Hispanic youth was

not found to be a determinant at intake and actually had an inverse relationship at adjudication. Meaning Black and Hispanic youth were found to be less likely to be adjudicated delinquent than White youth. Black youth, however, were found to receive out-of-home placement at judicial disposition while White and Hispanic youth received community placement. Overall, inconsistent racial/ethnic effects were found at court outcomes. One explanation for this occurrence rests with the view that judges “correct” for past discrepancies (Bishop, Leiber & Johnson, 2010; Rodriguez, 2010). Given that some discrepancies at the other stages in decision-making were found, this could be due to judges correcting for errors in prior decision-making and offsetting previous injustices (Dannefer & Schutt, 1982; Leiber & Johnson, 2008). Alternatively, these decision-making patterns could reflect the awareness of judges of the disproportionate overrepresentation of Black youth in general and are simply an attempt to reduce their presence there. It is important to note that differential outcomes by race once legal and extralegal factors are considered still represent a bias (Leiber & Johnson, 2008).

However, in line with this focus, the finding that Black youth were more likely to receive out-of-home placement at judicial disposition was consistent throughout the analysis. At judicial disposition, all youth who had received higher PACT categories were more likely to receive out-of-home placement, which could indicate that the PACT is doing its job as a risk assessment instrument. This relationship with harsher outcomes at judicial disposition is discussed below.

The strongest influences of race/ethnic and domain influences were found at judicial disposition. Inconsistent findings were presented at both intake and adjudication, but findings were consistently statistically significant at judicial disposition and in the

predicted direction. As previously stated, across all races, a higher PACT level was likely to result in out-of-home placement at judicial disposition. Record of referrals, gender, school history, current use of free time, current relationships, family history, current drug/alcohol use, current mental health, and attitudes/behaviors were all found to increase the likelihood of receiving out-of-home placement at judicial dispositions. It was also found that a number of domains indicate an inverse relationship at judicial disposition for White youth, with no such results being found for Black and Hispanic youth at judicial disposition.

It was argued by Bishop and colleagues (2010) that decision-making at judicial disposition is aimed at a number of goals and values and that any array of legal, sociodemographic, and contextual variables would come into play (Bishop, Leiber, and Johnson, 2010). Bishop and colleagues (2010) also said this about intake though, which is another loosely coupled stage. Since inverse effects were found at intake, but the opposite found at disposition, it may be interpreted that since judicial disposition is the final stage for these youth that these variables may be taken more seriously than at intake. Another possible interpretation for the findings at judicial disposition is the *parens patriae* doctrine of the juvenile justice system. Specifically, at this stage in decision-making judges could be choosing out of home placement in order for youth to receive treatment and services offered by DJJ. This could be viewed as placing the youth's best interest in mind and responding in a slightly protective and benevolent way to meet the needs of African American youth (Bishop & Frazier, 1996; Bridges et al., 1995; Leiber & Johnson, 2008).

Turning to prior literature in order to further understand these harsher effects at judicial disposition, Bishop and Frazier (1988) found that the subgroup that moves on to a

dispositional hearing absorbs the racial bias from the two preceding stages and further increases it. While the results at intake and adjudication were inconsistent, this literature could help better explain the findings at judicial disposition. Prior literature, as discussed by Leiber and Johnson (2008), that evaluated the influence of race on decision-making at judicial disposition has been less consistent than at intake (Bishop, 2005; Bishop & Frazier, 1988; Leiber & Jamieson, 1995). Statistics of studies have shown African-Americans are disproportionately placed in secure facilities compared to Whites, even after taking into account referenced legal and extra-legal factors into account (Snyder, 2005; Leiber & Johnson, 2008). The findings that framed my thesis questions are in line with prior literature and seem to be explained by racial disparities within decision-making.

#### *Influence of Domains*

Another theme that emerged is the influence of record of referrals, attitudes/behaviors, and drug/alcohol use. Beginning with the effect of record of referrals, this is an auto-populated domain from the Florida Juvenile Justice Information System (JJIS) system and was consistently influential in Risk levels. When evaluating the effects of each domain, record of referrals was constantly a statistically significant predictor of both Risk level and court outcome. It was found that Black youth received higher scores for record of referrals across all PACT category comparisons. As a consequence of this finding, a higher record of referrals was found to demonstrate a higher likelihood of receiving out of home placement at judicial disposition. The consistent influence of record of referrals and the finding that Black youth received higher record of referral scores could indicate a probable outcome at judicial disposition: out of home placement.

This finding could be explained by certain variables not being racially neutral or may serve as proxies for race (Harris, 2009; Engen et al., 2002). For example, prior literature has made the argument that “legally relevant” variables as prior arrest may not be racially neutral due to the possibility that police stop and subsequently arrest more African American youth than White youth (Pope & Feyerherm, 1995; Leiber, 2014; Bishop & Frazier, 1998). Additionally, Pope and Feyerherm (1995) found that compared to White youth, African American youth tended to have more prior contact and be arrested for more severe offenses. It has also been found that knowledge of an offender’s prior record is used as a general indicator of dangerousness and propensity to reoffend (Kurlychek et al., 2006). Thus, while prior record is used by the juvenile court as part of the decision-making process, this may lead to racial disparities in court outcomes.

Recall that the present thesis was interested in understanding the influence of domains, specifically those that could be viewed as more subjective in nature. Meaning, these domains could require the probation officer to draw conclusions about the youth’s attitudes and behaviors, thus allowing for their own opinions or biases to come into their decision-making. However, the influence of possibly subjective domains was inconsistent. Black youth who had higher PACT levels had statistically significant scores within the attitudes/behavior domain. The aggression and the skills domains were also found to be statistically significant in nearly all tables. The attitudes/behaviors domain is in both the pre and the full PACT assessments, while the aggression and skills domains were only present in the full PACT assessments. The attitudes/behavior domain was found to increase the likelihood of the juvenile receiving out of home placement.

Bridges and Steen (1998) found that attitudes were examples of internal attributions and could either have a positive or negative effect on the probation officer's perception of the juvenile. If the youth has the 'proper' attitude towards crime, acknowledged personal responsibility, and expressed remorse, they would be viewed as knowing right from wrong as more likely to avoid further criminal behavior. If, however, the juvenile has a disrespectful attitude, they may be viewed as having a lack of either understanding or agreement with legal order. By displaying a disrespectful attitude, the juvenile could be seen as lacking the internal restraints necessary to not commit future crime (Bridges & Steen, 1998).

Additionally, the family history domains were found to be significant throughout models in the present thesis, indicating a relationship between a youth's family and their PACT risk assessment scoring. Research has shown that family considerations have important implications for the handling of youth (Molaard, Spoth, & Redmond, 2000) and racial minorities (Frazier & Bishop, 1995; Robbins & Szapoczik, 2000). Juvenile probation officers are able to make assessments of the family's ability to provide a "good" home environment, socialize and supervise the juvenile (Feld, 1999). The juvenile probation officer's perception and assessment of the youth's family is used to assist in arriving at decisions in regards to the youth's outcome (Feld, 1999). Frazier and Bishop (1995) stated that views of decision-makers "about minority families indicate racial bias, and they ultimately operate to justify the system's bend toward treating youths from minority families more formally and more harshly" (p. 35).

In addition to viewing minority families differently than White families, the family dynamic is also predictive of how the juvenile will be perceived. Meaning, two parent

households are viewed differently than one-parent households; this judgment becomes harsher when it is a minority one-parent household, as prior literature has found (Pope & Feyerherm, 1993; Frazier & Bishop, 1995). More lenient outcomes have been given to juveniles from two parent households since families were assumed to exert greater supervision over their children than single-parent households (Arnold, 1971; Belknap, 1984; Dannefer & Schutt, 1982; Leiber & Mack, 2003). Tittle and Curran (1988) found that decision-makers could feel psychological discomfort or uneasiness when handling youth from single-parent households and as a result they may respond to them differently than youth from two parent homes. This is further explained by perceived notions of one-parent homes not being able to adequately meet the needs of children, provide the necessary supervision to prevent further delinquent behavior, and ensure abidance to stipulated conditions of probation at diversion, as predicted in a general theory of crime (Bishop & Frazier, 1996; Bridges et al., 1995).

As referenced, minority youth coming from a single parent home face more severe dispositions by decision-makers than White youth from intact homes (Pope & Feyerherm, 1993). Prior literature has indicated that African American youth were more likely to reside in single parent households and as a result were more likely than White youth to receive serve sanctions (Pope & Feyerherm, 1993). Further, Pope and Feyerherm (1993) argued that “family situation” could in fact be a typescript for race within juvenile justice proceedings that could be racially tainted. It could be questioned if these family variables should be relied upon by decision-makers and if assessments including family variables ought to result in the degree of difference between White and minority youth that they have been found to produce (Pope & Feyerherm, 1993; Leiber & Mack, 2003).



While not a focus of the present thesis, both the history and current use of alcohol/drugs were found to be significant throughout models displayed in the present thesis. Prior literature has indicated the difference between racial/ethnic groups in their alcohol/drug preferences. Black youth are no more likely, and in some literature have been found to be less likely, than White youth to be users of illicit drugs (Prendergast et al., 1989). As youth make the transition into young adulthood, drug use declines significantly among White young adults and it increases among Black young adults (National Institute on Drug Abuse, 1995). Prior literature has found that White youth are more likely to consume alcohol than Black youth (Blum et al., 2000). Recall that White youth had the highest scoring means for both history of current alcohol/drug and current alcohol/drug history. It has additionally been found that Non-Hispanic Whites are 30 times more likely to abuse cocaine than African Americans (Teplin, 2016). Ultimately, there have been differences in alcohol and drug abuse among Black and White youth. In the present thesis, the previous and current use of alcohol/drugs was found to be frequently statistically significant and influential in domain influence of Risk level and court outcome.

### *Theoretical Conclusions*

In line with the consensus theory is the belief that any racial/ethnic disparities are due to the difference in involvement in the juvenile justice system, meaning differential involvement in crime (Tracy, 2005). Differential selection, in line with the conflict perspective, however, argues that the justice system treats minority and White offenders differently (Leiber & Fox, 2005; Piquero, 2008). The present thesis found some support for the differential treatment perception given that Black youth received out-of-home placement in comparison to comparable White youth. Due to stereotypical perceptions on

part of decision-makers, African-Americans as a group may be viewed as more delinquent and subsequently receive differential treatment compared to Whites (Leiber & Mack, 2003).

The moderate racial disparities found may be explained within the context of attribution theory (Albonetti, 1991). Race/ethnicity appears to have some relationship with a Risk level, which is the result of the youth's interview with the juvenile probation officer. As referenced, the attributions theory could explain this by the probation officer using both internal and external characteristics to identify how responsible the juvenile is for their crime (Albonetti, 1991). Probation officers have also been found to use differential causal attributions to assess the delinquent behavior of Black and White youth (Bridges & Steen, 1988).

Additionally, race/ethnicity appears to have some influence at the judicial disposition stage and inconsistent effects at the intake and adjudication stages. A possible explanation for these findings at judicial disposition could be the fact that focal concerns are manifesting in decision-makers but only at this last step in determining whether or not a youth should receive out of home placement. The judge could be relying on their perceptual shorthand and viewing the youth's blameworthiness, practical constraints, and the protection of the community at this final stage of determining the youth's placement (Steffensmeier et al. 1998). It could be the case that a judge is considering more facts of the case at intake and adjudication, hence showing inconsistent results, and instead is relying on perceptual shorthand only at judicial disposition.

Support was also found for the consensus perspective and the belief that minorities differentially offend and exhibit more problematic behavior and need treatment, at intake,

adjudication, and out of home placement; this explains court outcomes. More research is needed to investigate subjective domains and to better understand if they are fueled by stereotypes. Even if these domains are not a result of stereotypes, Black youth are still scoring significantly higher in these domains, which could be the result of differential offending.

#### *Study Limitations and Directions for Future Research*

The present thesis utilized a secondary dataset from 2009-2010, which may have indicated trends that are no longer present. An updated dataset is now available and could be utilized to confirm findings in the present thesis as well as a potential avenue for future research. Additionally, the present thesis only looks at Black, White, and Hispanic youth while not taking into account youth who are other races or who identify as Hispanic as an ethnicity. By not including all demographics and racial/ethnic categories, such as Black or White youth who are Hispanic, the present thesis is limited in its generalizability.

With such a large number of cases, taking a sample of the cases could have been beneficial to understanding some of the statistically significant findings. The present thesis utilized the statistical significance threshold of  $<.01$  in efforts to employ a more rigorous process before identifying and reporting a significant relationship. Taking the analysis a step further to use a sample of the dataset could be beneficial in confirming the results found in the present thesis. Meaning, a random sub sample of the entire data set and then re-running the models could be useful to verify and confirm the results shown. Since the dataset is so large, almost any effect can appear statistically significant at a .05 level, thus the present thesis used the threshold of .01. By taking a smaller sample of this dataset, these results could become clearer and more meaningful.

Another limitation of the present thesis is the lack of an authentic scoring matrix from the state of Florida. It was very helpful to have the reportedly similar matrix from Washington, but the fact that the present thesis was forced to draw conclusions and create a scoring matrix not exactly used by Florida poses a limitation to the validity of the total score variable. The present thesis primarily analyzed the total score variable in relation/comparison to the Risk level variable in attempts to better understand the Risk level process. While some similarities and parallels were observed, an authentic scoring matrix would have improved the validity of the total score variable. This also would have allowed for a more in depth look at the scoring practices used by Florida DJJ with the PACT. Being able to utilize the scoring matrix from Florida and being able to work with DJJ staff to better understand the PACT scoring process would tremendously lend itself to future research.

One potential strategy for future research would be to interview juvenile probation officers to gain a better understanding of the overall experience at the juvenile detention facilities where the PACT is used. Prior literature (Vincent et al., 2012; Conley, 1994; Harris, 2009) has documented that qualitative lends itself to gaining an improved perspective of the juvenile justice system. Qualitative methods would not only contribute to the primarily quantitative research focused on risk assessment tools, but it would also lend itself to the processes used by staff members when employing risk assessment tools. The methodology employed by Bridges and Steen (1998) evaluating probation officer narratives would greatly lend itself to understanding this process specifically within Florida DLL. Juvenile probation officers could help researchers better understand the

override process, the motivational interviewing techniques used, and the experience they have with juveniles while employing the PACT.

I hope to obtain entry into the local Juvenile Assessment Center (JAC) since future research would be greatly improved by observing the entire intake process with juveniles. By observing the techniques and methods used by juvenile probation officers employing the PACT, the findings in the present thesis could be further understood. For example, learning the decision-making behind the subjective questions, these domains and the overall influence of biases and stereotypes could be better understood.

Harris (2009) used a sample of probation officers' narratives to investigate court actors' focal concerns and how these priorities shape attributions about youth. By using the narratives about juvenile offenders' amenability to the juvenile justice system, Harris was able to understand the organizational priorities that guided these processing decisions. Juvenile probation officers were found to characterize, label, and judge the juvenile and within their narratives contradictory information was often times found (Harris, 2009). It was found that once substantive rationality is implemented, it is very difficult to return to formal reasoning (Harris, 2008; Weber, 1968; Engen & Steen, 2000; Harris, 2007; Savelsberg & Joachim, 1992).

A reevaluation of these domains is needed in efforts to not allow them to serve as such proxies for race. A possible solution is for these domains to carry a lesser weight or influence in the youth's Risk level and subsequent court outcome. The present thesis is not dismissing the use of such domains, but instead recommending a lessened influence since they have been shown to lead to disparity. Given that prior record is contingent on police deployment, prior record could be tainted by the presence of police bias (Engen et al.,

2002). For example, if minority youth are arrested at a more frequent rate than White youth due to the racial bias of the officers or racially motivated policing techniques used, minority youth would have prior records that White youth would not. A possible solution for the influence of prior record is the evaluation of a 'prior'. Meaning, what kind of priors should count towards a youth's Risk level? Possibly only crimes against a person or violent prior offenses should have an influence on the PACT. Alternatively, possibly the most recent priors are only counted, or only priors for the last year or two years. The point of evaluating this domain, and other racially tainted domains, is to level the playing field between minority and non-minority youth.

### *Conclusion*

Despite the need for additional study in this area, the present thesis contributes to the understanding of juvenile justice decision-making. The present thesis was able to further explore the decision-making of probation officers while assessing juveniles, in addition to how these assessments affect the court outcomes as dictated by a judge. The present thesis contributed to the prior literature on risk assessment by looking a step further than validation studies and evaluating a risk assessment tool to control for possible biases and stereotypes held by decision-makers. Race/ethnicity was found to influence both risk levels and court outcomes, thus indicating the influence of extra-legal factors in juvenile justice outcomes. Future research should take these aspects into consideration when examining juvenile justice court proceedings, beginning at juvenile intake, and the possibility of race/ethnic disparities. Continued research in this area is needed to assess the use and practice of risk assessment throughout all races and ethnic groups, in efforts to enhance the scoring and assessment of youth in the juvenile justice system.