

PREDICTORS OF SECURE RESIDENTIAL PLACEMENT FOR JUVENILE  
PROBATIONERS IN TEXAS

by

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## **DEDICATION**

For Reese.

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## **ABSTRACT**

Although previous researchers have examined predictors of dispositional outcomes for youth, none have examined the role of actuarial assessments in this regard (i.e., risk and needs levels). As such, this dissertation seeks to address this void by examining the degree to which demographic, legal, actuarial, and contextual-level factors impact placement outcomes for youth adjudicated to probation in Texas ( $N = 9,397$ ). To meet this objective, two different, but related, sets of analytical techniques are applied: Study #1 involves a multivariate examination of the effect of individual-level predictors on placement outcomes for youth adjudicated to probation ( $n = 4,670$ ); and Study #2 focuses on a multivariate and multilevel evaluation of the effect of individual-level and contextual-level factors on placement outcomes for youth adjudicated to probation when considered simultaneously ( $n = 4,670$ ).

## CHAPTER 1 INTRODUCTION

In the past two decades, juvenile justice systems across the U.S. have undergone vast reform. Systems that once operated on the false assumption of the existence of “juvenile super-predators,” and the ever-anticipated rise in delinquency (Bennet, DiIulio, & Walters, 1996) now strive to operate under the umbrella of “what works” (Latessa, Listwan, & Koetzle, 2013; Lipsey, Howell, Kelly, Chapman, & Carver, 2010). Policies, practices, and programs that have been empirically shown to have a negative effect on delinquency are heavily encouraged. And, while the rhetoric of rehabilitation may not be new, a preference for employing “effective” methods to address delinquent behavior has become the norm. At the federal level, it is the Office of Juvenile Justice Delinquency and Prevention’s (OJJDP) mission to:

*. . . provide national leadership, coordination, and resources to prevent and respond to juvenile delinquency and victimization. OJJDP supports states and communities in their efforts to develop and implement effective and coordinated prevention and intervention programs and to improve the juvenile justice system [emphasis added] so that it protects public safety, holds youth appropriately accountable, and provides treatment and rehabilitative services tailored to the needs of juveniles and their families. (USDOJ, OJJDP, n.d.)*

They encourage both state and local juvenile justice agencies to embrace this mission. Through the provision of research and statistics, evidence-driven tools (e.g., the Model Programs Guide), and technical assistance (e.g., performance measurement), the OJJDP seeks to ensure that juvenile justice practitioners are successful in effectively moving youth through the system – from referred to rehabilitated.

To this end, the actuarial approach to addressing youths' *criminogenic risks* and *needs* has shown to be effective in reducing delinquency and anti-social behavior (Andrews, Bonta, & Hoge, 1990; Latessa et al., 2013; Lipsey et al., 2010; Lowenkamp & Latessa, 2004; Vincent, Guy, & Grisso, 2012b). Included in the tools that have been created to help in this regard are *risk and needs assessments*. As these tools have evolved, practitioners have become better equipped to identify, not only the risks associated with a juvenile's re-offending, but the factors that might be contributing to a youth's delinquent behavior as well (e.g., delinquent peers, low family involvement, and poor academic performance).

When validated and properly administered, risk and needs assessments can provide practitioners with a slew of information, including (a) the likelihood that a youth will re-offend or will be violent, (b) the need for a more thorough clinical assessment, (c) the factors that are contributing the most to a youth's delinquent behavior, and (d) an idea of what services could be offered given a youth's needs and the resources available. While many rightfully caution against *solely* relying on these tools for decision making – as that may result in other factors being overlooked – their use has been strongly recommended as a standardized tool for moving youth through the system (Andrews & Bonta, 2006; Andrews et al., 1990; Bonta & Andrews, 2007; Lipsey et al., 2010; Mulvey & Iselin, 2008; Vincent et al., 2012b).

If a youth who is referred to the system is assessed properly, and the result of their assessment indicates that they are low risk and low need, then the decision to dismiss, divert, or recommend deferred adjudication, has been empirically and theoretically justified (Andrews et al., 1990; Andrews & Bonta, 2006; Bonta & Andrews, 2007;

Lowenkamp & Latessa, 2004). If a decision is made, however, to confine and treat that youth by providing numerous services (e.g., constant supervision, individual counseling, group counseling, anti-social behavior workshops) then not only has the assessment been used improperly (or ignored altogether), it has also resulted in costly expenditures. Some of these costs can be calculated (e.g., time and money spent) while others will only become apparent over time (e.g., future delinquency/criminality from being exposed to secure confinement) (Bonta & Andrews, 2007; Lowenkamp & Latessa, 2004).

The use of risk and needs assessments in the decision-making process for juvenile justice practitioners is not new. For years, employees within state and local systems across the U.S. have chosen to use these tools to better inform how youth are processed. Multiple tools have been created – the Arizona Youth Assessment System (AZYAS), the Indiana Youth Assessment System (IYAS), the North Carolina Assessment of Risk (NCAR), the Ohio Youth Assessment System (OYAS), the Positive Achievement Change Tool (PACT), the Structured Assessment of Violence Risk in Youth (SAVRY), the Washington State Juvenile Court Assessment (WSCJA), the Youth Assessment & Screening Instrument (YASI), the Youth Level of Service/Case Management Inventory (YLS/CMI), to name a few – and various studies have been conducted to determine their validity (Baglivio, 2009; Baird, 2009; Krysik & LeCroy, 2002; Latessa, Lovins, & Ostrowski, 2009; Latessa & Lovins, 2012; LeCroy, Krysik, & Palumbo, 1998; Lovins & Latessa, 2013; Martin, 2012; Meyers & Schmidt, 2008; Schmidt, Campbell, & Houlding, 2011; Schwalbe, 2007; Schwalbe, 2009; Schwalbe, Fraser, & Day, 2007; Schwalbe, Fraser, Day, & Arnold, 2004; Schwalbe, Fraser, Day, & Cooley, 2006; Vincent, Guy,

Gershenson, & McCabe, 2012a; Washington State Institute for Public Policy, 1998; Washington State Institute for Public Policy, 2004).

What is absent from this literature, however, are evaluations of how these assessments are being implemented. If these tools were created for better informing the decision-making process, specifically decisions in disposition and treatment, then it needs to be determined whether they are being used appropriately. Are low-risk/low-need youth being diverted or deferred from confinement or are they being confined despite the results of their actuarial assessment?

Answering these questions is a critical step for any system using these tools, as their use requires time and investment. If administered and ignored, resources are lost, not only in the time it took to assess the youth, but in the subsequent services that are being provided (e.g., confinement and treatment). One way to evaluate the implementation of these tools is to examine whether the risk and needs levels established by these actuarial assessments are predictive of the decision they are intended to inform – i.e., dispositions.

This dissertation seeks to evaluate the use of risk and needs assessments in this regard. In the following chapters, a review of the most relevant literature is provided (Chapter 2); and two separate, but related empirical investigations are conducted. The first study, Study #1 (Chapter 3), includes a multivariate examination of the effect of individual-level predictors on dispositional outcomes for youth, while Study #2 (Chapter 4), focuses on a multivariate and multilevel evaluation of the effect of individual and contextual-level (or jurisdictional-level) factors when considered simultaneously.

Discussion and conclusions drawn from the results of these evaluations is comprehensively provided in the last chapter (Chapter 5).

## **CHAPTER 2**

### **REVIEW OF THE LITERATURE**

This chapter serves as a review of the literature most relevant in evaluating the role actuarial assessments play in dispositional outcomes for youth. This includes the theoretical foundation of risk and needs assessments, an overview of the risk-needs-responsivity model, the evolution of risk and needs assessments, the predictive validity of juvenile instruments (and the PACT), and prior studies examining individual-level and contextual-level predictors of dispositional outcomes for youth.

#### **The Theoretical Foundation of Risk and Needs Assessments**

The underlying theory of risk and needs assessments is Andrews and Bonta's (2006) General Personality and Cognitive Social Learning (GPCSL) theory. Seemingly new, the GPCSL perspective relies on previously tested theories of crime to offer a comprehensive explanation of continued criminality. According to this theory, criminal behavior is learned, both via modeling and conditioning. And the propensity to commit crime is something that an individual can be biologically predispositioned to do (i.e., cognitive impairment) or develop over time (i.e., through a lack of *or* proliferation of certain factors, such self-control/low self-control or pro-social/pro-delinquent role models).

The "immediate source of control over one's behavior," according to Bonta and Andrews (2017), is the environment (p. 60). Thus, when presented with the opportunity to commit a crime, an individual will in that moment, weigh the rewards and consequences of committing said crime, given the factors that have been identified as being favorable towards engaging in illicit behavior – a *criminal history, pro-criminal attitudes, pro-criminal associates, antisocial personality pattern, family/marital*



*relationships, school/work, substance abuse, and leisure/recreational time* (2017, p. 60).

These factors are what Andrews and Bonta (2006) call the “central eight.”

### **Predictors of Crime and the “Central Eight”**

Prior to examining these eight factors in greater detail, attention should be given to predictors of crime that have been established over the life-course (Glueck & Glueck, 1950; Moffit, 1993; Sampson & Laub, 1993). As Andrews and Bonta (2006) rightfully point out, most studies evaluating predictors of crime are cross-sectional in nature and are thereby limited in their ability to yield definite conclusions on the direction and association between variables. In longitudinal studies, however, findings of causation are more conclusive; as effects are examined at varying points, and across time. It is for this reason that the GPCSL perspective places an emphasis on those factors that appear to not only be consistent over time but that have in fact been shown to temporally precede illicit behavior (Andrews & Bonta, 2006).

**Life-course criminology and predictors of crime.** The origins of life-course criminology can be traced back to Glueck and Glueck’s (1950) *Unraveling Juvenile Delinquency*. In this publication, the Glueck’s introduced a longitudinal study that examined the lives of 1,000 males – five hundred delinquent and five hundred non-delinquent – at three different points (at ages 14, 25, and 32). Most notable about this study, was the size and scope of the data collected. Each boy was described in terms of over 400 factors that can be grouped into five domains: family and personal background, body types, health, intelligence, and temperament/character. Overall, the results of their analysis identified several factors to be consistent predictors of crime – personality, criminal history, attitudes, associates, school, and family (Glueck & Glueck, 1950).

Inspired by their analysis, Sampson and Laub (1993) later reconstructed the Glueck's data, to examine the effect of informal social controls on crime, over the life-course (i.e., age-graded theory of informal social control). In this study, the focus was not on what causes an individual to commit crime, but instead on what helps an individual to veer away, or "desist," from criminal behavior. Their results supplied empirical support for the hypothesis they put forth, which attributed offending over the life-course, to weak social controls. Additionally, they found that social bond factors such as marriage, employment, and military involvement, increase one's social capital, thereby changing the trajectory of one's life-course from continued criminality to desistance. Sampson and Laub (1993) aptly referred to these factors as "turning points."

The notion of desistance is likewise supported in Moffit's (1993) taxonomy of anti-social behaviors. In a thorough examination of the age-crime curve, Moffit (1993) identified two groupings that exist within the distribution, (a) *adolescent-limited offenders* (ALs) – individuals whose criminal career is limited to the adolescent period – and (b) *life-course persistent offenders* (LCPs) – individuals who persist in their offending, past adolescence. The latter of which, are few, and can be marked by neuropsychological impairments and disadvantaged familial and neighborhood environments. While Moffit (1993) acknowledges that factors such as marriage and employment may offer an opportunity for desistance, they also recognize that such transitions may also encourage persistence. This is more likely to occur if that individual's childhood is, (a) too "injurious" to overcome and (b) the transitions themselves foster and support continued anti-social behavior (e.g., a pro-criminal partner and/or associates).

The findings put forth by Glueck and Glueck (1950), Sampson and Laub (1993) and Moffit (1993), highlight an underlying principle subsumed in the GPCSL theory – to effectively rehabilitate an individual (i.e., achieve full desistance), their social and interpersonal sources contributing to their criminality, must be addressed. These sources, as established by life-course theorists, include an individual’s personality, attitudes, associates, school/work, and family/marriage (Glueck & Glueck, 1950; Moffit, 1993; Sampson & Laub, 1993). It thus stands to reason why these factors, in addition to criminal history, serve as the basis of Andrews and Bonta’s (2006) “central eight.”

### **The “Central Eight”**

**Criminal history.** The only *static* (or immutable) variable that has consistently demonstrated to have a positive effect on re-offending, this includes: any arrests, referrals, adjudications, dispositions, and violations that have occurred prior to the offense in question. In addition to being identified as a consistent predictor of crime (Glueck & Glueck, 1950), one’s criminal history has likewise been shown in cross-sectional studies to have a positive and significant effect on continued criminality (Gendreau, Little, & Goggin, 1996; Hirschi, 1969).

In 1969, Hirschi conducted one of the more comprehensive cross-sectional studies examining the *causes of delinquency*. In addition to analyzing school and police records, more than 4,000 high school students were surveyed, on the topics of school, family, and work. Though different in design, this study yielded similar results reported by Glueck and Glueck’s research (1950). Of the factors examined, those that demonstrated to have a significant association with delinquency was a youth’s personality, criminal history, pro-criminal attitude, pro-delinquent associates, school, and family (Hirschi, 1969). Likewise,

offering support for the inclusion of criminal history is Gendreau, Little, and Goggin's (1996) meta-analysis of 372 studies examining predictors of recidivism via actuarial assessments and their domains (i.e., risk level and needs levels). The studies included in this analysis produced over 1,700 correlates with criminal behavior, of which, criminal history was found to be one of the strongest (Gendreau et al., 1996).

From a social perspective, the inclusion of criminal history, is likewise supported by Tannenbaum (1938) and Lemert's (1951) labeling theory, as well as Sutherland's social learning theory (1939). According to labeling theory, once a label is applied to an individual by the system (e.g., offender, guilty, criminal, delinquent, convict), that label becomes internalized by the individual, thus increasing one's likelihood of re-offending (Lemert, 1951; Tannenbaum, 1938). Pragmatically speaking, those with a criminal history, at some point, learned their behavior from a pro-delinquent model; which is, by definition similar to Sutherland's (1939) differential association theory.

**Pro-criminal attitudes.** These are beliefs and values that are favorable to committing crime – such as believing that the rewards of committing a crime outweigh the consequences or having negative attitudes towards the justice system and its actors. Such attitudes, according to Andrews and Bonta (2006), develop in one of two ways: (1) due to a failure in the developmental process (i.e., psychologically or cognitively) (Freud, 1914; Kohlberg, 1958), or (2) because the environment one is in and the peers one associates with, support, model and re-affirm engagement in criminal behavior (Burgess & Akers, 1966; Sutherland, 1939).

Consider, for the former view, explanations of crime put forth by Freud's (1914) psychodynamic theory or Kohlberg's (1958) moral development theory. According to

Freud (1914), anti-social behavior is expected of individuals who fail to fully develop their superego – the mechanism in one’s psyche responsible for critically and morally checking the desires requested by the id. Without a functioning superego, individuals are unable to judge illicit behavior as “wrong” or anti-social, instead, this behavior is psychologically interpreted as being favorable as it is feeding a desire (e.g., immediate gratification) (Freud, 1914).

For Kohlberg (1958), anti-social behavior is attributed to those who fail to progress past the pre-conventional stage of moral development. In this stage, individuals pass through two levels, blind egoism and instrumental egoism. In the former, two things are acknowledged, one’s self and the existence of norms. In the latter, individuals choose to conform or deviate from these norms. Once passed the pre-conventional stage, adolescents and adults alike enter the stage of convention, in which the difference between right and wrong is learned, as well the duties that are required to uphold social contracts (i.e., the law). Individuals with favorable attitudes to committing crime, are either fixated in the pre-conventional stage or have failed to progress past the first level of convention (Kohlberg, 1958).

Bearing in mind Andrews and Bonta’s (2006) second view on pro-criminal attitudes, attention should be given to the criminological explanations put forth by Sutherland’s (1939) differential association theory and Burgess and Akers’ (1966) differential reinforcement theory. According to Sutherland (1939), attitudes and beliefs that are favorable to committing crime are learned via exposure to others who also view committing crime as favorable (e.g., parents, siblings, and friends). Burgess and Akers (1966) built on this notion by attributing attitudes favorable to criminality, not just to

modeling but to conditioning as well. Meaning that in addition to being taught that crime is favorable, these individuals have also been rewarded (or positively reinforced) when they have expressed interest in committing crime (Burgess & Akers, 1966).

The theories briefly covered in this section, of course, serve as a supplement to those studies previously discussed, which have all found pro-criminal attitudes to have a positive and significant effect on continued criminality (Glueck & Glueck, 1950; Hirschi, 1969; Gendreau et al., 1996).

**Pro-criminal associates.** These are individuals whose beliefs and values are favorable to committing a crime. Like pro-criminal attitudes, pro-criminal associates have been found within the literature to be one of the strongest predictors of continued criminality (Burgess & Akers, 1966; Gendreau et al., 1996; Glueck & Glueck, 1950; Hirschi, 1969; Sutherland, 1939). As youth who tend to “flock” to delinquent groups, have already exhibited pro-criminal attitudes and behavior (Glueck & Glueck, 1950).

According to Sutherland (1939), it is through holding and maintaining interpersonal relationships with pro-criminal associates, in which criminal behavior is learned. It has also been shown that youth remain in delinquent peer groups due to the affirmation they receive for engaging in anti-social and illicit behavior, from their peers (Burgess & Akers, 1966; Matseuda & Anderson, 1998; Sutherland, 1939; Wright, Caspi, Moffit, & Silva, 2001). These affirmations strengthen the bond in the relationship, thus increasing the likelihood of one of these youth, following suit (Payne & Cornwell, 2007).

Even in instances where individuals are predisposed to commit crime (e.g., individuals with low self-control or a pattern of anti-social personality), the effect of pro-criminal associates still holds true, as these individuals have been found to “self-select”

peers who also exhibit these predispositions (Andrews & Bonta, 2006; Gottfredson & Hirschi, 1990).

**Anti-social Personality Pattern (APP).** It is clear that personality matters, especially with regard to life-course persistent offenders (Glueck & Glueck, 1950; Hirschi, 1969; Gendreau et al., 1996; Moffit, 1993). Andrews and Bonta (2006) recognize the importance of this factor and describe APP within the context of the GPCSL perspective – as a latent trait that predisposes individuals to engaging in anti-social behavior. APP manifests in reoccurring displays of impulsivity and weak self-control.

The notion of APP is obviously influenced by Gottfredson and Hirschi's (1990) general theory of crime, which attributes criminality to a latent trait that develops early on and as a result of poor child rearing. This trait, according to Gottfredson and Hirschi (1990), is low self-control; and can be identified by an individual's level of impulsivity. One difference, however, between Andrews and Bonta's (2006) APP and Gottfredson and Hirschi's (1990) latent trait, is that Andrews and Bonta (2006) posit this trait to be alterable via the introduction of pro-social factors, while Gottfredson and Hirschi (1990) posit this trait to be unalterable once it is established at the early age of seven (Alquist & Baumeister, 2012; Baumeister, Heatherton, & Tice, 1994).

**Family/marital relationships.** It stands to reason that if modeling and re-affirming pro-social behaviors matter, then the social nature of one's family (i.e., pro-social vs. pro-delinquent), as well their intimate partner when applicable, matters as well (Burgess & Akers, 1966; Sutherland, 1939) - meaning, when family and marital relationships are fragmented and lacking in opportunities to engage in a pro-social way,

criminal behavior is more likely to ensue (Gendreau et al., 1996; Glueck & Glueck, 1950; Hirschi, 1969).

Fragmentation, according to Hirschi (1969), occurs when one of four bonds – commitment, attachment, involvement, and belief – between an individual and their family (or marriage) is broken. This fragmentation ultimately diminishes the informal social control that the familial (or marital) structure has over one's engagement in illicit behavior. Given that time dictates which structure takes priority (i.e., family in youth and life partner in adulthood), the findings surrounding the influence that families and marriage have, over the life-course, are worth revisiting.

Most individuals who engage in illicit behavior, do so in adolescence (Moffit, 1993). During this period, family, personality, and attitudes have all shown to influence a youth's decision to re-offend (Glueck & Glueck, 1950). It is not enough to only mention family in this regard, because personalities and attitudes that are favorable to committing crime, are heavily influenced by family, as they serve as a youth's social and moral compass (Burgess & Akers, 1966; Kohlberg, 1958; Sutherland, 1939).

In considering the role marriage plays, recall Sampson and Laub's (1993) study examining desistance. According to these theorists, there are specific factors that strongly and significantly contribute to an individual's turn, away from crime – marriage, work, and military involvement. Marriage, as an opportunity for desistance is also recognized by Moffit (1993), although the inability to take advantage of said opportunity is less expected for those who carry a predisposition for anti-social behavior (i.e., individuals with APP).



**School/work.** When involvement and performance in school (or work) are minimal and/or poor, continued criminality can also be expected (Glueck & Glueck, 1950; Hirschi, 1969; Sampson & Laub, 1993; Moffit, 1993). As both serve as environments with opportunity for social interactions, exposure to and reinforcement of pro-social behaviors, as well as pro-social associates, continue to matter (Burgess & Akers, 1966; Sutherland, 1939). Both school and work also serve as a structure of informal social control, while the latter has been identified as a vehicle for desistance (Hirschi, 1969; Moffit, 1993; Sampson & Laub, 1993).

An additional theory of crime to consider with regard to the factor of school/work, is Agnew's (2001) general strain theory. According to Agnew (2001), individuals are more likely to engage in anti-social behavior when sources of personal strain – such as failure to achieve goals, disjunction of expectations and achievement, and the removal and presentation of positive and negative stimuli – result in “negative affective states” (i.e., anger, frustration, disappointment, depression, and fear). As school and work are heavily associated with personal sources of strain, it is understandable why this factor is considered when evaluating the dynamic (mutable) factors contributing to one's criminality.

**Substance abuse.** The misuse of substances, including but not limited to illicit drugs, alcohol, and prescription medication, has also been identified as a predictor of crime (Dowden & Brown, 2002; Gendreau et al., 1996). In a meta-analytic review of 45 studies examining the effect of substance abuse on re-offending, Dowden and Brown (2002) found the mean effect size between substance abuse and recidivism ( $r = .10$ ), to be

equal to that found in a similar review conducted by Gendreau and colleagues, six years earlier (1996).

Social learning and general strain theories should also be considered. As substance abuse is often a common response to negative affective states (Agnew, 2001). Opting to use substances, in response to personal strain, like criminal behavior, is learned, both via modeling and conditioning. And by associating with individuals who support the use of substances to manage one's emotions – including friends, family, and even intimate partners – one increases their risk of re-offending.

**Leisure/recreational time.** When an individual is not attending school or work, they are presented with the opportunity to engage in anti-social behavior or associate with anti-social peers (Andrews & Bonta, 2006; Sutherland, 1939). For youth, this includes the time that they are most likely to be unsupervised, such as after school. According to Cohen and Felson (1979) this opportunity is more likely to result in crime, when three factors converge: a lack of guardianship, a suitable target, and a motivated offender. Removal of one, especially the latter, decreases the chance of criminal activity occurring.

As such, the use of one's leisure/recreational time to associate with anti-social peers, could be interpreted as their willingness to engage in anti-social behavior (Burgess & Akers, 1966; Sutherland, 1939). A similar inference can be made with regard to individuals who choose to engage in substance abuse during this time (Dowden & Brown, 2002; Gendreau et al., 1996). To curb either of these opportunities pro-social alternatives should be introduced (Andrews & Bonta, 2006).

By collectively analyzing Andrews and Bonta's (2006) central eight, criminal justice practitioners stand to gain two critical pieces of information: an individual's

potential risk to re-offend and their criminogenic needs – the dynamic (or mutable) “social and interpersonal sources” that increase one’s chances of further engaging in crime (Bonta & Andrews, 2017, p. 48). Employing this method allows practitioners to rely upon a theoretical and empirical approach to rehabilitation. A method, that in practice, is more widely known as the Risk-Needs-Responsivity model (RNR) (Andrews et al., 1990).

### **The Risk-Needs-Responsivity Model**

Subsumed in the GPCSL perspective is Andrews and colleagues (1990) RNR model. According to this model, three core principles guide effective offender rehabilitation: *risk, need, and responsivity*.

- The risk principle – indicates that the services provided should be proportionate to an offender's risk to re-offend.
- The needs principle – dictates that treatment should be targeted at dynamic factors that contribute to one’s engagement in illicit behavior.
- The responsivity principle – explains that treatment is most effective when an offender’s process for cognitive-social learning is assessed and incorporated into efforts aimed at rehabilitation.

While other principles have been added since the RNR model was first created (e.g., overarching, override, and organizational principles), these core three explain the underlying intent in applying the GPCSL perspective to reduce recidivism and increase offender rehabilitation (Bonta & Andrews, 2017).

## **The Evolution of Risk and Needs Assessments**

The assessment of an offender's criminogenic risk and needs has developed over time. From subjective decision making to empirically driven case management, methods for assessing one's risk and needs have evolved over the course of four generations: (1<sup>st</sup> generation) professional judgment, (2<sup>nd</sup> generation) evidence-based tools, (3<sup>rd</sup> generation) evidence-based and dynamic tools, and (4<sup>th</sup> generation) systematic and comprehensive assessments (Bonta & Andrews, 2007).

**First generation: Professional judgment.** Prior to the 1970s, decisions to increase supervision or provide a specific type of treatment were primarily guided by professionals within the correctional setting, such as administrators, correctional officers, probation officers, and clinical professionals. As these judgments are mainly informed by first-hand interactions *with* and observations *of* offenders, rather than based on empirical evidence, this method has been viewed as being largely subjective (Hannah-Moffat, 2005). In two separate meta-analyses examining the accuracy of clinical versus statistical (or mechanical) prediction, mechanical prediction was found to be between 10% and 13%, more accurate (Ægisdóttir et al., 2006; Grove, Zald, Lebow, Snitz, & Nelson, 2000). Void of a theoretical foundation and lacking in empirical validity, the method of *professional judgment*, marks the first generation of risk and needs assessments.

**Second generation: Evidence-based tools.** In an attempt to address the subjectivity associated with professional judgment, assessments began to emerge that established level of risk by scoring factors in an offender's history that have been empirically illustrated to increase the likelihood of recidivism (e.g., prior arrests/referrals or family criminality). The first tool created in this regard, dates to the 1920s, when

Burgess (1928) showed an additive index of risk factors, to be an accurate tool for predicting future criminality for parolees. In examining 3,000 cases, Burgess identified 21 factors to be associated with parole failure. These factors were then dichotomously coded (0 if the factor did not exist and 1 if it did) and weighted, which allowed Burgess to use the sum of a parolees score to predict re-offending.

An example of a second-generation tool used in juvenile justice, is the North Carolina Assessment of Risk (NCAR). This is a nine-item tool, mainly consisting of historical factors that were identified upon by juvenile court professionals, as being necessary when considering future reoffending (Schwalbe, 2007). And although this tool has been validated on a number of occasions (Schwalbe et. al., 2004; Schwalbe et. al., 2006; Schwalbe et. al., 2007), the way it was constructed – using a consensus approach rather than empirical one – diminishes the rigor that “characterizes actuarially-developed instruments” (Schwalbe, 2007, p. 450). Despite not meeting the standard put forth by Burgess (1928), it is a typical example of the tools that began to emerge in the juvenile justice arena, during this generation.

This second generation of risk and needs assessment illustrates the evolution from professional judgement into evidence-based tools, though as suggested by the existence of a third generation, this generation likewise has inherent limitations. By focusing solely on an offender’s historical correlates of crime, two things became clear. In using this generation of assessments an offender’s risk level can only increase *and* despite any effort to rehabilitate, can never change (Bonta & Andrews, 2007). It became apparent that if the goal of assessment was to inform on the probability that an offender would continue to commit crime, then it is important to measure the mutable (or dynamic)

factors that exist in their life that likewise increase their chances of engaging in illicit behavior (e.g., delinquent associates, poor school/work performance, or anti-social attitudes).

**Third generation: Evidence-based and dynamic tools.** The incorporation of dynamic factors into the assessment of an offender's risk and needs ushered in the third generation of instruments. By evaluating an offender's alterable correlates of crime, the ability to monitor an offender's risk to re-offend was introduced via the process of re-assessment. If in their initial evaluation, an offender is categorized as moderate or high risk to re-offend, then treatment can be targeted to address the factors most likely to contribute to their criminality (e.g., providing Functional Family Therapy for familial discourse). Post (or even mid) treatment, an offender can be re-assessed to determine whether the treatment being provided is having a direct effect on an offender's risk to recidivate.

This generation of instruments is predominantly rooted in Andrews and colleagues' (1990) RNR model, emphasizes the necessity to respond to an individual's criminogenic needs, to ensure a reduction in one's risk to re-offend. Building on the Level Service Inventory-R (LSI-R), which Andrews and Bonta (1995) created to assess risk of recidivism in adults, Hoge and Andrews (2002) created their own third-generation tool, the Youth Level of Service/Case Management Inventory (YLS/CMI). The YLS/CMI is one the most widely used assessment tools in juvenile justice and has been the most empirically investigated (Schmidt et al., 2011, Schwalbe, 2007).

The YLS/CMI includes 42 items across eight domains – offense history, family circumstances/parenting, education/employment, peers, substance abuse, use of

leisure/recreational time, personality/behavior, and attitudes/orientation – both static and dynamic. The first seven domains are used to calculate a composite score for risk and needs, while the eighth domain (attitudes/orientation) is intended to identify responsivity. This domain is intended to alert practitioners to any cognitive-learning barriers to rehabilitation that may exist (Andrews & Bonta, 2006). Overall, the YLS/CMI has been found to be a moderate predictor of recidivism and serves as a textbook example of a third-generation instrument (Schmidt et al., 2011, Schwalbe, 2007).

What has been found to matter most with this generation of assessments, is the use of these instruments, with the intention of adhering to the RNR model (Andrews et al., 1990), to rehabilitate those under supervision. In their examination of 13,676 offenders and 97 correctional programs, Lowenkamp, Latessa, and Holsinger (2006) found that few programs actually meet these principles; yet those that do are more effective in reducing recidivism among their participants. This discrepancy between intention and implementation is what spurred the fourth generation of assessments.

**Fourth Generation: Systematic and comprehensive assessments.** The fourth and most recent generation of assessments takes the management of an offender's risk and needs a step further. In addition to identifying an offender's criminogenic needs, fourth generation assessments attempt to provide practitioners with a comprehensive case management plan, including both treatment options and potential periods for re-assessment. They likewise serve as a repository of information that can be used to identify any additional factors that may aid in addressing an offender's likelihood to recidivate, such as protective factors – influences in an individual's life that serve (or can

serve) as a safeguard against illegal behavior (e.g., a strong and pro-social sibling relationship despite a fragmented relationship with parents) (Vincent, et al., 2012b).

Most assessments relied upon today in juvenile justice, fall under the third or fourth generation of risk and needs assessments (Baird et al., 2013). The Positive Achievement Change Tool (PACT), which is discussed in greater detail below, is just one example of a fourth-generation tool being used in the field (Florida Juvenile Justice Department, n.d.).

### **Risk and Needs Assessments in Juvenile Justice (& the PACT)**

Despite initial research on the RNR model focuses on assessing risks of adult recidivism (Andrews et al., 1990; Gendreau & Goggin, 1996; Gendreau et al., 1996), there is a fair amount of literature that speaks to the effectiveness of employing this method in the juvenile justice setting (Baird et al., 2013; Borum, 2003; Hoge, 2001; Hoge, 2002; Hoge & Andrews, 1996; Hoge & Andrews, 2002; Jung & Rawana, 1999; Schwalbe, 2007; Vincent, et al., 2012b; Vincent, Paiva-Salisbury, Cook, Guy, & Perrault, 2012c; Vincent, Guy, Perrault, & Gershenson, 2016). Today, many tools exist, from “home-grown” assessments to commercially produced instruments; and their use has become common practice (Baird et al., 2013). Most of the literature that exists on these assessments focus on their predictive validity – as in whether the instruments being used are accurate in their predictions of re-offending.

### **The Predictive Validity of Juvenile Risk and Needs Assessments**

One of the most common methods relied upon to establish the predictive validity of a risk and needs assessment, is to examine the area under the receiver operating characteristic (ROC) curve (Mossman, 1994; Rice & Harris, 1995; Rice & Harris, 2005).



In short, ROC curve analysis is used to determine whether a classifier – a tool used to predict one of two (or more) outcomes – is correct in its initial classifications (Mossman, 1994; Rice & Harris, 1995). By examining two random groups (recidivists vs. non-recidivists), post-assessment, an investigator using this technique can produce the probability that a “randomly selected recidivist will have a higher score on [a] prediction instrument than a randomly selected non-recidivist” (Rice & Harris, 1995, p. 738).

This probability is established by measuring the size of the area that exists between the “true-positive rate” (the rate at which the instrument correctly predicted the outcome of recidivism) and the “false-alarm rate” (the rate at which the instrument incorrectly predicted the outcome of recidivism) and is known, as the Area Under the Curve (AUC) (Mossman, 1994; Rice & Harris, 1995). AUC values range from .50 to 1.00 and are interpreted as an effect size; the larger the AUC value, the more accurate the tool is in its predictions (Mossman, 1994; Rice & Harris, 1995; 2005). In their comparison of the three most commonly used effect sizes (ROC Area, Cohen’s *d*, and *r*), Rice and Harris (2005) offer the following guidelines for interpreting AUC values: small/weak = .556 to .638, medium/moderate = .639 to .713, and large/strong = .714 or above.

In a meta-analysis of 28 studies that evaluated the predictive validity of 28 different juvenile risk and needs assessments, Schwalbe (2007) reported that, on average, the more widely relied upon assessments – such as the YASI, the YLS/CMI, WSCJA, and a few of their derivatives – to be moderate (AUC = 0.640) in their predictions of juvenile re-offending. Though none of the 28 instruments in this study were found to produce significantly superior results, third-generation assessments did appear, on

average, to have “relatively higher levels of predictive validity” (AUC = 0.646) (Schwalbe, 2007, p. 458). Schwalbe (2007) also found the association between juvenile assessments and recidivism to be comparable to the association found a decade ago, in adult assessments (Gendreau et al., 1996; Schwalbe, 2007). Because Schwalbe (2007) is the most extensive meta-analysis on the predictive validity of juvenile assessments to date, these findings serve as empirical support for the continued application of both the GPCSL theory and its subsumed RNR perspective, in the juvenile justice setting (Andrews & Bonta, 2006; Andrews et al., 1990).

### **The Positive Achievement Change Tool (the PACT)**

Among the instruments that have been found to be valid, is the Positive Achievement Change Tool (PACT) (Baglivio, 2009; Baglivio & Jackowski, 2013; Baird et al., 2013; Early, Hand, & Blankenship, 2012; Martin, 2012; McKenzie, 2018). This tool is of specific interest, as it is the one employed by juvenile probation departments in Texas. Created in collaboration with the proprietary vendor (assessments.com), the Florida Juvenile Justice Department (FJJD) constructed this tool, drawing heavily from the Washington State Juvenile Court Assessment, Back on Track! (WSCJA) (Barnoski, n.d.; Washington Institute for Public Policy, 1998, 2004). The PACT is a 126-item, fourth-generation risk and needs assessment that assesses youth across 12 domains: record or referrals, gender, school, use of free time, employment, relationships, family, alcohol and drug use, mental health, attitude and behavior, aggression, and skills (see Appendix A) (Barnoski, n.d.; Martin, 2012).

Level of risk is established by examining both static (*record of referrals*) and dynamic (*social history*) factors. While the level of need is based solely on the score

associated with a youth's social history – school/employment, peer relationships, family functioning, alcohol/drug use, mental health problems, and history of abuse/neglect. A youth's social history score can range from 0 to 18, while scores for record of referrals range from 0 to 31 (see Appendix B). Record of referral scores are established by factoring in: age at first offense, referral and adjudication history, past adjudications for against person offenses, referral and adjudications involving weapons, detention history involving holds for more than 48 hours, commitment history, history of escapes, and history of warrants or failure(s) to appear (Barnoski, n.d.; Martin, 2012). The higher the scores are in either of these areas – record of referrals and social history – the higher a youth's risk and needs and visa-versa.

### **The Predictive Validity of the PACT**

To date, six published studies have evaluated the predictive validity of the PACT (Baglivio, 2009; Baglivio & Jackowski, 2013; Baird et al., 2013; Early et al., 2012; Martin, 2012; McKenzie, 2018). Four of those studies included random samples of youth from across Florida (Baglivio, 2009; Baglivio & Jackowski, 2013; Early et al., 2012; Baird et al., 2013), while the other two examined youth randomly processed in two separate Texas counties (Martin, 2012; McKenzie, 2018). For an overview of sample specifics and AUC scores for each of these studies, see Table 1.

**Table 1**  
**Studies Evaluating the Predictive Validity of the PACT**

<b>Author (Year of Publication)</b>	<b>Sample</b>	<b>Findings on Predictive Validity: AUC Scores (by model)</b>
		<b>Composite PACT Score</b>
Baglivio (2009)	<i>n</i> = 8,132, Florida Juvenile Justice Department	.593 (full model) .590 (males only) .589 (females only)
		<b>Composite PACT Score</b>
Early et al. (2012)	<i>n</i> = 80,192, Florida Juvenile Justice Department	.632 (full model) .630 (males only) .614 (females only)

**Table 1 (continued)**

Martin (2012)	<i>n</i> = 3,117, Tarrant County Juvenile Probation, Texas	<b>Composite PACT Score</b>
		.607 (full model)
		.604 (males only)
		.596 (females only)
		<b>Composite PACT Score</b>
		.590 (full model)
Baglivio & Jackowski (2013)	<i>n</i> = 15,072, Florida Juvenile Justice Department	.590 (males only)
		.582 (females only)
		<b>Criminal History Domain</b>
Baird et al. (2013)	<i>n</i> = 27,369, Florida Juvenile Justice Department	.590 (full model, probation)
		.600 (males only, probation)
		.580 (females only, probation)
		.580 (full model, commitment)
		.580 (males only, commitment)
		.570 (females only, commitment)
		<b>Social History Domain</b>
		.630 (full model, probation)
		.620 (males only, probation)
		.650 (females only, probation)
		.520 (full model, commitment)
		.540 (males only, commitment)
		.520 (females only, commitment)
		<b>Composite PACT Score</b>
		.621 (full model)
		<b>Criminal History Domain</b>
		.612 (full model)
		.582 (males only)
McKenzie (2018)	<i>n</i> = 549, Montgomery Juvenile Probation Department, Texas	.782 (females only)
		<b>Social History Domain</b>
		.603 (full model)
		.588 (males only)
		.697 (females only)

The first validation study of the PACT was conducted by Baglivio in 2009.

Drawing from the population which the PACT was created for – youth adjudicated to the FJJD – Baglivio analyzed over 8,000 recidivism outcomes for youth, post-assessment, within a 12-month follow-up period. Approximately one-third of these cases resulted in a subsequent referral. In this study, Baglivio employed two analytical techniques, a multivariate logistic regression and a ROC curve analysis. The former of which was used to examine the effect of specific indicator variables, as established under the criminal and

social history domains, on recidivism. The latter was used to test the predictive validity of the PACT for both males and females.

In the full model, in which both females and males were considered, Baglivio (2009) found the overall risk to re-offend, as well as a youth's social and criminal history to be significant predictors of recidivism. As presented in Table 1, the AUC values for the composite measure of the PACT (i.e., risk to re-offend) were, .593 (full model), .590 (male only model) and .589 (female only model), respectively. While significant, these values are weak under the guidelines offered by Rice and Harris (2005).

In further examining the indicators under the social history domain, Baglivio (2009) found that youth who have a history of suspension/expulsion from school as well as a history of running away, who associate with anti-social peers, and lack supervision and exposure to pro-social adults, to be at a greater risk of recidivating. More specifically, Baglivio (2009) found that a history of running away increases the odds of female re-offending by .118 units, while having a pro-social adult, other than a teacher or employer, decreases those same odds by .286 units. The social indicators that showed to be significant predictors of recidivism among males, were drug abuse ( $b = .337$ ), suspension/expulsion from school ( $b = .164$ ), supervision ( $b = .219$ ), and anti-social peers ( $b = .278$ ).

Following Baglivio's (2009) examination, was Early and colleagues' (2012) three-phase study that evaluated both the validity and reliability of the PACT. To evaluate validity, Early and colleagues employed two methods, a ROC curve analysis and confirmatory and exploratory factor analysis. The latter was used to determine whether the indicators of the larger domains of criminal and social history, are in fact

representative of those constructs. To test reliability, inter-rater percentages were compared.

The sample examined in this study, included over 80,000 assessments for both males and females released by the FJJD between 2007 and 2009. Like Baglivio (2009), Early and colleagues examined the predictive validity of the PACT for both males and females, as well as for non-White youth. For all subsamples, and the full sample, risk-level, criminal history and social history, were all found to be significant predictors of re-offending, regardless of supervision placement (i.e., diversion, probation, residential commitment, and parole). The AUC scores for each sample were .614 (females), .630 (males), .632 (non-Whites), and .632 (full sample), respectively. Regarding individual predictors, Early and colleagues (2012) found the following factors to have the strongest effect on recidivism: sex (males), race (non-whites), prior adjudications for misdemeanors, incarceration history of current household members, and poor school experiences (enrollment, conduct, performance, and attendance).

Whereas not all indicators appeared to be predictive of re-offending, investigators found that the factors used to construct both criminal history ( $\alpha = 0.706$ ) and social history ( $\alpha = 0.541$ ), to have moderate to strong internal consistency. More specifically, four indicators were shown to explain approximately 64% of the variance seen in criminal history – low-level misdemeanants, felony offending, prior incarcerations, and referrals for weapon offenses. While three indicators explained 45% of the variance seen in social history – “defiant youth with multiple problems [across] multiple settings,” girls with untreated mental health issues or a history of running away, and youth with a history of abuse, neglect or out-of-home placement (Early et al., 2012, p. iii).

To test for reliability, a random sample of staff were asked to assign a risk-level to two youths, one male and one female, whom were interviewed and previously recorded. These classifications were then compared to those assigned to the same youths by a designated master rater. The percentage agreement between these two groups were strong, with a 90% agreement rate. To date, the study conducted by Early and colleagues (2012) serves as the most extensive test of validity and reliability for the PACT.

Following Early and colleagues, was Martin's (2012) dissertation that examined the predictive validity of the PACT on a sample of approximately 3,100 youth who were assessed and adjudicated in Tarrant county, Texas; both males and females were included in the sample. In addition to examining recidivism, post assessment, Martin (2012) also analyzed the effect of risk-level, criminal history and social history on time to recidivism over a 12-month period. As such, their analysis includes both ROC curve analysis and Cox regression survival analysis. The results of this study yielded lower AUC's than Early and colleagues (2012), as the full sample had an AUC of .607. For the male only sample, the AUC was .604 and for females, AUC = .596.

Of those who re-offended within Martin's (2012) sample, more than half (51.9%) re-offended within the first 120 days. The results of the survival analysis employed in this study, indicated overall risk level to be significantly predictive for the full sample ( $p < .01$ ), but not for the female sample. Contrary to prior studies, which have found criminal history to be predictive across both male and female samples (Baglivio, 2009; Early et al, 2012), Martin (2012) found this to be true of only the social history domain. Martin also examined contextual-level predictors of crime. This was done by evaluating the effect of "neighborhood disadvantage" on both dependent variables. None of the indicators

included in this construct – single parent household, unemployment rate, and poverty status – appeared to have a significant effect on either of the dependent measures.

In a subsequent study, Baglivio and Jackowski (2013) attempted to further examine the predictive validity of the PACT on females, by analyzing the change in both the  $R^2$  and the AUC before and after incorporating “gender-responsive” items. This included expanding the abuse variable (i.e., have you been abused, yes or no) to include different types of abuse (i.e., physical, sexual, and/or neglect). The decision to incorporate these items, was in response to the findings in a study that was published post Baglivio’s (2009) examination of the PACT (Salisbury, Van Voorhis, & Spiropoulos, 2009). By incorporating “gender-responsive” items into their examination of predictors of prison misconduct, Salisbury and colleagues (2009) saw an improvement in predictions.

The models in this study are similar to those constructed in Baglivio’s (2009) study, in that the predictive validity of the PACT was assessed across all levels – risk-level, criminal history, and social history – for the full sample and split samples consisting of females only, males only, and non-White youth. The sample included approximately 15,000 youth who completed probation between 2007 and 2008 in the state of Florida. Over a 12-month follow up period, Baglivio and Jackowski (2013) examined the predictive validity of all levels (and their indicators) on two outcomes, new referral/arrest (yes/no) and whether there was a consequence of that referral (yes/no). The ROC curve analysis was used to evaluate predictive validity, while a multivariate logistic regression was relied upon to examine of the effect of individual predictors.



The AUC values produced in this study were similar, and equal to, the value found by Baglivio (2009). In the full sample, the AUC statistic for youth who were re-referred/arrested was .590. While the AUC for youth who received a consequence from that subsequent referral/arrest, was .578. All levels (i.e., risk level, criminal history, and social history), were found to be predictive across all samples (i.e., full, males, females, and non-White). The most prevalent predictor was, criminal history, as it predicted across every category except for White female convictions. The strongest predictor, however, was social history. A finding similar to Martin's (2012) results. Individual predictors within each domain varied across all samples.

Upon their inclusion of the "gender-responsive" items, Baglivio and Jackowski (2013) saw no improvement in the overall predictive validity in the PACT for female re-offending, except for Hispanic females. For this population the inclusion of said items, doubled the  $R^2$ , in which traumatic history and running away showed to be predictive of a re-referral/re-arrest. Because no improvements were seen in either measure (AUC or  $R^2$ ) for the overall female sample, the investigators concluded that these findings demonstrate a lack of need for a gender-specific tool (Baglivio & Jackowski, 2013).

In the same year, Baird, Healy, Johnson, Bogie, Dankert, and Scharenbroch (2013) published a comprehensive evaluation of eight different juvenile risk and needs assessments used across 10 jurisdictions; one of these assessments was the PACT. Like Early and colleagues (2012), Baird and colleagues (2013) conducted an evaluation of both the validity and reliability of the tools in question. They also analyzed the equity of the assessments. The full sample included over 27,000 youth who had been admitted, assessed, and placed on probation or committed to the FJJD, over a 12-month follow-up

period. The structure of this sample differs slightly from that used in Baglivio and Jackowski (2013), as the follow up period starts post-assessment, rather than post-release. The ROC curve analysis was relied upon to test both validity and equity, while inter-rater percentage agreement was used to test reliability.

Unlike the studies that precede it, the evaluation conducted by Baird and colleagues, validated the PACT for the two populations in question, youth adjudicated to probation and youth committed to the state. They also only provide AUCs per domain only, as opposed to also providing a value for the overall composite level (i.e., risk to reoffend). It is for this reason that the AUCs for this study, as presented in Table 1, are more extensive than its counterparts. Though only the domains were analyzed, the results of this study are comparable to those before it, in that the AUCs reported are categorized as weak to moderate. The AUC values for the criminal history domain for probationers and those committed were .59 and .63, respectively. While the social history domain, yielded AUC values of .58 for probationers and .52 for youth committed to the state. In using a similar method to Early and colleagues (2012), inter-rater reliability was tested in this study by comparing the risk levels assigned to youth, by a random sample of staff versus levels assigned by an expert rater. There was a 76.6% agreement between staff and a 68.4% agreement rate between staff and the experts. The AUCs per male and female samples for both supervision types can be viewed in Table 1 (Baird et al., 2013).

The last and most recent study published that has examined the predictive validity of the PACT is McKenzie's (2018) dissertation. As the focus of this study is to test the predictive validity of this instrument on a population other than that which it was created for, Florida youth, a ROC curve analysis per domain (risk-level, and criminal and social

histories) and across various samples (male only, female only, White only, and minority only) served as the main statistical application. Using a sample of 549 youth who were referred to the Montgomery County Juvenile Probation Department in Texas, McKenzie (2018) found the AUC value for the composite risk-level as established by the PACT, to be .621. For criminal history, that value was .612 and .603 for social history. All were significant at the .001 level of significance. AUCs per domain, by sex, can be found in Table 1.

The average AUC value for five of the six studies, which examined overall risk to re-offend on a full sample, is .609. This value, according to Rice and Harris (2005), is weak at best. However, it does near a moderate level of prediction (AUC = .639). As illustrated in Table 1, the predictive validity of the PACT, varies across samples and in some cases has demonstrated to be quite strong [(i.e., AUC for social history construct on females only = .782 (McKenzie, 2018)]. In Baird and colleagues' (2013) comparison of the PACT to nine other assessments, the instrument showed to perform adequately, as it yielded higher AUC scores than three of the other assessments evaluated.

### **Predictors of Dispositional Outcomes for Adjudicated Youth**

Despite efforts to move toward evidence- (or research-) based practices in juvenile justice decision making, the literature on which factors influence dispositional outcomes, exposes continued support for a reactive and punitive approach towards delinquency (Campbell & Schmidt, 2000; Cauffman et. al., 2007; Kalmbach & Lyons, 2012; Matarazzo, Carrington, & Hiscott, 2001). The variable that appears to consistently predict dispositions, even after considering demographic, individual, and environmental factors, is prior involvement with the legal system.

History of arrests/referrals (Campbell & Schmidt, 2000; Horwitz & Wasserman, 1980; Thomas & Cage, 1977), prior dispositions (Matarazzo et al., 2001; Thornberry & Christensen, 1984), severity of dispositions (Henretta, Frazier, & Bishop, 1986; Phillips & Dinitz, 1982), history of confinement (Hoge, Andrews & Leschied, 1995), and severity of offense (Kalmbach & Lyons, 2012; Thornberry & Christensen, 1984) have all been found to have a positive and significant effect on the decision to confine a youth.

In examining extra-legal factors, some have found an increase in age (Phillips & Dinitz, 1982; Sanborn, 1996) and race (i.e., whether a youth is non-white) (Bishop & Frazier, 1996; Frazier, Bishop, & Henretta, 1992; Sanborn, 1996) to have significant effects on whether a youth is confined. These effects, however, appear to lose their significance once legal factors are considered (Cauffman et al., 2007; Henretta et al., 1986; Horwitz & Wasserman, 1980). Bearing in mind both legal and contextual-level factors, others have found school attendance, work, and having a two-parent household to likewise influence the outcome of a youth's disposition (Cohen & Kluegel, 1978; Thomas & Cage, 1977). Still, these findings have been inconsistent. Some attribute these inconsistencies to jurisdictional biases (Britt, 2000) while others point to the limitations associated with examining only one domain at a time – demographic, individual, legal, environmental – as opposed to conducting a more comprehensive evaluation (Campbell & Schmidt, 2000; Cauffman et al., 2007; Niarhos & Routh, 1992).

### **Demographic Factors as Predictors of Dispositional Outcomes**

Most studies that examine predictors of crime, use demographic variables, largely, as control variables (Campbell & Schmidt, 2000; Cauffman et al., 2007; Hoge, Andrews, & Leschied, 1995; Kalmbach & Lyons, 2012; Matarazzo et al., 2001; Niarhos

& Routh, 1992). Or, they are testing for the influence of jurisdiction on discriminatory processing, in which case they are examining the influence of contextual-level factors on dispositional outcomes (Britt, 2000; Crawford, Chiricos, & Kleck, 1998; Myers & Talarico, 1986; Ulmer & Kramer, 1996). Given that the focus of this study includes predictors at both the individual and jurisdictional-level, the review of those studies that specifically examine the effect of race or “gender,” on a contextual-level, is provided in the “contextual-level factors as predictors of crime” section below. A review of the few studies that have examined a demographic variable as a primary indicator of dispositional outcomes, follows.

In 1996, Bishop and Frazier conducted a quantitative and cross-sectional analysis to examine the effect of a youth’s race in the juvenile justice decision-making process. Their sample, consisted of 137,028 youth who had been referred to the Florida Juvenile Justice Department, between 1985 and 1987. Given their vast data set, they were able to examine the effects for two different types of offenders – status offenders and non-status offenders. In relying upon logistic regression, they analyzed outcomes at the following stages within processing, intake, detention, prosecutorial referral, and judicial disposition. Each were coded as binary outcomes. As a youth’s race was of primary concern in this study, the investigators examined predictors under three domains, demographic (age, gender, race), legal (prior record, offense severity, contempt status), and interactions (race x gender, race x prior record, and race x contempt status). The results of their analysis were two-fold: (1) race (i.e., being non-white) influences decisions at every stage of the process, albeit effect sizes do vary, and (2) non-Whites are more likely to experience filtration through the system. It is important to note that all the predictors

examined by Bishop and Frazier (1996) were found to be significant, begging the question of whether the size of their data set could have produced type one errors in significance.

In that same year, Sanborn (1996) took a slightly different approach to examining which factors influence dispositional outcomes. Through surveying 100 courtroom workers (i.e., judges, prosecutors, public defenders, probation officers, and court administrators), Sanborn examined the effect of race, gender, and crime severity on the dispositional outcomes for youth sentenced in three different juvenile courts (urban, suburban, and rural) in a northeastern state. Responses from these surveys, were then examined to determine which factors were cited as being associated with “harsh” dispositions (i.e., confinement). Numerous factors were considered (e.g., record, type of offense, school, personality, income status, presence of remorse), however three prevailed as being heavily cited in all three courts – having a “bad” record, receiving a disposition for a violent offense, and having failed previous treatment. A youth’s race (i.e., white v. non-white) and their gender (male v. female) were among the factors considered last and varied by jurisdiction.

A more recent study, conducted by Lieber and Peck (2015), also examined the effect of race (i.e., being African American), gender (i.e., being male), and crime severity on dispositional outcomes for youth. Lieber and Peck (2015) analyzed approximately 59,000 cases from 28 juvenile courts in three states (Midwest, Mid-Atlantic, and Northeast). Like Bishop and Frazier (1996), logistic regression was employed, to measure outcomes at following stages, intake, adjudication, and disposition. Indicators were measured for three domains, demographic (age, gender, race), legal [crime severity, prior

referrals, number of current charges, type of offense (property, person, drug)], and interactions (crime severity x race, crime severity x sex). Across all outcomes, both crime severity and number of charges were significant and positive predictors of dispositions. Apart from those, the only other factor that appeared to influence dispositions, were individuals who were charged with a property offense, which increased one's likelihood of being sentenced. Whether a youth was African-American or White appeared to have no effect (Leiber & Peck, 2015).

### **Legal Factors as Predictors of Dispositional Outcomes**

As illustrated by the studies reviewed above, it is not uncommon for investigators to use legal factors as control variables in their examination of predictors for dispositional outcome for youth (Bishop & Frazier, 1996; Campbell & Schmidt, 2000; Crawford et al., 1998; Niarhos & Routh, 1992; Sanborn, 1996; Lieber & Peck, 2015; Myers & Talarico, 1986; Ulmer & Kramer, 1996). There are quite a few, however, that place their focus on the influence that legal factors have (Cauffman et al., 2007; Hoge et al., 1995; Kalmbach & Lyons, 2012; Matarazzo et al., 2001). In 1995, for example, Hoge and colleagues (1995) examined which variables are associated with probation and custody dispositions in a sample of 338 youth on probation in a large urban city in Canada. Several analytical techniques were employed, where the full model was tested using stepwise regression.

Dispositional outcomes were measured in three ways – probation, open custody (community supervision), and secure custody (incarceration). Predictors can be categorized under three domains, demographic (gender), legal (seriousness of offense, seriousness of past offense, prior custody disposition, number of serious current offenses, number of serious past offenses) and extralegal (family, parental structure, peer

association, anti-social attitudes, conduct personality, education). This study is perhaps the closest to analyzing the effect actuarial assessments have on dispositional outcome, though it is not an exact examination. The indicators analyzed under the extralegal domain in this study were chosen from dynamic factors considered in the Youth Level Service Inventory (YSLI, Andrews, Robinson, & Hoge, 1984) – an earlier version of Hoge and Andrew’s (2002) YLS/CMI. Yet because these are not all the variables used to construct the “needs” domain in this assessment, it is not an exact evaluation of this variable on dispositional outcomes. Both studies proposed in this dissertation, looks to address this limitation.

Hoge and colleagues (1995) analysis found all of the extralegal variables considered to be significantly correlated with the dispositional outcome, to varying degrees. Of these variables, only anti-social attitudes were shown to have a significant effect. The factors that appeared to matter most, as hypothesized by the investigators, were legal indicators. Both prior custody and number of current serious offenses appeared to have the strongest effects on dispositional outcome, together these variables accounted for 32% of the variability in dispositions (Hoge et al., 1995).

Another evaluation of legal factors was conducted by Matarazzo and colleagues (2001). These authors examined the association between prior and current dispositions, under the premise of social reaction theory – which attributes crime to the responses of formal and informal agencies of social control (i.e., police, media, and family), to the “deviant” label (Mead, 1934). Matarazzo and colleagues (2001) analyzed the effect of six variables total – most recent prior disposition, second most recent prior disposition, current offense, most recent prior offense, gender, and age – on four different outcomes



(incarceration, open custody, probation and other). The results of their analysis supported their underlying hypothesis, in that they found prior dispositions (or the application of the deviant label) to significantly and positively predict current dispositional outcomes. They likewise found empirical support for “stabilization” and “escalation.” Similar offenses (past and current) resulted in similar dispositional outcomes, while more severe offenses (current vs. past) results in more severe outcomes (Matarazzo et al., 2001).

Perhaps one of the more comprehensive analysis in this arena is Cauffman and colleagues’ (2007) examination of legal, individual, and environmental factors as predictors of dispositional outcomes for 1,335 serious juvenile offenders from Phoenix and Philadelphia. The variables examined included (1) demographic variables – age, race, sex, and parents’ level of education, (2) psychological variables – psychological maturity, mental health, gang involvement, and IQ, (3) environmental variables – living with both biological parents, parents’ arrest history, grades in school, current enrollment in school, and (4) legal variables – violent versus non-violent offense, jurisdiction of judgment (adult vs. juvenile), number of prior referrals, and disposition of last offense (probation or other).

Their results indicated that sex (males), mental health – specifically drug abuse and drug dependence – and more prior referrals, were all significant predictors of confinement. Meanwhile, older youth with higher IQs who received probation as their last disposition were found to have a significant effect on the decision to place on probation. Their examination of multiple constructs at once (demographic, psychological, environmental, and legal), each containing multiple indicators, as well as their inclusion of mental health and developmental variables, earns Cauffman and colleagues (2007) the

designation of one the most comprehensive studies in this area. While they may not have been the first to attempt a more holistic examination of which factors influences youths' dispositional outcomes, they address limitations associated with previous attempts to examine this magnitude of predictors (Campbell & Schmidt, 2000; Niarhos & Routh, 1992).

A more recent study to examine predictors of juvenile dispositional outcomes was conducted by Kalmbach and Lyons (2012). These investigators examined 2,786 first-time male offenders who received a disposition in a large urban jurisdiction in 2002. Employing logistic regression, the investigators analyzed the effects of race/ethnicity, age at offense, offense severity, parental supervision, and history of violence on the restrictiveness of sanctions. The results indicated that the severity of a youth's offense, their history of violence, age, and inadequate parental supervision to all be significant predictors of harsher sanctions. As the effect of race/ethnicity (i.e., being non-white) was also of concern, they conducted a secondary analysis, in which race/ethnicity was regressed on those variables that varied as a result of it (i.e., age at offense, offense severity, and type of placement). Age at offense was the only factor that was revealed to be significantly different across racial groups. Non-white youth who committed their offenses at a later age, were found to be more likely to receive stricter sanctions.

### **Extralegal Factors as Predictors of Dispositional Outcomes**

Because some of the more comprehensive studies examining predictors of dispositional outcome, have been conducted to test the effect of extra-legal factors, those studies also warrant review (Campbell & Schmidt, 2000; Niarhos & Routh, 1992). In 1992, Niarhos and Routh analyzed the effect of 38 different variables on both

dispositional and recidivism outcomes for 234 randomly selected males who were evaluated by a mental health clinic in a metropolitan county in Florida between 1985 and 1988. Tests for significance in association (i.e., correlations) and stepwise regression served as their analytical techniques. Of the variables examined, only number of prior arrests and the decision to detain prior to disposition significantly impacted the decision to confine – together these two variables explained 25% of the variance seen in dispositional outcomes. While an increase in prior arrests, poor academic achievement, and a history of drug use was found to be predictive of recidivism. Unfortunately, because the mental health variables in this study were constructed retrospectively, the sample, suffered from a decent amount of missing data, resulting in several of the mental health variables having to be dropped from the models that were estimated (Niarhos & Routh, 1992).

In 2000, Campbell and Schmidt examined the effects of eighteen different variables, across three different constructs (demographic, legal, and mental health), on the outcome of youth dispositions. Both hierarchical and logistic regression were relied upon to test these effects. Of the eighteen variables examined, Campbell and Schmidt (2000) found only three to have a significant influence on the odds of confinement – the number of current offenses, poor home conditions, and substance abuse. This study, like Niarhos and Routh (1992), also struggled with its ability to make conclusions regarding the effect of mental health variables on dispositional outcomes. As their study only included 76 youth (55 males and 21 females), who were primarily selected based on having a comprehensive mental health evaluation. Having such a small and selective

sample, limited both the power of their analysis and the ability to generalize to a larger juvenile population.

### **Contextual-Level Factors as Predictors of Dispositional Outcomes**

Prior to reviewing the literature examining the effect of contextual-level factors on dispositional outcomes for youth, attention should be given to the theoretical support that exists to examine these effects. Although the “neighborhood” structure is not included in Andrews and Bonta’s (2006) central eight, they do acknowledge, via the importance placed on the immediate situation and environment (i.e., the opportunity to commit crime), that the setting in which crime occurs, matters. A notion that is indeed supported not just via social learning theories (e.g., differential association or differential reinforcement theory) but by societal explanations of crime as well, such as social disorganization theory (Burgess & Akers, 1966; Park, Burgess, & McKenzie, 1925; Shaw & McKay, 1942; Sutherland, 1939).

According to social disorganization theory, crime is attributed to the structure of the neighborhood in which one lives in. Areas that are visibly dilapidated, dense in population (i.e., urban settings), high in poverty, and lacking in informal social controls, for example, have all been demonstrated to have higher rates of crime (Park et al., 1925; Shaw & McKay, 1942). If these factors provide an explanation *for* crime, then it stands to reason that they should be considered when examining responses *to* crime (i.e., dispositions). It could be argued that because socially disorganized neighborhoods have a higher rate of crime, that saturating the neighborhood with formal social controls (i.e., law enforcement) and handing out “harsh” and impressionable sentences for these crimes serves as a justifiable and proper response for managing crime in that area.

There are, however, alternative explanations that exist, that attribute the high crime rates seen in these areas, to the disparities that exists within the social strata. Consider if you will, the predominant population that lives within neighborhoods that are characteristically, socially disorganized (i.e., impoverished minorities, more specifically, African Americans). According to Blalock (1967), the high rate of crime viewed in these areas, is not due to the structure of the neighborhood, but to the determination of the White race to maintain political and economic control.

Social disorganization stems from poverty (Park et al., 1925; Shaw & McKay, 1942), which unfortunately cannot be disentangled from race in the United States. Approximately 57% of those living in poverty in the U.S., are minorities, with most of those individuals being African American (21%) and Latinos (18%) (U.S. Census Bureau, 2018b). It is for this reason that the saturation of a socially disorganized neighborhood with formal social controls can alternatively be viewed as an assertive effort to control the minorities who predominantly make-up those neighborhoods. Per Blalock's (1967) racial threat hypothesis, the greater the minority population, the greater the likelihood that formal institutions will assert control, this includes the decision to arrest, adjudicate and sentence.

Another theory that should be taken into consideration when discussing responses to crime, is Packer's (1964) crime control model. According to this model, the main purpose of the criminal justice system is to control criminal behavior via punishment. To meet this objective, the system should operate as an "assembly line" of justice, that presumes guilt based on arrest and hands out convictions and sentences severe enough to prevent engagement in future crime (Packer, 1964, p. 11). Contextually speaking, this

means that communities with higher rates of crime, call for more oversight, as well as swifter and harsher punishments. Regardless of the positions taken in any of these theories, one thing is clear, contextual-level factors do matter, both with regard to why crime is committed and how it is responded to. Because this dissertation is concerned with the latter, studies examining the influence of contextual-level factors on dispositional outcomes, will now be reviewed.

In 1986, Myers and Talarico examined whether the racial differences recognized in sentencing decisions, are conditioned by individual factors or social context. Their sample included close to 1,700 convicted felons whom had been sentenced in one of two courts in the state of Georgia. Using weighted and ordinary least squares regression models, Myers and Talarico (1986) examined the influence of 20 factors within three domains – demographic, legal, and contextual – to determine what effect, if any, these variables have on confinement and length of sentence. The contextual-level factors that were examined in this study include, urbanization, income, African American income inequality, index crime rate, percent index crimes involving weapons, percent index crimes involving strangers, and percent of African American arrestees. Of these factors, only one had a significant effect on confinement, the racial composition of a county – county's with higher populations of African Americans demonstrated a higher impact on the decision to confine

Contrary to Blalock's (1967) racial threat hypothesis, the county with a higher population of African American's in this study, showed an increase in the likelihood of confinement for White offenders. A finding that according to Horowitz (1985), makes more sense, because an increase in a minority population ultimately equates to an

increase in their political mobilization. This finding held true for sentence length as well. Other contextual-level variables that had a positive effect on sentence length, were urbanization and a county's rate of index crime; while income inequality among African American's showed to have a negative effect (Myers & Talarico, 1986).

A decade later, Ulmer and Kramer (1996), conducted a study that also examined the effect of contextual-level variables on confinement (both at the local and state level) and sentence length. In total, 10 variables were analyzed, each falling under one of three domains, legal (prior record, offense type, offense severity, and number of conviction charges), demographic (race, gender, and age), and contextual (population, percent African American, and index crime rate).

The data relied upon in this analysis was collected firsthand via interviews with courtroom workers in three different counties, a large urban county, an affluent suburban county, and a rural county. In total, information from 61 interviews were analyzed. Unlike Myers and Talarico (1986), the results of the regression analyses (OLS and logistic) ran by Ulmer and Kramer (1996) did not show support for any of the contextual-level factors considered. What presented to have the strongest influence on both confinement and sentence length, were legal factors (Ulmer & Kramer, 1996).

Shortly following Ulmer and Kramer's (1996) examination, was Crawford, Chiricos, and Kleck's (1998) direct test of Blalock's (1967) racial threat thesis, on the confinement of habitual offenders in Florida. The sample in this study, consisted of 9,690 males admitted to prison between 1992 and 1993. Race (i.e., whether individuals are African American or White), as it was the independent variable of primary concern, served as the sole demographic variable in this study. While eight others were analyzed

under the larger domains of legal factors (seriousness of current offense and drug-related crime status), contextual-level factors (violent crime rate, drug arrest rate, percent African American, and racial income inequality), and interaction terms (race x prior record and race x drug-related crime status). Because the outcome variable was binary, confined or not, Crawford and colleagues (1998) employed logistic regression as their statistical technique. Seven of the nine variables examined had a positive and significant effect on the likelihood of confinement. The two that did not, were the interaction terms. Of the seven that did were found to be significant, race (whether an individual is African American) appeared to have the strongest effect. In fact, the odds of confinement for African Americans in this sample, showed to be nearly two times larger than their White counterparts ( $OR = 1.69$ ). The second and third strongest variables found to have an effect, was an offender's prior record and the composition of an offender's county (i.e., percent African American). Findings that indeed offer support for Blalock's (1967) racial threat theory.

Building on the results of Crawford and colleagues (1998) is Britt's (2000) multilevel analysis, examining the influence of a court's social context on one's confinement and length of stay. Despite Britt's (2000) examination is not specific to the juvenile population, it offers a promising foundation for future research that looks to examine predictors of dispositional outcomes while considering variables at both the individual-level and jurisdictional-level (e.g., courts, departments, counties, neighborhoods), which is one of the primary goals of this dissertation.

Of principal concern for Britt (2000), was the influence of a court's social context on racial disparities in punishment decisions (i.e. racial threat). Using data from the



Pennsylvania Commission on Sentencing, Britt analyzed over 205,000 decision files (128,916 on confinement and 76,120 on sentence length), covering a four-year time span (1991-1994). In total, the analysis included 21 variables falling under nine domains – sentencing outcome, length of sentence, demographic characteristics, criminal history, case characteristics, urbanization, race (i.e., African American v. White), and ethnic composition, macroeconomic conditions, and level of crime. The first two served as dependent variables, while the remaining seven made-up the independent factors considered per level, individual and county (or court).

In using a multilevel model, Britt (2000) was able to examine the likelihood of an individual effect occurring given the social climate of the court in which a defendant was sentenced. This study addressed the following questions, does the social context of a court’s jurisdiction – urbanization, race, economic status, and rate of crime – matter in its sentencing decisions? If so, then which factor(s) matter most? Overall, Britt (2000) did find there to be significant “contextual variation in punishment decisions,” however, “typical indicators of social context [did] not explain these variations” (p. 707). Given that prior findings on indicators of social context are mixed, the conclusion that Britt (2000) reached, comes as no surprise.

Because the findings around contextual-level variables vary as they do, it seems reasonable for future research examining predictors of dispositional outcomes (among youths or adults), to consider the influence that jurisdiction may have. It is important to note, however, that to use Britt (2000) as a model and to ensure accurate estimates of standard error, investigators must secure a sample with enough second level units (e.g., 50 or more counties, courts, or departments) (Maas & Hox, 2005). Because the data

relied upon in this dissertation allows for this type of sample to be drawn, it is the investigator's intent to examine the influence of both individual and jurisdictional (i.e., departmental) -level variables on the dispositional outcomes for youth who are adjudicated to probation in Texas.

To achieve this goal, this dissertation provides an empirical investigation of two different, but related, studies. In this vein, Study #1 uses individual-level predictors of local confinement, specifically for the purpose of analyzing the role of actuarial levels, and Study #2 examines the influence that jurisdiction may have on dispositional outcomes, while controlling for the individual-level factors examined in Study #1. The research questions and hypotheses proposed by this dissertation are listed below.

**Study #1, Research Question #1.** What individual-level factors influence the decision to locally confine youth in secure residential placement?

**Hypothesis.** As found in prior studies, the investigator expects to find legal factors (i.e., the number of prior referrals, type of offense, and detention prior to adjudication) to have a positive and significant effect on the decision to locally confine youth in secure residential placement.

**Study #1, Research Question #1a.** Are levels, as established by actuarial assessments (i.e., risk and needs levels), influential on the decision to locally confine youth in secure residential placement?

**Hypothesis.** As actuarial assessments were created to help inform both decisions on intervention and treatment, the investigator expects to find actuarial factors (i.e., risks and needs level) to have a positive and significant effect on the decision to locally confine youth to secure residential placement.

**Study #2, Research Question #1.** What jurisdictional (contextual)-level factors influence the decision to locally confine youth in secure residential placement?

**Hypothesis.** Given that the only consistent finding on the influence a jurisdiction has on dispositional outcomes is that outcomes significantly vary by contextual-level (e.g., county or court), the investigator expects that the decision to locally confine youth in secure residential placement will vary by jurisdiction and that certain jurisdictional-level factors are likely to explain this variation.

### CHAPTER 3

#### STUDY #1 – EXAMINING INDIVIDUAL-LEVEL PREDICTORS OF SECURE RESIDENTIAL PLACEMENT

This chapter includes the first of two studies conducted in this dissertation.

Building on the literature presented in Chapter 2, Study #1, assesses two research questions: what individual-level factors influence the decision to locally confine youth in secure residential placement *and* are risk/needs levels, as established by a valid risk and needs instrument, influential in this regard? Following a brief overview, the methodology for this study – including a sample description, variable construction, and a plan of analysis – is presented below. Results of the analysis are presented immediately after, with the chapter concluding on the strengths and weaknesses of the study.

#### Overview

While prior studies have examined predictors of dispositional outcomes for youth, none have examined the role that actuarial assessments play in this regard (i.e., risk and needs levels). As such, this study seeks to address this void in the literature, by examining the degree to which demographic, legal, and actuarial factors impact placement outcomes for youth adjudicated to probation in Texas in 2016 ( $N = 9,397$ ). The analysis relied upon in this study includes a multivariate examination of the effect of eight individual-level predictors – *age, race/ethnicity, sex, prior referrals, type of offense, detention status, risk level* and *needs level* – on placement outcomes for a random sample of 4,670 youth placed on probation.

#### Methods

**Data and Sample.** The population of interest in this study includes youth, ages 10 to 17, who were adjudicated to probation in the state of Texas in 2016 and received a

disposition of either *community supervision* or *secure residential placement* ( $N = 9,397$ ). This data is secondary and was originally collected by the Texas Juvenile Justice Department (TJJD). From this population, and to allow the use of inferential statistics, a random sample of 50% is drawn ( $n = 4,670$ ).

### **Variables/Measurement**

**Dependent Variable: Placement Outcome.** When a youth in Texas is adjudicated to probation, their dispositional outcome refers to where the youth has been “placed,” either on community supervision, in a secure residential facility (i.e., confinement), or in a non-secure residential placement. This study focuses on the two extremes of these dispositional possibilities (i.e., community supervision vs. secure residential placement). As such, the outcome is measured by a dummy coded variable, where placement outcome is equal to 0 when a youth is placed on community supervision and 1 when a youth is placed in a secure residential facility.

### **Independent Variables**

**Demographic Factors.** Three demographic variables are examined: race/ethnicity, sex, and age at disposition (Bishop & Frazier, 1996; Lieber & Peck, 2015; Sanborn, 1996). All three coded as categorical variables. Race/Ethnicity consisted of three categories, White, African American, and Latino. Less than one percent of the population was categorized as “other” by TJJD, and therefore are excluded from the study. A series of dummy coded variables (i.e., White, yes or no; African American, yes or no; Latino, yes or no) are created to represent race/ethnicity, with White serving as the reference category. Comparatively, sex and age are measured dichotomously: sex =

female (0) and male (1) and age = 10 to 13 (0) and 14 to 17 (1) to distinguish early onset from late onset juvenile offenders (Moffit, 1993).

**Legal Factors.** Largely informed by the literature (Cauffman et al., 2007; Hoge et al., 1995; Kalmbach & Lyons, 2012; Matarazzo et al., 2001) the legal variables considered in this study include number of prior referrals, detention status prior to disposition, and type of offense. Number of prior referrals are coded continuously, while both detention status and type of offense are coded dichotomously. Youth who were not detained prior to disposition are coded as 0 and youth who were detained prior to disposition are coded as 1. The same coding was given to the type of offense a youth had received a disposition for – a violent (1) or non-violent offense (0). Per TJJD, violent offenses include: homicide, attempted homicide, sexual assault, robbery, assault, and offenses that they categorize as “other violent.” All other offenses are considered to be, non-violent.

**Actuarial Levels.** The risk and needs levels relied upon in this study come from the PACT, as it is the tool employed by juvenile probation in Texas. Once assessed, youth are assigned a risk and needs level of low, moderate, or high. It is possible for a youth to be assigned as moderate low or moderate high risk. However, as they both fall under the level of moderate, consolidating the continuum provided for a more parsimonious and informative analysis. As such, the actuarial level variables in this study are coded in a categorical manner: risk level = low (0), moderate (1), high (2) and needs level = low (0), moderate (1), high (2). Low-risk and low-need will serve as the reference categories, respectively.

## **Analytical Strategy**

The analysis for Study #1 proceeds in a series of stages. First, sample descriptive statistics are reported, and these sample statistics are also compared to the population characteristics from which the random sample was drawn. Second, a series of bivariate chi-square tests and correlations are estimated comparing the association between the demographic, legal, and actuarial factors and placement outcome (i.e., secure residential placement versus community supervision). The final stage involves a multivariate logistic regression analysis predicting placement outcome and is presented in three separate models: Model 1 is the baseline model with just the demographic factors included; Model 2 includes the demographic and legal factors; and Model 3 includes the demographic, legal, and actuarial factors.

## **Results**

**Sample and Population Descriptives.** The sample descriptive statistics are displayed in Table 2, alongside the population characteristics from which the random sample was drawn. Regarding the sample, most youths in the sample were placed on community supervision (81%), while less than a quarter (19%) were placed in local confinement. The majority are male (79%) and are between the ages of 14 to 17 (89%). Latinos comprise 50% of the sample, while African American and White youth comprise 29% and 21%, respectively. Most, were detained prior to their disposition (70%), were adjudicated for non-violent offenses (76%), and have a history of referrals; with less than one-third having had no prior contact with the juvenile justice system (30%). Almost half were assigned a risk and needs level of moderate. While nearly 34% of the youth were

categorized as high need and 23% as high risk. Bivariate comparisons demonstrate that the random sample statistics did not differ significantly from the population statistics.

**Table 2**  
**Population and Sample Frequency Distributions of Study #1**

	(N = 9,397)	%	(n = 4,670)	%
<b>Demographic Factors</b>				
<i>Sex</i>				
Female	1,936	20.6	966	20.7
Male	7,461	79.4	3,704	79.3
<i>Race</i>				
White	1,886	20.1	971	20.8
African American	2,773	29.5	1,343	28.8
Latino	4,738	50.4	2,356	50.4
<i>Age at Disposition</i>				
10 to 13	1,051	11.2	497	10.6
14 to 17	8,346	88.8	4,173	89.4
<b>Legal Factors</b>				
<i>Type of Offense</i>				
Violent	2,290	24.4	1,117	23.9
Non-Violent	7,107	75.6	3,553	76.1
<i># of Prior Referrals</i>				
0 referrals	2,760	29.4	1,384	29.6
1 referral	2,063	22.0	1,006	21.5
2 referrals	1,463	15.6	717	15.4
More than 2 referrals	3,111	33.0	1,563	33.5
<i>Detention Status</i>				
Not Detained	2,910	31.0	1,421	30.4
Detained	6,487	69.0	3,249	69.6
<b>Actuarial Levels</b>				
<i>Risk Level</i>				
Low Risk	3,006	32.0	1,491	31.9
Medium Risk	4,174	44.4	2,093	44.8
High Risk	2,217	23.6	1,086	23.3
<i>Needs Level</i>				
Low Need	2,039	21.7	1,036	22.2
Medium Need	4,119	43.8	2,040	43.7
High Need	3,239	34.5	1,594	34.1
<b>Placement Outcome</b>				
Community Supervision	7,593	80.8	3,793	81.2
Secure Residential Placement	1,804	19.2	877	18.8



**Bivariate Analysis of Independent Variables and Placement Outcome.** To test the association between the categorical predictors in this study – age, sex, race/ethnicity, type of offense, detention status, risk level, and needs level – and the dependent variable (i.e., placement outcome), a series of chi-square analyses are conducted. As illustrated in Table 3, all predictors of interest, are significantly related to a youth’s placement outcome; with needs ( $\chi^2 = 334.43, p < .001$ ) and risk ( $\chi^2 = 330.69, p < .001$ ) levels having the strongest association, followed by detention status ( $\chi^2 = 262.24, p < .001$ ). Type of offense ( $\chi^2 = 56.75, p < .001$ ), age ( $\chi^2 = 24.02, p < .001$ ), sex ( $\chi^2 = 10.13, p = .001$ ), and race/ethnicity ( $\chi^2 = 9.83, p = .007$ ) are also significantly related, but have a weaker relationship.

**Table 3**  
**Chi-Square Results for Categorical Variables in Study #1 ( $n = 4,670$ )**

	Chi-Square ( $\chi^2$ )	<i>p</i> -value
Sex	10.13	.001
Race/Ethnicity	9.83	.007
Age	24.02	<.001
Type of Offense	56.75	<.001
Detention Status	262.24	<.001
Risk Level	330.69	<.001
Needs Level	334.43	<.001

**Note:** *df* = 1 for age, sex, detention status, and type of offense  
*df* = 2 for race/ethnicity, risk level, and needs levels

Given the binary nature of the dependent variable, the strength and direction of these associations are examined using three different correlation coefficients: Phi, Cramer’s V, and Point-Biserial. Phi coefficients are calculated for binary nominal level predictors (i.e., sex, age, detention status, and type of offense), Cramer’s V for categorical and ordinal level predictors (i.e., race, risk level, and needs level), and point-biserial for the ratio-level predictor, number of prior referrals. These coefficients are

found in Table 4 below, and it is important to note that all but one of the variables, type of offense, are positively related with secure placement.

**Table 4**  
**Correlation Coefficients Examining Association Between IVs & DV in Study #1**  
**(*n* = 4,670)**

	<b>Correlation Coefficient</b>	<b><i>p</i>-value</b>
Sex	0.047	.001
Race/Ethnicity	0.046	.007
Age	0.072	<.001
Type of Offense	-0.110	<.001
Prior Referrals	0.233	<.001
Detention Status	0.237	<.001
Risk Level	0.266	<.001
Needs Level	0.268	<.001

Even though the chi-square values for some of the independent variables (e.g., detention status, risk level, needs level) illustrate a large association with a youth's placement outcome, further examination of the strength and direction of these associations, identifies these relationships to be weak, at best. As illustrated in Table 4, the strength of the relationships between the independent and dependent variable(s) in this study, ranges from 0.046 to 0.268. With a youth's age ( $\phi = 0.072$ ), sex ( $\phi = 0.047$ ), and race/ethnicity ( $\phi = 0.046$ ) sharing the least amount of variance with placement outcome and detention status ( $\phi = 0.237$ ), risk level (Cramer's  $V = 0.266$ ) and needs level (Cramer's  $V = 0.268$ ) sharing the most. The number of prior referrals is also significantly associated with placement outcome, that association however is likewise weak ( $r_{pb} = 0.233$ ).

**Multivariate Logistic Regression Models.** To test the potential impact of the independent variables in this study – demographic, legal, and actuarial – on the likelihood of secure placement, multivariate logistic regression is employed, and three models are

estimated. Model 1 examines the influence of demographic factors only (i.e., sex, age, race/ethnicity); Model 2 builds on Model 1 to include the examination of legal factors (i.e., detention status, prior referrals, type of offense) in addition to demographic factors; while Model 3 adds to Model 2 to include actuarial factors (i.e., risk and needs levels). The results for each of these models, follow (Tables 5, 6, and 7).

**Table 5**  
**Model 1 - Logistic Regression Results on Placement Outcome Considering Demographic Variables ( $n = 4,670$ )**

Variable	Odds Ratio	% Change	S.E.	z	Sig.
<b>Sex</b>					
Male	1.3878	38.78	0.1374	3.31	.001
<b>Race/Ethnicity</b>					
African American	1.4008	40.08	0.1541	3.06	.002
Latino	1.1462	14.62	0.1173	1.33	.182
<b>Age</b>					
14 to 17	2.1074	110.74	0.3179	4.94	.000
<b>Constant</b>	0.0757		0.0141	-13.88	.000

$\chi^2 = 49.04$  ( $p < .001$ )

The results of Model 1 (see Table 5) illustrates, that without controlling for any other variables (e.g., prior legal involvement), a youth's demographics, matter. The likelihood of secure placement is significantly higher for African American males, and youth who are between the ages of 14 and 17. Being male increases the likelihood of secure confinement by 39% ( $p = .001$ ), while controlling for age and race/ethnicity. Older youth (ages 14 to 17) have an 111% increased likelihood of confinement ( $p < .001$ ) compared to younger youth. This change occurs while controlling for race/ethnicity, as well as sex. Being African American increases the likelihood of secure confinement by 40% ( $p = .002$ ), while controlling for age and sex. This racial/ethnicity effect, however, does not appear to be significant for Latino youth. While these findings carry

implications regarding the bias that potentially exist towards African American youth and the decision to confine them, the significance of this finding is only true without considering the impact of additional (and relevant) factors (e.g., type of offense).

**Table 6**  
**Model 2 - Logistic Regression Results on Placement Outcome Considering Demographic and Legal Variables ( $n = 4,670$ )**

Variable	Odds Ratio	% Change	S.E.	$z$	Sig.
<i>Demographic</i>					
<b>Sex</b>					
Male	1.3264	32.64	0.1385	2.70	.007
<b>Race/Ethnicity</b>					
African American	1.2052	20.52	0.1408	1.60	.110
Latino	0.9015	-9.85	0.0982	-0.95	.341
<b>Age</b>					
14 to 17	1.5350	53.50	0.2421	2.72	.007
<i>Legal</i>					
<b>Type of Offense</b>					
Violent	0.5912	-40.88	0.0647	-4.80	.000
<b>Prior Referrals</b>	1.1631	16.31	0.0144	12.23	.000
<b>Detention Status</b>					
Prior to Disposition	6.5592	555.92	0.8805	14.01	.000
<b>Constant</b>	0.0196		0.0045	-16.97	.000

$\chi^2 = 564.33$  ( $p < .001$ )

As reported in Model 2 (Table 6), once legal factors are introduced the significance of the effect of race/ethnicity (being African American) on placement outcome disappears ( $OR = 1.21$ ,  $p = .110$ ). For Latinos, the effect of race/ethnicity on placement outcome, is still not significant, however the direction of this effect, is now negative ( $OR = 0.90$ ,  $p = .341$ ). The results in Table 6 also indicate that even after consideration is given to legal factors, a youth's sex and age continue to matter.

On average, and while controlling for age, race/ethnicity, detention status, number of prior referrals, and the type of offense, being males increases the likelihood of

confinement by 33% ( $OR = 1.33$ ;  $p = .007$ ). Youth who are older (14 to 17), likewise face a 54% increased likelihood of confinement ( $OR = 1.54$ ,  $p = .007$ ). This change occurs while controlling for all other variables in the model.

The legal variables considered – detention status prior to disposition, number of prior referrals, and type of offense – likewise are significant predictors of placement outcome. As illustrated in Table 6, the factor that has the greatest effect on the decision to place in confinement, is a youth’s detention status. Youth who are detained prior to their disposition, while controlling for type of offense, prior referrals, and demographic factors (i.e., sex, race/ethnicity, and age), experience an increased odd of confinement by a factor of 6.56 (or 556%,  $p < .001$ ). The number of a youth’s prior referrals and type of offense, however, appear to matter less. As the number of a youth’s prior referrals increases, so too does their odds of secure placement, by a factor of 1.16 (or 16%,  $p < 0.001$ ), while controlling for all other variables in the model. While youth who commit violent offenses, are found, to be 41% less likely ( $OR = 0.59$ ,  $p < .001$ ) to be placed in a secure residential facility. This change in odds occurs while controlling for detention status, number of prior referrals, and demographic factors.

**Table 7**  
**Model 3 - Logistic Regression Results on Placement Outcome Considering Demographic, Legal and Actuarial Variables ( $n = 4,670$ )**

Variable	Odds Ratio	% Change	S.E.	z	Sig.
<b>Sex</b>					
Male	1.3291	32.91	0.1419	2.66	.008
<b>Race/Ethnicity</b>					
African American	1.2618	26.18	0.1513	1.94	.053
Latino	0.9207	-7.93	0.1028	-0.74	.459
<b>Age</b>					
14 to 17	1.5086	50.86	0.2443	2.54	.011
<b>Type of Offense</b>					
Violent	0.6590	-34.10	0.0742	-3.71	.000

<b>Table 7 (continued)</b>					
<b>Prior Referrals</b>	1.0886	8.86	0.0146	6.33	.000
<b>Detention Status</b>					
Prior to Disposition	5.4144	441.44	0.7347	12.45	.000
<i>Actuarial</i>					
<b>Risk Level</b>					
Moderate Risk	1.9567	95.67	0.2629	5.00	.000
High Risk	2.6960	169.60	0.4079	6.55	.000
<b>Needs Level</b>					
Moderate Need	1.8567	85.67	0.3041	3.78	.000
High Need	3.3490	234.90	0.5601	7.23	.000
<b>Constant</b>	0.0064		0.0018	-18.27	.000
$\chi^2 = 771.88$ ( $p < .001$ )					

In addition to demographic and legal variables, Model 3 (the full model), includes the examination of actuarial factors (i.e., risk and needs levels). As illustrated in Table 7, Model 3 - like Model 1 ( $\chi^2 = 49.04$ ,  $p < .001$ ) and Model 2 ( $\chi^2 = 564.33$ ,  $p < .001$ ) – is a significant improvement in estimation over the intercept only model. As reported in Table 7, the direction and significance of all but one (i.e., race/ethnicity; being African American) of the predictors examined in Model 2, hold true for Model 3. In the full model (Model 3), being African American increases the likelihood of confinement by 26%;  $p = .053$ ), and that is while controlling for a youth's age, sex, detention status, number of prior referrals, type of offense, and actuarial levels.

In the full model, youth who are male ( $OR = 1.33$ ,  $p = .008$ ), who are older (14 to 17) ( $OR = 1.51$ ,  $p = .011$ ), who have been detained prior to disposition ( $OR = 5.41$ ,  $p < .001$ ) and who have prior referrals ( $OR = 1.09$ ;  $p < .001$ ), all appear to have a significantly greater likelihood of confinement. While type of offense, continues to have a significant and negative effect ( $OR = 0.66$ ,  $p < .001$ ) on placement outcome (i.e., a

violent offense reduces the likelihood of confinement). All these estimates occur, respectively while controlling for all other variables in the model.

Last, are the factors of main concern in this study, actuarial levels - which as hypothesized (see Table 7), show to be significant predictors that directly influence the decision to place a youth in secured residential placement. Being moderate risk (as opposed to being low risk) increases the likelihood of confinement by 96% ( $p < .001$ ), and that is while controlling for demographic and legal factors, as well as needs level. For high risk youth, the odds are even higher ( $OR = 2.70, p < .001$ ). While controlling for all other variables in the model, high risk youth are more than two and a half times more likely to be placed in secure confinement. Those odds are slightly different for those with moderate and high needs.

Being moderate need results in an 86% increased likelihood of confinement ( $p < .001$ ). While being high need, appears to have a greater effect than even risk. Youth who are high need, as opposed to low are have a 235% ( $OR = 3.35, p < .001$ ) greater likelihood of being placed in a secure residential facility, and that is while controlling for demographic factors, prior legal involvement, and risk level.

### **Strengths and Limitations of Study #1**

**Strengths.** To date, studies examining predictors of dispositional outcomes for youth have not assessed the role that actuarial assessments play in this regard. Given that this study seeks to address this void in the literature, is perhaps its most notable strength. As these instruments were created with the intention to inform dispositional decisions, it is important to measure whether they are being used as they were intended. When implemented properly, these assessments have been found to be an effective method for

rehabilitation and reducing recidivism (Andrews, Bonta, & Hoge, 1990; Latessa et al., 2013; Lipsey et al., 2010; Lowenkamp & Latessa, 2004; Vincent, et al., 2012b). Another strength of this study, albeit an offshoot of measuring actuarial levels at all, is that both a youth's risk and criminogenic needs are being examined. Because needs are established by accounting for the dynamic factors contributing to a youth's delinquency, this analysis is contributing to the discussion on whether these factors matter with regard to judicial decision making.

**Limitations.** The weaknesses associated with this study are threefold. First, and perhaps most unfortunate, is that individual-level factors that make-up a youth's risk and needs level (e.g., age at first offense, offense characteristics, family dynamics, peer association etc.) cannot be independently measured for their effect on a youth's dispositional outcome. When examined separately from their overarching domains in tests for predictive validity, one or more individual-level social factors collected by the PACT, showed to influence youth recidivism (Baglivio, 2009; Baglivio & Jackowski, 2013; Baird et al., 2013; Early, Hand, & Blankenship, 2012; Martin, 2012; McKenzie, 2018). Given these findings, it is possible that one or more of these factors could influence the decision to confine. The data relied upon in this study regarding a youth's risk and needs, are limited to only the levels (i.e., level of need, level of risk) assigned to a youth prior to disposition.

Another limitation of this study concerns the scope of the dependent variable. When a youth is adjudicated in Texas' juvenile justice system, they are subject to several dispositional outcomes – community supervision, non-residential secure placement, secure residential placement, and commitment to the state (indeterminately or



determinately). The first and last, of which, represent the two extremes of the dispositional continuum. It would indeed be helpful to know what factors influence decisions to sentence across all points of the continuum. Because the commitment of misdemeanants to the state in Texas is prohibited, the variation (or lack thereof) in youth offense type would need to be taken into consideration and requires a more complex sampling strategy than the one relied upon in this study. The third limitation is that which is most widely associated in using a cross-sectional design. Causality, which requires temporal order between the independent and dependent variable to be established, becomes difficult to when only one point in time is examined.

## **CHAPTER 4**

### **STUDY #2 – EXAMINING JURISDICTIONAL (AND) MULTILEVEL PREDICTORS OF SECURE RESIDENTIAL PLACEMENT**

To determine the effect that jurisdiction may have on the likelihood of a youth being placed in a secure residential facility, a separate but related study is conducted. Building on the results presented in Chapter 3 (and the literature discussed in Chapter 2), Study #2, employs a multivariate and multilevel model to examine the effect of individual-level and contextual-level factors on placement outcomes for youth. The details of this method – including the sample description, variable measurement, and plan of analysis – are provided below. Results of the analysis follow the description of methods; while the strengths and weaknesses of the study, conclude the chapter.

#### **Overview**

Though previous studies have examined predictors of dispositional outcomes for youth, none have looked at the role that actuarial assessments play in this regard (i.e., risk and needs levels) in a multivariate and multilevel framework. As such, the void in the literature is addressed in this study by examining the degree to which demographic, legal, actuarial, and contextual-level factors influence placement outcomes for youth adjudicated to probation in Texas ( $N = 9,397$ ). To meet this objective, a multivariate and multilevel model is employed. Effects for both individual and contextual-level factors on placement outcomes for a random sample of 4,670 youth adjudicated to probation are examined.

#### **Methods**

**Data and Sample.** The population of interest for this analysis remains the same as Study #1 – youth, ages 10 to 17, who were adjudicated to probation in Texas in 2016

and received a disposition of either community supervision or secure residential placement ( $N = 9,397$ ). From this population, and to permit the use of inferential statistics, a random sample of approximately 50% was drawn,  $n = 4,670$ . In addition to the demographic, legal, and actuarial factors examined in Study #1, this dataset also includes the addition of U.S. Census Bureau data. Despite there being 254 counties in Texas, there are only 167 juvenile probation departments; with 44 of those departments assuming jurisdiction over multiple counties. Each department is mutually exclusive, in that it oversees a county, or it does not, no department shares a county. This means that when a youth is processed through the system, they are done so via one of these departments. It is for this reason, that the macro-level measurement in this study, reflects the social context of the probation department through which a juvenile is processed, rather than the youth's county of residence. Of the 167 juvenile probation departments operating across the state, 150 are represented in the random sample.

### **Variables/Measurement**

**Dependent Variable: Placement Outcome.** The two “extreme” dispositional possibilities for youth adjudicated to probation in the state of Texas, community supervision and secure residential placement are the focus of this study. Due to the dichotomous nature of this outcome, the dependent variable in this study, is measured by relying upon a dummy coded variable, where placement outcome is equal to 0 when a youth is placed on community supervision and 1 when a youth is placed in a secure residential facility.

## **Independent Variables**

**Demographic Factors.** Three demographic variables are examined: race/ethnicity, sex, and age at disposition (Bishop & Frazier, 1996; Lieber & Peck, 2015; Sanborn, 1996). All three coded as categorical variables. Race/ethnicity consist of three categories, White, African American, and Latino. A series of dummy coded (i.e., White, yes or no; African American, yes or no; Latino, yes or no) variables are created to represent race, with White being the reference category. Comparatively, sex and age are measured dichotomously: sex = female (0) and male (1) and age = 10 to 13 (0) and 14 to 17 (1) to distinguish early onset from late onset juvenile offenders (Moffit, 1993).

**Legal Factors.** Informed by the literature (Cauffman et al., 2007; Hoge et al., 1995; Kalmbach & Lyons, 2012; Matarazzo et al., 2001), the legal variables considered in this study include: number of prior referrals, detention status prior to disposition, and type of offense. Number of prior referrals is coded continuously, while both detention status and type of offense are coded dichotomously. Youth who were not detained prior to disposition are coded as 0 and youth who were detained prior to disposition are coded as 1. The same coding is given to the type of offense a youth had received a disposition for – a violent (1) or non-violent offense (0).

**Actuarial Levels.** The risk and needs assessment employed by juvenile probation in Texas is the PACT. Once assessed, youth are given a risk and needs level of low, moderate, or high. It is possible for a youth to be assigned a moderate-low or moderate-high risk. However, as they both are categorized in the moderate level, consolidating the continuum provided for a more parsimonious and informative analysis. As such, the actuarial level variables in this study are coded in a categorical manner: risk level = low

(0), moderate (1), high (2) and needs level = low (0), moderate (1), high (2). Low-risk and low-need serve as the reference categories, respectively.

**Jurisdictional Factors.** The impact that jurisdiction on dispositional outcomes for youth under the larger construct of social context is examined (Britt, 2000; Crawford et al., 1998; Myers & Talarico, 1986; Ulmer & Kramer, 1996). Specifically, seven macro-level variables are derived from the U.S. Census Bureau and included – urban/rural status, border/non-border status, proportion African American, proportion Latino, per capita income, average violent crime rate, and average property crime rate.

**Urbanicity.** Departments are defined as being urban/rural by using county classifications as established by the U.S. Census Bureau (2018a). According to this definition, county is categorized into one of three classifications: completely rural (100% population rural), mostly rural (50% or more population rural), and mostly urban (50% or more population urban) (U.S. Census Bureau, 2018a). Using these classifications, departments are coded in the following way: rural = 0, dual (rural and urban) = 1, and urban = 2. A series of dummy coded (i.e., rural, yes or no; dual, yes or no; urban, yes or no) variables are created to represent Urbanicity, with rural being the reference category.

**Border.** Given the political climate surrounding “crime on the border” (Horton, 2018), this study extends on Britt’s (2000) research, by examining the potential impact of a county’s border status on confinement for juveniles adjudicated in Texas. Whether a department is defined as being a border or non-border department is based on Article 4 of the La Paz Agreement of 1983, which designates a county as being a border county if it is within 100 kilometers of the U.S./Mexico border. This definition is also employed by the Texas Department of State Health Services (2015). Using this definition, departments are

coded in the following way: non-border = 0, dual (border and non-border) = 1, and border = 2. A series of dummy coded (i.e., non-border, yes or no; dual, yes or no; border, yes or no) variables are created to represent border, with non-border being the reference category.

***Proportion Minority (African American & Latino).*** Data from the U.S. Census Bureau (2010) is also employed to construct the variables used to examine the possible influence of racial threat – proportion African American and proportion Latino. Both are scale-level variables that include the percentage of a county's population that is African American and that is Latino. For the department's that oversee multiple counties, the average proportion is used.

***Per Capita Income.*** To examine the potential impact of a community's economic position on placement outcome, the per capita income – as established by the U.S. Census Bureau (2010) – for a department's county is employed. Again, for departments that oversee multiple counties, the average of all counties is employed. This factor is also measured as a scale-level variable.

***Crime Rate (Property & Violent).*** To determine whether the crime rate influences the decision to locally confine a youth to secure residential placement, the property and violent crime rates for a department's county – as reported to the Federal Bureau of Investigations by the Texas Department of Public Safety (2016) – is relied upon. For department's that oversee multiple counties, the average of all counties is used. Both are scale-level variables and represent rates per 100,000.

## **Analytical Strategy**

First, sample descriptive statistics are reported, and these sample statistics are also compared to the population characteristics from which the random sample was drawn. Second, a series of bivariate chi-square tests and correlations are estimated comparing the association between the demographic, legal, actuarial, and jurisdictional/contextual-level factors and placement outcome (i.e., secure residential placement versus community supervision). The final stage involves a multivariate and multilevel logistic regression analysis predicting placement outcome and is presented in three separate models: Model 1 is the baseline model with just the individual-level demographic, legal, and actuarial factors included; Model 2 includes only the jurisdictional-level factors; and Model 3 includes the individual-level and jurisdictional level factors.

## **Results**

**Sample and Population Descriptives.** Most youths in the sample, as reported in Table 8, were placed on community supervision (81%), while less than one-fifth (19%) were placed in local confinement. The majority are male (79%) and fall between the ages of 14 to 17 (89%). Half of the sample are Latinos (50%), while African American and White youth make-up 29% and 21%, respectively. The majority were detained prior to receiving their disposition (70%) and adjudicated for a non-violent offense (76%). With less than a third having had no prior contact with the juvenile justice system (30%). Only 34% of the youth were categorized as high need and 23% as high risk; most were moderate need (45%) and of moderate risk.

Concerning the sample and the jurisdictional-level factors, most of the cases were processed in an urban department (92%), while some were processed in rural departments

(6%), and a few in dual departments (2%). Relatedly, most cases were processed through a non-border department (84%), although quite a few were handled by departments on the border (15.5%); and, very few were processed by dual departments (0.5%). The average proportion African American in the jurisdiction where these cases were processed is 12% and the average proportion Latino is 45%. The departments in this sample assume jurisdiction over a population in which the average per capita income is \$27,878, and the average property crime rate is 2,794 for every 100,000 and the average violent crime rate is 448 per 100,000. Bivariate comparisons demonstrate that the random sample statistics does not differ significantly from the population statistics.

**Table 8**  
**Population and Sample Frequency Distributions of Study #2**

	(N = 9,397)	%	(n = 4,670)	%
<b>Demographic Factors</b>				
<i>Sex</i>				
Female	1,936	20.6	966	20.7
Male	7,461	79.4	3,704	79.3
<i>Race</i>				
White	1,886	20.1	971	20.8
African American	2,773	29.5	1,343	28.8
Latino	4,738	50.4	2,356	50.4
<i>Age at Disposition</i>				
10 to 13	1,051	11.2	497	10.6
14 to 17	8,346	88.8	4,173	89.4
<b>Legal Factors</b>				
<i>Type of Offense</i>				
Violent	2,290	24.4	1,117	23.9
Non-Violent	7,107	75.6	3,553	76.1
<i># of Prior Referrals</i>				
0 referrals	2,760	29.4	1,384	29.6
1 referral	2,063	22.0	1,006	21.5
2 referrals	1,463	15.6	717	15.4
More than 2 referrals	3,111	33.0	1,563	33.5



**Table 8 (continued)**

<i>Detention Status</i>				
Not Detained	2,910	31.0	1,421	30.4
Detained	6,487	69.0	3,249	69.6
<b>Actuarial Levels</b>				
<i>Risk Level</i>				
Low Risk	3,006	32.0	1,491	31.9
Medium Risk	4,174	44.4	2,093	44.8
High Risk	2,217	23.6	1,086	23.3
<i>Needs Level</i>				
Low Need	2,039	21.7	1,036	22.2
Medium Need	4,119	43.8	2,040	43.7
High Need	3,239	34.5	1,594	34.1
<b>Contextual-Level Factors</b>				
<i>Urbanicity</i>				
Dual	223	2.4	111	2.4
Rural	571	6.1	273	5.9
Urban	8,603	91.5	4,286	91.7
<i>Border Status</i>				
Dual	48	0.5	24	0.5
Border	1,445	15.4	726	15.6
Non-Border	7,904	84.1	3,920	83.9
<i>Proportion Minority</i>				
Proportion A.A.	-	12.4	-	12.3
Proportion Latino	-	44.4	-	44.5
<i>Per Capita Income</i>				
	-	\$27,888	-	\$27,877
<i>Crime Rate (per 100K)</i>				
Avg. Viol. Crime Rate	-	449	-	448
Avg. Prop. Crime Rate	-	2,795	-	2,794
<b>Placement Outcome</b>				
Community Supervision	7,593	80.8	3,793	81.2
Secure Residential Placement	1,804	19.2	877	18.8

**Bivariate Analysis of Independent Variables and Placement Outcome.** To test the level of association between the categorical level factors and the dependent variable

(i.e., placement outcome) in this study, a series of chi-square analyses are conducted (see Table 9). Correlation coefficients are obtained to measure the strength and direction of those associations, as well as for the scale-level predictors of interest. Phi coefficients are calculated for binary nominal level predictors (i.e., sex, age, detention status, and type of offense), while Cramer's V coefficients are calculated for categorical and ordinal level predictors (i.e., race, risk level, needs level, urbanization, and border status), and point-biserial coefficients for interval and ratio level predictors (i.e., number of prior referrals, proportion minority, per capita income, and average violent and property crime rates).

**Table 9**  
**Chi-Square Results for Categorical Variables in Study # 2 ( $n = 4,670$ )**

	Chi-Square	<i>p</i> -value
Age	24.02	<.001
Sex	10.13	.001
Race/Ethnicity	9.83	.007
Type of Offense	56.75	<.001
Detention Status	262.24	<.001
Risk Level	330.69	<.001
Needs Level	334.43	<.001
Urbanization	1.97	.373
Border Status	6.08	.048

**Note:**  $df = 1$  for age, sex, detention status, and type of offense  
 $df = 2$  for race/ethnicity, risk level, needs levels, urbanization, and border status

As presented in Table 9, the association between a jurisdiction's urban status and a youth's placement outcome is relatively small and insignificant ( $\chi^2 = 1.97, p = .373$ ). Border status, however, does appear to have a significant relationship with the decision to confine ( $\chi^2 = 6.08, p = .048$ ), though the size of this association is nowhere near the size of association shared with some of the individual-level factors, such as a youth's level of need ( $\chi^2 = 334.43, p < .001$ ), risk level ( $\chi^2 = 330.69, p < .001$ ), and detention status ( $\chi^2 = 262.24, p < .001$ ). Of the other categorical variables examined (type of offense, age, sex, and race/ethnicity), all show to have a significant relationship with a youth's placement

outcome, however those relationships are smaller than the aforementioned factors: type of offense ( $\chi^2 = 56.75, p < .001$ ), age ( $\chi^2 = 24.02, p < .001$ ), sex ( $\chi^2 = 10.13, p = .001$ ), and race/ethnicity ( $\chi^2 = 9.83, p = .007$ ).

Further examination of the strength (and direction) of these associations, indicate that despite their significance, these relationships are very weak to weak, at best. As reported in Table 10 the relationships between the categorical factors in this study and the dependent variable (i.e., placement outcome), range from  $r = .021$  to  $r = .268$ , and are mostly positive. The exception being, a youth's type of offense. This finding is not surprising given the limitation of the dependent variable being examined. If more severe options were included – such as commitment to the state and transfer to adult court – the direction of this association would be expected to be positive, as opposed to negative ( $\phi = -.110, p < .001$ ).

**Table 10**  
**Correlation Coefficients Examining Association Between IVs & DV in Study #2**  
**( $n = 4,670$ )**

	Correlation Coefficient	p-value
Sex	.047	.001
Race/Ethnicity	.046	.007
Age	.072	< .001
Type of Offense	-.110	< .001
Prior Referrals	.233	< .001
Detention Status	.237	< .001
Risk Level	.266	< .001
Needs Level	.268	< .001
Urbanization	.021	0.373
Border Status	.036	0.048
Proportion African American	.094	< .001
Proportion Latino	.013	.369
Per Capita Income	.008	.609
Average Violent Crime Rate	.144	< .001
Average Property Crime Rate	.074	< .001

In examining the relationships between the scale-level variables and placement outcome, all but two factors appear to be significant – per capita income and proportion Latino. The relationship between a jurisdiction’s per capita income and the decision to confine a youth, is very weak to non-existent ( $r_{pb} = .008, p = .609$ ) - as is the relationship between placement outcome and the proportion of a county that is Latino ( $r_{pb} = .013, p = .369$ ). The factors that are significantly related to placement in a secure facility are a jurisdiction’s crime rates, both property ( $r_{pb} = .074, p < .001$ ) and violent ( $r_{pb} = .144, p < .001$ ), as well as the proportion of their population that is African American ( $r_{pb} = .094, p < .001$ ). The scale-level predictor to have the strongest relationship with the dependent variable, appears to be the number of a youth’s prior referrals ( $r_{pb} = .223, p < .001$ ), albeit still a weak association by general standards.

**Multilevel Multivariate Logistic Regression Models.** To determine the extent of the role that jurisdiction plays in a youth’s placement outcome, a series of multilevel multivariate logistic regression models are estimated (Models 1 – 3). In employing this method (over simple logistic regression), the investigator is seeking to answer a few questions: (1) does jurisdiction matter with regard to a youth’s placement outcome, (2) if so, does jurisdiction influence the effect seen among individual-level predictors, and (3) if so, can the contextual-level variables as put forth in this study, account for that jurisdictional-level influence?

Prior to running any models that examine the effect of predictors (on an individual or contextual-level) on placement outcome, an empty random intercept only model is conducted. Running this model, prior to engaging in any type of multilevel

analysis, is meant to inform investigators on whether a multilevel approach is even necessary. If, for instance, the amount of variance in placement outcome ( $\chi^2$ ), explained by jurisdiction, is negligible, then the preferred method for controlling for jurisdictional differences in placement outcome would be a simple logistic regression. As parsimony and efficiency are key.

The results of the random intercept only model indicates a multilevel logistic regression approach, over simple logistic regression, to produce a better fit to the data. The  $\chi^2$  value ( $\chi^2 = 291.28, p < .001$ ) associated with this model ( $n_i = 4,670, n_j = 150$ ) falls within the critical region needed to reject the null hypothesis (i.e., jurisdiction makes no difference with regard to the variance in placement outcome), allowing one to conclude, at the .001 level of significance, that the variance in placement outcome, significantly differs between jurisdictions. The intraclass correlation coefficient generated for this model indicates that approximately 15.5% of the variance in placement outcome is occurring between jurisdictions.

A finding of significance in this regard, confirms that jurisdiction does matter when it comes to a youth's placement outcome. Models 1 through 3 are estimated to determine how the variance seen between jurisdictions impacts individual-level effects on placement outcome (Model 1); whether or not the contextual-level variables in this study can explain that variance (Model 2); and what that variance looks like when these two types of variable effects (on an individual and contextual-level) are measured simultaneously (Model 3). To establish which of these models provides the best model of fit (Models 1, 2, or 3), a series of likelihood ratio tests are conducted post estimation.

### Model 1 – Fixed Individual-Level Predictors w/ Randomly Varying

**Intercepts.** Given that jurisdiction contributes to the variance seen in the decision to locally confine youth, it is important to re-examine the effect of individual-level predictors in this light. As no theoretical justification exists to allow the slopes to vary between jurisdictions, a fixed-slope model with random varying intercepts is employed. The results for Model 1 can be seen in Table 11.

The findings associated with Model 1, reveals a significant improvement over the intercept only model (Wald  $\chi^2 = 579.58, p < .001$ ) and a superior model to the simple logistic regression method ( $\chi^2 = 429.69, p < .001$ ). According to the intraclass correlation coefficient generated for this model, 28.83% of the variance in placement outcome, can be attributed to between-jurisdiction differences, and that's while controlling for demographic, legal, and actuarial variables. Conversely approximately 71% of the variance can be attributed to within-jurisdictional differences. As reported in Table 11, all but two (age and race/ethnicity) of the independent variables included in Model 1 have a significant effect on the likelihood of secure residential placement, and that is while considering the variation that exists between jurisdictions. Of the predictors that appear to have a significant effect, five are positive – sex, detention status, number of prior referrals, risk level, and needs level – while one, type of offense, is negative.

**Table 11**  
**Model 1 – Multilevel Logistic Regression Results on Placement Outcome Considering Individual-Level Variables ( $n_i = 4,670, n_j = 150$ )**

Variable	Odds Ratio	% Change	S.E.	z	Sig.
<i>Demographic</i>					
<b>Sex</b>					
Male	1.3719	37.19	0.1611	2.69	.007
<b>Race/Ethnicity</b>					
African American	0.9051	-9.49	0.1286	-0.70	.483
Latino	0.8578	-14.22	0.1142	-1.15	.249

**Table 11 (continued)**

<b>Age</b>					
14 to 17	1.3842	38.42	0.2446	1.84	.066
<i>Legal</i>					
<b>Type of Offense</b>					
Violent	0.6823	-31.77	0.0837	-3.12	.002
<b>Prior Referrals</b>	1.2148	21.48	0.0211	11.22	.000
<b>Detention Status</b>					
Prior to Disposition	6.4430	544.30	0.9402	12.77	.000
<i>Actuarial</i>					
<b>Risk Level</b>					
Moderate Risk	2.1716	117.16	0.3120	5.40	.000
High Risk	4.5026	350.26	0.7694	8.81	.000
<b>Needs Level</b>					
Moderate Need	1.5096	50.96	0.2693	2.31	.021
High Need	2.2056	120.56	0.4119	4.24	.000
<b>Constant</b>	5.4e+233		2.6e+235	11.11	.000

**Note:** Wald  $\chi^2 = 579.58$  ( $p < .001$ ); LR test v. logistic model  $\chi^2 = 429.69$  ( $p < .001$ ); ICC = .2883

While controlling for all other variables in the model, including variation between jurisdictions, males adjudicated to probation have a 37% increased likelihood of secure placement compared to females. Detaining a youth prior to disposition (i.e., detention status) results in a 544% increased likelihood for secure confinement, controlling for demographic variables, number of prior referrals, type of offense, and actuarial levels. The number of prior referrals has a notably smaller effect on the decision to place a youth in a secure facility ( $OR = 1.22$ ,  $p < .001$ ). As the number of prior referrals for a youth increases, so does the likelihood of placement, by approximately 22%, while controlling for all other variables in the model.

The predictors of main interest, a youth's actuarial levels, were also found to directly affects their placement outcome. As reported in Table 11 , being moderate risk (as opposed to low) results in a 117% increased likelihood for secure confinement, while

controlling for all other variables in the model. Comparatively, youth who are high risk (in comparison to their low risk peers) are 350% more likely to be confined ( $p < .001$ ), while controlling for demographic and legal factors, as well as needs levels. Youth who are moderate need, while controlling for risk level, demographics, and legal factors, experience a 51% increased likelihood of secure placement (over their low needs counterparts) ( $OR = 1.51, p = .021$ ). The likelihood of confinement for high need youth, are also significantly greater ( $OR = 2.21, p < .001$ ), while controlling for all other variables in the model.

The only indirect effect in Model 1, is type of offense (i.e., violent). Again, given that the more severe dispositional options (e.g., commitment to the state or waiver to adult court) are not being measured in this study, the direction of this effect is not surprising. As illustrated in Table 11, violent, as opposed to non-violent, juveniles, are approximately 32% less likely to be placed in local confinement ( $OR = 0.68, p = .002$ ), and that's while controlling for detention status, number of prior referrals, demographics and legal factors. If the more restrictive dispositional options were being measured, the direction of this effect would be expected to change. The race/ethnicity and age of the youth did not exert statistically significant ( $p > .05$ ) effects.

**Model 2 – Fixed Jurisdictional-Level Predictors with Randomly Varying Intercepts.** The findings from the empty random intercept only model and Model 1, confirmed two things: (1) jurisdiction matters with regard to placement outcome, and (2) controlling for said variation impacts the findings associated with individual-level predictors, such as those estimated in Study #1. By introducing level-2 variables – or contextual/jurisdictional-level factors – into the model, an attempt can be made to



identify which contextual-level factors, if any, help explain the variation seen between jurisdictions, in the decision to confine. Model 2, in which fixed jurisdictional-level predictors with randomly varying intercepts are estimated, initiates this attempt. Followed by Model 3, which examines effects for both individual and contextual-level factors, simultaneously.

**Table 12**  
**Model 2 – Multilevel Logistic Regression Results on Placement Outcome Considering Jurisdictional-Level Variables ( $n_i = 4,670$ ,  $n_j = 150$ )**

Variable	Odds Ratio	% Change	S.E.	z	Sig.
<b>Urbanization</b>					
Dual	1.3776	37.76	0.5748	0.77	.443
Urban	0.8951	-10.49	0.2641	-0.38	.707
<b>Border Status</b>					
Dual	0.4011	-59.89	0.3538	-1.04	.300
Border	0.4701	-52.99	0.2540	-1.40	.162
<b>Proportion Minority</b>					
% African American	0.9874	-1.26	0.0167	-0.75	.453
% Latino	1.0089	0.89	0.0067	1.33	.183
<b>Per Capita Income</b>					
	0.9999	-0.01	0.0000	-0.11	.913
<b>Average Index Crimes</b>					
Violent	1.0008	0.08	0.0009	0.88	.379
Property	0.9998	-0.02	0.0002	0.07	.941
<b>Constant</b>	0.0000		0.0013	-0.19	.849

**Note:** Wald  $\chi^2 = 7.10$  ( $p = .6269$ ); LR test v. logistic model  $\bar{\chi}^2 = 154.95$  ( $p < .001$ ); ICC = .1341 (13.41%)

As seen in Table 12 (Model 2), not one of the contextual-level factors examined in this study significantly contribute to the variance in placement outcome seen between jurisdictions. Whilst this model is considered to be a superior model over a simple logistic regression as a test for these factors ( $\bar{\chi}^2 = 154.95$ ,  $p < .001$ ), it does not appear to improve upon the estimations of the intercept only model (Wald  $\chi^2 = 7.10$ ,  $p = .6269$ ). A Wald's  $\chi_{(9)}^2$  value of 7.10, does not on exceed the critical value of 16.92, requiring the investigator to accept the null, and conclude that the slopes in Model 2, do not

significantly differ from zero in the population. These findings indicate that while employing a multilevel method may be the superior method for examining predictors on placement outcome, the jurisdictional variables considered in this study – urbanization, border status, proportion minority, per capita income, and average index crimes – offer no explanation for that variance.

**Model 3 – Fixed Individual and Jurisdictional-Level Predictors with Randomly Varying Intercepts.** The full model, Model 3, examines the effects of both individual and contextual (or jurisdictional)-level factors, simultaneously. As illustrated in Table 13, none of the contextual (or jurisdictional)-level factors, show to have a significant effect on the variance of placement outcome between jurisdictions (similar to the findings seen in Model 2). Despite not being significant, the inclusion of contextual-level variables in Model 3, confirms the model to be a significant improvement over the intercept only model (Wald  $\chi^2 = 586.10$ ,  $p < .001$ ). A finding that is not true for Model 2. Furthermore, the results of a likelihood ratio test, likewise find Model 3 (a multilevel model) to be a superior method for examining these predictors, over simple logistic regression ( $\chi^2 = 207.63$ ,  $p < .001$ ). The intraclass correlation coefficient calculated post estimation, shows that on average, and while controlling for demographic, legal, actuarial, and contextual-level factors, 24% of variance in placement outcome occurs between jurisdictions.

**Table 13**  
**Model 3 – Multilevel Logistic Regression Results on Placement Outcome Considering Individual and Jurisdictional-Level Variables ( $n_i = 4,670$ ,  $n_j = 150$ )**

Variable	Odds Ratio	% Change	S.E.	<i>z</i>	Sig.
<i>Demographic</i>					
<b>Sex</b>					
Male	1.3707	37.07	0.1607	2.69	.007

**Table 13 (continued)**

<b>Race/Ethnicity</b>					
African American	0.9220	-7.80	0.1320	-0.57	.571
Latino	0.8639	-13.61	0.1160	-1.09	.276
<b>Age</b>					
14 to 17	1.4089	40.89	0.2487	1.94	.052
<i>Legal</i>					
<b>Type of Offense</b>					
Violent	0.6796	-32.04	0.0833	-3.15	.002
<b>Prior Referrals</b>	1.2144	21.44	0.0211	11.20	.000
<b>Detention Status</b>					
Prior to Disposition	6.4409	544.09	0.9385	12.78	.000
<i>Actuarial</i>					
<b>Risk Level</b>					
Moderate Risk	2.1761	117.61	0.3125	5.41	.000
High Risk	4.5470	354.70	0.7766	8.87	.000
<b>Needs Level</b>					
Moderate Need	1.5087	50.87	0.2687	2.31	.021
High Need	2.1959	119.59	0.4090	4.22	.000
<i>Contextual-Level</i>					
<b>Urbanization</b>					
Dual	1.5444	54.44	0.5322	0.82	.414
Urban	0.6875	-31.25	0.3793	-0.99	.323
<b>Border Status</b>					
Dual	0.4959	-50.41	1.0944	-0.64	.522
Border	0.4202	-57.98	0.6998	-1.24	.215
<b>Proportion Minority</b>					
% African American	0.9968	-0.32	0.0228	-0.14	.888
% Latino	1.0103	1.03	0.0086	1.19	.234
<b>Per Capita Income</b>	0.9999	-0.01	0.00003	-0.87	.385
<b>Average Index Crimes</b>					
Violent	1.0008	0.08	0.0011	0.69	.491
Property	0.9998	-0.02	0.0002	-1.07	.284
<b>Constant</b>	6.6e+242		6.0e+244	6.18	.000

**Note:** Wald  $\chi^2 = 586.10$  ( $p < .001$ ); LR test v. logistic model  $\bar{\chi}^2 = 207.63$  ( $p < .001$ ); ICC = .2421 (24.21%)

As reported in Tables 11 (Model 1) and 13 (Model 3), the effect of individual-level factors on placement outcome, when examined in conjunction with certain jurisdictional variables – urbanization, border status, proportion minority, per capita income, and average index crime rates – largely go unaltered. With the one exception being, age. In Model 3, youth who are ages 14 to 17 are 41% (OR = 1.41,  $p = .052$ ) more likely, than their 10 to 13-year-old counterparts, to be placed in secure residential placement.

**Table 14**  
**Likelihood Ratio Test Results Between Models**

Models Tested	Likelihood Ratio Test Results ( $\chi^2$ )	P > $\chi^2$
Model 1 & Model 2	903.65	< .001
Model 2 & Model 3	911.31	< .001
Model 1 & Model 3	7.66	.569

To determine which model provides the best fit to the data (Model 1, 2, or 3), a series of likelihood ratio tests are conducted, between Model 1 (individual-level factors only) and Model 2 (jurisdictional-level factors only); Model 2 and Model 3 (individual and jurisdictional-level factors); and between Model 1 (individual-level factors only) and Model 3 (individual and jurisdictional-level factors). As illustrated in Table 14, the model that provides the best fit for the data, appears to be Model 1, in which only individual-level variables are considered and variation in placement outcome between jurisdictions is accounted for. Though Model 3 serves as a significant improvement over the intercept only model (Wald  $\chi^2 = 586.10$ ,  $p < .001$ ), there shows to be a minimal and insignificant difference between the estimates produced by Models 1 and 3 ( $\chi^2$  of 7.66,  $p = .569$ ).

## **Strengths and Limitations of Study #2**

**Strengths.** The major strength of this study – aside from the examination of actuarial assessments, as done in Study #1 – is that, similar to Britt’s (2000) study, this

investigation employs a multivariate and multilevel model, to examine the influence that both individual and contextual (or jurisdictional)-level factors have on dispositional outcomes for youth. Prior studies have typically examined these factors by using weighted least squares, OLS, logistic regression or a combination of the two (Crawford et al., 1998; Ulmer & Kramer, 1996; Myers & Talarico, 1986). In employing these techniques, these investigators have overlooked one major assumption of the linear model, the independence of residuals (Bressoux, 2010). Because youth with similar characteristics (e.g., prior referrals, 14 to 17, moderate risk and need) are more likely to be sentenced one way in one jurisdiction (i.e., confinement v. community supervision) versus another, it is important for analyses attempting to examine individual and contextual-level effects, simultaneously, to take this entanglement into consideration (Sommet & Morselli, 2017).

Additionally, this study seeks to add to the literature examining whether racial discrimination exists in dispositional outcomes for youth (Britt, 2000; Crawford et al, 1998; Myers & Talarico, 1986; Ulmer & Kramer, 1996), by extending a test of Blalock's (1967) racial threat thesis to include the percentage of a jurisdiction's population that is Latino. On a relevant note, because the population of interest is in Texas, this study is presented with the opportunity to examine whether proximity to the Mexican border has any impact on sentencing outcomes for youth. In examining this effect, this study is poised to contribute to the current political discussion around "crime on the border" (Horton, 2018).

**Limitations.** The limitations that exist for the individual-level factors in this study are the same as the weaknesses discussed for Study #1. Because the data relied upon in

this analysis only include level of need and level of risk, the effect of the factors that are used to establish those levels (e.g., age at first offense, offense characteristics, family dynamics, peer association etc.), on placement outcome, cannot be independently examined. The scope of the dependent variable is also limited by not including all possible outcomes available to youth post-adjudication – non-secure residential placement, secure residential placement, commitment to the state (indeterminately or determinately). To conduct such a study, would require a more complex methodology and sampling strategy. Limitations regarding causality and the use of a cross-sectional design, likewise, apply.

On the contextual-level, this study is limited in two additional ways. The first regards the use of arrest rates reported to the FBI's Uniform Crime Report (UCR), which has its share of limitations – the inability to capture the “dark figure” of crime, potential manipulation of statistics, and the inability to account for biases in arrests (National Institute of Justice, 2009). The second, concerns the failure to capture a jurisdiction's political ideology (or political majority) to more aptly test Packer's (1964) crime control model. In *Two Models of Justice*, Packer (1964) associates the crime-control model with decision-makers who hold conservative values. To determine the political ideology of a probation department, would require first-hand data collection, on the workgroup responsible for informing a youth's dispositional outcome (e.g., judge, probation officers responsible for writing pre-disposition reports, probation chiefs etc.). While this information might be useful, time did not permit for the collection of this information.

## **CHAPTER 5**

### **DISCUSSION AND CONCLUSION**

The use of actuarial assessments in the juvenile justice decision making process has demonstrated to be an effective method for helping youth successfully move through the system (Andrews, Bonta, & Hoge, 1990; Latessa et al., 2013; Lipsey et al., 2010; Lowenkamp & Latessa, 2004; Vincent, et al, 2012b). In being able to identify a youth's criminogenic risk and needs, practitioners have become better equipped with the information they need to help advise on dispositional outcomes (e.g., level of intervention and treatment). What is largely known about these assessments is whether or not they carry predictive validity (Baglivio, 2009; Baird, 2009; Krysik & LeCroy, 2002; Latessa, Lovins, & Ostrowski, 2009; Latessa & Lovins, 2012; LeCroy, Krysik, & Palumbo, 1998; Lovins & Latessa, 2013; Martin, 2012; Meyers & Schmidt, 2008; Schmidt, Campbell, & Houlding, 2011; Schwalbe, 2007; Schwalbe, 2009; Schwalbe, Fraser, & Day, 2007; Schwalbe, Fraser, Day, & Arnold, 2004; Schwalbe, Fraser, Day, & Cooley, 2006; Vincent, et al., 2012a; Washington State Institute for Public Policy, 1998; Washington State Institute for Public Policy, 2004). In this vein, research has demonstrated that instruments that consider both static (immutable) and dynamic (mutable) factors (i.e., third generation instruments) have been found to be more accurate in their predictions of re-offending (Schwalbe, 2007).

Missing from the literature, however, is whether these instruments are being used as they were intended – to inform dispositional decision making (e.g., determining level of supervision and treatment type). One way to do so, is to examine the role that risk and needs levels play in this regard. The goal of this dissertation is just that.

By conducting two separate but related studies, answers were obtained for the following research questions: (a) what individual-level factors influence the decision to place youth in a secure residential facility, (b) to what extent are actuarial levels considered in this regard, and (c) are there jurisdictional-level factors that might also impact dispositional outcomes for youth? The hypotheses associated with these questions, were found to be either fully or partially supported.

### **Individual-Level Predictors of Placement Outcome**

In examining the results of the model that was found to provide the best fit to the data (Model 1, Study #2), all but two (age and race/ethnicity) of the individual-level factors had a significant influence on the decision to locally confine a youth. This includes, sex, legal factors, and actuarial levels. Male youth are 37% more likely than their female counterparts to be placed in secure local confinement, post-adjudication to probation. As male's make-up the majority of youth who are referred and processed through the system, this finding is not surprising and adds to literature that has likewise found sex (Lieber & Peck, 2015; Myers & Talarico, 1986; Steffensmeier, Kramer, & Streifel 1993) to have a noteworthy influence on a youth's dispositional outcome.

Partial support was found for the hypothesis associated with the first research question, as two of the three legal factors examined in this dissertation, showed to have a positive and significant effect on placement outcome for youth in the sample – prior number of referrals and detention status. These findings indicate that youth with prior system involvement, are significantly more likely to be placed in confinement over community supervision. A result that has been consistently found within the literature (Cauffman et. al., 2007; Hoge, et. al., 1995; Kalmbach & Lyons, 2012; Lieber & Peck,



2015; Matarazzo et. al., 2001; Myers & Talarico, 1986; Sanborn, 1996; Ulmer & Kramer, 1996). Detention status, alone, increased the likelihood of being placed in a secure residential facility by over 500%. This particular finding suggests that it may benefit jurisdictions to examine, (a) what factors are contributing to the decision to detain its youth, and (b) whether the detention practices in question are the most effective (socially and financially). This could be accomplished a number of different ways, including by replicating the studies in this dissertation. The dependent variable would need to be switched from placement outcome post-adjudication, to decision to detain prior to adjudication, which may result in different findings as the outcome would seemingly be accompanied by a presumption of innocence.

The likelihood of confinement associated with detention status, as found in this dissertation, also brings into question the overall “goal” of detention. What is the purpose of detention? Is it to prevent a youth from re-engaging in crime? From hurting themselves or others? Or maybe it’s to put a roof over their head while figuring out which steps to take next (e.g., tracking down a potential legal guardian or contacting child protective services). It would be hard to argue that the youth being protected from themselves and that the youth needing a place to lay their head, should be subjected to the same chances of confinement as those youth who are justifiably posing a threat to public safety. Given these findings, if practitioners wish to keep youth out of the “deeper-ends” of the system, examining their decisions to detain appears to be a noteworthy place to start.

The type of offense a youth commits, in this sample, has the opposite effect one might expect on the likelihood of confinement. Its logical to assume that the more restrictive dispositional options (e.g., secure placement) would be reserved for those who

commit the most severe crimes (e.g., violent offenses). However, this was not the case observed in this set of analyses. A possible explanation for this finding is that the predictor in question is limited by the operationalization of the dependent variable.

Notably, Texas does not permit the commitment of misdemeanants to the state. Technically, this is the most “extreme” dispositional outcome that a youth can receive once adjudicated for delinquent behavior. Probation, however, can supervise a range of offenders, misdemeanants to felons, non-violent to violent. The latter of which, they have fewer of. Had the dependent variable in this study been extended to include a greater range of dispositional outcomes – one that reflects the full extent of what “sentence” a youth can be given (i.e., dismissal to commitment) – and had it included all youth who were adjudicated (rather than just adjudicated to probation), type of offense may have shown to have a positive influence on a youths’ dispositional outcome. Nevertheless, this is an empirical question for future research to consider.

### **Actuarial Levels as Predictors of Placement Outcome**

The variables of primary concern in this dissertation, actuarial levels, influence placement outcome as hypothesized – positively and significantly. As a youth’s criminogenic risk and needs increases (i.e., from low to moderate or low to high), so does their likelihood of secure residential placement. Two main inferences can be drawn from these findings, (1) jurisdictions are using these actuarial levels to inform dispositional outcomes (i.e., level of intervention/supervision) and thus, can be said to be making a concerted effort at implementing evidence-based tools at this stage of the process, and (2) further discussion regarding the purpose of confinement and whether or not it serves as an effective method for addressing a youth’s needs could be beneficial.

In comparison to their low risk peers, high risk youth face a 350% greater likelihood of being placed in secure confinement. Empirically speaking, youth who have been designated by the PACT as being high risk to re-offend, have been found to be more likely to recidivate (violent or non-violent) and therefore arguably “warrant” higher levels of supervision (e.g., confinement) (Baglivio, 2009; Baglivio & Jackowski, 2013; Baird et al., 2013; Early, Hand, & Blankenship, 2012; Martin, 2012; McKenzie, 2018). Given that the odds of secure placement for high-risk youth in the sample, is approximately four and half times more than that of low-risk youth, indicates that the jurisdictions examined in this dissertation are making a genuine attempt to adhere to the risk principle, in which intensive interventions (e.g., confinement) are reserved largely for higher-risk offenders.

The odds of secure placement associated with a youth’s needs level, warrants a bit more discussion. Recall that the reference category for both risk and needs levels in this investigation is low risk/low needs. Meaning that the effect seen in moving from low needs to moderate needs (a 51% increase in likelihood of secure placement), and low needs to high needs (a 121% increase in likelihood of secure placement) occurs while youth are, by statistical default, low risk. Admittedly expected, this finding is intriguing. As explained in Chapter 2, risk and needs levels, as designated by the PACT, are established using two different set of factors (see Appendices A & B); and while both sets may share certain indicators (e.g., education, peers, family, substance abuse), the two are not synonymous. Additionally, under the RNR model, the risk and needs principles serve two different, albeit related, purposes (Andrews, et al., 1990).

Per the RNR model, level of risk is meant to inform level of intervention/services (e.g., low risk = low level intervention, high risk = confinement). While level of needs (and all the information that is collected to establish it) is meant to identify target areas for treatment. By effectively responding to those needs, a reduction in recidivism can be achieved (Andrews et al., 1990; Bonta & Andrews, 2007; Lowenkamp & Latessa, 2004). Given this distinction, one cannot help but wonder, if risk and needs levels are intended to inform on two different aspects of a youth's dispositional outcome (i.e., risk = level of intervention, need = type of treatment) then should level of need be used, as level of risk is – to determine level of intervention/services?

If a youth can be low risk, but still face a significantly greater likelihood for secure placement based on having a high (or even moderate) level of need (see Table 15), then are needs levels being used as they were intended? If level of needs is meant to identify target areas for treatment, then what criminogenic need is reduced by secure placement? It could be argued, that by confining a high (or moderate) need youth, despite their low risk, practitioners are better positioned to meet youth's needs. As placement in such a facility supplies them access to the variety of services being offered in those institutions. This is a dangerous train of thought, as it directly ignores the research on the matter (Bonta & Andrews, 2007; Bonta, Wallace-Capretta, & Rooney, 2000; Lowenkamp & Latessa, 2004).

Youth who are low risk and given intensive services recidivate at a level two times that of youth who are similar risk and not given any services (Bonta, et al., 2000). Furthermore, when these services are given in a custodial setting, they have been shown to have an adverse effect, in that the setting itself becomes criminogenic (Bonta &

Andrews, 2007; Lowenkamp & Latessa, 2004). A finding that is largely attributed to the fact that when confined, low risk youth are exposed to higher risk youth, ultimately fostering an environment for continued criminal learning (Lowenkamp & Latessa, 2004; Sutherland, 1939). Thus, by choosing to confine a youth on the basis of their needs (despite their low risk), practitioners may be unintentionally increasing the likelihood that those youth will re-offend.

**Table 15**  
**Actuarial Levels Assigned to Youth by Placement Outcome (*n* = 4,670)**

<b>Placement Outcome &amp; Risk Level</b>	<b>Needs Level</b>		
	<b>Low Need</b>	<b>Moderate Need</b>	<b>High Need</b>
<b>Community Supervision</b>			
<b>Low Risk</b>	713	554	135
<b>Moderate Risk</b>	241	934	501
<b>High Risk</b>	28	244	443
<b>Secure Residential Placement</b>			
<b>Low Risk</b>	31	42	16
<b>Moderate Risk</b>	16	182	219
<b>High Risk</b>	7	84	280

In the instances that a youth is high or moderate need, but low (or even moderate) risk, practitioners should ask themselves what treatment would be most effective in meeting these needs (i.e., the response principle of the RNR principle). In these instances, do youth *need* confinement? Has this practice/method shown to reduce anti-social behavior and reduce recidivism? Or is there an alternative method that has shown to result in the desired outcomes (e.g., behavioral and cognitive social learning treatment strategies)? Remember, full, as opposed to partial, adherence to the RNR principle – in which level of intervention is determined by level of risk, criminogenic needs are comprehensively identified, and effectively responded to – has been found to be most

effective in this regard (Andrews, et al., 1990; Andrews, Zinger, Hoge, Bonta, Gendreau, & Cullen, 1990; Bonta & Andrews, 2007; Lowenkamp & Latessa, 2004).

According to both the GPCSL perspective and the RNR model, how systems choose to respond to an individual's criminogenic needs, has a direct impact on their likelihood to recidivate (Andrews & Bonta, 2006; Andrews et al., 1990). As its name implies, in order to better understand the "psychology of criminal conduct," we must first understand that there are criminogenic factors that influence one's *general personality* and then "correct" by improving the *cognitive social learning* that occurs within those factors (Andrews & Bonta, 2006). In knowing this, policy makers and practitioners alike are in a position to gain the most effective outcomes by prioritizing the use of treatment programs that have been found to be effective in addressing the variables that contribute most to one's criminality (i.e., the "central eight") (Andrews et al., 1990).

For example, several meta-analyses reveal that from a research perspective the treatment programs that demonstrate to be the most effective in reducing delinquent behavior include programs such as those aimed at, improving a youth's process of social-learning and association (Andrews, Zinger et. al., 1990; Landenberger & Lipsey, 2005), at repairing the family dynamic (Piquero, Jennings, Diamond, Farrington, Tremblay, Welsh & Gonzalez, 2016a), at improving a youth's level of self-control (Piquero, Jennings, Farrington, Diamond, & Gonzalez, 2016b) and addressing their school-based problems (Wilson, Gottfredson, & Najaka, 2001). Of course what is noteworthy here, is that the studies examined within these meta-analyses exist because an attempt was made to evaluate the programs in question, meaning that somewhere in their creation these programs were established with the intent to meet certain objectives and is collecting (or

has collected) data/information that can be used to determine whether or not the services being provided are meeting said objectives. Merely having a program that aims to address a youth's criminogenic needs does not equate to implementing a program that has been shown to be effective in doing so, though it is a good start. Policymakers and practitioners should heed this note, as it is important to distinguish between the two to ensure that resources (both physical and financial) are being reserved for the most effective methods for reducing continued delinquency.

This matter of ensuring program integrity, according to Bonta and Andrews (2017), is one of the common barriers that exist in being able to fully adhere to the RNR model. Barriers that they summarize, in two categories: problems with assessment and issues with rehabilitation. Challenges with the former – such as resistance to acceptance and use of the tool, belief that the validity of the instrument is overestimated due to bias, and “inattention to the integrity of the assessment” – can all be addressed in two ways, (1) training and (2) monitoring (Bonta & Andrews, 2017, p. 244). By training staff on the purpose and use of a risk and needs assessment and monitoring that they are appropriately administering it and aiming services at the target areas identified by the assessment, then administration can help increase buy-in and ensure that the tool is being used as intended. If effectively used, then practitioners stand to gain a “roadmap,” if you will, for that youth's rehabilitation.

Once at this stage, practitioners then face those challenges associated with ensuring and maintaining the integrity of the treatment being offered. The solution for these barriers, are not as easy to address. Several limitations exist in this regard, such as issues with participant retention, inadequate (or no) data collection, absent objectives and

expected outcomes, and a lack of physical (i.e., professionals in the area who are qualified to conduct such an evaluation) and financial resources to accomplish said evaluations. To address these barriers, departments might consider some of the following solutions: (1) prioritize the hiring of a full time employee (or employees) whose sole job is to ensure the integrity of the programming being offered by the department, (2) contract with a credible professional on a periodic basis to ensure and preserve the quality of programming (3) partner with a local college or state university to help with ongoing evaluations, or (4) as suggested by Bonta and Andrews (2017), employ a validated actuarial “checklist” – such as the Correctional Program Assessment Inventory-2010 (CPAI-2010, Gendreau, Andrews, & Theriault, 2015) – that are meant to serve as a “measure of adherence to the RNR model” (p. 249).

It is clear, from the findings in this dissertation, that there is plenty of research to be conducted with regard to the use of risk and needs assessments in the arena of juvenile justice. Thus far the literature that has existed on juvenile risk and needs assessments has been largely limited to knowing that validated instruments exist in the field, meaning that there are tools that are available that can (to some degree) accurately predict risk to re-offend (or to be violent). What is lacking, however, and what this dissertation hopes to begin to address, is how the other half of these assessments are being used. Are they being used with the full RNR model in mind? Or, are they being overlooked and implemented how certain systems and departments see fit? Future research on risk and needs assessments should focus not just on establishing the predictive validity of these tools, but on the fidelity (i.e., proper assessment) and integrity of how these assessments are used (i.e., matching quality/effective treatment with youth needs), as well.



## **Jurisdictional-Level Influence on Placement Outcome**

The results associated with jurisdiction in this sample, provides partial support for the hypothesis put forth. Placement outcome does significantly vary between jurisdictions, however, none of the contextual-level factors examined in this dissertation – urbanization, border status, proportion minority, per-capita income, and average index crime rate – provide an explanation for this difference. Per the model of best fit, approximately 29% of the variation in placement outcome, can be attributed to jurisdiction, and that's while controlling for individual-level factors. This finding is parallel to the results seen by Britt (2000), who also found dispositional outcome (i.e., confinement and sentence length) to vary by jurisdiction, however measures of social disorganization, nor racial threat, nor crime control, served as an explanation for said difference.

Worth noting, is that despite their insignificant contribution to the variance seen in placement outcome, the direction of the odds ratios for the contextual-level factors examined in this dissertation (see Model 3, Study #2), do *partly* function in ways pursuant to those theories underlying their inquiry. For example, the likelihood of secure placement is 54% ( $p = .414$ ) higher for dual departments (i.e., jurisdictions that are responsible for youth that reside in both rural and urban areas) than for rural departments. This finding, albeit insignificant, does illustrate that dual departments are affirmatively responding – opting to securely place versus supervising within the community – to the increase in their population. Per social disorganization theory, such a response should be expected, as areas that are denser in population have been found to experience higher rates of crime (Park et al., 1925; Shaw & McKay, 1942). A jurisdiction's overall income

likewise functions as anticipated under this theory, in that the likelihood for secure placement is slightly less ( $-0.01\%$ ,  $p = .385$ ) for counties with a higher per-capita income.

The way Blalock (1967) would expect the system to respond (i.e., defending against a racial threat) can also be viewed in these results, though only for jurisdictions that have a higher percentage of Latinos ( $OR = 1.01$ ,  $p = .234$ ). The direction of this association did not appear to be true for jurisdictions with a higher percentage of African Americans (i.e.,  $.32\%$  less likely,  $p = .888$ ). Lastly, as per Packer's (1964) crime control model, the findings do show placement outcome to be (slightly and) positively influenced by higher rates of violent crime (i.e.,  $.08\%$  more likely to be confined,  $p = .491$ ). Property crime, on the other hand, does not appear to function in the same manner. As the average rate of property crime in a jurisdiction goes up, the likelihood for placement decreases (i.e.,  $.02\%$  less likely,  $p = .284$ ).

How these factors function aside (especially given that none were found to significantly contribute to the variance seen), it is important to focus on the fact that decisions to securely place a youth *do* significantly vary between jurisdictions. Meaning, there is more to be known about what department level factors contribute to the decision to locally confine. It is possible that the factors that explain this variation are more specific to the department (e.g., available resources) rather than the county at large. Available bed space, available programming, adequate staff, and financial resources, for instance, are all second-level factors that could potentially contribute to a jurisdiction's decision to confine. Future research seeking to explain variation in dispositional outcomes at the county level should focus on examining such factors, as second level

influence may be best explained by matters of practical application, rather than expected theoretical responses to delinquency/crime (e.g., racial threat or crime control).

Likewise, to consider is the complexity of examining multilevel factors in this regard. In this study, the term contextual-level was operationalized using several indicators that were meant to depict characteristics of a “jurisdiction.” A concept that is used to explain and discuss the area that falls under a department’s purview. As such, the term jurisdictional and contextual-level are used interchangeably throughout this document. However, if the level of measurement is more explicitly considered, then one is bound to notice that there are many levels nested within both terms – context and jurisdiction (e.g., youth within a jurisdiction, courts within a jurisdiction, the courtroom workgroup within that court). This means that future research on this matter should attempt to consider all levels that exist, as there are many more than two. Doing so would require investigators to disaggregate the various levels a youth passes through prior to their placement and would likely strengthen any estimates produced by the model.

## **Conclusion**

The goal of this dissertation was to investigate both individual and contextual (or jurisdictional)-level predictors of secure residential placement, for youth adjudicated to probation in Texas. Though prior studies have examined predictors of dispositional outcomes for youth, none have examined the role that actuarial assessments play in this regard. To a similar end, few have simultaneously examined individual and contextual-level factors, in a manner that accounts for jurisdictional clustering (Britt, 2000). By conducting two separate but related analyses, this dissertation aimed to address these voids in the literature.

Results from the model of best fit, show that Texas is no exception with regard to prioritizing legal factors in determining dispositional outcomes among youth. Whether a youth is detained prior to disposition has a demonstrable impact on the likelihood of local confinement. As such, attention should be given, by both researchers and practitioners alike, to the factors that influence the decision to detain. In doing so, departments will gain a better understanding at how/when detention is being used and whether it is being used in the most appropriate manner (e.g., socially and financially effective). As made evident by these results, if jurisdictions wish to minimize the number of youths placed in the deeper ends of their system, then minimizing the number of detentions, is the place to start.

The findings associated with a youth's level of risk, indicates that the majority of juvenile probation departments in the state are making a notable effort to adhere to the risk principle – in which the most restrictive level of intervention/services (i.e., confinement) are being reserved primarily for high risk youth. Prior to this dissertation, what was known about actuarial assessments, was largely limited to whether they carry predictive validity. This finding, and the subsequent finding on a youth's needs level, expands on this literature to inform on the matter of implementation. The magnitude associated with this effect, offers support to claim that once a youth's risk level has been established, it is being used as intended – to inform on level of intervention.

While the effect reported for a youth's needs level was expected, it introduced a new series of questions. If a youth's needs level can exist independently of a youth's risk level, then should the two be used in the same way? Does a youth *need* to be confined? Has confinement been shown to be successful in addressing a youth's needs? Given that

there is lack of support for the latter, practitioners should consider further exploring the purpose of confinement, as well as the most effective methods in addressing a youth's criminogenic needs.

Last, as jurisdiction was found to have a significant influence on the variation in placement outcome for youth across the state, it is important for future research to take said variation into consideration. Even if only examining the effect of individual-level factors, the results of this dissertation indicate that predictions estimated without consideration for level-2 variation run the risk of producing inefficient estimates. While none of the contextual-level factors examined in this dissertation offer an explanation for the variation seen between jurisdictions, the mere existence of significant variation calls for continued research into the departmental level factors that may be contributing to the differences in placement outcome seen between jurisdictions.

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## APPENDIX A: THE PACT

<b>DOMAIN 1: Record of Referrals Resulting in Diversion, Adjudication Withheld, Adjudication, or Deferred Prosecution</b>	
<i><b>Domain 1 Definitions:</b> Referrals, rather than offenses, are used to assess the persistence of re-offending by the youth. Referrals should be included in Domain 1 if either (1) they have a qualifying disposition or (2) they have no qualifying disposition but are less than 500 days old from the date of the referral. Qualifying dispositions include only referrals that resulted in diversion, adjudication withheld, adjudication, deferred prosecution or referral to adult court (regardless of whether successfully completed).</i>	
<b>1. Age at first offense:</b> <i>The age at the time of the offense for which the youth was referred to juvenile court for the first time on a non-traffic misdemeanor or felony.</i>	<input type="radio"/> Over 16 <input type="radio"/> 16 <input type="radio"/> 15 <input type="radio"/> 13 to 14 <input type="radio"/> 12 and Under
<i><b>Felony and misdemeanor referrals:</b> Items 2 and 3 are mutually exclusive and should add to the total number of referrals as defined in "Domain 1 Definitions," see above.</i>	
<b>2. Misdemeanor referrals:</b> <i>Total number of referrals, as defined in "Domain 1 Definitions," above, for which the most serious offense was a non-traffic misdemeanor.</i>	<input type="radio"/> None or one <input type="radio"/> Two <input type="radio"/> Three or four <input type="radio"/> Five or more
<b>3. Felony referrals:</b> <i>Total number of referrals, as defined in "Domain 1 Definitions," above, for which the most serious offense was for a felony offense.</i>	<input type="radio"/> None <input type="radio"/> One <input type="radio"/> Two <input type="radio"/> Three or more
<i><b>Against-person or weapon referrals:</b> Items 4, 5, and 6 are mutually exclusive and should add to the total number of referrals, as defined in "Domain 1 Definitions," see above, that involve an against-person or weapon offense, including sex offenses.</i>	
<b>4. Weapon referrals:</b> <i>Total number of referrals for which the most serious offense was a firearm/weapon charge or a weapon enhancement finding.</i>	<input type="radio"/> None <input type="radio"/> One or more
<b>5. Against-person misdemeanor referrals:</b> <i>Total number of referrals for which the most serious offense was an against-person misdemeanor – a misdemeanor involving threats, force, or physical harm to another person or sexual misconduct (assault, coercion, harassment, intimidation, etc.).</i>	<input type="radio"/> None <input type="radio"/> One <input type="radio"/> Two or more
<b>6. Against-person felony referrals:</b> <i>Total number of referrals involving force or physical harm to another person including sexual misconduct as defined by FDLE as violent felonies.</i>	<input type="radio"/> None <input type="radio"/> One or two <input type="radio"/> Three or more
<i><b>Sex offense referrals:</b> Items 7 and 8 are mutually exclusive and should add to the total number of referrals, as defined in "Domain 1 Definitions," see above, that involve a sex offense or sexual misconduct.</i>	
<b>7. Sexual misconduct misdemeanor referrals:</b> <i>Total number of referrals for which the most serious offense was a sexual misconduct misdemeanor, including obscene phone calls, indecent exposure, obscenity, pornography, or public indecency, or misdemeanors with sexual motivation.</i>	<input type="radio"/> None <input type="radio"/> One <input type="radio"/> Two or more
<b>8. Felony sex offense referrals:</b> <i>Total number of referrals for a felony sex offense or involving sexual motivation including carnal knowledge, child molestation, communication with minor for immoral purpose, incest, indecent exposure, indecent liberties, promoting pornography, rape, sexual misconduct, or voyeurism.</i>	<input type="radio"/> None <input type="radio"/> One <input type="radio"/> Two or more
<b>9. Confinements in secure detention where youth was held for at least 48 hours:</b> <i>Number of times the youth was held for at least 48 hours physically confined in a detention facility.</i>	<input type="radio"/> None <input type="radio"/> One <input type="radio"/> Two <input type="radio"/> Three or more
<b>10. Commitment orders where youth served at least one day confined under residential commitment:</b> <i>Total number of commitment orders and modification orders for which the youth served at least one day confined under residential commitment. A day served includes credit for time served.</i>	<input type="radio"/> None <input type="radio"/> One <input type="radio"/> Two or more
<b>11. Escapes:</b> <i>Total number of attempted or actual escapes that resulted in adjudication.</i>	<input type="radio"/> None <input type="radio"/> One <input type="radio"/> Two or more
<b>12. Pick Up Orders for failure-to-appear in court or absconding supervision:</b> <i>Total number of failures-to-appear in court or absconding supervision that resulted in a pick up order being issued. Exclude failure-to-appear warrants for non-criminal matters.</i>	<input type="radio"/> None <input type="radio"/> One <input type="radio"/> Two or more

  

<b>DOMAIN 2: Gender</b>
Gender is auto-populated from JJIS.

DOMAIN 3A: School History	
1. Youth is a special education student or has a formal diagnosis of a special education need: (check all that apply.)	<input type="checkbox"/> No special education need <input type="checkbox"/> Learning                      Mental retardation <input type="checkbox"/> Behavioral                    ADHD/ADD
2. History of expulsions and out of school suspensions since the first grade:	<input type="checkbox"/> No expel/suspend <input type="checkbox"/> 4 or 5 <input type="checkbox"/> 1 expel/suspend <input type="checkbox"/> 6 or 7 <input type="checkbox"/> 2 or 3 <input type="checkbox"/> More than 7
3. Age at first expulsion or suspension:	<input type="checkbox"/> No expulsions <input type="checkbox"/> 14 to 15 years old <input type="checkbox"/> 5 to 9 years old <input type="checkbox"/> 16 to 18 years old <input type="checkbox"/> 10 to 13 years old
4. Youth has been enrolled in a community school during the last 6 months, regardless of attendance:	<input type="checkbox"/> No, graduated/GED and not attending school, do not complete Domain 3B <input type="checkbox"/> No, dropped-out or expelled for more than six months, do not complete Domain 3B <input type="checkbox"/> Yes, must complete Domain 3B
DOMAIN 3B: Current School Status	
<input type="checkbox"/> For Initial Assessments, current is the most recent term in last 6 months. <input type="checkbox"/> For Re-assessments and Final Assessments, current is the last 4 weeks in the most recent term.	
1. Youth's current school enrollment status, regardless of attendance: If the youth is in home school as a result of being expelled or dropping out, check expelled or dropped out; otherwise check enrolled, if in home school.	<input type="checkbox"/> Graduated/GED <input type="checkbox"/> Suspended <input type="checkbox"/> Enrolled full-time <input type="checkbox"/> Dropped out <input type="checkbox"/> Enrolled part-time <input type="checkbox"/> Expelled
2. Type of school in which youth is enrolled:  Name of School	<input type="checkbox"/> Public academic <input type="checkbox"/> Private academic <input type="checkbox"/> Vocational <input type="checkbox"/> Home school <input type="checkbox"/> Alternative <input type="checkbox"/> College <input type="checkbox"/> GED program <input type="checkbox"/> Other _____
3. Youth believes there is value in getting an education:	<input type="checkbox"/> Believes getting an education is of value <input type="checkbox"/> Somewhat believes education is of value <input type="checkbox"/> Does not believe education is of value
4. Youth believes school provides an encouraging environment for him or her:	<input type="checkbox"/> Believes school is encouraging <input type="checkbox"/> Somewhat believes school is encouraging <input type="checkbox"/> Does not believe school is encouraging
5. Teachers, staff, or coaches the youth likes or feels comfortable talking with:	<input type="checkbox"/> Not close to any teachers, staff, or coaches <input type="checkbox"/> Close to 1 <input type="checkbox"/> Close to 3 <input type="checkbox"/> Close to 2 <input type="checkbox"/> Close to 4 or more
6. Youth's involvement in school activities during most recent term: School leadership; social service clubs; music, dance, drama, art; athletics; other extracurricular activities.	<input type="checkbox"/> Involved in 2 or more activities <input type="checkbox"/> Involved in 1 activity <input type="checkbox"/> Interested but not involved in any activities <input type="checkbox"/> Not interested in school activities
7. Youth's conduct in the most recent term: Fighting or threatening students; threatening teachers/staff; overly disruptive behavior; drug/alcohol use; crimes (e.g., theft, vandalism); lying, cheating, dishonesty.	<input type="checkbox"/> Recognition for good behavior <input type="checkbox"/> No problems with school conduct <input type="checkbox"/> Problems reported by teachers <input type="checkbox"/> Problem calls to parents <input type="checkbox"/> Calls to police
8. Number of expulsions and suspensions in the most recent term:	<input type="checkbox"/> No expel/suspend <input type="checkbox"/> 2 or 3 <input type="checkbox"/> 1 expel/suspend <input type="checkbox"/> More than 3
9. Youth's attendance in the most recent term: Partial-day absence means attending majority of classes and missing minority. Full-day absence means missing majority of classes. Habitual truancy as defined in FS includes 15 unexcused absences in a 90 day period.	<input type="checkbox"/> Good attendance; few excused absences <input type="checkbox"/> No unexcused absences <input type="checkbox"/> Some partial-day unexcused absences <input type="checkbox"/> Some full-day unexcused absences <input type="checkbox"/> Habitual truant
10. Youth's academic performance in the most recent school term:	<input type="checkbox"/> Honor student (mostly As) <input type="checkbox"/> Above 3.0 (mostly As and Bs) <input type="checkbox"/> 2.0 to 3.0 (mostly Bs and Cs, no Fs) <input type="checkbox"/> 1.0 to 2.0 (mostly Cs and Ds, some Fs) <input type="checkbox"/> Below 1.0 (some Ds and mostly Fs)



11. Interviewer's assessment of likelihood the youth will stay in and graduate from high school or an equivalent vocational school:	<input type="radio"/> Very likely to stay in school and graduate <input type="radio"/> Uncertain if youth will stay and graduate <input type="radio"/> Not very likely to stay and graduate
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DOMAIN 4A: Historic Use of Free Time	
1. History of structured recreational activities within the past 5 years: <i>Youth has participated in structured and supervised pro-social community activities, such as religious group/church, community group, cultural group, club, athletics, or other community activities.</i>	<input type="radio"/> Involved in 2 or more structured activities <input type="radio"/> Involved in 1 structured activity <input type="radio"/> Never involved in structured activities
2. History of unstructured pro-social recreational activities within the past 5 years: <i>Youth has engaged in activities that positively occupy the youth's time, such as reading, hobbies, etc.</i>	<input type="radio"/> Involved in 2 or more pro-social unstructured activities <input type="radio"/> Involved in 1 pro-social unstructured activity <input type="radio"/> Never involved in pro-social unstructured activities
DOMAIN 4B: Current Use of Free Time	
<input type="radio"/> For Initial Assessments, current means behaviors during the last 6 months. <input type="radio"/> For Re-assessments and Final Assessments, current means behaviors during the last 4 weeks.	
1. Current interest and involvement in structured recreational activities: <i>Youth participates in structured and supervised pro-social community activities, such as religious group/church, community group, cultural group, club, athletics, or other community activity.</i>	<input type="radio"/> Currently involved in 2 or more structured activities <input type="radio"/> Currently involved in 1 structured activity <input type="radio"/> Currently interested but not involved <input type="radio"/> Currently not interested in any structured activities
2. Types of structured recreational activities in which youth currently participates: <i>(check all that apply.)</i>	<input type="checkbox"/> None <input type="checkbox"/> Community/cultural group <input type="checkbox"/> Hobby group or club <input type="checkbox"/> Athletics <input type="checkbox"/> Religious group/church <input type="checkbox"/> Volunteer organization
3. Current interest and involvement in pro-social unstructured recreational activities: <i>Youth engages in activities that positively occupy his or her time, such as reading, hobbies, etc.</i>	<input type="radio"/> Currently involved in 2 or more pro-social unstructured activities <input type="radio"/> Currently involved in 1 pro-social unstructured activity <input type="radio"/> Currently interested but not involved <input type="radio"/> Not interested in any pro-social unstructured activities

DOMAIN 5A: Employment History	
1. History of employment:	<input type="radio"/> Too young for employment consideration <input type="radio"/> Never been employed <input type="radio"/> Has been employed
2. History of successful employment:	<input type="radio"/> Never successfully employed <input type="radio"/> Has been successfully employed
3. History of problems while employed:	<input type="radio"/> Never fired or quit because of problems <input type="radio"/> Fired or quit because of poor performance <input type="radio"/> Fired or quit because he or she could not get along with employer or coworkers
4. History of positive personal relationship(s) with past employer(s) or adult coworker(s):	<input type="radio"/> Never had any positive relationships <input type="radio"/> Had 1 positive relationship <input type="radio"/> Had 2 or more positive relationships
DOMAIN 5B: Current Employment	
<input type="radio"/> For Initial Assessments, current means behaviors during the last 6 months. <input type="radio"/> For Re-assessments and Final Assessments, current means behaviors during the last 4 weeks.	
1. Understanding of what is required to maintain a job:	<input type="radio"/> Lacks knowledge of what it takes to maintain a job <input type="radio"/> Has knowledge of abilities to maintain a job <input type="radio"/> Has demonstrated ability to maintain a job
2. Current interest in employment:	<input type="radio"/> Currently employed <input type="radio"/> Not employed but highly interested in employment <input type="radio"/> Not employed but somewhat interested <input type="radio"/> Not employed and not interested in employment <input type="radio"/> Too young for employment consideration
3. Current employment status:	<input type="radio"/> Not currently employed <input type="radio"/> Employment is currently going well <input type="radio"/> Having problems with current employment
4. Current positive personal relationship(s) with employer(s) or adult coworker(s):	<input type="radio"/> Not currently employed <input type="radio"/> Employed but no positive relationships <input type="radio"/> At least 1 positive relationship

DOMAIN 6A: History of Relationships	
1. History of positive adult non-family relationships not connected to school or employment: Adults, who are not teachers and not part of the youth's family, who can provide support and model pro-social behavior, such as religious leader, club member, community person, etc.	<input type="radio"/> No positive adult relationships <input type="radio"/> 1 positive adult relationship <input type="radio"/> 2 positive adult relationships <input type="radio"/> 3 or more positive adults relationships
2. History of anti-social friends/companions: Anti-social peers are youths hostile to or disruptive of the legal social order; youths who violate the law and the rights of others and other delinquent youth. (check all that apply.)	<input type="checkbox"/> Never had consistent friends or companions <input type="checkbox"/> Had pro-social friends <input type="checkbox"/> Had anti-social friends <input type="checkbox"/> Been a gang member/associate
DOMAIN 6B: Current Relationships	
<input type="radio"/> For Initial Assessments, current means behaviors during the last 6 months. <input type="radio"/> For Re-assessments and Final Assessments, current means behaviors during the last 4 weeks.	
1. Current positive adult non-family relationships not connected to school or employment: Adults, who are not teachers and not part of the youth's family, who can provide support and model pro-social behavior, such as religious leader, club member, community person, etc.	<input type="radio"/> No positive adult relationships <input type="radio"/> 1 positive adult relationship <input type="radio"/> 2 positive adult relationships <input type="radio"/> 3 or more positive adults relationships
2. Current pro-social community ties: Youth feels there are people in his or her community who discourage him or her from getting into trouble or are willing to help the youth.	<input type="radio"/> No pro-social community ties <input type="radio"/> Some pro-social community ties <input type="radio"/> Has strong pro-social community ties
3. Current friends/companions youth actually spends time with: (check all that apply.)	<input type="checkbox"/> No consistent friends or companions <input type="checkbox"/> Pro-social friends <input type="checkbox"/> Anti-social friends <input type="checkbox"/> Gang member/associate
4. Currently in a "romantic," intimate, or sexual relationship:	<input type="radio"/> Not romantically involved with anyone <input type="radio"/> Romantically involved with a pro-social person <input type="radio"/> Romantically involved with an anti-social person/criminal
5. Currently admires/emulates anti-social peers:	<input type="radio"/> Does not admire, emulate anti-social peers <input type="radio"/> Somewhat admires, emulates anti-social peers <input type="radio"/> Admires, emulates anti-social peers
6. Current resistance to anti-social peer influence:	<input type="radio"/> Does not associate with anti-social peers <input type="radio"/> Usually resists going along with anti-social peers <input type="radio"/> Rarely resists goes along with anti-social peers <input type="radio"/> Leads anti-social peers

DOMAIN 7A: Family History	
1. History of court-ordered or DCF voluntary out-of-home and shelter care placements exceeding 30 days: <i>Exclude DJJ residential commitments.</i>	<input type="radio"/> No out-of-home placements exceeding 30 days <input type="radio"/> 1 out-of-home placement <input type="radio"/> 2 out-of-home placements <input type="radio"/> 3 or more out-of-home placements
2. History of running away or getting kicked out of home: <i>Include times the youth did not voluntarily return within 24 hours, and include incidents not reported by or to law enforcement.</i>	<input type="radio"/> No history of running away/being kicked out <input type="radio"/> 1 instance of running away/kicked out <input type="radio"/> 2 to 3 instances of running away/kicked out <input type="radio"/> 4 to 5 instances of running away/kicked out <input type="radio"/> Over 5 instances of running away/kicked out
3. History of petitions filed: <i>Include all petitions regardless of whether the petition was granted. (check all that apply.)</i>	<input type="checkbox"/> No petitions filed <input type="checkbox"/> CINS/FINS <input type="checkbox"/> Dependency
4. History of jail/imprisonment of persons who were ever involved in the household for at least 3 months: <i>(check all that apply.)</i>	<input type="checkbox"/> No jail/imprisonment history in family <input type="checkbox"/> Mother/female caretaker <input type="checkbox"/> Father/male caretaker <input type="checkbox"/> Older sibling <input type="checkbox"/> Younger sibling <input type="checkbox"/> Other member
5. Youth living under any adult supervision. <i>Adult supervision must be someone who is responsible for the youth's welfare, either legally or with parental consent.</i>	<input type="radio"/> No, living with peers without adult supervision, do not complete Domain 7B <input type="radio"/> No, living alone without adult supervision, do not complete Domain 7B <input type="radio"/> No, transient without adult supervision, do not complete Domain 7B <input type="radio"/> Yes, living under adult supervision, must complete Domain 7B
DOMAIN 7B: Current Living Arrangements	
<input type="radio"/> For Initial Assessments, current means behaviors during the last 6 months. <input type="radio"/> For Re-assessments and Final Assessments, current means behaviors during the last 4 weeks.	
1. All Persons with whom youth is currently living: <i>(check all that apply.)</i>	<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> Living alone  <input type="checkbox"/> Biological mother  <input type="checkbox"/> Non-biological mother  <input type="checkbox"/> Older sibling(s)  <input type="checkbox"/> Grandparent(s)  <input type="checkbox"/> Long-term parental partner(s)  <input type="checkbox"/> Youth's romantic partner  <input type="checkbox"/> Foster/group home               </div> <div style="width: 48%;"> <input type="checkbox"/> Transient (street, moving around)  <input type="checkbox"/> Biological father  <input type="checkbox"/> Non-biological father  <input type="checkbox"/> Younger sibling(s)  <input type="checkbox"/> Other relative(s)  <input type="checkbox"/> Short-term parental partner(s)  <input type="checkbox"/> Youth's child  <input type="checkbox"/> Youth's friends               </div> </div>
2. Annual combined income of youth and family:	<input type="radio"/> Under \$15,000 <input type="radio"/> \$15,000 to \$34,999 <input type="radio"/> \$35,000 to \$49,999 <input type="radio"/> \$50,000 and over
3. Jail/imprisonment history of persons who are currently involved with the household: <i>(check all that apply.)</i>	<input type="checkbox"/> No one with history of being in jail/prison <input type="checkbox"/> Mother/female caretaker <input type="checkbox"/> Father/male caretaker <input type="checkbox"/> Older sibling <input type="checkbox"/> Younger sibling <input type="checkbox"/> Other member
4. Problem history of parents who are currently involved with the household: <i>(check all that apply.)</i>	<input type="checkbox"/> No problem history of parents in household <input type="checkbox"/> Parental alcohol problem history <input type="checkbox"/> Parental drug problem history <input type="checkbox"/> Parental physical health problem history <input type="checkbox"/> Parental mental health problem history <input type="checkbox"/> Parental employment problem history

5. Problem history of siblings who are currently involved with the household: (check all that apply.)	<input type="checkbox"/> No siblings currently in household <input type="checkbox"/> No problem history of siblings in household <input type="checkbox"/> Sibling alcohol problem history <input type="checkbox"/> Sibling drug problem history <input type="checkbox"/> Sibling physical health problem history <input type="checkbox"/> Sibling mental health problem history <input type="checkbox"/> Sibling employment problem history
6. Support network for family: Extended family and/or family friends who can provide additional support to the family.	<input type="radio"/> No support network <input type="radio"/> Some support network <input type="radio"/> Strong support network
7. Family willingness to help support youth:	<input type="radio"/> Consistently willing to support youth <input type="radio"/> Inconsistently willing to support youth <input type="radio"/> Little or no willingness to support youth <input type="radio"/> Hostile, berating, and/or belittling of youth
8. Family provides opportunities for youth to participate in family activities and decisions affecting the youth:	<input type="radio"/> No opportunities for involvement provided <input type="radio"/> Some opportunities for involvement provided <input type="radio"/> Opportunities for involvement provided
9. Youth has run away or been kicked out of home: Include times youth did not voluntarily return within 24 hours, and include incidents not reported by or to law enforcement.	<input type="radio"/> Has not run away/kicked out of home <input type="radio"/> Has run away/kicked out of home <input type="radio"/> Is currently kicked out of home or is a runaway
10. Family member(s) youth feels close to or has good relationship with: (check all that apply.)	<input type="checkbox"/> Does not feel close to any family member <input type="checkbox"/> Feels close to mother/female caretaker <input type="checkbox"/> Feels close to father/male caretaker <input type="checkbox"/> Feels close to male sibling <input type="checkbox"/> Feels close to female sibling <input type="checkbox"/> Feels close to extended family
11. Level of conflict between parents, between youth and parents, among siblings:	<input type="radio"/> Some conflict that is well managed <input type="radio"/> Verbal intimidation, yelling, heated arguments <input type="radio"/> Threats of physical abuse <input type="radio"/> Domestic violence: physical/sexual abuse
12. Parental supervision: Parents know whom youth is with, when youth will return, where youth is going, and what youth is doing.	<input type="radio"/> Consistent good supervision <input type="radio"/> Sporadic supervision <input type="radio"/> Inadequate supervision
13. Parental authority and control:	<input type="radio"/> Youth usually obeys and follows rules <input type="radio"/> Youth sometimes obeys or obeys some rules <input type="radio"/> Youth consistently disobeys and/or is hostile
14. Consistent appropriate punishment for bad behavior: Appropriate means clear communication, timely response, and response proportionate to conduct.	<input type="radio"/> Consistently appropriate punishment <input type="radio"/> Consistently overly severe punishment <input type="radio"/> Consistently insufficient punishment <input type="radio"/> Inconsistent or erratic punishment
15. Consistent appropriate rewards for good behavior: Appropriate means clear communication, timely response, and response proportionate to conduct; rewards mean affection, praise, etc.	<input type="radio"/> Consistently appropriate rewards <input type="radio"/> Consistently overly indulgent/overly protective <input type="radio"/> Consistently insufficient rewards <input type="radio"/> Inconsistent or erratic rewards
16. Parental characterization of youth's anti-social behavior:	<input type="radio"/> Disapproves of youth's anti-social behavior <input type="radio"/> Minimizes, denies, justifies, excuses behavior, or blames others/circumstances <input type="radio"/> Accepts youth's anti-social behavior as okay <input type="radio"/> Proud of youth's anti-social behavior



DOMAIN 8A: Alcohol and Drug History	
<p><i>Disrupted functioning involves having a problem in any of these five life areas: education, family conflict, peer relationships, crime, or health, and usually indicates treatment is warranted. Use that contributes to criminal behavior typically precipitates the commission of a crime; there is evidence or reason to believe the youth's criminal activity is related to alcohol/drug use.</i></p>	
<p>1. History of Youth's alcohol use: (check all that apply.)</p>	<p><input type="checkbox"/> No use of alcohol  <input type="checkbox"/> Past use of alcohol  <input type="checkbox"/> Alcohol disrupted education  <input type="checkbox"/> Alcohol caused family conflict  <input type="checkbox"/> Alcohol interfered with keeping pro-social friends  <input type="checkbox"/> Alcohol caused health problems  <input type="checkbox"/> Alcohol contributed to criminal behavior  <input type="checkbox"/> Youth needed increasing amounts of alcohol to achieve same level of intoxication or high  <input type="checkbox"/> Youth experienced withdrawal problems</p>
<p>2. History of Youth's drug use: (check all that apply.)</p>	<p><input type="checkbox"/> No past drug use  <input type="checkbox"/> Past use of drugs  <input type="checkbox"/> Drugs disrupted education  <input type="checkbox"/> Drugs caused family conflict  <input type="checkbox"/> Drugs interfered with keeping pro-social friends  <input type="checkbox"/> Drugs caused health problems  <input type="checkbox"/> Drugs contributed to criminal behavior  <input type="checkbox"/> Youth needed increasing amounts of drugs to achieve same level of intoxication or high  <input type="checkbox"/> Youth experienced withdrawal problems</p>
<p>3. History of referrals for drug/alcohol assessment:</p>	<p><input type="radio"/> Never referred for drug/alcohol assessment  <input type="radio"/> Referred but never assessed  <input type="radio"/> Diagnosed as no problem  <input type="radio"/> Diagnosed as abuse  <input type="radio"/> Diagnosed as dependent/addicted</p>
<p>4. History of attending drug/alcohol education classes for an drug/alcohol problem:</p>	<p><input type="radio"/> Never attended drug/alcohol education classes  <input type="radio"/> Voluntarily attended drug/alcohol education classes  <input type="radio"/> Attended classes by parent, school, or other agency request  <input type="radio"/> Attended classes at court direction</p>
<p>5. History of participating in drug/alcohol treatment program:</p>	<p><input type="radio"/> Never participated in treatment program  <input type="radio"/> Participated once in treatment program  <input type="radio"/> Participated several times in treatment programs</p>
<p>6. Youth is currently using alcohol or drugs:</p> <ul style="list-style-type: none"> <li>• For Initial Assessments, current means within the last six months.</li> <li>• For Re-assessments and Final Assessments, current means within the last four weeks.</li> </ul>	<p><input type="radio"/> No, do not complete Domain 8B  <input type="radio"/> Yes, must complete domain 8B</p>

DOMAIN 8B: Current Alcohol and Drugs	
<p><input type="radio"/> For Initial Assessments, current means behaviors during the last 6 months.</p> <p><input type="radio"/> For Re-assessments and Final Assessments, current means behaviors during the last 4 weeks.</p>	
1. Youth's Alcohol use: (check all that apply.)	<input type="checkbox"/> Not currently using alcohol <input type="checkbox"/> Currently using alcohol <input type="checkbox"/> Alcohol disrupts education <input type="checkbox"/> Alcohol causes family conflict <input type="checkbox"/> Alcohol interferes with keeping pro-social friends <input type="checkbox"/> Alcohol causes health problems <input type="checkbox"/> Alcohol contributes to criminal behavior <input type="checkbox"/> Youth needs increasing amounts of alcohol to achieve same level of intoxication or high <input type="checkbox"/> Youth experiences withdrawal problems
2. Youth's Drug use: (check all that apply.)	<input type="checkbox"/> Not currently using drugs <input type="checkbox"/> Currently using drugs <input type="checkbox"/> Drugs disrupts education <input type="checkbox"/> Drugs causes family conflict <input type="checkbox"/> Drugs interferes with keeping pro-social friends <input type="checkbox"/> Drugs causes health problems <input type="checkbox"/> Drugs contributes to criminal behavior <input type="checkbox"/> Youth needs increasing amounts of drugs to achieve same level of intoxication or high <input type="checkbox"/> Youth experiences withdrawal problems
3. Type(s) of drugs used: (check all that apply.)	<input type="checkbox"/> No current drug use <input type="checkbox"/> Marijuana/Hashish <input type="checkbox"/> Amphetamines (Meth/uppers/speed/ecstasy) <input type="checkbox"/> Cocaine (crack/rock) <input type="checkbox"/> Cocaine (coke) <input type="checkbox"/> Heroin <input type="checkbox"/> Inhalants (Glue/Gasoline) <input type="checkbox"/> Barbiturates (Tuinal/Seconal/downers) <input type="checkbox"/> Tranquilizers/sedatives (Valium/Libnum/Dalmane/Ketamine) <input type="checkbox"/> Hallucinogens (LSD/Acid/Mushrooms/GHB) <input type="checkbox"/> Phencyclidine (PCP/Angel Dust) <input type="checkbox"/> Other opiates (Dilaudid/Demerol/Percodan/Codeine/ Oxycontin) <input type="checkbox"/> Other Drugs (Specify _____)
4. Current drug/alcohol treatment program participation:	<input type="radio"/> Alcohol/drug treatment not warranted <input type="radio"/> Not currently attending needed treatment program <input type="radio"/> Currently attending treatment program <input type="radio"/> Successfully completed treatment program

DOMAIN 9A: Mental Health History	
1. <b>History of suicidal ideation:</b> Include any previous thoughts, threats, plans and attempts even if youth indicates they were manipulative or there was no intent. (Check all that apply.)	<input type="checkbox"/> Has never had serious thoughts about suicide <input type="checkbox"/> Has had serious thoughts about suicide <input type="checkbox"/> Has made a plan to commit suicide. If yes, describe _____ <input type="checkbox"/> Has attempted to commit suicide. If yes, describe attempts and dates _____ <input type="checkbox"/> Feels life is not worth living—no hope for future <input type="checkbox"/> Knows someone well who has committed suicide. If yes, who, when and how _____ <input type="checkbox"/> Engages in self-mutilating behavior
<i>For abuse and neglect, include suspected incidents of abuse, including those disclosed by youth, whether or not reported or substantiated, but exclude reports of abuse/neglect investigated but proven to be false.</i>	
2. <b>History of violence/physical abuse:</b> Include suspected incidents of abuse, whether or not substantiated, but exclude reports proven to be false. (check all that apply.)	<input type="checkbox"/> Not a victim of violence/physical abuse <input type="checkbox"/> Victim of violence/physical abuse at home <input type="checkbox"/> Victim of violence/physical abuse in a foster/group home <input type="checkbox"/> Victimized by family member <input type="checkbox"/> Victimized by someone outside the family <input type="checkbox"/> Attacked with a weapon
3. <b>History of witnessing violence:</b> (check all that apply.)	<input type="checkbox"/> Has not witnessed violence <input type="checkbox"/> Has witnessed violence at home <input type="checkbox"/> Has witnessed violence in a foster/group home <input type="checkbox"/> Has witnessed violence in the community <input type="checkbox"/> Family member killed as a result of violence
4. <b>History of sexual abuse/rape:</b> Include suspected incidents of abuse if disclosed by youth, whether or not reported or substantiated, but exclude reports investigated but proven to be false. (check all that apply.)	<input type="checkbox"/> Not a victim of sexual abuse/rape <input type="checkbox"/> Sexually abused/raped by family member <input type="checkbox"/> Sexually abused/raped by someone outside the family
5. <b>History of being a victim of neglect:</b> Include suspected incidents of neglect, whether or not substantiated, but exclude reports proven to be false.	<input type="radio"/> Not a victim of neglect <input type="radio"/> Victim of neglect
6. <b>History of ADD/ADHD:</b> Confirmed by a professional in the social service/healthcare field.	<input type="radio"/> No history of ADD/ADHD <input type="radio"/> Diagnosed with ADD/ADHD <input type="radio"/> Only ADD/ADHD medication prescribed <input type="radio"/> Only ADD/ADHD treatment prescribed <input type="radio"/> ADD/ADHD medication and treatment prescribed
7. <b>History of mental health problems:</b> Such as schizophrenia, bi-polar, mood, thought, personality, and adjustment disorders. Exclude conduct disorder, oppositional defiant disorder, substance abuse, and ADD/ADHD. Confirmed by a professional in the social service/healthcare field.	<input type="radio"/> No history of mental health problem(s) <input type="radio"/> Past history of mental health problem(s) diagnosis (more than six months ago) <input type="radio"/> Diagnosed with mental health problem(s) <input type="radio"/> Only mental health medication prescribed. If yes, list _____ <input type="radio"/> Only mental health treatment prescribed <input type="radio"/> Mental health medication and treatment prescribed
8. <b>History of Anger or Irritability</b>	<input type="radio"/> No history of anger/irritability <input type="radio"/> History of occasional feelings of anger/irritability <input type="radio"/> History of consistent feelings of anger/irritability <input type="radio"/> History of aggressive reactions to feelings of anger/irritability



9. History of Depression/Anxiety	<input type="radio"/> No history of depression/anxiety <input type="radio"/> History of occasional feelings of depression/anxiety <input type="radio"/> History of consistent feelings of depression/anxiety <input type="radio"/> History of impairment in everyday tasks due to depression/anxiety
10. History of Somatic Complaints: <i>Bodily or physical discomforts associated with distress, such as stomachaches or headaches.</i>	<input type="radio"/> No history of somatic complaints <input type="radio"/> History of one or two somatic complaints <input type="radio"/> History of three or four somatic complaints <input type="radio"/> History of 5 or more somatic complaints
11. History of Thought Disturbance:	<input type="radio"/> No unusual thoughts or beliefs <input type="radio"/> Presence of hallucinations (auditory or visual) <input type="radio"/> Presence of beliefs that the youth is controlled by others
12. History of Traumatic Experience: <i>Lifetime exposure to events such as rape, abuse or observed violence, including dreams or flashbacks.</i>	<input type="radio"/> No presence of traumatic event <input type="radio"/> History of traumatic event <input type="radio"/> History of flashbacks to traumatic event
13. Currently has health insurance:	<input type="radio"/> No health insurance <input type="radio"/> Public insurance <input type="radio"/> Private insurance
14. Current mental health problem status: <i>For Initial Assessments, current means within the last six months.</i> <i>For Re-assessments and Final Assessments, current means within the last four weeks.</i>	<input type="radio"/> No current mental health problem(s), do not complete Domain 9B <input type="radio"/> Current mental health problem(s), must complete Domain 9B

DOMAIN 9B: Current Mental Health	
<input type="checkbox"/> For Initial Assessments, current means behaviors during the last 6 months. <input type="checkbox"/> For Re-assessments and Final Assessments, current means behaviors during the last 4 weeks.	
1. <b>Current suicidal ideation:</b> Include any previous thoughts, threats, plans and attempts even if youth indicates they were manipulative or there was no intent. (check all that apply)	<input type="checkbox"/> Has never thought about suicide <input type="checkbox"/> Has had serious thoughts about suicide <input type="checkbox"/> Has made a plan to commit suicide. If yes, describe _____ <input type="checkbox"/> Has attempted to commit suicide. If yes, describe attempts and dates _____ <input type="checkbox"/> Feels life is not worth living—no hope for future <input type="checkbox"/> Knows someone well who has committed suicide. If yes, who, when and how _____ <input type="checkbox"/> Engages in self-mutilating behavior _____
2. <b>Currently diagnosed with ADD/ADHD:</b> Confirmed by a professional in the social service/healthcare field. Type of medication: _____	<input type="checkbox"/> No ADD/ADHD diagnosis <input type="checkbox"/> No ADD/ADHD medication currently prescribed <input type="checkbox"/> Currently taking ADD/ADHD medication <input type="checkbox"/> ADD/ADHD medication currently prescribed, but not taking
3. <b>Mental health treatment currently prescribed excluding ADD/ADHD treatment:</b>	<input type="checkbox"/> No current mental health problem <input type="checkbox"/> No mental health treatment currently prescribed <input type="checkbox"/> Attending mental health treatment <input type="checkbox"/> Treatment currently prescribed, but not attending
4. <b>Mental health medication currently prescribed excluding ADD/ADHD medication:</b> Type of medication: _____	<input type="checkbox"/> No current mental health problem <input type="checkbox"/> No mental health medication currently prescribed <input type="checkbox"/> Currently taking mental health medication <input type="checkbox"/> Mental health medication currently prescribed, but not taking
5. <b>Mental health problems currently interfere in working with the youth:</b>	<input type="checkbox"/> No current mental health problem <input type="checkbox"/> Mental health problem(s) do not interfere in work with youth <input type="checkbox"/> Mental health problem(s) interfere in work with youth

DOMAIN 10: Attitudes/Behaviors	
<input type="radio"/> For Initial Assessments, current means behaviors during the last 6 months. <input type="radio"/> For Re-assessments and Final Assessments, current means behaviors during the last four weeks.	
1. Primary emotion when committing crime(s):	<input type="radio"/> Nervous, afraid, worried, ambivalent, uncertain, or indecisive <input type="radio"/> Hyper, excited, or stimulated <input type="radio"/> Unconcerned or indifferent <input type="radio"/> Confident or brags about not getting caught
2. Primary purpose for committing crime(s) within the last 6 months:	<input type="radio"/> Anger / Revenge <input type="radio"/> Impulse <input type="radio"/> Sexual desire <input type="radio"/> Money or material gain, including drugs <input type="radio"/> Excitement, amusement, or fun <input type="radio"/> Peer status, acceptance, or attention
3. Optimism: Youth talks about future in positive way with plans or aspirations of a better life that could include employment, education, raising a family, travel, or other pro-social life goals.	<input type="radio"/> High aspirations: sense of purpose, commitment to better life <input type="radio"/> Normal aspirations: some sense of purpose <input type="radio"/> Low aspirations: little sense of purpose or plans for better life <input type="radio"/> Believes nothing matters; he or she will be dead before long
4. Impulsive; acts before thinking:	<input type="radio"/> Uses self-control; usually thinks before acting <input type="radio"/> Some self-control; sometimes thinks before acting <input type="radio"/> Impulsive; often acts before thinking <input type="radio"/> Highly Impulsive; usually acts before thinking
5. Belief in control over anti-social behavior:	<input type="radio"/> Believes he or she can avoid/stop anti-social behavior <input type="radio"/> Somewhat believes anti-social behavior is controllable <input type="radio"/> Believes his or her anti-social behavior is out of his or her control
6. Empathy, remorse, sympathy, or feelings for the victim(s) of criminal behavior:	<input type="radio"/> Has empathy for his or her victim(s) <input type="radio"/> Has some empathy for his or her victim(s) <input type="radio"/> Does not have empathy for his or her victim(s)
7. Respect for property of others:	<input type="radio"/> Respects property of others <input type="radio"/> Respects personal property but not publicly accessible property: "It's not hurting anybody." <input type="radio"/> Conditional respect for personal property: "If they are stupid enough to leave it out, they deserve losing it." <input type="radio"/> No respect for property: "If I want something, it should be mine."
8. Respect for authority figures:	<input type="radio"/> Respects most authority figures <input type="radio"/> Does not respect authority figures, and may resent some <input type="radio"/> Resents most authority figures <input type="radio"/> Defies or is hostile toward most authority figures
9. Attitude toward responsible law abiding behavior:	<input type="radio"/> Abides by conventions/values <input type="radio"/> Believes conventions/values sometimes apply to him or her <input type="radio"/> Does not believe conventions/values apply to him or her <input type="radio"/> Resents or is hostile toward responsible behavior
10. Accepts responsibility for anti-social behavior:	<input type="radio"/> Accepts responsibility for anti-social behavior <input type="radio"/> Minimizes, denies, justifies, excuses, or blames others <input type="radio"/> Accepts anti-social behavior as okay <input type="radio"/> Proud of anti-social behavior
11. Youth's belief in successfully meeting conditions of court supervision:	<input type="radio"/> Believes he or she will be successful <input type="radio"/> Unsure if he or she will be successful <input type="radio"/> Does not believe he or she will be successful

DOMAIN 11: Aggression	
Items 1 through 4: O For Initial Assessments, rate items based on behavior during the last 6 months. O For Re-assessments and Final Assessments, rate items based on behavior during the last 4 weeks.	
1. Tolerance for frustration:	<input type="radio"/> Rarely gets upset over small things or has temper tantrums <input type="radio"/> Sometimes gets upset over small things or has temper tantrums <input type="radio"/> Often gets upset over small things or has temper tantrums
2. Hostile interpretation of actions and intentions of others in a common non-confrontational setting:	<input type="radio"/> Primarily positive view of intentions of others <input type="radio"/> Primarily negative view of intentions of others <input type="radio"/> Primarily hostile view of intentions of others
3. Belief in yelling and verbal aggression to resolve a disagreement or conflict:	<input type="radio"/> Believes verbal aggression is rarely appropriate <input type="radio"/> Believes verbal aggression is sometimes appropriate <input type="radio"/> Believes verbal aggression is often appropriate
4. Belief in fighting and physical aggression to resolve a disagreement or conflict:	<input type="radio"/> Believes physical aggression is never appropriate <input type="radio"/> Believes physical aggression is rarely appropriate <input type="radio"/> Believes physical aggression is sometimes appropriate <input type="radio"/> Believes physical aggression is often appropriate
Items 5 and 6: O For Initial Assessments, include the entire history of report. O For Re-assessments and Final Assessments, include reports within the last 4 weeks.	
5. Reports/evidence of violence not included in criminal history: (check all that apply.)	<input type="checkbox"/> No reports/evidence of violence <input type="checkbox"/> Violent outbursts, displays of temper, uncontrolled anger indicating potential for harm <input type="checkbox"/> Deliberately inflicting physical pain <input type="checkbox"/> Using/threatening with a weapon <input type="checkbox"/> Fire starting <input type="checkbox"/> Violent destruction of property <input type="checkbox"/> Animal cruelty
6. Reports of problem with sexual aggression not included in criminal history: (check all that apply.)	<input type="checkbox"/> No reports/evidence of sexual aggression <input type="checkbox"/> Aggressive sex <input type="checkbox"/> Sex for power <input type="checkbox"/> Young sex partners <input type="checkbox"/> Child sex <input type="checkbox"/> Voyeurism <input type="checkbox"/> Exposure

DOMAIN 12: Skills	
<p><input type="radio"/> For Initial Assessments, current means behaviors during the last 6 months.</p> <p><input type="radio"/> For Re-assessments and Final Assessments, current means behaviors during the last 4 weeks.</p> <p><input type="radio"/> Use a general pattern of current behaviors and not a single incident.</p>	
1. Consequential thinking:	<input type="radio"/> Does not understand there are consequences to actions <input type="radio"/> Understands there are consequences to actions <input type="radio"/> Identifies consequences of actions <input type="radio"/> Acts to obtain desired consequences—good consequential thinking
2. Goal setting:	<input type="radio"/> Does not set goals <input type="radio"/> Sets unrealistic goals <input type="radio"/> Sets somewhat realistic goals <input type="radio"/> Sets realistic goals
3. Problem-solving:	<input type="radio"/> Cannot identify problem behaviors <input type="radio"/> Identifies problem behaviors <input type="radio"/> Thinks of solutions for problem behaviors <input type="radio"/> Applies appropriate solutions to problem behaviors
4. Situational perception: <i>Ability to analyze the situation, choose the best pro-social skill, and select the best time and place to use the pro-social skill.</i>	<input type="radio"/> Cannot analyze the situation for use of a pro-social skill <input type="radio"/> Can analyze but not choose the best pro-social skill <input type="radio"/> Can choose the best skill but cannot select the best time and place <input type="radio"/> Can select the best time and place to use the best pro-social skill
5. Dealing with others: <i>Basic social skills include listening, starting a conversation, having a conversation, asking a question, saying thank you, introducing yourself, introducing other people, and giving a compliment. Advanced social skills include asking for help, joining in, giving instructions, following instructions, apologizing, and convincing others.</i>	<input type="radio"/> Lacks basic social skills in dealing with others <input type="radio"/> Has basic social skills, lacks advanced skills in dealing with others <input type="radio"/> Sometimes uses advanced social skills in dealing with others <input type="radio"/> Often uses advanced social skills in dealing with others
6. Dealing with difficult situations: <i>Incl. making a complaint, answering a complaint, dealing with embarrassment, dealing with being left out, standing up for a friend, responding to frustration, responding to failure, dealing with contradictory messages, dealing with accusation, getting ready for a difficult conversation, and dealing with group pressure.</i>	<input type="radio"/> Lacks skills in dealing with difficult situations <input type="radio"/> Rarely uses skills in dealing with difficult situations <input type="radio"/> Sometimes uses skills in dealing with difficult situations <input type="radio"/> Often uses skills in dealing with difficult situations
7. Dealing with feelings/emotions: <i>Includes knowing his or her feelings, expressing feelings, understanding the feelings of others, dealing with someone else's anger, expressing affection, dealing with fear, and rewarding oneself.</i>	<input type="radio"/> Lacks skills in dealing with feelings/emotions <input type="radio"/> Rarely uses skills in dealing with feelings/emotions <input type="radio"/> Sometimes uses skills in dealing with feelings/emotions <input type="radio"/> Often uses skills in dealing with feelings/emotions
8. Monitoring of internal triggers, <i>distorted thoughts</i> , that can lead to trouble:	<input type="radio"/> Cannot identify internal triggers <input type="radio"/> Identifies internal triggers <input type="radio"/> Actively monitors internal triggers

9. <b>Monitoring of external triggers, events or situations, that can lead to trouble:</b>	<input type="radio"/> Cannot identify external triggers <input type="radio"/> Identifies external triggers <input type="radio"/> Actively monitors external triggers
10. <b>Control of impulsive behaviors that get youth into trouble:</b> <i>Reframing, replacing anti-social thoughts with pro-social thoughts, diversion, relaxation, problem solving, negotiation, relapse prevention.</i>	<input type="radio"/> Never had a problem with impulsive behavior <input type="radio"/> Does not know techniques to control impulsive behavior <input type="radio"/> Knows techniques to control impulsive behavior <input type="radio"/> Uses techniques to control impulsive behavior
11. <b>Control of aggression:</b> <i>Includes asking permission, sharing thoughts, helping others, negotiating, using self control, standing up for one's rights, responding to teasing, avoiding trouble with others, and keeping out of fights.</i>	<input type="radio"/> Never had a problem with aggression <input type="radio"/> Lacks alternatives to aggression <input type="radio"/> Rarely uses alternatives to aggression <input type="radio"/> Sometimes uses alternatives to aggression <input type="radio"/> Often uses alternatives to aggression

## APPENDIX B: THE PACT SCORING MATRIX

Record of Referrals Risk Score	Social History Risk Score		
	0 to 5	6 to 9	10 to 18
0 to 5	Low	Low	Moderate
6 to 8	Low	Moderate	Moderate-High
9 to 11	Moderate	Moderate-High	High
12 to 31	Moderate-High	High	High

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