

**An Examination of the Predictive Validity of Court Assigned Risk Levels on
Recidivism Rates among Juvenile Sex Offenders**

by

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Abstract

Approximately 20% of all sexual crimes are committed by adolescents (Barbaree & Marshall, 2006). Those adolescents that are adjudicated for a sexual offense and subsequently complete a treatment program, typically have low sexual recidivism rates that range from approximately 5% to 15% (Nisbet, Wilson, & Smallbone, 2004; Vandiver, 2006; Waite et al., 2005; Worling & Curwen, 2000). Despite this low recidivism rate, policy and laws derived from adult laws have been created with the justification that such regulations are necessary to protect the public from even juvenile sexual offenders.

During the past decade, all juveniles convicted of a sexual crime in Alabama were mandated to complete treatment. Subsequently, each adolescent was assigned a risk level of none, low, moderate, or high that was determined by the committing court in a post release hearing. This project examined the predictive validity of these different levels of risk assignment on sexual and non-sexual recidivism. A total of 658 male juvenile sex offenders were included as participants in this study. A total of 29 participants were re-arrested for a sexual crime within ten years of being released from treatment. The aggregate re-arrest rate for sexual crimes was 4%. However, none of the designated high risk juveniles were re-arrested. Interestingly, over 8% were re-arrested for some violation of registration requirements. Implications for accurately assessing risk and developmentally appropriate strategies for managing juveniles with sex offenses are discussed.

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Introduction

In recent years, concern about adult sex offenders has led to numerous legislative actions organized around the idea that such offenders represent a critical risk once they are released into the community after incarceration. Based on this concern about the safety of the children in the community, legislative actions have been focused on the control, post-incarceration, of sex offenders, leading to significant changes in public policy. Specifically, over the past 30 years, several laws have been enacted for adult sex offenders designed to decrease the risk of offending by providing more external control and management of sex offenders.

The Wetterling Act (Jacob Wetterling Crimes Against Children and Sex Offender Registration Act, 1994), Megan's Law (Megan's Law, 1996), the Pam Lyncher Sexual Offender Tracking and Identification Act of 1996 (Pan Lyncher Act, 1996), and the Adam Walsh Child Protection and Safety Act (AWA, 2006), have all been enacted in reaction to public outcry over specific and heinous sexual crimes committed against children. These laws were intended to increase societal awareness and protect the public from sex offenders living in the community. Most recently, the AWA includes the Sex Offender Registration and Notification Act (SORNA), which requires adult sex offenders to comply with registration and community notification requirements.

In an extension of these policies downward to juvenile offenders, the SORNA guidelines were written to apply to all juvenile offenders who have been adjudicated for a sexual offense comparable to, or more severe than, aggravated sexual abuse, and who

were at least 14 years of age at the time of their offense (Caldwell, Ziemke, & Vitacco, 2008). The SORNA guidelines for juveniles are contrary to the original purpose of juvenile law. Historically, the juvenile justice system was created to differentiate juvenile from adult offenders, with the intent to provide appropriate rehabilitation to delinquent youth, rather than punitive punishment (Trivits & Repucci, 2002). Moreover, in recent years several additional state and federal regulations originally intended to apply to adult offenders have been extrapolated to adolescents and applied to adolescents with sexual behavior problems (AWA, 2006). These laws include post-incarceration civil commitment and sexually violent predator laws. At least four states, Washington, California, Wisconsin, and Minnesota, have implemented policies for juveniles that would require a civil commitment following a criminal sentence if the offender was deemed violent and dangerous (Hagan, Anderson, Caldwell, & Kemper, 2010).

Juvenile and adult sex offenders are distinctly different in various ways, yet similar sex offender laws are applied without developmental considerations. One difference is that the thoughts and behavior patterns of adolescents with sexual behavior problems are more malleable, and therefore, they are more amenable to treatment than adult offenders. Also, adult offenders are more likely to develop deviant arousal patterns, whereas juveniles are more likely to offend out of sexual curiosity often combined with low adult supervision (Trivits & Reppucci, 2002). Another fundamental difference between juvenile and adult offenders is the rate of sexual recidivism, which is significantly lower for juveniles; especially those who have successfully completed a treatment program (Worling & Curwen, 2006). A meta-analysis compared recidivism among adolescents with sexual behavior problems who successfully completed treatment

versus adolescents with sexual behavior problems in an alternative treatment or no treatment group (Reitzel & Carbonell, 2006). Adolescents with sexual behavior problems in the treatment group versus the control group had recidivism rates of 7% and 19%, respectively. Although results vary, typically juveniles who complete treatment have a sexual recidivism rate from 5 to 10% (Parks & Bard, 2006; Reitzel & Carbonell). A large meta-analysis that evaluated treatment outcomes for adult sex offenders found the recidivism rate to be 12.3% approximately four years after release from incarceration (Hanson et al., 2002).

Not only are adolescents with sexual behavior problems different from adults, they are, in some ways, distinct from general delinquents. Seto & Lalumière (2010) conducted a meta-analysis to thoroughly review characteristics and behaviors of adolescents with sexual behavior problems and non-sexual delinquents. Both groups scored similarly on measures of conduct problems, antisocial attitudes and beliefs, exposure to non-sexual violence, familial substance abuse and criminality, and cognitive abilities. Adolescents with sexual behavior problems did however; score significantly higher on measures of social isolation, anxiety, low self-esteem, and atypical sexual interests. Studies reviewing recidivism rates for adolescents with sexual behavior problems and non-sex offenders have generally found that both delinquent groups show similar recidivism rates for sexual crimes. However, adolescents with sexual behavior problems were significantly less likely than non-sex offending youth to be charged with any new criminal offense during a follow-up period of approximately 5 years (Caldwell, 2007). Although adolescents with sexual behavior problems and general delinquents share similar characteristics, adolescents with sexual behavior problems represent a

diverse group in their offending characteristics and patterns, family background, and psychopathology (Higgins, 2008).

Juveniles who commit sex offenses comprise a heterogeneous population; and clearly have a highly varied risk/need profile in terms of types of treatment and needs while in treatment. In most jurisdictions, juveniles convicted of a sexual crime are mandated to complete sex offender treatment. Treatment is typically provided either through a community based program or in a residential treatment facility. Although the type of treatment provided (e.g., cognitive-behavioral, systemic), as well as the duration and intensity of treatment, differs by program, the recognition among most thoughtful reviewers is that treatment should be organized by an analysis of the individual adolescent's needs (Andrews, Bonta, & Wormith, 2006). Thus, all programs need to assess the risk/needs of the juvenile at the commencement of treatment and upon completion of treatment. Risk for sexual recidivism refers to the likelihood that an adolescent will sexually abusive another individual after their release from treatment. The risk that the adolescent poses to the community is assessed by a clinician and then a risk level is assigned based on the presence of risk factors prior to treatment completion.

The essential questions that must be asked when determining risk for any future behavior include, "At risk to whom, at risk for what, and at risk when or under what circumstances" (Rich, p.7, 2009). Assessing the risk for sexual recidivism among adolescents with sexual behavior problems versus adult offenders differs greatly. Fundamentally, the difference is that with adults there is a baseline of stable functioning which provides the foundation for defining characteristic patterns or events which empirically can be shown to predict recidivism. These differences are largely not as likely

to have occurred for adolescents. Such events include maintaining long-term peer or romantic relationships, being married, and having stable employment. Thus, adult offenders can be assessed primarily on static risk factors, while adolescents are typically assessed for static and dynamic risk factors. Static risk factors are variables that are unlikely to change during treatment (e.g., number of victims) and remain fairly stable across time. Dynamic risk factors have the potential to change during the course of treatment (e.g., accepting responsibility for offense) and are evaluated to facilitate determining treatment success among adolescents with sexual behavior problems (Rich). The most common risk factors can be placed into ten categories: 1) sexual beliefs, 2) history of sexually abusive behavior, 3) history of victimization, 4) history of antisocial behavior, 5) quality of social relationships, 6) personal characteristics, 7) psychosocial functioning, 8) family relationships, 9) environmental context, and 10) response to treatment (Rich).

In recent years, much research has been conducted to define, assess, and predict risk for future recidivism of adolescents with sexual behavior problems. Although much controversy remains regarding the predictability of specific risk factors, there are generally agreed upon principles (Rich, 2009). One principle states that criteria for determining higher or lower risk must be defined prior to assigning a risk level. Second, risk is composed of a variety of different factors and cannot be determined by one unitary variable. Several factors have been identified as empirically supported predictors of recidivism for sexual offenses among adolescents with sexual behavior problems. These factors will be discussed later when instruments for assessing risk are evaluated. A general consensus exists that a structured measure with objective criteria may be likely to

be more accurate than clinical judgment alone for predicting risk. However, protective factors for juveniles also ought to be considered when assessing future dangerousness. Protective factors do not eliminate risk, but reduce the likelihood of re-offending in the presence of risk factors (Rich).

Currently, only a few empirically supported risk factors have been identified for increasing the likelihood of juvenile sexual recidivism (Worling & Långström, 2006). Therefore, a positive relationship ought to exist between the number of risk factors and the assigned risk level. Unfortunately, risk level is not always determined based on empirically supported risk factors. This is concerning because the juvenile's risk level directly determines the consequences imposed on the adolescent in the community. The main concern from a clinician and public policy perspective is whether the level of risk assigned actually predicts sexual recidivism among adolescents with sexual behavior problems. The levels of risk are qualitatively different depending on the designation of risk: low, moderate, or high. It is imperative to examine how risk is being determined among treatment programs and if the risk assigned accurately predicts a juveniles' abusive sexual behavior once released back into the community.

The legal consequences determined from risk levels differ by state, but are generally becoming increasingly more stringent. In the state of Alabama, a court assignment of low risk would require the juvenile to inform the senior law enforcement official, typically the sheriff, in order to be compliant with the registration requirement and the principal of the school he will be attending with his name, address, date of birth, and description of the sexual offense committed. Moderate risk additionally requires that the juvenile provide his name, address, date of birth, sex, complete physical description,

and a detailed description of the offense to all school and child care facilities within 3 miles of the juveniles' residence. A high risk classification results in the juvenile being treated as an adult sex offender. In addition to the requirements for low and moderate risk, a flyer will be distributed to all neighbors within 1000 to 2000 feet of the juveniles' physical residence. The flyer will include all of the information that will be provided to schools and day care facilities. Also, adolescents with sexual behavior problems with a high risk assignment will be required to register as a convicted sex offender on the national registry database for 10 years (Alabama Sex Offender Registration and Community Notification Statutes, 2005).

Research Question

The public's main concern about sex offenders being released into the community is the risk that they will pose for re-offending, particularly with children (Center for Sex Offender Management, 1999). All of the laws and policies described in this review were created based on the idea that such controls would enhance the safety of children who otherwise might be at risk for being victimized by released offenders. However, based on recent research (Caldwell et al., 2008; Freeman & Sandler, 2010; Letourneau & Armstrong, 2008), there appears to be little empirical support for this outcome. One of the fundamental assumptions is that accurate estimates of level of risk can predict with some degree of certainty which adolescents will continue engaging in abusive behaviors once returned to their communities. If risk levels could be accurately foretold, then perhaps policies could be developed and refined which would allow for effective management of these youthful offenders to reduce the likelihood of re-offending.

However, for clinicians to accurately assess the likelihood that adolescents with sexual behavior problems will re-offend once released into the community is a complicated task. What parameters of functioning provide valid predictive foundations? How accurately can risk be identified? What instruments reliably predict risk? If identified, how do risk estimates allow for allocation of treatment resources? For what type of recidivism is the juvenile at risk? What factors protect the adolescent from re-offending?

Determining risk involves assessing the interplay between the offender and the environment in which they exist (Rich, 2009). Risk factors have been organized by domains to capture most all internal and external variables that play a role in the risk of re-offending. These categories are: characteristics of sexually abusive behavior (e.g., history of male victims), victim characteristics and relationship (e.g., age of victim), offender characteristics (e.g., impulsivity), offender social connection (e.g., social relationships), offender general antisocial behavior (e.g., criminal arrests), and offender psychosocial history (e.g., past victimization). Risk factors are assessed throughout treatment to inform therapists about the adolescents' progress and to focus individual treatment on the needs of the adolescent. A relatively novel theoretical approach to the assessment and treatment of adolescents with sexual behavior problems is the Risk-Needs-Responsivity (RNR) model. The framework for the RNR model is based upon three principles: 1) the risk principle states that risk can be reliably and objectively predicted; 2) the needs principle asserts that the offender's needs must be addressed directly through treatment; and 3) the responsivity principle purposes that treatment ought to be tailored to the offender based on their level of risk and their identified needs

(Andrews, Bonta, & Hodge, 1990). The RNR model allows for risk as well as protective factors to be considered during the course of treatment.

Clinicians typically target identified factors in treatment that could increase the chances that a juvenile will re-offend. However, protective factors that help to buffer the adolescent from re-offending must also be considered when predicting recidivism.

Because risk levels are associated with serious legal requirements, it is imperative to evaluate the predictive validity of the assigned risk level on subsequent juvenile and adult recidivism rates. No studies to date have evaluated the predictive validity of an assigned level of risk for adolescents with sexual behavior problems once completing a treatment program. In the following review, an attempt will be made to evaluate the rate of sexual and non-sexual recidivism among adolescents with sexual behavior problems, the complexities associated with the concept of risk, the tools utilized to assess risk, and the accuracy with which specific risk designations predict the type and frequency of future re-offending rates. The presumptive goal of most of the work in this arena is to be able to identify adolescents with sexual behavior problems early on to prevent sexually abusive behavior from continuing in the future or to mitigate risk for future offending by effective treatment and management after treatment. In the next section of this paper, the research literature bearing on these issues will be reviewed.

Literature Review

Sexual crimes against children and adolescents are a critical societal concern. A recent national survey examined the incidence of abusive behaviors over a 12 month period of more than 2,000 youth from 2002 to 2003. Alarmingly, 1 in 12 youth reported at least one incident of sexual victimization during the study year (Finkelhor, Ormrod, Turner, & Hamby, 2005). The majority of sexual crimes against children are perpetrated by adults; however, juveniles account for approximately 20% of all reported sexual assaults (Barbaree & Marshall, 2006).

Historically, juveniles with sexual behavior problems were considered by the public to be similar to adult offenders in terms of dangerousness to the community because of a high rate of recidivism. However, the consensus now among researchers is that juveniles with sexual behavior problems most often do not continue a lifelong persistent course of sexually deviant behavior (Moffitt, 1993). However, researchers examining adult sex offenders have found that deviant sexual interests often began during their adolescent years. Therefore, a crucial task for preventing further sexual abuse of children is for early identification of juveniles who exhibit lifelong deviant sexual behavior.

Research has examined early patterns of adult offenders and has shown that a third of adults convicted of a sexual crime were sexually attracted to prepubescent children before 16 years of age (Elliot, Browne, & Kilcoyne, 1995). More than half of the

adult sex offenders included in the Abel & Osborn (1992) study reported experiencing deviant sexual fantasies as an adolescent prior to offending. These findings indicate that early identification and treatment of adolescents with sexual offenses might be an effective form of secondary prevention.

Although studies with adult sex offenders show a majority experienced deviant sexual thoughts during adolescence, the majority of adolescents with sexual behavior problems do not continue offending as adults (Zimring, 2004). Approximately 6% of adolescent offenders will continue to engage in life-course persistent antisocial behavior, including deviant sexual behavior (Moffitt, 1993). Despite the low recidivism rate for those youth who successfully complete treatment, all adolescents with sexual behavior problems are typically considered at “high-risk” for re-offending by the public (Worling & Curwen, 2000). This myth that juveniles pose a significant risk to the community to re-engage in sexual crimes is largely derived from misperceptions about juvenile offenders and the few, heinous adult sex offender crimes that have been highly publicized in the media (Chaffin, 2008). A goal of this paper is to counter false beliefs and ideas about adolescents with sexual behavior problems and provide factual data from empirical research. In addition to differentiating between juveniles and adults who engage in sexually abusive behaviors, the following studies will provide evidence for similarities and differences among sexually deviant juveniles and general adolescent delinquents.

Hanson & Bussiere (1998) reviewed 61 studies that include nearly 29,000 adult sex offenders and evaluated variables that related to or predicted recidivism. Predictors of sexual recidivism for adult offenders that showed small to moderate correlations include demographic variables (i.e., single, young), antisocial personality disorder, the number of

prior criminal offenses, prior sexual offenses, stranger victims for sexual offenses, extra-familial victims, male victims, first sexual offense occurring at an early age, engaging in diverse sexual crimes, and failure to complete treatment. The largest single predictor of sexual recidivism was sexual interest in children as measured with a phallometric assessment. A history of childhood sexual abuse did not significantly predict sexual recidivism among adult offenders. Variables predicting general recidivism include a history of criminal offending and antisocial personality disorder. Historically, adolescents with sexual behavior problems have been compared to their adult counterpart when it is likely more appropriate to compare their characteristics to other delinquent youth who have been convicted of non-sexual crimes.

Comparisons have been made between sexually and non-sexually offending youth in terms of their individual characteristics (e.g., personality, family dynamics, abuse history) and recidivism rates. The goal for comparing these groups is to identify traits or other defining features that are specific to sexual and non-sexual adolescent offenders, thus allowing for more accurate predictions of recidivism rates.

A recent meta-analysis summarized 59 studies comparing male juvenile sexual offenders (n = 3, 855) with non-sexual offenders (n = 13,393) on multiple variables (Seto & Lalumière, 2010). The variables explored included general delinquency, cognitive abilities, family dysfunction, exposure to violence, interpersonal skills, psychopathology, sexual experiences, and childhood abuse. Studies that examined general delinquency compared to adolescents with sexual behavior problems found that the latter had a less extensive criminal history than non-sexually deviant youth; however, no significant difference was found between the groups on antisocial attitudes and beliefs. Moreover,

adolescents with sexual behavior problems also reported less gang involvement and delinquent associations than non-sex offenders. Studies examining childhood sexual abuse found that, on average, adolescents with sexual behavior problems experienced a significantly greater prevalence of child sexual abuse (46%) than adolescent non-sex offenders (16%). Interpersonally, adolescents with sexual behavior problems exhibited more social isolation than non-sexual offenders, but no group differences existed for other relational problems. The sexuality category yielded the greatest group differences. Adolescents with sexual behavior problems reported significantly more deviant sexual thoughts, or fantasies, and were more frequently diagnosed with a paraphilia than adolescent non-sex offenders. Adolescents with sexual behavior problems experienced significantly greater anxiety and lower self-esteem compared to adolescent non-sex offenders. Cognitive differences were not statistically significant between the groups; however, academic differences revealed that adolescents with sexual behavior problems exhibited greater learning difficulties than non-sexual offenders.

Seto & Lalumière (2010) concluded that the largest contributors to adolescents engaging in sexual rather than non-sexual offenses were social isolation, anxiety, low self-esteem, and atypical sexual interests. Antisocial attitudes and beliefs about women did not appear to play a large role in determining the type of offense committed.

Etiological theories of adolescent sexual behavior problems continue to evolve as an increasing number of risk factors are evaluated to predict recidivism. Understanding the utility of risk factors and how certain variables are determined by risk assessment instruments will facilitate the most accurate assignment of risk for adolescents.

Risk Factors for Recidivism

Determining the level of risk that a juvenile poses to society following the completion or failure of a treatment program is a complex task. Empirical studies have become increasingly more focused on identifying factors that reliably predict sexual and nonsexual recidivism among youthful offenders (Långström, 2002; Rasmussen, 1999; Waite et al., 2005; Worling & Curwen, 2000). More than 100 factors related to the onset or continuity of sexually abusive behaviors has been identified; however, only five factors have some evidence of empirical support. These factors include: deviant sexual arousal, prior convicted sexual offenses, multiple victims, social isolation, and incomplete sexual offender treatment (Worling & Långström, 2006). Several variables are considered promising risk factors that may predict juvenile general and sexual recidivism. Results from research studies on risk factors often provide inconsistent findings regarding what variables are likely to reliably predict recidivism. This discrepancy exists for many reasons, including sampling differences, treatment modalities, variables assessed, and follow-up period. Because the literature lacks consistency for determining risk factors, research ought to further investigate the best predictors of recidivism to facilitate evaluating adolescents upon treatment completion. The following studies will highlight the most common risk factors that have been identified for predicting general criminal and sexual recidivism among juveniles with sexual behavior problems.

Rasmussen (1999) retrospectively identified 170 first time juvenile sexual offenders and assessed recidivism during a 5 year follow-up period. The only significant predictor of sexual recidivism at the follow-up was a history of the offender molesting multiple female victims. However, youth who had only one female victim were more

likely to re-offend for a non-sexual crime. Also, the youth in this study were significantly more likely to re-offend for a non-sexual offense if they had a history of non-sexual offenses prior to their adjudicated sex offense, they had molested an older victim, they had parents who were divorced or separated, or if they failed to complete a treatment program. That parental absence due to divorce or separation is a significant predictor for non-sexual crimes among youth in this study appears to be a unique finding. A likely hypothesis is that family disruption and conflict may lead to less parental supervision that could result in increased criminal activity.

Adolescents (n=58) convicted of a sexual crime were evaluated after completing a specialized community-based treatment program (Worling & Curwen, 2000) and variables related to sexual and non-sexual recidivism were identified. Non-sexual recidivism was significantly related to antisocial personality, a criminal history including aggressive behaviors, economic disadvantage, low self-esteem, and a history of child sexual abuse. Sexual recidivism was predicted only by a deviant sexual interest in children. Although a sexual interest in children was not a significant predictor consistent among juvenile studies, this finding is consistent within the adult literature for predicting sexual recidivism (Hanson & Bussiere, 1998).

Miner (2002) examined 86 male adolescent sexual offenders and evaluated the predictive utility of risk factors for recidivism. Sexual preoccupation was related to general recidivism, but not solely sexual recidivism as Worling and Curwen (2000) reported. Non-sexual recidivism was predicted by a history of child sexual abuse, a shortened treatment period, and those who were younger offenders. Molesting a male victim and being diagnosed with multiple paraphilias was significantly related to a

decrease in general recidivism. This finding may indicate that those adolescents with a specific targeted victim or more serious sexual behavior problems are less likely to be a general delinquent. Antisocial behavior and a criminal history did not predict general recidivism, which is contrary to other studies examining risk factors (Rasmussen, 1999; Worling & Curwen, 2000).

A retrospective follow-up study with adult sex offenders (mean age = 28 years) an average of 9.5 years after committing a sexual offense as an adolescent (Långström, 2002). Found that the risk factors that were found to significantly predict sexual recidivism included a history of previous sex offenses, committing a sex offense in a public area, molesting a stranger victim, committing two or more separate sex offenses, and molesting two or more victims. Sexual penetration was associated with a significant decrease in sexual recidivism, possibly indicating a more persistent pattern of general criminal activity that is not limited to sexual deviance.

A more recent study analyzed data collected from 292 juveniles who were convicted of a sexual offense and were followed up for an average of 7.3 years (Nisbet, et al., 2004). The average age of the adolescent during the initial assessment was 16 years and the average age at follow-up was 24 years. Those youth who re-offended sexually prior to adulthood were significantly more likely to re-offend for non-sexual crimes than youth who did not recidivate sexually during adolescence. However, youth who re-offended sexually during adolescence were not significantly more likely to re-offend sexually as an adult. Youth who had molested a peer or adult victim were significantly more likely to re-offend sexually during adulthood and were more likely to be arrested for a non-sexual crime than those youth who molested a child victim. An increased risk

of sexual recidivism was related to the youth being an older age at the time of the initial assessment, a history of non-sexual offenses, and a higher number of charges for the index sex offense. The only predictor of adolescent sexual deviance was the number of sexual offense charges. The results from Nisbet et al. may indicate a strong element of general antisocial behavior rather than just sexual deviance that is associated with sexual recidivism.

The current literature lacks consistency among risk factors that reliably predict recidivism. More troubling is the contradictory findings among similarly conducted studies. Seto & Lalumière (2010) found low self-esteem, anxiety, and social isolation related to sexual offending. However, Worling and Curwen (2000) found that these same variables were not predictive of sexual recidivism. Rather, Worling and Curwen report that one of the strongest predictors for sexual recidivism is sexual deviancy, specifically a preoccupation with children. Moreover, incomplete results have emerged regarding victim characteristics predicting recidivism. Having multiple female victims has been shown to increase the risk for re-offending among adolescents with sexual behavior problems (Rasmussen, 1999), while other results suggest that molesting a stranger victim or having multiple victims increases a youth's risk for sexual recidivism (Långström, 2002). General delinquent recidivism for juveniles has been related to low-self-esteem, a history of child sexual abuse, abusing an older victim, antisocial personality traits, and a history of criminal offenses (Rasmussen; Worling & Curwen).

Some common themes have been identified to provide a basis for determining the likelihood of sexual re-offending. These themes include a history of sexual offenses (Långström, 2002; Nisbet et al., 2004) and nonsexual offenses (Nisbet et al.), and a

deviant sexual interest in children (Hanson & Bussiere, 1998). Further evidence corroborating or refuting previous findings would strengthen the argument for continuing to examine these identified critical risk factors among adolescents with sexual behavior problems.

Though risk factors predicting recidivism have been extensively studied in the juvenile offender literature, there is not yet a clear consensus about a set of powerful and reliable variables. Moreover, due to the potential for adverse consequences associated with predicting or failing to predict that a youth will re-offend, it is fundamental that a more valid set of risk factors is identified through research. In addition, more conceptual and empirical work is needed to understand when adolescents are shielded from future sexual offending by exposure to events or contexts which moderate risk. These variables are considered protective factors and will be discussed briefly in the next section.

Protective Factors

Risk factors are identified through risk assessment instruments for the purpose of most accurately predict recidivism among adolescents with sexual behavior problems. However, a relatively new area of research includes considering protective factors and the potential role that protective factors could play in reducing the risk of recidivism. Protective factors are those which moderate risk and, thus, alter adverse outcomes; in this case, sexually abusive behavior (Rich, 2009). Identifying protective factors is only necessary in the presence of at least one risk factor. Thus, if there is no risk factor present than it is not necessary to consider protective factors. However, every adolescent who has committed a sexual offense exhibits at least one risk factor and, thus, should be open to discovering protective factors. Identifying variables that buffer or provide protection

against the likelihood of harmful behaviors is viewed as a strength based approach that is somewhat contrary to the intention of assessing risk (Rich, 2009). It is helpful to identify areas that need improvement prior to an adolescent beginning a treatment program, so that those specific concerns can be addressed during treatment. Moreover, it may be, likewise, necessary to then consider an adolescent's strengths, or the presence of protective factors, after completing a treatment program and prior to the youth returning to the community. The presence of protective factors does not eliminate the presence of risk factors, but may decrease the chances of harmful behaviors (Rich). For example, if an adolescent is deemed at high risk to re-offend with a young child (risk factor), but has a vigilant and supportive family at home (protective factor), the likelihood of recidivism may be decreased due to the presence of a protective factor.

Protective factors can be divided into domains that are similar to the categories for risk factors. Protective factors include individual (e.g., intelligence), family (e.g., supportive parents), school (high academic success), peer (prosocial friends), and community (positive role models) (Rich, 2009). More research is needed to examine how the isolation or combination of protective factors may have a moderating effect on the presence of risk factors.

Protective factors aim to reduce harmful behavior and, thus, ought to be considered when determining risk level. Currently, the only risk assessment instrument for adolescents with sexual behavior problems that considers protective factors is the Juvenile Risk Assessment Tool (J-RAT). However, this instrument does not have much acceptance in the field as it is not empirically validated, nor is it psychometrically sound. Clinical assessment instruments other than the J-RAT are more widely used for assigning

a risk level among juveniles with sexual behavior problems (Rich, 2009). After a brief review of the conceptual foundations of risk analysis, the most commonly utilized measures will be discussed in a subsequent section.

Risk Assessment

A comprehensive model that focuses on individual characteristics and the environmental context is the Risk-Need-Responsivity (RNR) model (Andrews, Bonta, & Hodge, 1990). The RNR model purports that risk is a combination of static and dynamic factors that contribute to future dangerousness. More intensive treatment services are reserved for those youth who are most distressed and pose the greatest risk to harming others. Need is focused on those dynamic factors that are malleable and likely to change during the course of treatment. The youths' needs will be accurately matched with the goals of treatment to reduce the chance of recidivism. Responsivity refers to matching the type, intensity, and duration of treatment to the youth to address both static and dynamic factors. Treatment is more individualized to the specific issues that are presented by the youth, rather than a "one size fits all approach" (Andrews et al.).

The task of accurately and reliably determining future risk for juvenile sex offenders remains a difficult issue. Actuarial and clinical assessment instruments are the most widely used tools for assigning a level of risk (Rich, 2009). Actuarial assessments inquire into both static and dynamic factors (Rich). Static risk factors remain stable and constant over time (e.g., number of prior offenses, age at first offense) and are useful in predicting recidivism because the one truism in prediction is that past behavior is typically a good predictor of future behavior. Dynamic risk factors are malleable and likely to change over time due to situational factors (e.g., completion of treatment, family

environment). Clinical measures, such as therapist own assessment of post-treatment functioning and clinical judgment based on experience, are typically perceived to be a weaker and less scientific approach than actuarial assessments (Andrews et al., 2006). Researchers and clinicians alike tend to agree that both types of instruments are necessary and most accurately facilitate the determination of risk when used in conjunction.

Empirically derived risk assessment instruments have been developed to predict adult sexual (e.g., STATIC-99; Hanson & Thornton, 2000; SVR-20; Hart, Kropp, & Laws, 2004) and nonsexual violent recidivism (e.g., PCL-R; Hare, 1991; VRAG; Quinsey, Harris, Rice, & Cormier, 1998). Instruments for adults using only static factors have been shown to predict criminal recidivism (Static-99; Hanson & Thornton). However, comparable instruments to assess juvenile sexual risk pose more difficulties. The adolescent time period is characterized by large and continual developmental changes. Also, the lack of empirically supported risk factors associated with adolescent sexual recidivism makes reliably predicting risk more challenging (Worling & Långström, 2006).

Currently, three empirically guided checklists are available for predicting adolescent sexual recidivism. The Estimate of Risk of Adolescent Sexual Offence Recidivism (ERASOR; Worling, 2004) was designed for use with male or female offenders age 12 to 18 and is composed of 25 risk factors including sexual behavior and interests, prior sexual offenses, psychosocial functioning, family dynamics, and treatment. Each factor is coded according to the presence, partial presence, or absence of the risk factor. The ERASOR provides a risk designation of low, moderate, or high and requires clinical judgment and experience when scoring each item.

The Juvenile Sex Offender Assessment Protocol-II (J-SOAP-II; Prentky & Righthand, 2003) is intended for use with males' age 12 to 18 who have engaged in sexually abusive behaviors. The J-SOAP-II is divided into two domains: static factors (i.e., sexual drive, antisocial behavior) and dynamic factors (i.e., treatment, community stability). Each factor is rated similarly to the factors on the ERASOR and requires clinical judgment when scoring the factors. However, the J-SOAP-II does not provide risk level categories based on the overall score, and therefore, should not be used in isolation when determining an adolescent's level of risk.

The Juvenile Sexual Offense Recidivism Risk Assessment Tool-II (JSORRAT-II; Epperson, Ralston, Fowers, DeWitt, & Gore, 2006) is presently the only actuarial risk assessment instrument available to predict adolescent sexual recidivism (Rich, 2009). This instrument is designed to assess males who are age 12 to 18 and have been previously adjudicated for a sexual offense during their adolescence. The JSORRAT-II includes 12 risk factors. Some risk factors are dichotomous with a "yes" or "no" answer and are scored either a 0 or 1. Other risk factors range from a score of 0 to 2, and a few items range from a score of 0 to 3. The total possible score on the JSORRAT-II is 21. The initial normed sample included 636 adolescent males age 12 to 17. The risk categories are broken down into: low (0-2), moderate-low (3-4), moderate moderate-low (5-7), moderate-high (8-11), and high (12-21). Previously, this instrument was utilized solely as a research tool; however, it has begun to be used clinically, and continues to be validated with diverse sample populations. The JSORRAT-II has the potential to be modified depending on the outcome of further validation studies.

The following section first addresses the major limitations that currently exist with empirical research on the treatment for adolescents with sexual behavior problems. A discussion of these shortcomings is necessary for understanding the range of results often found among studies. A comprehensive overview of the relevant recidivism literature will then be discussed in detail, highlighting methodological strengths and weaknesses that likely affect recidivism rates.

Limitations

Studies evaluating risk factors and predicting recidivism have methodological flaws that need to be addressed prior to a review of the literature. First, recidivism is not consistently operationally defined and has not been consistently measured between studies, making outcome comparisons more difficult. Recidivism is often assessed via crime statistics that are recorded as either the re-arrest rate of criminal offenses or the rate of criminal convictions.

Second, recidivism among adolescents with sexual behavior problems is typically divided between sexual and non-sexual crimes. However, sometimes these categories are combined due to a low rate of recidivism to ensure enough statistical power. Therefore, the recidivism results provided may not provide discrete information on the rate of sexual re-offenses.

Third, some investigators who are unable to obtain crime statistics have used self-report measures and family data to assess recidivism. Although this is not necessarily an unreliable way to obtain data, social desirability may factor in when individuals or family members are asked about adolescent sexual behavior. It is important to note that, regardless of the method of obtaining recidivism data, the statistics are always assumed to

be an underestimate of the “true” rate of crimes committed (Becker, Kaplan, & Kavoussi, 1988). Actual sexual recidivism statistics are unobtainable, due to the fact that reports of sexual assaults are grossly underestimated because victims do not always report sexual abuse to authorities (Abbey, 2005).

Lastly, the follow-up time from treatment completion to collecting recidivism data also plays a role in the variability of recidivism statistics. In the meta-analysis by Hanson et al. (2002), the follow-up times for the studies reviewed ranged from 12 months to 16 years. The method of collecting recidivism statistics will be discussed.

Hanson et al. (2002) conducted a large meta-analytic review of 43 treatment outcome studies that included 5,078 treated adult and adolescent sex offenders who were compared to 4,376 untreated adult and adolescent sex offenders. Although the majority of the studies focused on adult sex offenders, four studies specifically examined adolescent recidivism. The inclusion criteria for the treatment programs examined in the current study include: using the same recidivism criteria for the treatment and comparison group of sex offenders, both groups having approximately the same follow-up period for recidivism, having the combined sample be a minimum of 10 participants, and the psychological treatment provided serving as the primary intervention for the participants. The majority of the studies (25) reported general and sexual recidivism rates, however, some only reported general or sexual recidivism. The most common source of recidivism information was from national crime statistics followed by state records. Definitions of recidivism included reconviction, re-arrest, parole violations, readmission to institutions, and/or unofficial reports (e.g., self-report). The source of recidivism was not reported for

six studies. This meta-analysis divided studies by methodological design in an attempt to reduce confounding variables, such as those who refused or dropped out of treatment.

Hanson et al. (2002) differentiated between current treatments (e.g., cognitive-behavioral) and older types of treatment (i.e., non-cognitive-behavioral). The type of treatment provided made a significant difference for sexual recidivism with the current treatments producing a decreased rate of general and sexual recidivism compared to the older forms of treatment. The specific types of current and past treatment methods were not discussed. Also, a comparison was made between institutional and community treatment settings, with no significant differences found and both were associated with a reduced rate of sexual recidivism. The average follow-up period for examining recidivism was, on average, 46 months after the participant was released from incarceration. Treatment was found to be equally effective for adult and adolescent participants. Recidivism rates were lower for the treatment group for both sexual (12.3%) and general (27.9%) criminal recidivism. The recidivism rates for the non-treatment group were 16.8% and 39.2%, respectively. The studies examined also showed that those participants who dropped out of treatment had higher rates of sexual recidivism than those who completed treatment. However, participants who refused any treatment did not have significantly higher rates of sexual recidivism than participants who received at least some treatment. In terms of general recidivism, rates were found to be significantly higher for those participants who refused sex offender treatment.

This meta-analytic review (Hanson et al., 2002) included more than twice the number of recidivism studies than previously reported. Although attempts were made to minimize confounding variables, there are limitations within this large review. Hanson et

al. noted the following limitations. First, the definition of recidivism was not consistently defined among studies. A more ubiquitous definition of recidivism across recidivism studies would facilitate more accurate results when obtaining re-offense data. For example, Fortune and Lambie (2006) examined adolescent recidivism studies and found a range of 0% to 42% sexual recidivism rate for youth who completed treatment and a significantly higher rate of general recidivism ranging from 8% to 52%. Another weakness was the variability among the methodology of group assignment. Because typically participants cannot be randomly assigned to treatment versus no treatment groups, alternative approaches must be taken to give all participants the opportunity to receive treatment given the seriousness of the effects of sexual recidivism. It would, however, be possible to evaluate different treatment modalities within a facility to assess treatment effectiveness via recidivism rates.

Limitations found in the literature on juvenile sex offenders in general include a lack of consistency. More specifically, these differences include sampling (e.g., age of offenders), definitions of recidivism (e.g., arrests versus convictions), methods of data collection (e.g., crime statistics versus self-report), and types of treatment provided (e.g., cognitive-behavioral versus systemic). Despite the many limitations noted, unique findings were presented regarding treatment dropouts and those who refuse treatment in terms of general and sexual recidivism. More research ought to further explore potential reasons for the occurrence of drop out and continue examining diverse treatment modalities as new approaches to treatment emerge.

Empirical Recidivism Studies

Worling and Curwen (2000) evaluated a specialized community-based treatment program for reducing male adolescent sexual recidivism. The Sexual Abuse, Family Education and Treatment (SAFE-T) Program provided individual, group, and family treatment to 58 adolescents who were convicted of a sexual offense. A comparison group of 90 adolescents convicted of a sexual offense was comprised of youth who were either assessed at the SAFE-T program and received treatment elsewhere, assessed at the SAFE-T program and did not receive any treatment, refused treatment, or dropped out of treatment prior to 12 months. The SAFE-T program emphasized a holistic approach to treatment and incorporated goals related to increasing self-esteem, social skills, expressing angry feelings in an acceptable manner, and learning how to build and earn trust. The follow-up period for obtaining recidivism data ranged from 2 to 10 years. The youth from both groups were compared on sexual, violent non-sexual, and nonviolent criminal charges. Recidivism rates for treated youth were 5.17%, 18.9%, and 20.7%, respectively, compared to the youth in the comparison group with significantly higher rates of 17.8%, 32.2%, and 50%. The youth who completed the treatment program had significantly lower recidivism rates in all criminal categories, indicating that youth who successfully complete community-based treatment are less likely to re-offend than youth who have dropped out or did not complete treatment. A limitation to this study is that the comparison group was comprised of youth who received some form of treatment for a period of time, refused any treatment, or received no treatment for a reason other than refusal. However, the results are clear that completing a comprehensive sex offender treatment program is beneficial in reducing the likelihood of future criminal behavior.

A longitudinal study followed the re-arrest and reconviction data of male juvenile sex offenders throughout adolescence and into adulthood (Nisbet et al., 2004). The initial assessment included 303 males who were approximately 16 years of age. The average age at follow up was 24 years and included 292 of the original sample. The follow-up period ranged in years from 4.64 to 12.88 and averaged 7.3 years. Nearly 25% of the 303 youth within the sample were convicted of a sexual offense prior to their eighteenth birthday. Youth who were reconvicted during adolescence were significantly more likely to have committed prior non-sexual offenses than those adolescents who were not convicted for nonsexual crimes prior to their adjudicated sex offense. The sexual recidivism rate, including charges and convictions, for the juvenile offenders after 18 years of age was 9%; however, nonsexual convictions were significantly higher at 61.3%. Participants who victimized children rather than peers or adults were significantly less likely to re-offend for sexual or non-sexual crimes. This study shows that adolescents who commit sexual offenses are more likely to commit non-sexual crimes, while recidivating for sexual crimes is significantly less likely to occur.

A prospective study evaluated recidivism data for adolescents with sexual behavior problems and additionally investigated the predictive validity of impulsive/antisocial traits related to recidivism (Waite et al., 2005). The recidivism data was collected from the Department of Juvenile Justice Juvenile Tracking System database for those re-arrested as a juvenile and from the Virginia Criminal Information Network for participants re-arrested as an adult. The impulsive/antisocial traits were assessed with an adapted version of the Scale 2 on the Juvenile-- Sex Offender Assessment Protocol (J-SOAP). Scale 2 on the J-SOAP inquires into anger management

problems, school behavior problems (including suspensions/expulsions), a history of conduct disorder, antisocial behavior, criminal charge/arrest record prior to age 16, multiple criminal offenses, and impulsivity. The J-SOAP scores were obtained from the Department of Juvenile Justice Client Profile database and pertinent treatment information was obtained from archival clinician files. Juvenile sex offender recidivism re-arrest data was obtained 10 years after the youth completed one of two different treatment programs.

The “self-contained” treatment group included 144 males who were in an intensive program that separated the sexually deviant youth from the general population. The “prescriptive” treatment group including 112 youth was a less intense program than the “self-contained” group and the adolescents resided among the general population. Recidivism rates for all 256 juvenile offenders were examined and the duration of months the youth were in the community before re-offending was examined. The “self-contained” treatment group was at risk to re-offend for 56.2 months and the “prescriptive” treatment group was at risk to re-offend for 69.3 months. Recidivism was defined as re-arrest and was categorized as sexual offenses, nonsexual person offenses, and property offenses. Results will be presented for each treatment group because significant differences between groups were identified on multiple variables.

The “self-contained” treatment group had significantly lower rates of recidivism among all offense categories, except sexual offenses, compared to the “prescriptive” treatment group. The recidivism rates for sexual offenses, property offenses, nonsexual person offenses, and any criminal offenses were 4.9%, 13.2%, 27.8%, and 47.2%, respectively. The mean time to re-arrest for youth in the “self-contained” group was

64.02 months. Significant differences were found when the mean time to re-arrest was examined in terms of low and high levels of impulsive/antisocial behaviors. A survival analysis showed the mean arrest time for any criminal offense for youth with high levels versus low levels of impulsive/antisocial behaviors was 57 months compared to 71.9 months, respectively.

The recidivism rates for the “prescriptive” treatment group were 4.5% for sexual offenses 20.5% for property offenses 39.3% for nonsexual person offenses, and 70.5% for any offense. For the “prescriptive” treatment group the mean time for re-offending for youth with high levels of antisocial/impulsive behavior was 39.2 months compared to 58.9 months for youth exhibiting low levels of antisocial/impulsive behaviors. The results presented in this study disconfirm the misperception that adolescent sex offenders will likely continue exhibiting sexually deviant behavior in adulthood. This study shows support for examining other risk factors for recidivism, such as levels of antisocial/impulsive behaviors, which are more predictive of future recidivism than simply examining offense characteristics.

Vandiver (2006) assessed the recidivism rates and characteristics for adult males who were convicted of a sexual crime as a juvenile. Participants were selected based on two criteria: being arrested and convicted for a sex offense as a juvenile and being an adult for 3 to 6 years from the date the data was collected. From the initially large database, 300 participants were chosen randomly. At the time that the juveniles’ criminal histories were assessed, they ranged in age from 20 to 23 years. A survival analysis was used to account for the varying length of time (3 to 6 years) for offenders to be re-arrested as adults. Victim characteristics tended to reflect other studies showing that they

majority of victims were female (71%) compared to 26% male victims. The average victim age was 8 years old and ranged from infancy to 18 years (excluding 2 outliers over 40 years). Male victims were more likely to be included in the youngest age category, infancy to 5 years, than female victims (29% compared to 16%). In general, female victims were more likely to span across a wide age range, whereas male victims tended to be younger.

Vandiver (2006) also examined the types of crimes committed initially and during the follow-up period. The majority of the initial sex offenses committed were sexual assault crimes followed by indecency with a child. Slightly more than 50% of the youth were arrested as an adult. Sexual recidivism accounted for 8% of the re-arrests and 18% committed an assaultive offense. The majority of re-arrests were for drug crimes (32%), property crimes (37%), or other crimes (58%). The results from the survival analysis show that the younger the age of the offender at the time of arrest for the initial sex offense is significantly related to increased recidivism during adulthood. However, the crimes committed during adulthood were overwhelmingly non-sexual, which provides more evidence to support the notion that early sex offenders who persist in criminal activity during adulthood are unlikely to continue to engage in sexually abusive behaviors.

The sexual recidivism rate for adolescents is low, ranging from approximately 5% to 15% (Nisbet et al., 2004; Vandiver, 2006; Waite et al., 2005; Worling & Curwen, 2000), for adolescents who complete a treatment program. The low rate of sexual recidivism found in nearly every study is evidence that juveniles with sexual behavior problems are amenable to treatment and ought to be considered distinctly different from

adult offenders in terms of sexual recidivism. Recidivism rates for general delinquency remain consistently high signifying that sexual recidivism constitutes only a fraction of the total crimes committed following treatment. Because of the low rate of sexual recidivism among youth with sexual behavior problems, it seems unnecessary, and more so, detrimental to require juveniles to register as a sex offender. The studies examining sexual recidivism will bolster the argument against the current registration and notification system for adolescents and highlight the adverse consequences that are likely to occur.

Registration and Notification Laws for Juvenile Sex Offenders

Laws were enacted during the early 1990's that required adult sex offenders to registry publicly as a convicted sex offender. The sex offenders who are subjected to this requirement are typically deemed to be the most likely to sexually re-offend and are mandated to register anywhere from 10 years to a lifetime on the registry. Given that the juvenile justice system was originally intended to be more rehabilitative than punitive in nature, adolescents with sexual behavior problems initially were not required to comply with registration and notification requirements. However, recent legislative policies have significantly altered the outcomes for adolescents convicted of sexual crimes after treatment completion. Specifically, the Sex Offender Registration and Notification Act (SORNA) was implemented with the passing of Title 1 of the Adam Walsh Child Protection Safety Act (AWA) in 2006. The Adam Walsh Act mandated all states to implement registration requirements for juveniles by July 27, 2009 (AWA, 2006). However, at that time no states were in compliance with those standards. As of February 2009, there were still no states in full compliance with the AWA (SEARCH, 2009).

There are currently 32 states that require juveniles adjudicated of a sexual offense under the age of 18 to register as a sex offender. However, only 6 states (Arkansas, Missouri, Montana, North Carolina, Oklahoma, and Wisconsin) have separate legislation for adult and juvenile offenders (NCSBY, 2011).

The AWA has created much controversy among mental health professionals who provide treatment to adolescents with sexual behavior problems. Difficulties arise among treatment professionals because the majority of adolescents with sexual behavior problems do not continue to engage in sexually abusive behaviors following treatment. However, the majority of youth who commit a sexual crime will meet the necessary criteria for SORNA. Also, the registration and notification system is not developmentally appropriate. Adolescence is a dynamic, malleable phase of life and applying a fixed risk level does not allow for positive changes that are made during treatment. Therefore, the SORNA system will likely create adverse consequences for youth. Empirical studies evaluating the effectiveness of SORNA are in their infancy; however, preliminary results do not support the contention that registered youth will re-offend at a lower rate than non-registered youth (Letourneau & Armstrong, 2008; Letourneau, Bandyopadhyay, Sinha, & Armstrong, 2009b). The fundamental goals of SORNA are to reduce recidivism by previously convicted sex offenders and to provide the community with information to help protect their children. If SORNA were to become a nationally mandated law, it would require juvenile offenders to be included in all state registration and notification databases. Therefore, any juvenile who has been adjudicated for a sexual offense comparable to, or more severe than, aggravated sexual abuse, and who is at least 14 years of age will be included in SORNA (Caldwell et al., 2008).

Letourneau & Armstrong (2008) examined the rate of sexual and non-sexual recidivism among registered versus non-registered male juvenile sex offenders in South Carolina. The youth were matched on several variables including age and year of index offense, race, prior person and non-person index offenses, and the index sexual offense. The final sample consisted of 222 males (111 in each group) who were found guilty of committing a sex offense before turning 18 years of age. The follow-up period was on average 4.3 years and recidivism was defined as a guilty verdict for any crime committed. Initial recidivism results showed 13 adjudications for a sexual offense, which is a 5.9% recidivism rate. Upon further review, only 2 crimes met the criteria for a sexual offense making the recidivism rate 0.9%. Given the low base rate of sexual recidivism, between group analyses were not possible.

This study also examined nonsexual person and non-person recidivism between registered and non-registered youth. The majority of nonsexual person offenses were assault, while nonperson offenses included property, drug, and public order crimes. Status offenses (e.g., violation of probation) were not included in recidivism rates. There were no significant differences found between groups for nonsexual offenses; however, registered youth were significantly more likely to be convicted for non-person offenses than non-registered youth. Minority status and prior convictions for non-person offenses also predicted non-person recidivism. The intended purpose of registering youth to reduce sexual recidivism was not supported in this study. More research needs to be conducted to investigate the reasons why registered youth have a higher conviction rate for certain crimes. One hypothesis is that youth who are registered are scrutinized more by authorities and police are more vigilant of these individuals than non-registered youth.

Recent studies have begun to evaluate the effectiveness of SORNA to accurately classify sex offenders that pose the highest risk to society. A three tiered system exists within SORNA and is delineated based solely on the type of adjudicated sexual offense without consideration for identified risk factors. The tier that an individual is assigned to determines the length of time for registration. Tier 1 is reserved for misdemeanor offenses, followed by Tier 2 for the majority of felony sex crimes, and Tier 3 includes all forcible sex offenses as well as any sexual contact offenses involving children less than 12 years of age. Individuals are required to register for 10 years, 25 years, and life, respectively, from Tier 1 to Tier 3.

Freeman and Sandler (2010) examined the 3 tiered SORNA system to assess the effectiveness of accurately predicting sexual and non-sexual recidivism based solely on the adjudicated sex offense within an adult population. The tier system was divided into categories: Tier 1 (low risk), Tier 2 (moderate risk), and Tier 3 (high risk). Demographic variables, victim characteristics, and prior criminal offenses were also examined for predicting recidivism. The amount of time in the community prior to re-arrest was also examined and included 4.6 years for sexual recidivism and 3.6 years for non-sexual recidivism. The results show inherent flaws in the tiered SORNA system as the system was unable to correctly identify those sex offenders that were most likely to re-offend. Significant differences were found based on tier classification regarding amount of time to re-arrest. Those individuals in Tier 1 were re-arrested for a sexual offense more quickly than those offenders in Tier 2 or Tier 3. Several variables were found to significantly predict a higher rate of sexual recidivism, including prior number or prison sentences, number of sex offense arrests, criminal versatility, and the number of victims

involved in the index sex offense. Tier 1 offenders were also re-arrested at a faster rate for non-sexual offenses compared to those offenders in Tier 2 and Tier 3. Freeman & Sandler found that the current classification of sex offenders within SORNA is not an effective manner to identify which individuals pose the greatest risk to society. Other variables (e.g., number of criminal offenses) will likely more accurately predict sexual and non-sexual recidivism.

Caldwell and colleagues (2008) evaluated the effectiveness of registration for adolescents convicted of a sexual crime as well as examining the predictive validity of widely used risk assessment instruments (i.e., J-SOAP-II, PCL: YV), state specific risk instruments, and the tier assignment as designated through SORNA. The state specific instruments included were New Jersey Registrant Risk Assessment Scale (RRAS), Juvenile Risk Assessment Scale (JRAS), Wisconsin Department of Corrections Guidelines for Release of Confidential Information as Persons Committing Sex Offenses as Youth (WDOC), and Texas Juvenile Sex Offender Risk Assessment Instrument (TJSORAI). The participants in this study included 91 adolescents adjudicated for a felony sexual offense and 174 adolescent male general delinquents from the same secure treatment facility. The adolescents with sexual behavior problems were assessed based on J-SOAP-II scores, state specific scores, and PCL: YV scores, whereas the non-sex offenders were assessed only on the PCL: YV. Over 70% of adolescents with sexual behavior problems met criteria to be included in Tier 3 of SORNA. Participants' average age upon entering the program was 15.4 years. The adolescents were followed for an average of 71.6 months to determine sexual and non-sexual recidivism rates. Recidivism

in this study was defined as original criminal charges filed in state court, and therefore, included all charges that were pled down or settled and did not result in a conviction.

The relationship between all of the measures and SORNA were compared to determine concurrent validity. The SORNA tiers had no relationship with any of the J-SOAP-II scale scores. The SORNA tiers were correlated with the RRAS and the JRAS; however, no relationship was found with the WDOC or TJSORAI. A negative correlation was found between the SORNA tiers and the total PCL: YV score. This indicates those youth with a higher PCL: YV scores were in a lower risk Tier. The total score on the J-SOAP-II, state specific measures, and the tier SORNA system all failed to reliably predict sexual recidivism. Currently, using these measures to evaluate juveniles in order to assign a level of risk has not been found to be an effective means of differentiating adolescents who will re-offend sexually, versus those who will not.

Adolescents with sexual behavior problems were not more likely to re-offend for violent or sexual crimes compared to juvenile non-sex offenders. The prevalence rate of recidivism for felony sex offense charges between adolescents with sexual behavior problems (12.1%) and non-sex offenders (11.6%) was comparable. Adolescents with sexual behavior problems general re-offense rate was 69% compared to 88.4% for non-sex offenders, which shows that adolescents with sexual behavior problems were somewhat less likely to re-offend for a general offense when compared to the non-sex offenders. None of the measures or SORNA tiers was able to predict sexual recidivism among the youthful offenders. Two subscales, J-SOAP-II Scale 3 and RRAS Scale 4, did reliably predict new felony sex offenses. The J-SOAP-II Scale 3 and RRAS Scale 4 assess dynamic factors related to treatment progress. It is likely that instruments that

examine positive changes made during the course of treatment may have more predictive validity than measures assessing static factors. The SORNA tiers were effective for predicting new violent offenses; however, the rate of recidivism was much lower for adolescents with sexual behavior problems (46.9%) compared to the non-sex offending delinquent youth (70.4%). The J-SOAP-II subscale scores and total scores did not predict general recidivism. Scale 2 on the J-SOAP-II predicted new violent offenses. Individual items on Scale 2 were then examined and three items significantly predicted violent offenses. The items were a history of conduct disorder before age 10, antisocial behavior, and committing multiple types of offenses. According to these results, it is likely that criminal history and antisocial behavior are more predictive of future violent crimes than the SORNA tier system or state created specific sex offender measures.

Further analyses on individual items on the J-SOAP-II and state risk instruments were conducted to examine the predictive validity for felony sex offense charges. The significant items that emerged were: a lack of expressing remorse or guilt, cognitive distortions, a lack of motivation and compliance with treatment, and not receiving support in treatment. The PCL: YV predicted felony sex offenses, violent offenses, and general offenses for adolescents with sexual behavior problems and non-sex offenders. A history of sexual offending did not significantly predict sexual recidivism above and beyond the total PCL: YV score. The results of this study have significant implications regarding the current practice of classifying adolescents with sexual behavior problems according to their adjudicated sex offense. A history of violent behavior and criminal versatility is likely to be a better predictor of any type of criminal recidivism, rather than state risk measures or SORNA tier classifications.

Some states require certain risk factors to be evaluated for juvenile sex offenders prior to their release into the community. For example, the Alabama law related to evaluating risk factors specifies certain variables to be included in the risk assessment. The Alabama criminal code, Title 15: Criminal Procedure- Section 15-20-28- Juvenile criminal sex offender- Risk assessment; notification, outlines the necessary factors related to risk for recidivism. These factors include: 1) conditions of release related to treatment in the community, supervision at home by a guardian, and supervision by a probation officer, 2) physical conditions that could potentially minimize recidivism, 3) criminal history including the presence of repetitive and compulsive behaviors, 4) criminal factors related to the relationship to the victim, the level of threat and injury to the victim, and the frequency and nature of previous criminal offenses, 5) psychological testing results indicative of likelihood of recidivism, 6) response to treatment, 7) recent behavior while in treatment/incarcerated, 8) recent threats to commit further crimes (Alabama Criminal Code, 2010).

Some states have begun to apply more stringent laws to include juvenile offenders, such as the Sexually Violent Person Commitments Act (SVPCA). The SVPCA has been enacted in four states (Wisconsin, Minnesota, California, Washington) and allows juvenile offenders to be involuntarily committed if the adolescent has committed a sexual crime and is deemed dangerous and more likely than not to re-offend due to a mental disease or disorder (Hagan et al., 2010). The purpose of the SVPCA and SORNA laws created for adult and juvenile sex offenders are primarily to protect children in the community from harm by alerting the public of sex offenders who live in close proximity to their residence. Although the goals driving these laws are well-intentioned, many

adverse consequences have been examined for adults and juveniles subject to public registration and notification.

Effects of Sex Offender Registration and Notification

The laws created for juvenile sex offenders are based on misperceptions about the risk that adolescents with sexual behavior problems pose to the community and are moreover, inconsistent with the rehabilitative goals of the juvenile justice system (Garfinkle, 2003). Unintended, yet adverse, consequences have resulted from registration and notification requirements for adult sex offenders. Tewksbury (2005) reported the findings from 121 registered adult sex offenders residing in Kentucky. The most common negative consequences of being registered included losing a friend (54.7%), loss of or being denied a place to live (45.3%), publicly experiencing harassment (47%), and losing a job (42.7%). A further assessment examined the perceptions and attitudes of the registered adult sex offenders. The mean scores are reported (1= strongly disagree to 10= strongly agree). A majority indicated feelings of shame with being on the registry (8.30), feeling that it was an unfair punishment (7.39), and understanding why the community wants a state sex offender registry (7.40).

Schram & Milloy (1995) evaluated the effects of registration on the rate of recidivism for adult sex offenders subjected to the highest level of community notification (Level III) compared to adult sex offenders who did not have to register. The groups were matched on the number of sex offense convictions and the type of victim (child or adult). The follow-up “at-risk” period in the community was 54 months. The registered group was found to have a sexual recidivism rate of 19% compared with 22% of the non-registered offenders. This difference was not statistically significant. No

significant difference was found in the overall rate of general recidivism; however, the registered group was re-arrested more quickly in the community than the non-registered group. This shows that registering as a sex offender does not necessarily affect the rate of recidivism, but may alert law enforcement to be more vigilant of registered sex offenders and their actions.

Zevitz & Farkas (2000) interviewed 30 convicted sex offenders in Wisconsin as to their experiences with being subjected to Level III community notification. The men interviewed expressed great distress as a result of their presence within the notification system. The consequences included loss of employment, social ostracism, threats, harassment, family conflict/estrangement, and continual psychological stress. Society desires for these “hardened criminals” to leave prison and become productive members of society. The constraints put in place by the sex offender registration and notification makes that task nearly impossible and creates an extra barrier between the offender and their community.

Zevitz (2006) examined adult sex offenders in Wisconsin who were subjected to either extensive notification or limited notification after release from prison. The purpose of this study was to examine recidivism rates based on notification status. Each of the 47 extensive notification offenders and 166 of the limited notification offenders was tracked for 54 months after release from prison. Approximately 50% of each notification group recidivated during the follow-up period. The extensive notification group had a sexual recidivism rate of 19% compared to 12% of the limited notification offenders. No significant differences were found between groups for any type of recidivism. This

suggests that a high level of community notification for offenders does not have an effect on the rate of recidivism or community protection.

Mercado, Alvarez, and Levenson (2008) examined the perceptions and effects of registration and notification for high risk adult sex offenders upon reentry to the community. Results show that nearly half of the 138 offenders experienced job loss, difficulty finding adequate housing, and vigilantism.

Although the intended consequences of registration and community notification are to protect the public and deter criminals, several anti-therapeutic consequences have emerged. DiCataldo (2009) has summarized the iatrogenic effects of sex offender laws for juveniles. Youth are likely to be ostracized at school and in their neighborhood if community members are aware of their sexual criminal history. It may be difficult for an adolescent to make new friends or rekindle past relationships, which may leave him socially isolated without many positive coping skills. The families of the juveniles' may also be subject to negative consequences if the youth is mandated to live a certain distance from schools or daycare centers. Even if the family is not forced to move the stress associated with a family member being labeled a sex offender in the community may be too much to bear, and therefore, the family may feel their only choice is to relocate. The goal for these youth ought to be reintegration into society and rather, the current laws are creating more difficulties (e.g., social isolation, vigilantism, family discord) that could lead to psychological distress and potentially re-offending.

Summary

The literature reviewed provides the framework for the current investigation. Risk factors related to general and sexual recidivism were examined to provide a foundation

for understanding the difficulties posed by risk assessment instruments for juveniles. Although assessment measures are beginning to be empirically validated (JSORRAT-II; Epperson et al., 2006), more research needs to address the limitations of assigning a risk level to an adolescent upon treatment completion. One limitation is the lack of protective factors included in the risk assessment. Another limitation among risk assessment instruments is the lack of uniformity, particularly with coding responses that then correspond to a risk level. Addressing the current flaws with risk factors and risk assessment instruments that are used to predict recidivism is crucial. It is essential to refine the methods for identifying risk factors and assess the utility of assigned risk levels because each risk level poses significant consequences, some including a lifetime placement on the sex offender registry. With such enormous repercussions for adolescents who commit a sexual crime, it is paramount that juveniles' risk level and their rate of recidivism be examined. A gap in the current literature is an evaluation of the predictive validity of assigned risk levels as practiced in a real life setting

The Current Investigation

In Alabama, all juveniles convicted of a criminal juvenile sex offense are required to complete treatment. Following treatment, these adolescents are required to go back to court and if the court determines that they will be subjected to notification, the court then assigns a risk level of low, moderate, or high. As discussed earlier, the assignment has enormous implication for the juvenile's standing in the community and enormous implications for what quality of life is available to them. To date, no research has been conducted to examine the predictive validity of different levels of risk assignment provided through a judicial review process. The current project is intended to address this

deficiency in the research by examining the re-arrest rate of adolescent males assigned to no, low, moderate, or high risk levels. By doing so, the ecological validity of the current practice of the law can be evaluated.

Specifically, the adolescent's court appointed risk level and the subsequent rates of sexual and nonsexual recidivism that occurred in the community during a one to ten year follow-up period will be determined. Based on these data, the following specific hypotheses will be evaluated.

Hypotheses

1. The percentage of juvenile sex offenders who were assigned a level of high risk upon treatment completion will match the rate of sexual recidivism.
2. The level of assigned risk (i.e., none, low, moderate, high) will predict sexual recidivism among juvenile sex offenders.
3. The level of assigned risk (i.e., none, low, moderate, high) will predict non-sexual recidivism among juvenile sex offenders.
4. The level of assigned risk (i.e., none, low, moderate, high) will predict failure to register among juvenile sex offenders.
5. Juvenile sex offenders who represent an ethnic minority will be convicted at a significantly higher rate for nonperson crimes compared to White juvenile sex offenders. Letourneau & Armstrong (2008) found that the odds of recidivism for ethnic Minority youth were 130% higher compared to a White adolescent.

Methods

Prior to 1999, the state of Alabama did not require treatment for juveniles adjudicated of a sexual crime. In 1999 Alabama passed a law that mandated treatment for all juvenile sex offenders in Alabama. At the time the law was passed, there were inadequate treatment options available for adolescents. The Department of Youth Services (DYS) began to search for agencies to participate in providing services to youth in accordance with the new legislation. The Department of Psychology at Auburn University and the School of Social Work at the University of Alabama formed a partnership to provide comprehensive treatment to adolescents convicted of a sex offense (Burkhart, Peaton, & Sumrall, 2009). The program formed was the Accountability Based Sex Offender Program (ABSOP), which has evolved over the past decade and is now ABSOP-II.

As part of the programming, all youth who entered the program were provided a global and comprehensive assessment of psychological functioning. Moreover, the evaluation protocol was designed to enable the assessment of risk in order to be responsive to the legislative mandate that following completion of treatment, a recommendation for risk was to be provided to the referring court. This recommendation was to be used by the court along with other specific factors in the assignment of a risk level. The comprehensive assessment highlighted area of strengths and weaknesses for the youth and prompts therapists to focus on certain factors during the course of treatment. A second assessment was conducted following the completion of treatment to

assess treatment success and changes in functioning that occurred while incarcerated. The data collected were also used to evaluate the treatment program and for on-going research projects to further knowledge of juvenile sex offenders.

Participants

This study included 658 male juvenile sex offenders as participants in this study. Participants were incarcerated at the Mt. Meigs correctional facility, in Alabama, between September 2000 and July 2010. The state of Alabama Department of Youth Services designated the Mt. Meigs campus as the state treatment facility for juveniles convicted of a sex offense beginning in 2000.

Measures/Materials

Clinical Interview. The comprehensive clinical interview is semi-structured and includes open-ended and closed-ended questions. The interview is designed to obtain all relevant information related to the youths' past and current functioning. The domains evaluated include: demographics, family history and dynamics, school history, criminal behavior, medical problems, alcohol/drug history, psychological conditions, psychiatric and non-psychiatric medications, physical/sexual abuse history, and a detailed history of all sexual behaviors (normative and deviant).

Hare Psychopathy Checklist: Youth Version. The Hare Psychopathy Checklist: Youth Version (PCL: YV; Forth, Kosson, & Hare, 2003) is a 20-item structured clinical rating scale that is designed to assess for rather stable psychopathic personality traits. Psychopathy is a combination of affective, interpersonal, and behavioral traits characterized by shallow affect, lack of remorse, pathological lying, impulsivity, irresponsibility, and persistent violation of social norms (Hare, 1991). The PCL: YV is

designed for use with male and female youth age 12 to 18. The PCL: YV is scored based on data collected during the interview and collateral information from the courts, police reports, prior psychological reports, information from previous detention facilities, and school documents. The items on the PCL: YV were adapted from the adult version of the Psychopathy Checklist to be more appropriate for an adolescent population (Forth et al., 2003). Items on the PCL: YV are scored from 0 to 2 (0= the item does not apply, 1= the item applies to some extent, or 2= the item certainly does apply). PCL: YV total scores range from 0 to 40 with a higher score representing greater psychopathic traits.

Several structure factors (2, 3, and 4) have been identified as a good fit for the PCL (Harpur, Hare, & Hakstian, 1989; Cooke & Michie, 2001; Hare & Neumann, 2005). Neumann, Kosson, Forth, & Hare (2006) report a four factor structure for the PCL: YV characterized by interpersonal (e.g., pathological lying), affective (e.g., lack of remorse), antisocial (juvenile delinquency), and lifestyle (impulsivity).

Psychometric properties indicate that the PCL: YV reliably measures the construct of psychopathy in adolescents (Forth, Hart, & Hare, 1990). Forth et al. report high inter-rater reliability (single-rater intra-class correlation of 0.88) and high internal consistency of 0.90. The PCL: YV has shown strong predictive validity for general, nonviolent, and violent recidivism among a youthful population (Stockdale, Olver, & Wong, 2010).

Juvenile Sex Offender Assessment Protocol-II. The Juvenile Sex Offender Assessment Protocol-II (J-SOAP-II) is a 26-item actuarial checklist designed to examine relative risk for future criminal and sexual recidivism among male youth age 12 to 18 who have previously engaged in sexually abusive behaviors (Prentky, Harris, Frizzell, &

Righthand, 2000). The J-SOAP-II is comprised of four domains with two domains representing static factors and two domains representing dynamic factors. The static factor domains include, Scale I: Sexual Drive/Sexual Preoccupation and Scale II: Impulsive and Antisocial Behavior. The dynamic factor domains are, Scale III: Clinical and Treatment and Scale IV: Community Adjustment. Items are scored from 0 to 2 (0= item does not apply, 1= item somewhat applies, 2= item definitely applies).

The four domains on the J-SOAP have shown moderate to high internal consistency ranging from 0.68 to 0.85 (Prentky et al., 2000). The psychometric properties of the J-SOAP-II scales were examined for reliability. The inter-rater reliability was good for all scales and ranged from 0.80 to 0.91. The internal consistency for each scale was moderate to excellent and ranged from 0.64 to 0.95 (Righthand, Prentky, Knight, Carpenter, Hecker, & Nangle, 2005).

The J-SOAP was revised to the J-SOAP-II, which was published in 2003 (Prentky & Righthand, 2003). Several items on each scale were added and deleted to provide more concise behavioral anchors. The completed J-SOAP-II consists of 28-items.

Millon Adolescent Clinical Inventory. The Millon Adolescent Clinical Inventory (MACI; Millon, 1993) is a 160-item true/false self-report measure used to assess a wide array of psychological concerns for male and female adolescents' age 13 to 19 years of age. The MACI consists of 31 scales which are composed of one validity scale and three clinical domains: 4 Validity Indices (Disclosure, Desirability, Debasement, Reliability), 7 Clinical Syndromes scales (Eating Dysfunctions, Substance Abuse, Delinquency Predisposition, Impulsive Propensity, Anxious Feelings, Depressive Affect, Suicidal Tendency), 12 Personality Patterns scales (Introversive, Inhibited,

Doleful, Submissive, Dramatizing, Egotistic, Unruly, Forceful, Conforming, Oppositional, Self-Demeaning, Borderline Tendencies), and 8 Expressed Concerns scales (Identity Diffusion, Self-Devaluation, Body Disapproval, Sexual Discomfort, Peer Insecurity, Social Insensitivity, Family Discord, Childhood Abuse).

The MACI does not use standard scores (e.g., T-score) for comparisons among groups, but rather computes raw scores into base rates. The raw scores are modified in relation to the prevalence rates that were determined from the studies used to initially establish norms referenced groups. Raw scores are converted to base rates for each domain and include age, race, and prevalence data with raw scores ranging from 0-115. A base rate below 60 indicates no significant problems within that domain, 60-74 suggests some presence of the trait, 75-84 shows clinically significant problems, and 85-115 indicates clinically significant issues that are severe and persistent (Millon, 1993).

Empirical data was collected from approximately 700 psychiatric individuals to establish norms (Millon, 1993). The MACI has shown good internal consistency and test-retest reliability (Millon). Alpha coefficients range from 0.73 to 0.87 for the Validity scales, 0.74 to 0.90 for the Personality Patterns scales, 0.75 to 0.89 for the Clinical Syndromes scales, and 0.73 to 0.91 for the Expressed Concerns scales (Millon). Pinto & Grilo (2004) examined the psychometric properties of the MACI in a sample of inpatient adolescents. The internal consistency of the scales was very comparable to Millon 1993, with alpha coefficients ranging from 0.71 to 0.93. Criterion validity for depressive affect, substance use disorder, and delinquent predisposition were high. The concurrent validity of the MACI was examined and found was found to be generally high when correlated with similar measures.

In addition to these measures which are directly sourced for this study, the complete assessment procedure includes: The Wechsler Abbreviated Scale of Intelligence (WASI); Wide Range Achievement Test – 3rd or 4th Edition (WRAT-3 or 4); Schedule for Affective Disorders and Schizophrenia for School Aged Children (K-SADS); Delis-Kaplan Executive Function System (D-KEFS); Adolescent Cognitions Scale; Inventory of Parent and Peer Attachment; Parental Bonding Inventory; Jessness Inventory; Multiphasic Sex Inventory, Juvenile version; Reynolds Adolescent Depression Scale; Substance Abuse Subtle Screen Inventory- Adolescent Version; and the Screen for Adolescent Violence Exposure.

Risk Level. A risk level is assigned to every juvenile who has committed a criminal juvenile sex offense at the final court hearing held after treatment completion. . At this hearing, a treatment summary and a review of the risk elements mandated to be considered are provided to the court by the treatment staff of ABSOP. The data for this document includes a post-treatment evaluation consisting of a semi-structured interview, the administration of the J-SOAP-II, PCL: YV, and direct questions for assessing the juveniles' self-assessment of their success during treatment. Additionally, the juvenile's therapist also completes a questionnaire to assess their perspective of the individual's progress in treatment. The final determination made by the presiding judge of the county from where the juvenile was adjudicated for the sexual offense is based on these data plus the District Attorney's presentation of the elements of the original offense and a review of victim statements.

Procedure

Study participants previously resided in counties across Alabama and were adjudicated for a sex offense prior to their placement at Mt. Meigs. The youth were given seven days to acclimate to their new environment before being interviewed and tested. Every juvenile sex offender was mandated to complete treatment, and therefore, all were required to complete a pre-treatment evaluation.

This study followed all ethical guidelines for the protection of human subjects. The Internal Review Board (IRB) at Auburn University fully approved the data collection process for this project. Each youth was provided with an assent form that described in detail the nature and purpose of the testing process. Additionally, the evaluator verbally described the assessment process, including what types of testing were to be conducted, the total length of the testing, the benefits of the testing, and the youth's ability to terminate the testing process at any point. The juveniles were informed of the meaning of confidentiality and what measures were being taken to ensure that their private information would remain confidential. They were also told that their data would remain anonymous and that their data would be entered into our database upon completion of the evaluation. The youth were highly encouraged to be as open and honest as possible throughout the interview and testing.

Advanced graduate students in clinical psychology conducted the interviews and administered the objective non-self report measures. Undergraduate research assistants administered and scored the self-report instruments. The pre-treatment assessment consisted of the following measures: a clinical interview, a review of all available records (i.e., psychological, criminal, educational); Psychopathy Checklist: Youth Version (PCL:

YV); Juvenile Sex Offender Assessment Protocol (J-SOAP-I or II); Kiddie- Schedule for Affective Disorders and Schizophrenia (K-SADS); Wechsler Abbreviated Scale of Intelligence (WASI); Wide Range Achievement Test, 3rd or 4th Edition (WRAT-3 or 4). Self-report measures include the following instruments: Adolescent Cognitions Scale; Inventory of Parent and Peer Attachment; Parental Bonding Inventory; Millon Adolescent Clinical Inventory; Jessness Inventory; Reynolds Adolescent Depression Scale; Substance Abuse Subtle Screen Inventory- Adolescent Version; and the Screen for Adolescent Violence Exposure.

All of the data collected during the pre-treatment assessment was subsequently coded and the variables were entered into a large electronic database and stored in a Statistical Package for the Social Sciences (SPSS) file.

Re-arrest data used in the current investigation consisted of arrest information collected by the Alabama Crime Information Center (ACIC) and recorded by the National Crime Information Center (NCIC) and the Automation Fingerprint Identification System (AFIS).

Logistic Regression

Logistic regression was used to predict the dichotomous outcome of recidivism or non-recidivism based on assigned risk level among juvenile sex offenders who had been in the community for at least one year. A single variable was used to parallel the current sex offender laws that classify juvenile offenders based solely on one criterion (i.e., index offense). A Chi square test of Independence was conducted to further examine the recidivism category to determine if an association exists among different categories of crimes.

Receiver Operating Characteristic

The receiver operating characteristic (ROC) is a statistical procedure used to accurately predict the occurrence of a future event. ROC was originally rooted in signal-detection theory and was developed in the field of psychophysics to determine the presence or absence of a signal (Green & Swets, 1966). Recently, ROC curves have been used in forensic and clinical psychology for predicting violent recidivism of identified criminal offenders (Rice & Harris, 1995). The main advantage to using the ROC analyses over other types of analyses (e.g., correlation coefficients, odds ratio) is that the ROC is not dependent upon the base rate of the identified outcome. This is particularly crucial for low base rate events, such as sexual recidivism.

The ROC curve is a plot of the true-positive rate as a function of the false-positive rate for a specific and pre-determined interval for the predictive variable. If recidivism is correctly predicted that would constitute a “true-positive.” However, if recidivism is predicted but does not occur it is considered a “false-positive.” The goal for any predictive instrument is to maximize the amount of “true-positives” and minimize the number of “false-positives.”

A preferred method for describing an ROC is the area under the curve (AUC). The AUC is a probability estimate for a chosen variable used to predict recidivism among offenders. The AUC statistic ranges from 0.5 (indicating no power for predicting recidivism) to a value of 1.0 (indicating 100 percent accuracy for predicting recidivism). The power of the chosen variable to predict recidivism increases with the value of the AUC. Assigned risk level is the identified variable that was used to accurately predict general criminal and sexual recidivism among juvenile sex offenders.

Results

Sample Demographics of all Juveniles

The following information describes 658 adolescents who were adjudicated for a sexual offense, received treatment, and were released from the Alabama Department of Youth Services (DYS) at the Mt. Meigs campus. As part of their program at DHS, all of these adolescents participated in a comprehensive psychological evaluation and completed treatment in the Accountability Based Sex Offender Program (ABSOP). In addition; the subsequent arrest history for all these boys was tracked from the time that they were released from Mt. Meigs. Thus, their subsequent re-arrests were coded and served as the foundation for the analysis of recidivism reported in the following results. In this project, “recidivism” and “arrest” will be defined as referring to an adolescent who was re-arrested for a criminal offense following their release from Mt. Meigs into the community.

Using re-arrest data is the most conservative formal method for evaluating criminal activity in the community. Criminal re-arrest does not include formal charges or a criminal conviction, as individuals arrested are not always subsequently charged or convicted for the crime for which they were arrested. In addition, re-arrest data do not account for those crimes that are committed but are not detected by law enforcement. Finally, the phrase “Failure to register” refers to an adolescent being arrested for failing to comply with the registration requirements placed on them by the court as a sex offender mandated to do so as a condition of their release.

Descriptive and Demographic Data for Full Sample

At the time of the initial pre-treatment assessment, the average age of the adolescents was 15.77 years ($SD= 1.57$) and ranged from 11 to 21 years of age. The average grade completed at the time of assessment was the middle of the eighth grade, 8.70 ($SD= 1.60$) and ranged from 1st grade to 12th grade. There were 420 adolescents (63.8%) who reported repeating a grade in school and 319 (48.5%) received some type of special education services. At the time of their release from treatment, their average age was 17.25 years ($SD= 1.60$) and ranged from 11.34 to 21.01 years. The average length of stay was 17.44 months ($SD= 9.34$) and ranged from less than one month (i.e., 7 days) to 75.8 months (i.e., 6.32 years).

The adolescents identified themselves as Caucasian ($n= 360, 54.7%$), African American ($n= 266, 40.4%$), Biracial ($n= 12, 1.8%$), Hispanic ($n= 6, 0.9%$), and Other ($n= 3, 0.5%$). A total of 368 adolescents received testing of intellectual functioning. The average Full-Scale IQ was 86.05 ($SD= 13.90$), the average verbal score was 85.12 ($SD= 13.95$), and the average performance score was 89.55 ($SD= 15.12$). A total of 593 adolescents received testing of risk levels for sexual re-offending and psychopathy. The average Juvenile-Sex Offender Assessment Protocol-II (J-SOAP-II) score was 22.03 ($SD= 8.90$). The J-SOAP-II was used to assess for relative risk for future criminal and sexual recidivism for youth who have committed a sexual offense. An overall average score of 22 shows a moderate level of risk factors that was present prior to treatment. The average Hare: Psychopathy Checklist: Youth Version (PCL: YV) score was 15.25 ($SD= 8.28$). The PCL: YV assesses for the presence of stable psychopathic personality traits.

An overall sample score of 15 is considered to be in the low to moderate range of psychopathy.

A total of 600 juveniles in the sample provided information regarding family history and previous psychosocial history. In terms of family history, 48.9% reported that their biological parents had been married or were currently married, compared to 34.7% who reported that their biological parents were divorced. There were 145 (22%) and 183 (27.8 %) adolescents who reported using alcohol or illicit drugs on a regular basis, respectively. In terms of previous violence, 16.4% witnessed domestic violence, 30.5% experienced sexual abuse, 32.4% experienced physical abuse, and 14.7% reported a history of neglect. A majority of the sample (60.3%) had prior psychiatric treatment, with 24% having had at least one prior inpatient psychiatric hospitalization, and 22.3% were currently prescribed psychotropic medication. Nearly three quarters of the sample (68.7%) were not taking a psychotropic medication. Of the psychotropic medications prescribed, stimulants accounted for 47.9%, followed by antidepressants (27.9%), mood stabilizers (15%), and anti-psychotics (9.3%).

The juveniles' legal history was obtained during the pre-treatment assessment. The total number of juvenile justice commitments (including their current commitment) ranged from one to 17, with an average of 1.94 ($SD= 2.11$). 50.3% of the adolescents reported that their current commitment was their first. The adolescents' total number of criminal arrests ranged from one to 35 with an average of 3.17 ($SD= 3.72$). The total number of adjudicated sex offenses ranged from one to 12 with an average of 1.33 ($SD= 0.94$). More specifically, 68.2% committed one offense, 13.7% committed two offenses, and 6.6% committed three or more offense. On average, the adolescents had been

engaging in sexually abusive behaviors for 11.65 months ($SD= 21.87$) prior to entering treatment, with an average of 1.90 ($SD= 4.70$) victims. The majority of the juveniles' victims were female only (60.6%), with 19.5% being only male and 10% included both male and female victims. 9.9% of the sample had missing data for this variable. The age of the victim relative to the offender was four or more years younger for 56.4% of the sample, while 23.9% had victims who were peer age or older, and 9.6% had a mixed pattern of both younger and peer age victims. The relationship of the offender to the victim was a friend or acquaintance for 36.0% of the sample, a relative other than a sibling (23.9%), a sibling (22.6%), and 2.6% were stranger victims. The level of physical intrusiveness ranged from fondling to penetration; 27.1% engaged in fondling only, 15.4% engaged in some type of oral sex (i.e., providing, receiving), and 41% engaged in penetration (i.e., digital, penile).

Of the 658 adolescents in this study, 389 (59.1%) were never re-arrested during the follow-up period, which ranged from 1.01 to 10.35 years. The average length of time since release from treatment for the sample was 4.66 years ($SD= 2.57$). The average age of these 389 juveniles when released from Mt. Meigs was 17.11 years ($SD = 1.60$) with a range from 11.34 to 22.80.

Sample Demographics for Juveniles Re-Arrested

Of the 658 adolescent offenders, 269 (40.9%) were re-arrested for a subsequent criminal offense of any type. Furthermore, 190 (28.9% of the total) adolescents were re-arrested for a non-sexual offense. The average age of adolescents when released from treatment who were re-arrested was 17.44 ($SD = 1.57$) and ranged from 12.47 to 23.65. The juveniles ranged in age at first re-arrest from 15.53 to 25.79 years, with an average

age in years of 19.86 ($SD = 1.64$). On average, the juveniles were arrested 2.42 years ($SD = 1.62$) following their release from Mt. Meigs with a range from zero days to 6.82 years. The total number of arrests for all 269 juveniles re-arrested ranged from one to 18, with a mean of 3.24 ($SD = 2.71$) and a mode of one. More than 75% of juveniles re-arrested had fewer than five arrests during the follow-up period and nearly 90% had fewer than seven arrests.

Sample Demographics for Juveniles Re-Arrested for a Sexual Offense

Out of the 269 juveniles who were re-arrested for any offense, 29 (4.4% of the total) were re-arrested at some point during the follow-up period for a contact sex offense. In this analysis, exhibitionism was considered to be a contact offense. However, only 18 (62.1%) of the 29 juveniles were re-arrested in the community for the first time for a contact sex offense, while 11 (37.9%) were first re-arrested for a non-sexual offense prior to their arrest for a sex offense. The average age of release from Mt. Meigs for those who were re-arrested for a sex offense was 17.31 years ($SD= 1.61$). Furthermore, the 29 adolescents re-arrested for a contact sex offense, were on average, re-rearrested 2.12 years ($SD= 1.47$) following their release from Mt. Meigs. The average number of all types of arrests for those re-arrested for a sex offense was 3.38 ($SD= 2.82$) with a mode of two.

Sample Demographics for Juveniles Re-Arrested for Failure to Register

Of the 269 adolescents who were re-arrested for any offense, 54 (8.2% of the total) were re-arrested for failure to register as a sex offender. Also, of the 54 adolescents who were ever re-arrested for failing to register as a sex offender, 28 (51.9%) were first arrested in the community for failing to register as a sex offender. The average age of

release from Mt. Meigs for those who were re-arrested for failure to register was 17.64 ($SD= 1.71$). Out of the 83 adolescents re-arrested for a sex offense or failure to register, 4 (4.8%) were re-arrested for both offenses.

Index Offense for Re-Arrest for Sex Offense

The following table shows the index offenses of each adolescent who was subsequently re-arrested for a sex offense following treatment. The index offense refers to the criminal conviction that mandated each adolescent complete sex offender treatment at Mt. Meigs.

Table 1. Adjudicated Offense Categories

<u>Offense</u>	<u>Frequency</u>	<u>Percent</u>
Rape 1 st Degree	2	6.9
Rape 2 nd Degree	3	10.3
Sexual Abuse 1 st Degree	7	24.1
Sexual Abuse 2 nd Degree	4	13.8
Sodomy 1 st Degree	3	10.3
Sexual Misconduct	5	17.2
Sexual Harassment	1	3.4
Indecent Exposure	1	3.4
Burglary 2 nd Degree	1	3.4
Missing	2	6.9
Total	29	100.0

The index offenses consisted of felony charges (Rape 1st Degree, Rape 2nd Degree, Sexual Abuse 1st Degree, Sexual Abuse 2nd Degree, and Sodomy 1st Degree) and misdemeanor charges (Sexual Misconduct, Sexual Harassment, Indecent Exposure, and Burglary 2nd Degree). The felony charges accounted for 70.4% of all index offenses and misdemeanor charges accounted for 27.4% of index offenses. Two of the adolescents' (6.9%) index offenses were not available.

Non-Sex Offense Arrest Categories for First Re-Arrest

The main focus of the current hypotheses was on sex offense crimes or registration violations, and therefore, the remaining criminal categories (non-sexual [violent], property, drug, and other) will only include the first time that the adolescents were re-arrested following their date of release. The Sex Offense and Failure to Register categories below, only include the juveniles' first re-arrest and do not account for the total number of arrests during the follow-up period.

Table 2. Arrest Categories for First Re-Arrest Post Release from Treatment

<u>Offense Category</u>	<u>Frequency</u>	<u>Percent</u>
Sex Offense	18	6.7
Failure to Register	28	10.4
Non-Sex Offense (violent)	36	13.4
Property	66	24.5
Drug	26	9.7
Other	95	35.3
Total	269	100.0

Violent non-sexual offenses included: Aggravated Assault, Robbery, Domestic Violence 1st, Assault-Reckless Endangerment, and Homicide. Property offenses included: Stolen Property, Burglary 1st and 3rd Degree, Theft of Property, Receiving Stolen Property, Larceny, and Arson. Drug offenses include: Possession of Marijuana 2nd Degree, Possession of Drug Paraphernalia, Possession of a Controlled Substance, and Manufacturing of a Controlled Substance (i.e., methamphetamine manufacturing). Other offenses included: Public Order Crimes (e.g., harassment, public intoxication), Disorderly Conduct, Carrying a Concealed Weapon, Traffic offenses (e.g., driving without a license, driving without a tag, and speeding), Shoplifting, and Possession of Forged Checks.

Descriptive Data on Risk Level and Recidivism for all Adolescents

During the time period of this study, the law in Alabama required that juveniles who were convicted of a “criminal juvenile sex offense” and released from treatment had to be returned to court for determination and assignment of a risk level. Juvenile judges could approve an assignment of “no risk” even for juveniles with “criminal juvenile sex offenses” if it were determined that there was no public safety need for notification to be applied. Juveniles who were convicted of misdemeanor sex offenses did not have to appear in court for such determination, but were automatically assigned the “no risk” level. Thus, all of the juveniles released from Mt. Meigs were assigned a risk level. The risk levels assigned ranged from: No risk level assigned (this occurred because of a Misdemeanor or non-sexual index offense, “None Applied” by referring court, Low, Moderate, or High. Of the 658 juveniles who were released, 155 (23.6%) were assigned no risk level because their index offense was a Misdemeanor sexual crime or a non-sexual crime, 115 (17.5%) were assigned No risk level by referring court, 287 (43.6%)

were assigned a Low risk level, 84 (12.8%) were assigned a Moderate risk level, and 17 (2.6%) were assigned a High risk level. Thus, there were 270 (41.1%) adolescents who had not assigned a risk level assigned, either because their committing offense did not require a risk level assignment or because the court concluded that no risk level assignment was required. In effect, the absolute number of adolescents (17) who were assigned high risk levels roughly matched the numbers who were re-arrested for a sexual offense (29) confirming Hypothesis 1.

Table 3. Risk Levels for All Juveniles

<u>Risk Level</u>	<u>Frequency</u>	<u>Percent</u>
Misdemeanor	155	23.6
None Applied	115	17.5
Low	287	43.6
Moderate	84	12.8
High	17	2.6
Total	658	100.0

Date for Juveniles Arrested for a Sex Offense

The 29 juveniles who were re-arrested for a contact sex offense had been assigned the following risk levels: 9 (31.0%) no risk level because of a Misdemeanor sex offense, 5 (17.2%) None Applied, 10 (34.5 %) Low, 5 (17.2%) Moderate, and 0 (0%) High.

Table 4. Risk Levels for Juveniles Re-Arrested for a Contact Sex Offense

<u>Risk Level</u>	<u>Frequency</u>	<u>Percent</u>
Misdemeanor	9	31.0
None Applied	5	17.2
Low	10	34.5
Moderate	5	17.2
High	0	0.0
Total	29	100.0

The juveniles assigned no risk level because of a Misdemeanor crime or non-sex offense were initially adjudicated for the following offenses: Rape 2nd Degree, (1), Sexual Misconduct (5), Sexual Harassment (1), Indecent Exposure (1), and Burglary 2nd Degree (1). The juveniles assigned No risk level applied were initially adjudicated for: Rape 2nd (2), Sexual Abuse 1st Degree, (1) Sexual Abuse 2nd Degree (1), and one adolescent's offense records were not available. The juveniles assigned a Low risk level were initially adjudicated for: Rape 1st Degree (1), Sodomy 1st Degree (3), Sexual Abuse 1st Degree (3), and Sexual Abuse 2nd Degree (3). Those adolescents assigned a Moderate risk level were initially adjudicated for the following criminal convictions: Rape 1st Degree (1), Sodomy 1st Degree (1), Sexual Abuse 1st Degree (2), and one adolescent's offense records were not available.

The 29 adolescents were re-arrested in the community for the following contact sex offenses: Rape 1st Degree, Rape 2nd Degree, Sodomy 1st Degree, Sodomy 2nd Degree, Sexual Abuse 1st Degree, Sexual Abuse 2nd Degree, Attempted Rape, Sexual Abuse of a Child Under 12 years of age, Child Fondling, Sexual Assault, and Sexual Misconduct.

Table 5. Sexual Recidivism Offense Categories

<u>Sex Offense</u>	<u>Frequency</u>	<u>Percent</u>
Rape 1 st Degree	4	13.8
Rape 2 nd Degree	8	27.6
Sodomy 1 st Degree	3	10.3
Sodomy 2 nd Degree	4	13.8
Sexual Abuse 1 st Degree	2	6.9
Sexual Abuse 2 nd Degree	1	3.4
Attempted Rape	1	3.4
Sexual Abuse Child Under 12	3	10.3
Child Fondling	1	3.4
Sexual Assault	1	3.4
Sexual Misconduct	1	3.4
Total	29	100.0

Of the 29 juveniles re-arrested for a contact sex offense, 22 were re-arrested once for a sex offense, six adolescents were re-arrested twice for sex offenses, and one juvenile was arrested three times for sexual offenses. There were 42 total sex offense charges among the 29 juveniles re-arrested for a sex offense. Specifically, there were 22 adolescents with one sex offense charge, five adolescents with two sex offense charges, one adolescent with three sex offense charges, and one adolescent with seven sex offense charges.

Of the 29 adolescents who were re-arrested for a sex offense, 27 have victim information that was collected while at Mt. Meigs. The average number of victims was

1.96 ($SD= 2.64$) with a range from one to 14. The sex of the victims was nearly 70% female, 17% male, and 7% mixed both male and female. A majority of the adolescents' victims (58.6%) were younger by four or more years, while 31.0% were a peer age or older victim. Only one juvenile (3.4%) showed a mixed pattern of victim ages. The average victim age was 9.89 years ($SD= 3.95$) with a range from three years to 18 years of age. One (3.4%) of the 27 juveniles used a weapon during the offense, while 26 (89.7%) did not use a weapon. Physical intrusiveness of the offenses ranged from fondling, to oral sex, and penetration. Nearly 60% of the sexual offenses included some type of penetration (i.e., digital, vaginal), while 34.5% of the offenses include fondling only.

Data for Juveniles Re-Arrested for Any Offense

The 269 juveniles who were re-arrested for any offense had been assigned the following risk levels: 62 (23.0%) no risk level because of a Misdemeanor or Violation of Probation index offense, 51 (19.0%) None Applied, 114 (42.2%) Low, 36 (13.4%) Moderate, and 6 (2.2%) High.

Table 6. Risk Levels for Juveniles Re-Arrested for any Re-Arrest

<u>Risk Level</u>	<u>Frequency</u>	<u>Percent</u>
Misdemeanor	62	23.0
None Applied	51	19.0
Low	114	42.2
Moderate	36	13.4
High	6	2.2
Total	269	100.0

Data for Juveniles Not Arrested for a Sex Offense

Contrary to the 29 adolescents who re-offended for a sex offense, there were 629 adolescents who were not re-arrested for a contact sex offense after their treatment completion. Their pre-treatment data included that the average number of victims was 1.90 ($SD= 4.70$). A majority of the victims were female only (60.6%), with 19.5% male only and 10% were mixed male and female victims. The average age of the victims was 9.27 years ($SD= 5.03$). The adolescents' victims were younger by four or more years 56.4% of the time, while 23.9% of the victims were peer age or older and 9.6% of the sample was mixed ages. There were 12 (1.8%) adolescents that used a weapon during the offense, while 579 (88%) did not use a weapon. Physical intrusiveness during the offenses ranged from fondling, to oral sex, to penetration. Fondling alone was involved in 27.1% of the sample, while 15.4% involved oral sex, and 41% included penetration (i.e., digital, penile).

Juveniles Arrested for Failure to Register

The 54 juveniles who were re-arrested for failure to register as a sex offender had been assigned the following risk levels: 5 (8.1%) no risk level because their index offense was a Misdemeanor sex offense or a non-sex offense, 2 (3.9%) None Applied, 33 (28.9%) Low, 11 (61.1%) Moderate, and 3 (5.6%) High. It is important to note that juveniles who have no risk assigned are not required to register as a sex offender. Therefore, these data show that 7 of the juveniles were court ordered to register, despite the fact that they were not assigned a risk level prior to their release into the community.

Table 7. Risk Levels for Juveniles Re-Arrested for Failure to Register

<u>Risk Level</u>	<u>Frequency</u>	<u>Percent</u>
Misdemeanor	5	9.3
None Applied	2	3.7
Low	33	61.1
Moderate	11	20.4
High	3	5.6
Total	54	100.0

Evaluating Differences among Risk Levels and Arrests

For the following Chi Square analyses, the risk level categories for Misdemeanor and None Applied, as well as, for Moderate and High were collapsed due to the low numbers in these two categories. A Chi Square test for independence was conducted to determine if those assigned a risk level of Misdemeanor/None Applied, Low, or Moderate/High differed significantly based on any arrest and arrests for a sex offense. The results for any arrest revealed a non-significant effect $\chi^2(2, N= 658) = 0.29, p=.84, ns$. The results for a sex offense also revealed a non-significant effect $\chi^2(2, N= 269) = 0.85, p=.66, ns$. Thus, court assigned risk levels failed to predict subsequent re-arrests and did not confirm Hypotheses 2 or 3.

Another Chi Square test of independence was conducted to determine if Low, Moderate, and High risk levels differed significantly based on failure to register. The Moderate and High risk levels were collapsed due to the low numbers in the High category. The results revealed a non-significant effect $\chi^2(1, N= 156) = 0.11, p=.74$, which did not confirm Hypothesis 4.

Predicting Subsequent Re-Arrest for Any Criminal Offenses

A binomial logistic regression was used to predict any type re-arrest using the court assigned risk level. Results revealed a non-significant overall effect (-2*Log Likelihood = 889.04), $\chi^2(4, N= 658) = 1.14, p=.89, ns$. Thus, the model has a poor fit with assigned risk level as the only predictor variable. Results indicated that risk level does not contribute to a significant rating of a subsequent arrest for any offense. Results showed that risk level (Wald = 1.14, $p = .89, ns$) did not contribute significantly to a subsequent arrest for any offense. The Hosmer and Lemeshow test indicated that 59.1% of cases were correctly classified, $\chi^2(3) = .000, p = 1.00, ns$. The predictor variable of risk level did not add to the percent of cases correctly identified prior to the predictor variable being entered.

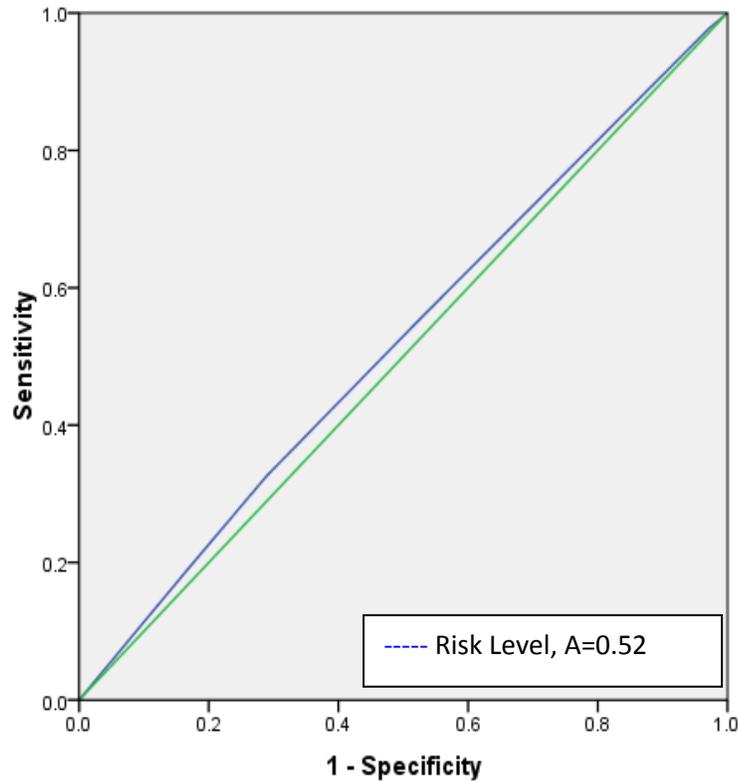
Predicting Subsequent Re-Arrest for Sexual Offenses

A binomial logistic regression was used to predict re-arrest for a sex offense using the court assigned risk level. Results revealed a non-significant overall effect (-2*Log Likelihood = 180.87), $\chi^2(4, N= 269) = 3.08, p=.54, ns$. Thus, the model has a poor fit with assigned risk level as the only predictor variable. Results indicated that risk level does not contribute to a significant rating of a subsequent arrest for any offense. Results showed that risk level (Wald = 1.71, $p = .79, ns$) did not contribute significantly to a subsequent arrest for a sex offense. The Hosmer and Lemeshow test indicated that 89.2% of cases were correctly classified, $\chi^2(3) = .00, p = 1.00, ns$. The predictor variable of risk level did not add to the percent of cases correctly identified prior to the predictor variable being entered.

Prediction Accuracy of Arrests

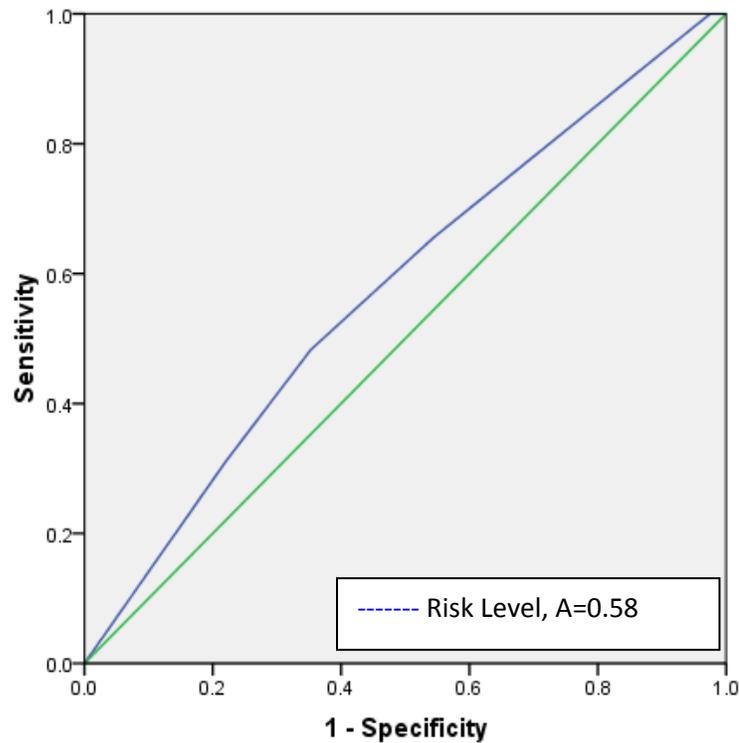
A Receiver Operating Characteristics (ROC) curve was used to estimate the predictive accuracy of risk level to predict a subsequent re-arrest. An AUC of .50 is indicative of chance prediction. The risk level produced an AUC of .52 (S.E. = .02; 95% C.I. = 0.48 to 0.57). See Figure 1.

Figure 1. Risk Level and Any Re-arrest ROC Curve



A Receiver Operating Characteristics (ROC) curve was used to estimate the predictive accuracy of risk level to predict subsequent re-arrest for a contact sex offense. An AUC of .50 is indicative of chance prediction. The risk level produced an AUC of .58 (S.E. = .06; 95% C.I. = 0.47 to 0.69). See Figure 2.

Figure 2. Risk Level and Contact Sex Offense Re-arrest ROC Curve



Race and Arrest History

There are 626 juveniles who have racial identity information available for Chi Square analyses. The Chi Square racial analyses will include only Caucasian and African American adolescents because of the low numbers of predicted arrests within the remaining racial categories. Furthermore, more than 96% of the sample was composed of Caucasian and African American adolescents. A Chi Square test of independence was performed to determine the relationship between race and risk level. The results revealed a non-significant effect $\chi^2(2, N=626) = 2.91, p = 0.23 ns$. Thus, the assignment of risk did not differ based on race. A Chi Square test of independence was performed to determine the relationship between race and re-arrest history. The results revealed a

significant effect $\chi^2(1, N=626) = 16.69, p < .000$, confirming Hypothesis 5. Therefore, there were significantly more African American adolescents re-arrested than Caucasian adolescents for any crime. Specifically, within the race category, 33.5% of Caucasian juveniles were re-arrested compared to 50.8% of their African American counterpart. Of the 29 adolescents re-arrested for a contact sex offense, 15 (51.7%) were Caucasian, 13 (44.8%) were African American, and one (3.4%) was Biracial.

Race and Total Arrests

There were 647 adolescents included in a One-way Analysis of Variance (ANOVA) to evaluate significant differences between racial groups and total number of arrests. The racial groups for Hispanic, Asian, Biracial, and Other were collapsed into one category because of the small number of total arrests for each of those racial groups individually. The test of homogeneity of variances was violated, and therefore, the robust test of equality of means was interpreted. There was a significant effect on the total number of arrests by race at the $p < .05$ level for the three conditions based on the Welch statistic [$F(2, 56) = 6.60, p = 0.003$]. Equal variances are not assumed, and therefore, post hoc comparisons using the Games-Howell test indicated that the mean score for total arrests for African Americans ($M = 1.73, SD = 2.56$) was significantly different from Caucasians ($M = 1.03, SD = 2.15, p = 0.001$). Comparisons between the Hispanic, Asian, Biracial, and Other group and the other two groups were not statistically significant at $p < 0.05$.

Discussion

Interpretation of Findings

The cardinal goal of this study was to examine the predictive validity of court assigned risk levels for sexual recidivism among a large sample of juveniles convicted of a sexual crime and subsequently mandated to complete a treatment program. Many states use some set of criteria or systematic strategy to define risk, often as a component of the post-treatment management of juvenile sex offenders. The assignment of risk is accomplished as either a part of treatment or as a mechanism for post release supervision. Moreover, the implementation of the Adam Walsh Act (AWA, 2006) has led to the establishment of lifetime registration requirements as a function of the specific charge by which the adolescent was convicted. In essence, the registration requirement is predicated on the presumed risk of re-offending based on the severity of the assigned charge.

Thus, a critical task for evaluating the effectiveness of such mechanisms is to establish the validity of these procedures. That is, if “at risk” juveniles can be identified successfully, the goal of public safety, which is at the heart of these policies, can be justified. However, if it is the case that “at risk” offenders cannot be successfully predicted, then the policy cannot be justified, particularly if adverse consequences can be established for the adolescents who are placed in the “at risk” group. Often the requirements for the length of registration and the exposure of the adolescent to community notification are established based on some assignment of risk, or in the case

of the AWA, the nature of their adjudicated offense. Thus, in the final analysis, the empirical validity of the concept of risk is critical to the determination of whether policies using risk assignment to determine the post treatment management of juveniles with sex offense charges are fair and useful.

The concept of assigning risk levels for youth who have committed a sexual crime is derived from laws that were originally created with the intention of protecting the public from adult sexual offenders (Jacob Wetterling Crimes Against Children and Sex Offender Registration Act, 1994; Megan's Law, 1996; Pan Lyncher Act, 1996). However, the origins and standards of practice for juvenile justice, from the beginning, were intentionally designed to be distinct from adult law and primarily intended to focus on rehabilitation rather than punishment for youthful offenders (Garfinkle, 2003; Trivits & Repucci, 2002). Unfortunately, the current sex offender laws that are now applied to juveniles have deviated greatly from these conceptual origins. Instead, the conflating of juvenile sex offenders with adult sex offenders has led to an eroding of the tender youth standard of protection, and have put juveniles into essentially the same models of management that have evolved to respond to adult sex offenders. Therefore, many juveniles are being branded as a "sex offender" without this designation of sex offender being empirically founded in terms of persistence of offending into adulthood. These laws are largely based on misperceptions about adolescents who commit sexual offenses (Chaffin, 2008). Instead of being afforded the appropriate services to help the adolescents succeed in the community, juveniles are being controlled by extremely intrusive and non rehabilitative methods (e.g., civil commitment) (Hagan et al, 2010).

It is the premise of this work that the focus of research should be to establish whether such intrusive and potentially damaging methods of control can be justified given the data about the risk of recidivism for juvenile offenders. If, for example, research results establish that the few youth who do continue to exhibit illegal and problematic sexual behaviors can be accurately identified, then mechanisms can be developed to manage these adolescents. However, if the evidence is that re-arrest cannot be reliably predicted and that only a very few juveniles do re-offend, then little justification for abandoning the traditional models for youth can be made.

In fact, the results of the current research study were that the assigned risk levels failed to predict sexual recidivism during the one to ten year follow-up period. That is, juveniles who had completed treatment and had been in the community for an average of more than five years, were more than 95% likely to not have been re-arrested for a new sex offense. Specifically, only 29 (4.4%) of the 658 adolescents who were examined in this study were arrested for a new sexual offense. Of critical note, is that none of the 29 adolescents arrested for a sexual crime were assigned a High risk level, and nearly half were assigned No risk level. This finding profoundly demonstrates the limitation of using non-empirically established mechanisms to establish risk levels, which are intended to predict recidivism. Moreover, the very low base rate of re-offending likely means that accurate prediction of re-offending is not statistically possible (Meehl & Rosen, 1955).

This study also aimed to examine the adolescents who were re-arrested for failure to register as a sex offender. This is a new offense category that was created after the implementation of sex offense registration laws as a means to monitor that the adolescents comply with the registration requirements in the community. The results

showed that over half of the 54 adolescents, who were re-arrested for failure to register, were first arrested in the community for non-compliance with the registration policy. This means that those adolescents first re-arrested for not registering as a sex offender, had not previously been identified by law enforcement for any other criminal behavior since their release from treatment. This finding illustrates one of the adverse effects of registration/notification laws; the effect is creating a new criminal event which then increases the probability of an adolescent being removed from society, thus hindering any attempt to create a normal life trajectory; by being returned to a correctional context.

The results of this project further showed an alarming disparity in the rates of African American adolescents that were re-arrested compared to Caucasian youth. Specifically, there were significantly more African American juveniles re-arrested compared to Caucasian juveniles. Furthermore, the mean number of total arrests for African American adolescents was significantly higher than the average total arrests for Caucasian youth. These results have been shown in a previous study (Letourneau & Armstrong, 2008) and likely indicate a major disparity in law enforcement possibly targeting African American youth in the community. These finding suggests that law enforcement may be more vigilant of those adolescents who are “labeled” as a sex offender (i.e., registered) and/or are a minority status and may subsequently be more likely to target them in the community (Chiricos, Barrick, Bales, & Bontrager, 2007). However, there were no significant differences found among the assigned risk levels and race. This suggests that race was a factor that did not play a significant role in determining risk level.

Adolescent Recidivism Rates

Accurately predicting juvenile sexual recidivism is a difficult task. In fact, because of the low base rate of sexual offenses committed by juveniles, it may well be a statistically impossible task. Results from a comprehensive review of the literature found that, typically, less than 15% of treated juvenile sex offenders were re-arrested for new sexual offenses (Parks & Bard, 2006). If, even with the best empirical methods, we cannot predict re-offending, then it seems that the way in which we think about managing juveniles with sex offenses needs to be re-conceptualized.

Of course, another way of considering the issue is to argue that we do have the means to predict, but only by using the base rate information for treated adolescents. If we predict that no juveniles who have completed treatment are likely to re-offend, we will be correct over 85% of the time. In Alabama, under the current functioning system, reliance on such a policy would lead to being correct more than 95% of the time. Moreover, during the majority of the time during which these data were collected, there were no systematic policies or programs established to provide any post treatment support for juveniles released from ABSOP in Alabama. Beginning in 2007, a pilot program was established to provide post incarceration support for juveniles, but this program operated only in a handful of counties in the central part of the state. Less than 10% of the juveniles released from ABSOP had any formal support after treatment. The fact that 95% of juveniles were not re-arrested is even more compelling given the paucity of resources available in a poor and professionally underserved state like Alabama. There is little evidence that these juveniles are, as a group, at high risk for re-arrest, even in a resource poor context.

Ironically, treated juvenile sex offenders, statistically, have the same rate of re-arrest for sex offenses as general delinquents who had no previous sex offense charges (Caldwell et al, 2008; Cook, 2010). Thus, the entire apparatus for managing juveniles with sex offense charges would be just as empirically justifiable for delinquents without sex offense charges. In short, there appears to be no empirical justification for the extensive, extended, and intrusive post release management of juveniles with sex offense charges. In effect, the clearest implication of these re-arrest data is that we should continue to invest resources in the treatment of juveniles with sex offense charges, and not in post release management organized by correctional containment instead of therapeutic support. What could we do if we were able to provide post-treatment support for all juveniles released from ABSOP? Perhaps no boys would be re-arrested.

The consensus from a number of reviews is that treated juveniles have a lower rate of re-offending than untreated juvenile offenders (Vandiver, 2006; Waite et al., 2005; Worling & Curwen, 2000). Moreover, this is in spite of the fact that the field is in the infancy of treatment development. If a program like ABSOP, housed in an antiquated system and with profound resource limitations has shown a 95% success at rehabilitation, then there is cause for considerable optimism in the effectiveness of sex offender treatment. Moreover, as acknowledged above, ABSOP lacks the capacity to provide systematic follow up support, a deficit that is critical according to most knowledgeable observers (Bourdin, Schaeffer, & Heiblum, 2009). If, instead of spreading enormous resources in maintaining registries and community notification, policy and procedures provided a comprehensive and effective aftercare program, what could we accomplish? These findings suggest that the best use of risk analysis is for the original purpose of what

risk analysis was intended to accomplish; identifying factors to help predict who would need treatment and what type of treatment would be best in order to prevent re-offending.

An alternative interpretation of these data is that the assigned risk levels have been effective at preventing recidivism. Thus, the “high risk” adolescents were correctly identified and supervised more closely in the community leading to the lower rate of re-arrest for this group. However, no counties in Alabama had implemented structured post treatment supportive services for youth following residential treatment until 2006 when, with a grant, an aftercare program, The Continuum of Care (COC), was begun in two counties, eventually being extended to 12 counties. Very few adolescents included in this study would have been provided services through the COC, likely less than 30.

Moreover, the typical services for juveniles were similar for both the adolescents with regular delinquent offenses and those with sex offenses and usually involved only minimum supervision consisting of infrequent check-ins with the juvenile probation officers. Alabama does not have a wealth of aftercare services or programs. The anecdotal evidence that was available did not indicate that high risk juveniles had any additional services or even surveillance. At this juncture, there is simply no way to determine whether the high risk assignment did provide a protective buffer, although there is little in the ecology of the lives of these juveniles which would support this assumption. Additional research following these boys in the daily lives is needed to determine the consequences of being identified as high risk and without such research, little is really known about the direct daily impact of registration and notification demands on the life of these juveniles

Predicting Adolescent Recidivism

Furthermore, predicting future risk will require using an empirically validated tool or at least, predictor variables that have shown strong empirical support across samples of juveniles offenders. Although research support has been very limited (Rich, 2009), several risk factors for predicting adolescent sexual recidivism have been examined. These variables include deviant sexual arousal, prior convicted sexual offenses, multiple victims, social isolation, and incomplete sexual offender treatment (Worling & Långström, 2006).

Nisbet et al. (2004) found that there was an increased risk of sexual recidivism if the adolescent was older at the time of the offense and if there was a history of non-sexual offenses. However, the only variable found to predict sexual recidivism among adolescent males in the study was the total number of sexual offense charges. Research has also shown prior criminal history to be a strong predictor of sexual recidivism (Worling & Curwen, 2000; Worling & Långström, 2006).

Although some studies have identified significant risk factors for adolescent sexual recidivism, there remains controversy regarding the predictive validity for those variables. Furthermore, the literature lacks much replication among juvenile samples that would be necessary to support a consistent set of predictors for adolescent recidivism. Therefore, these conflicting results regarding which factors are empirically supported warrants a more careful examination of how risk is currently calculated for adolescents.

In this current sample, the average number of total criminal arrests was approximately three, with a mode of one. The average number of total adjudicated sex offenses was 1.3 with a mode of one. These results indicate that the current sample, on average, had a low level of criminal behavior previous to the adjudicated offense.

Therefore, if past criminal offenses were used to predict sexual recidivism (e.g., a risk factor that has shown some predictive validity), it would be expected that the majority of the youth in this study would not be re-arrested for a sex offense following treatment. Risk factors that continue to show the most empirical support for predicting recidivism ought to be further examined in an attempt to accurately identify the adolescents who pose a significant risk to the community.

In addition to considering risk factors for recidivism, it may be advantageous, also, to consider protective factors. Protective factors refer to identified variables that moderate risk for sexual recidivism in order to alter negative outcomes (Rich, 2009). Identifying protective factors for adolescents aims to provide a buffer against harmful behaviors, thus reducing the risk of recidivism. The concept of protective factors is a “strengths based” approach to determining. Currently, only one clinical instrument has considered protective factors when assessing adolescents for risk, which is the Juvenile Risk Assessment Tool (J-RAT) (Rich). Typically, predicting risk is only based on assessing factors that are known to increase the chances of recidivism (i.e., criminal history, age at first offense), whereas identified protective factors are theoretically used to reduce the likelihood of recidivism in the presence of the risk factors. Protective factors include individual (e.g., intelligence), family (e.g., non-criminal), peer (prosocial), and community (e.g., religious involvement) variables that ought to be identified for each adolescent prior to returning to the community in order for to maximum success. Examining protective factors is commensurate with the intention of the juvenile justice system that focuses on supporting youth and identifying ways to help them succeed in the community. Furthermore, protective factors could be used in a post release support

program to facilitate the adolescents' transition to the community. Focusing on the youth's strength will likely provide them with more opportunities for success as opposed to the use of risk levels, which is a failed attempt to contain recidivism.

Treatment Implications

Treatment programs for adolescents who exhibit problematic sexual behaviors ought to be tailored to meet the specific needs of each individual adolescent. One such model that is tailored to meet the needs of youth individually is the Risk-Needs-Responsivity (RNR) Model (Andrews et al., 1990). This model first assesses the specific risk factors that the adolescent currently presents (e.g., prior arrests, total number of sexual offenses). The needs of the adolescent are then evaluated in order to decide what type of treatment program would be most beneficial for the adolescent and their community (e.g., community based treatment, residential). Lastly, the type and intensity of treatment is implemented to provide the adolescent with a variety of resources to reduce their risk of recidivism (e.g., positive coping skills, social skills, sex education). This model of treatment has been implemented with youthful offenders and positive treatment results have been shown.

Waite et al. (2005) evaluated 256 youth who were separated into two treatment groups, based on the needs the youth initially presented. Youth that presented with multiple deficits were assigned to the more intensive treatment program, while youth presenting with fewer concerns were placed in a less intensive program. Follow-up data concludes the sexual recidivism rate for the more intensive versus less intensive group was 4.9% and 4.5%, respectively. These results are comparable and suggest that the youth were placed in the appropriate pre-treatment groups based on their presenting

needs and received the necessary treatment that was required to reduce their chance of recidivism. The results support a RNR approach to treatment for youth that does not focus solely on their offense, but rather globally addresses their emotional, mental, and physical health. The standardized process of automatically assigning youth to the national registry based only on their sexual offense, fails to include any dynamic factors that have changed during their course of treatment.

The results from the youth in this current study showed areas of concern in several domains of functioning, including family, peers, school, and mental health issues, Approximately half of the youth came from a single parent family, a quarter used alcohol and/or drugs on a regular basis, 60% received psychiatric services prior to their current treatment, a quarter of the sample had been previously committed to an inpatient psychiatric hospital, 22% were currently prescribed psychotropic medication, 30% experienced physical or sexual abuse, and 16% witness domestic violence in the home. The adolescents in this study clearly required treatment above and beyond reducing their risk for sexual recidivism. The goals for the youth in treatment included providing tools for managing emotions and behaviors, appropriately coping with stress, and ultimately providing most opportunities to succeed in the community. However, to implement a more comprehensive program that would closely model a RNR approach would require more resources than are currently unavailable. The results of the current study show that the youth have a low sexual recidivism rate; however the rate of general recidivism is significantly higher. The RNR model, which uses a holistic approach to treatment, would likely decrease sexual recidivism in addition to general re-offending by specifically tailoring treatment to meet each of the juvenile's needs.

Policy Implications

Policy implications from the current data of this research project along with the findings of other studies are clear. The current registration and notification requirements are ineffective at predicting juvenile sexual recidivism (Letourneau et al., 2009b). The Sex Offender Registration and Notification Act (SORNA), which is part of The Adam Walsh Child Protection Safety Act (AWA), requires any juvenile, age 14 years or older, who has committed a sexual offense comparable to, or more severe than, aggravated sexual abuse against a victim 12 years of age or younger, to register on the national public registry for the rest of their lives. Under the SORNA statute, 34% of the current sample examined in this study would have been subjected to lifetime registration as a sex offender (Davis, 2012). This number is concerning because only 4.4% of the current sample was re-arrested for a sexual offense during the most at risk period of adolescence. In addition to the alarming discrepancy between those juveniles who would have been mandated to register compared with those who were actually re-arrested for a sex offense, are the additional notable flaws associated with the AWA.

The AWA deviates greatly from the original intention of the juvenile justice system, which was created to rehabilitate youthful offenders and guide them towards a non-criminal lifestyle (Garfinkle, 2003; Trivits & Repucci, 2002). Research has documented that the majority of individuals who engage in criminal activity during their adolescence do not continue engaging in delinquent behavior during adulthood (Moffitt, 1993). In fact, engaging in minor criminal behavior during adolescence can be seen as a normative and developmentally appropriate. Most adolescents who engage in delinquent behavior during their youth are never arrested for a criminal offense in adulthood

(Moffitt). However, the AWA falsely assumes that juveniles who commit a sexual offense will continue offending through adulthood. This assumption is not supported based on the low sexual recidivism rate found in the current study and all of the other research now available (Batastini, Hunt, Present-Koller, & DeMatteo, 2011; Letourneau & Armstrong, 2008; Parks & Bard, 2006).

Furthermore, juveniles who have been convicted of a sexual offense and subsequently receive treatment are re-arrested for a sexual crime at similarly low rates as non-sexual delinquent youth (Cook, 2010). This finding suggests that sexually abusive behavior may be part of general criminality, rather than a sexual preoccupation with young children or a pattern of sexually abusive behavior. Additional results from this current study found that general non-sexual re-offending for adolescents was significantly higher than sexual recidivism at 28.9%. This finding is consistent with research that has examined rates of general recidivism among adolescents convicted of a sexual crime (Worling & Curwen, 2000).

Furthermore, the AWA is following a more punitive, adult focused management model, which imposes greater sanctions and restrictions on adolescent offenders. These sanctions include lifetime registration, which could limit where an adolescent lives or attends school, and civil commitment requirements that mandate incarceration past the maximum release date for the criminal offense. These punishment driven requirements are, at best, failing to facilitate a youth's optimal success in the community, and at worst, are increasing the chances of recidivism by limiting positive social supports and ostracizing them from the community (Letourneau & Armstrong, 2008).

The AWA is also operating under two largely false assumptions about youthful offenders: (1) high risk youth are easily identifiable based solely on the committing sexual offense (2) any youth who have committed a sexual offense pose a significant risk to society because they are likely to re-offend sexually.

To address the first assumption, certain juvenile offenders are now mandated to lifetime registration based solely on their adjudicating offense. When predicting risk, it has been deemed best practice to use empirically validated factors, in order to be as accurate as possible (Rich, 2009). Furthermore, widely used clinical instruments that identify potential risk factors consider multiple variables when calculating a risk prediction to maximize the likelihood of correct identification. Therefore, using only one predictor variable that has not been supported in the literature to show predictive validity significantly increases the likelihood that a youth will be falsely identified as a high risk offender. This means that under the AWA regulations, many youth who have been incorrectly labeled as “high risk” will be mandated to comply with the SORNA standards, including lifetime registration.

Evaluating the second assumption, studies have consistently found low rates of sexual recidivism among youth who complete treatment after committing a sexual offense (Vandiver, 2006; Waite et al., 2005; Worling & Curwen, 2000). The rate of sexual recidivism reported in most studies is less than 15%. However, the percentage of adolescents being placed in a Tier III classification is much higher than the sexual recidivism rate, indicating a misrepresentation of the youth who may actually pose a significant risk.

Furthermore, the misassumption supporting lifetime registration for adolescents is that the youth who qualify for a Tier III designation are more serious offenders, thus more likely to re-offend. However, the rate of sexual recidivism has been found to be very low for those registered youth. Letourneau and Armstrong (2008) compared the rates of recidivism for two groups (i.e., registered versus non-registered) of adolescent males convicted of a sexual offense. The groups were matched one to one on several variables including the type of index sexual offense, the date of index offense, age at arrest, race, and prior convictions for criminal offenses. Thus, the main variable that differentiated the groups was their registration status. Results of this study showed that the overall sexual recidivism of both groups combined was 0.9% ($n= 2$) with both recidivism events occurring to registered youth.

Batastini and colleagues (2011) evaluated 108 male adolescents adjudicated for a sexual offense over a 2-year period in the community following the completion of outpatient treatment. The adolescents were separated into two groups: one group of adolescents met Tier III criteria and registered as a sex offender, and the other group did not meet Tier III criteria, thus was not mandated to register. Results of the study showed that adolescents registered as a sex offender did not recidivate at a significantly higher rate than those adolescents who were not registered. The overall sexual recidivism rate was very low, less than 2% ($n= 2$).

Caldwell et al. (2008) conducted a study with two groups of adolescent males in a secure correctional facility. One group had been adjudicated for a felony sexual offense and was compared to another group that had never been arrested, charged, or convicted for a sexual offense. One of the main research questions was whether the SORNA Tier III

classification predicted sexual recidivism. Results showed that the SORNA Tier failed to reliably predict sexual recidivism for either group of adolescents. Furthermore, the sexual recidivism rate for adolescent sex offenders versus non-sex offenders was 12.1% and 11.6%, respectively after nearly six years in the community following their release from treatment. The research presented provides support against using a single criterion, such as an index offense, to predict sexual recidivism. Also, the Tier system was unable to correctly classify the juveniles who re-offended.

Implications and Effects of Juvenile Registration

The current legislation for adolescents with sexual behavior problems is not consistent with the original intentions of the juvenile justice system, which is to rehabilitate youthful offenders and guide them towards a non-criminal lifestyle (Garfinkle, 2003; Trivits & Repucci, 2002). Moreover, the AWA is not commensurate with the focus on rehabilitation for juveniles, but rather is imposing punitive requirements on juvenile offenders that likely have serious adverse consequences. Research examining the effects for juveniles who are placed on the sex offender registry is in its infancy. It is likely that registration policies will hinder adolescents from ultimately achieving success in their academics, forming meaningful relationships, and in the community as they transition into adulthood (Letourneau & Miner, 2005). Studies evaluating the adverse effects for adult sex offenders show negative consequences of being registered included relationship difficulties, being denied a place to live, publicly experiencing harassment, and job loss (Mercado et al., 2008; Tewksbury, 2005). The assumption can be made that juveniles are likely to experience many similar negative

effects of being labeled a “sex offender” and may suffer even more serious consequences than their adult counterpart.

DiCataldo (2009) has purported the adverse effects for adolescents to include problems with peers at school, romantic relationships, and family relational issues. Youth are likely to experience an increased level of ostracism and difficulty with acceptance by a peer group if their peers are aware of their sexual offense. The adolescent may feel socially isolated and may begin to associate with other delinquent youth if that is the only peer group where they find acceptance. Also, adolescence is a time for forming a sexual identity and exploring interests in romantic partners. For youth who are placed on the registry, initiating dating relationships may be an impossible task to master for fear that any attempt at intimacy may be construed as deviant and illegal. The families of these youth are also affected by unintended consequences of registering as a sex offender. The families may be forced to move if the adolescent is required to reside a specified distance from a school or day care. Also, the juveniles’ families may experience great stress due to harassment or vigilantism in their neighborhood and choose, or may experience pressure, to relocate.

Methodological Strengths and Limitations

The majority of studies examining juvenile sexual recidivism have used relatively small sample sizes as well as a short follow-up period. A major strength of the current study is the large sample size ($n= 658$) that is demographically diverse and represents all counties in Alabama. In effect, the current study is not based on a sample, it used the entire population of adolescents who had been convicted of a juvenile sex crime in the state as the ABSOP program is the only state program in existence. Moreover, the sample

was diverse in terms of the adolescents' age, familial background, and psychosocial history.

Also, this study collected recidivism data on the juveniles for a follow-up period of up to ten years. This follow-up range is significantly higher compared with most criminal recidivism studies. Furthermore, because the youth were followed for nearly a decade, the results of this study include re-offending that occurred during their adolescence and through early adulthood.

Methodological limitations of this study must also be considered. First, only arrest data was used to identify adolescents for sexual recidivism. Using conviction data may prove to be more representative of those adolescents who continue engaging in sexually problematic behaviors. Adolescents are commonly arrested for an offense that is subsequently pleaded down in court to a lesser offense. One could assume that a conviction for a sexual crime is more serious than an arrest and that a juvenile convicted of a sexual offense may pose a higher risk for engaging in delinquent behavior. Furthermore, adolescents who have a known criminal history are conceivable more likely to be targeted in the community and arrested at a disproportionate rate compared to other adolescents.

Additionally, results from this study were based solely on re-arrest data from Alabama. Therefore, the data presented are best seen as an estimate of sexual recidivism, rather than the actual rates, as individuals engage in criminal activity outside of law enforcement awareness. Also, the recidivism data does not account for adolescents who were arrested in a state other than Alabama.

Future Directions

Exponentially more research will need to be conducted on the efficacy of the national registry (i.e., examining registered versus non registered youth) as more states comply with the AWA and mandate certain juveniles to register as a sex offender after treatment. Research efforts will also need to focus on the adverse effects of registering as a sex offender for the youths' development and reintegration to society. Also, studies ought to evaluate community supports that are designed to buffer adolescents from the iatrogenic effects of registering as a sex offender.

If registration policies continue to be enforced for youthful offenders, there ought to be consideration for major reforms. These reforms should include more flexibility to allow for discretion when determining what adolescents qualify for placement on the registry. This should include eliminating the current criterion that is used (i.e., adjudicated offense) for the AWA and replacing the single factor with empirically supported risk factors, identified through a clinically valid assessment instrument, for predicting recidivism. Using empirically supported clinical risk assessment instruments has been proposed by Letourneau, Bandyopadhyay, Sinha, and Armstrong (2009a) to help prevent misclassifying juveniles as "high risk" based on their offense, when based on actuarial assessments may in fact pose a low risk of recidivism. Letourneau and colleagues also recommended a separate Tier system specifically for juvenile offenders. The Tiers would be based on empirically supported factors, rather than the initial adjudicated offense. Additionally, Caldwell et al. (2008) suggest limiting the age at which an adolescent would have to register. The proposed age is 21 years old, which is commensurate with the maximum age within juvenile court. Lastly, alternatives to public notification for adolescent offenders have been proposed. The recommendation to

eliminate the national registry for youth was suggested by Letourneau et al. and strongly advocates for abolishing the SORNA system for youth due to the potential permanent adverse effects of lifetime registration.

Additional alternatives to the registry for youth are provided. This current study found a less than five percent sexual recidivism rate among more than 650 youth. This means that treatment for youthful offenders is largely effective at reducing recidivism. However, because of the heterogeneity among juvenile sex offenders, treatment provided in a residential setting is often a more restrictive environment than necessary for effective rehabilitation. It is recommended that youth who are adjudicated for a sexual offense receive an evaluation to determine the most appropriate treatment based on their individual needs. This suggestion is largely based on the RNR principle that treatment ought to be tailored to the needs of each adolescent (Andrews et al., 2006). For those youth who do not require the extensive structure and security of residential care, intensive community based treatment involving the family should be advocated. Programs that use a multi-systemic approach to treatment have shown significantly promising results for reducing sexual recidivism (Borduin et al., 2009). However, some youth that have more serious concerns would require a more secure facility to ensure the public's safety. In those cases, residential treatment would likely be the best choice for treatment, while including the goal of involvement from the adolescent's family.

Following treatment completion (community based or residential), a post-evaluation using empirically supported risk assessment instruments ought to be conducted to examine the dynamic risk factors that changed during treatment. Then, consideration for static risk factors (e.g., prior criminal history), dynamic risk factors

(e.g., treatment success), and protective factors (e.g., positive family support) ought to be used as a model to predict the adolescent's risk for re-offending.

Risk could be classified as either "low" or "high" and at least 90% of youth would fall within the low category, based on the current results of recidivism. Following the determination of risk, wraparound services should be provided to those deemed a low risk. The goal for adolescents', who are at a low risk to re-offend, is to create an environment where they are most likely to succeed, while also maintaining public safety. Wraparound services for low risk youth could include a probationary period of on-going individual and family therapy, a social worker or case manager assigned to check in with the adolescent, and imposing specific requirements (e.g., curfew) for the youth to follow. For the youth identified as high risk, more restrictive services following treatment may be necessary. For example, it may be important to provide information about the adolescent's offense to organizations that provide services to children (e.g., daycare centers, schools), while not exploiting the youth and only sharing the necessary amount of information to protect the public. The youth would ideally be re-evaluated at specific time intervals (e.g., every 3 months) and the notification process would be terminated if the youth was identified to pose a low risk of recidivism for a certain amount of time.

Conclusions

The major findings of the current research project were that juvenile sex offenders who had completed a treatment program were at very low risk to be re-arrested for a new sex offense during the remainder of their adolescence and that the few who were re-arrested could not be identified as vulnerable based on a reasonably intensive process designed to identify high risk status. . In effect, adolescents who commit offenses in early

to middle adolescence are not likely to commit another sexual offense during the rest of their adolescence or during early adulthood. These findings appear to be compelling evidence that adolescent sex offending likely is not an adult persistent pattern. Additionally, court assigned risk levels were not predictive of sexual or general recidivism. Thus, policy predicated on a presumption that juveniles are at a high likelihood of re-offending is doomed to be misleading. Thus, legal policies that presume high rates of post treatment control to be necessary are likely to be counterproductive in that, at the least, this may result in a misallocation of resources by putting scarce resources into managing large numbers of adolescents who are not likely to re-offend. At the extreme, this heavy burden of registration and notification may so distort the normal adolescent trajectory of development as to function as an iatrogenic event.

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