OFFICE OF JUSTICE PROGRAMS

SEX OFFENDER
MANAGEMENT ASSESSMENT
and PLANNING INITIATIVE

SMART
Office of Sex Offender Sentencing, Monitoring,
Apprehending, Registering, and Tracking

TEXT SIZE: ⊖ ⊕   SEND ✉

⊚ Printer-Friendly Option

Chapter 4: Assessment of Risk for Sexual Reoffense in Juveniles Who Commit Sexual Offenses

by Phil Rich, Ph.D.

Introduction	Risk Assessment Process	Risk Factors for Juvenile Sexual Offending
Juvenile Risk Assessment Instruments	Protective Factors in Assessments of Juvenile Risk
Summary	Notes	References

Introduction

The assessment of sexual recidivism risk for juveniles who commit sexual offenses serves several purposes. The overall purpose is to estimate the risk of future sexual offending so that the most effective steps to reduce, contain, or eliminate that risk can be taken. Hence, risk assessment essentially serves as an investigative tool that helps inform and guide various intervention, treatment, and legal processes. (For more information on treatment, see chapter 5, "Effectiveness of Treatment for Juveniles Who Sexually Offend," in the Juvenile section.)

A risk assessment can be administered at different points once a juvenile is identified by authorities as the perpetrator of a sexual offense. An assessment can be administered during the intake screening process to inform and guide authorities as to the appropriate course of action. In the event of a referral to the court, an assessment may be administered prior to or during adjudication (or trial, when transfer to the adult criminal court occurs) to provide the court, its officers, and other professionals with risk information that can be used in legal proceedings as well as in decision-making regarding supervision or treatment. Finally, assessments may be administered at the postadjudication level to provide the court, its officers, correctional authorities, or treatment professionals with risk information that can be used in dispositional or sentencing hearings, as well as in decision-making regarding institutional placement, community supervision, or treatment. The point in the process at which an assessment is administered, as well as the purpose of the evaluation, may have significant impact on the risk evaluation. Within the context of treatment, risk assessment is typically used to set a baseline assignment of risk and to then periodically reevaluate risk during the course of treatment. In addition, the risk assessment process can be used to determine the type and intensity of treatment needed and to help define targets for treatment and case management.

Regardless of the purpose of risk assessment or the point when it occurs, the assessment of risk involves making predictions about the likelihood of future behavior, which is an inherently difficult task. The process of risk assessment for juveniles who sexually offend is further complicated by the relatively low base rates[1] of sexual recidivism found among juveniles. Given these low base rates, the process of risk prediction can potentially result in type I errors, or false positive findings, in which risk is overestimated and low-risk juveniles are incorrectly determined to be high-risk (Craig, Browne, & Stringer, 2004; Wollert, 2006). Juvenile risk assessment is complicated even further by the ongoing development and maturation of youth. In short, juveniles vary and change over time in their physical development; cognitive, neurological, and personality development; formation of attitudes and acquisition of information; and emotional and behavioral maturity (Rich, 2009; Steinberg, 2009, 2010; Steinberg & Scott, 2003; Zimring, 2004). Accordingly, risk assessment models and tools need to account for these developmental factors in order to accurately estimate risk.

Whereas the process of juvenile risk assessment was once largely driven by adult risk assessment research and instrumentation, the field of juvenile risk assessment has largely developed in its own right over the past decade. Like adult risk assessment, juvenile risk assessment traditionally has focused on the identification and assessment of factors within the individual that increase (and possibly predict) risk for sexual recidivism. However, juvenile risk assessment can also be used to identify and assess protective factors that mitigate risk for sexual recidivism. Risk assessment for sexual recidivism—both for juveniles and adults—also has traditionally focused on **static** risk factors that reflect historical behaviors and experiences related to sexual offending. Static risk factors are those that have previously occurred and will remain unaltered over time. Contemporary risk assessment, however, also includes a focus on **dynamic** risk factors. Dynamic risk factors are those associated with current behaviors, thoughts, feelings, attitudes, situations, interactions, and relationships. So named because they are fluid and sometimes relational or situational, dynamic risk factors may thus change over time, particularly through some form of treatment. Dynamic risk factors are sometimes referred to as **criminogenic needs** because they contribute directly to criminal behavior. Although the measurement and evaluation of one or both types of risk factors (static and dynamic) is central to the risk assessment process, focusing on dynamic risk factors is particularly important when treatment is provided because criminogenic needs provide targets for rehabilitative interventions (Beggs & Grace, 2011; Olver & Wong, 2009; Pedersen, Rasmussen, & Elsass, 2010).

FINDINGS

It has been strongly asserted in both juvenile and adult risk assessment contexts that actuarial assessment has the capacity to predict risk more accurately than clinical assessment; however, this contention is not universally accepted and many have noted that both assessment models have strengths and weaknesses. Despite this ongoing debate, it is generally recognized that the exercise of unaided professional judgment by mental health practitioners is not a reliable or accurate means for assessing the potential for future dangerous behavior.

The goals of a comprehensive risk assessment process extend beyond the assessment of risk alone.

Much of the literature on risk factors for juvenile sexual offending is theoretical and descriptive rather than the result of statistical research. Given these problems, it is not surprising that findings regarding risk factors vary considerably and are inconsistent across different studies. Despite these problems, the empirical research indicates that it is the presence and interaction of multiple risk factors, rather than the presence of any single risk factor alone, that is most important in understanding risk.

Although there is a developing research base, the empirical evidence concerning the validity of commonly identified risk factors for juvenile sexual offending remains weak and inconsistent.

Although some empirical support for the predictive validity of the J-SOAP-II, ERASOR, and JSORRAT-II assessment tools can be found in the literature, the instruments do not perform in a manner that suggests or proves their ability to accurately predict juvenile sexual recidivism.

Despite the apparent importance of protective factors, few of the instruments commonly

Given the importance of risk assessment in sex offender management and treatment, this chapter reviews the literature on the assessment of risk for sexual recidivism for juveniles who commit sexual offenses. It summarizes what is scientifically known about risk assessment for juveniles who sexually offend and presents key, up-to-date research findings on the defining features and predictive accuracy of commonly used assessment instruments.

When reading this chapter, it is important to keep the following in mind. First, while it is possible to describe the historical context and current state of juvenile risk assessment, there is ongoing controversy in the field about the best model to employ in risk assessment and the capacity of various models and instruments to accurately predict risk for sexual recidivism. Both of these issues will be discussed in detail below. Second, although research on female juveniles who commit sexual offenses and preadolescent children who engage in sexually abusive and sexually troubled behavior is emerging, the existing knowledge base concerning juvenile risk assessment is primarily based on studies of adolescent males who commit sexual offenses. Accordingly, although much of the information in this review may be pertinent to both males and females and to adolescents and preadolescents, the reader must bear in mind that the research cited and discussed in this chapter is most directly relevant to male adolescents who commit sexual offenses. Finally, the terms "evaluator" and "evaluation" are used throughout the chapter; these terms refer to the individual performing the risk assessment and the overall risk assessment process, respectively.

Risk Assessment Process

Juvenile sexual offending takes place within a milieu of different developmental, social, and contextual circumstances. Juvenile risk assessment, therefore, focuses not only on adolescents who commit sexual offenses, but also on the systems within which they live, learn, and function and on which they depend for structure, guidance, and nurturance. In short, risk assessments of juveniles who sexually offend place behavior and risk factors in the context of the social environment as well as the context of child and adolescent development. In fact, unlike adult risk assessment instruments, the most widely used juvenile risk assessment instruments set what are essentially time limits (or expiration dates) for any individual's assessed risk level or score, either requiring reassessment of risk within a specified time period (such as every 6 months[2]) or noting that the risk estimate is limited to sexual recidivism prior to age 18.[3] Developmental considerations are important not only when estimating the risk of sexual recidivism, but also when identifying the very risk factors that are to be used as the foundation for the risk assessment process itself.

Models of Risk Assessment

Currently, two general models are used in juvenile risk assessment: the actuarial model and the clinical model. In both models, the assessment process attempts to identify and evaluate the likely effects of risk factors believed to be associated with sexual recidivism. In the actuarial model—also known as statistical or mechanical assessment—determination of risk is based entirely on a statistical comparison between the personal characteristics and past behavior of the juvenile and those of known recidivists. The assessment of static risk factors is a distinguishing feature of the actuarial model. Clinical risk assessment, on the other hand, is primarily based on observation and professional judgment rather than statistical analysis. The evaluator attempts to develop an understanding of the juvenile and the presence and likely effect of defined risk factors. In contemporary applications of the clinical model, a structured risk assessment instrument is used to guide clinical judgment. Hence, this approach is considered to be a structured or anchored clinical risk assessment (Rettenberger, Boer, & Eher, 2011). Unlike actuarial assessment, clinical risk assessment typically evaluates both static and dynamic risk factors, as well as protective factors that may decrease the risk for a sexual reoffense.

> *"Evaluation should include a wide range of individual, social, interactional, and contextual factors."*

Actuarial and Clinical Judgments of Risk

It has been strongly asserted in both juvenile and adult risk assessment contexts that actuarial assessment has the capacity to predict risk more accurately than clinical assessment (Hanson & Thornton, 2000; Harris & Rice, 2007; Meehl, 1996; Quinsey et al., 1998; Steadman et al., 2000). In addition, some researchers have argued that the two methods of assessment—actuarial and clinical—are essentially incompatible (Grove & Lloyd, 2006; Harris & Rice, 2007). In fact, Quinsey and colleagues (2006) have argued for strict adherence to the actuarial model and the elimination of clinical judgment from the risk assessment process altogether. These positions, however, are not universally accepted and not everyone agrees with the assertion that actuarial risk assessment has greater predictive power than clinical assessment (Boer et al., 1997; Hanson & Morton-Bourgon, 2007; Hart, Michie, & Cooke, 2007; Litwack, 2001).

Sjöstedt and Grann (2002), for example, have argued that there are problems associated with strict proactuarial positions, and other researchers have suggested that actuarial instruments should be used to support, rather than replace, clinical judgment (Monahan et al., 2001). Moreover, Sjöstedt and Grann (2002) and Pedersen, Rasmussen, and Elsass (2010) reported strong predictive validity for **structured** clinical risk assessment, and Hart and colleagues (2003)—describing the model as "structured professional judgment"—have argued that structured professional guidelines help improve the consistency, transparency, and usefulness of decision-making. Further, Rettenberger, Boer, and Eher (2011) have argued that actuarial assessment does not provide information about risk or possible risk management strategies that is highly personalized for the individual being assessed; hence, it fails to meet the practical, ethical, and legal issues and requirements relevant to any individual case.

Despite the ongoing debate, it is important to recognize that the exercise of **unaided** professional judgment by mental health practitioners is not considered a reliable or accurate means for assessing the potential for future dangerous behavior (Ægisdóttir et al., 2006; Hanson & Thornton, 2000; Monahan & Steadman, 1994; Steadman et al., 2000; Webster et al., 1997). Further, it is clear that the actuarial and

used with juveniles incorporate protective factors, and those that do either have no empirical support or are in development and have not yet been empirically validated.

clinical assessment models both have strengths and weaknesses. Campbell (2004) writes that neither actuarial nor clinical risk assessment instruments stand up to rigorous scientific scrutiny, noting that all current actuarial and clinical risk assessment instruments are insufficiently standardized, lack inter-rater reliability,[4] are absent of adequate operational manuals, and generally fail to satisfy significant scientific standards. Similarly, Grisso (2000) and Hart and colleagues (2003) have argued that such instruments have not yet achieved the level of psychometric rigor needed to meet publication standards.

Development of Risk Assessment Instruments

Bonta (1996) and others have characterized the evolution of risk assessment methods as occurring in distinct stages (Andrews, Bonta, & Wormith, 2006; Bonta & Andrews, 2007; Hannah-Moffat & Maurutto, 2003; and Schwalbe, 2008). First-generation methods primarily involved unstructured clinical judgment, whereas second-generation methods involved statistically derived and static actuarial assessments of risk. Third-generation methods, which are increasingly being used in sexual risk assessments of adult offenders, incorporate both the actuarial base of a static assessment and the dynamic factors of a clinical assessment. Fourth-generation methods integrate an even wider range of dynamic factors, incorporating factors relevant to treatment interventions, case management, and monitoring. Third- and fourth-generation methods not only recognize the utility of both static and dynamic risk factors, but also that "there is no reason to think that one type is superior to another when it comes to the predicting recidivism" (Bonta, 2002, p. 367). In fact, when dynamic measures are part of the assessment process, the predictive accuracy of risk assessment can exceed that which may be achievable with only static risk factors (Allan et al., 2007). McGrath and Thompson (2012) report that although static and dynamic risk factors both predicted sexual recidivism in juveniles who commit sexual offenses, a combination of static and dynamic factors resulted in a significant improvement in prediction.

While the characterizations and propositions highlighted above are largely drawn from the literature on risk assessment for adult sexual offenders, they are equally relevant in the context of risk assessment for juveniles who commit sexual offenses. Moreover, they are essential for understanding the groundwork upon which juvenile risk assessment is built.

Focus and Breadth of Juvenile Risk Assessment

According to Epps (1997), the goal of juvenile risk assessment is to synthesize psychosocial, statistical, factual, and environmental information in a way that allows defensible decisions to be made about matters of management, treatment, and placement. Within this context, Will (1999) describes three broad purposes for juvenile risk assessment: the assessment of risk for reoffense, the development of a clinical formulation upon which treatment can be based, and the assessment of the juvenile's motivation to accept and engage in treatment. Graham, Richardson, and Bhate (1997) describe six overarching and interactive goals for juvenile risk assessment:

1. Identifying troubled patterns of thoughts, feelings, and behavior.
2. Recognizing and understanding learned experiences and processes contributing to the development and maintenance of juvenile sexually abusive behavior.
3. Identifying situational contexts and correlates of sexually abusive behavior.
4. Evaluating the probability of sexual recidivism.
5. Assessing the juvenile's motivation to engage in treatment aimed at emotional and behavioral regulation.
6. Gathering the information required to develop interventions and treatment.

In short, the goals of a comprehensive risk assessment process extend beyond the assessment of risk alone.

Risk Factors for Juvenile Sexual Offending

An extensive literature has developed that has identified and discussed risk factors for juvenile sexual offending.[5] Although definitive conclusions regarding the risk factors that are most pertinent to the prediction of sexual recidivism have yet to made, similar risk factors appear in the most frequently used juvenile risk assessment instruments. These risk factors are commonly grouped into 1 of 10 categories (Rich, 2009):

1. Sexual beliefs, attitudes, and drive.
2. History of sexual offending behavior.
3. History of personal victimization.
4. History of general antisocial behavior.
5. Social relationships and connection.
6. Personal characteristics.
7. General psychosocial functioning.
8. Family relationships and functioning.
9. General environmental conditions.
10. Response to prior/current treatment.

Unfortunately, much of the literature on risk factors for juvenile sexual offending is theoretical and descriptive rather than the result of statistical research. It also is characterized by a number of methodological problems and other limitations (Spice et al., 2013). Spice and colleagues (2013) noted that early studies on juvenile sexual recidivism were often based on short followup periods of less than 3 years, and that early as well as more contemporary studies often employed samples that are small in size. They also noted that the risk factors examined vary widely from one study to the next. Similarly,

McCann and Lussier (2008) maintained that the risk factors examined in many studies were selected by researchers based on their own clinical experience, the literature on adult sexual recidivism, and, until recently, a lack of theoretical understanding regarding sexual offending behavior among juveniles. Given these problems, it is not surprising that findings regarding risk factors vary considerably and are inconsistent across different studies (Spice et al., 2013).

Interactive Effect of Multiple Risk Factors

Despite the problems outlined above, the empirical research indicates that it is the presence and interaction of multiple risk factors, rather than the presence of any single risk factor alone, that is most important in understanding risk. Thus, all risk assessment instruments—regardless of whether they are used with adults or juveniles, or whether they are actuarial or clinical—include multiple risk factor items, and all risk assessment processes are concerned not only with the presence of different risk factors, but also with the interactive and amplifying effects of multiple risk factors. Simply put, no single risk factor, even one with relatively high predictive strength, is alone capable of predicting recidivism accurately (Hanson & Bussière, 1998; Hanson & Morton-Bourgon, 2005, 2007; Roberts, Doren, & Thornton, 2002).

Empirical Basis of Risk Factors for Juvenile Sexual Recidivism

The problem of the low base rate for juvenile sexual recidivism complicates the process of determining which individual risk factors are likely to be most important in juvenile risk assessment. In fact, many of the risk factors included in juvenile risk assessment instruments used today have face validity (an intuitive and perhaps common sense appeal that appears to reflect aspects of risk), but very little proven predictive validity.

Worling and Långström (2003, 2006) contend that most risk factors commonly associated with juvenile sexual offending lack empirical validation. Describing 21 commonly cited risk factors, Worling and Långström (2006) argue that only 5—deviant sexual arousal, prior convicted sexual offenses, multiple victims, social isolation, and incomplete sexual offender treatment—are empirically supported through at least 2 published, independent research studies, and that only 2 other factors—problematic parent-child relationships and attitudes supportive of sexually abusive behavior—have empirical support in at least 1 study, and thus can be considered "promising" risk factors (see table 1). The remaining 14 factors they describe as either third-tier "possible" risk factors based on general clinical support or fourth-tier "unlikely" risk factors that either lack empirical support or are contradicted by empirically derived evidence.

Table 1. Typology of Risk Factors for Sexual Recidivism

Empirically Supported Risk Factors Empirical support in at least two published, independent research studies	**Promising Risk Factors** Empirical support in at least one study
• Deviant sexual arousal • Prior convicted sexual offenses • Multiple victims • Social isolation • Incomplete sexual offender treatment	• Problematic parent-child relationships • Attitudes supportive of sexually abusive behavior
Possible Risk Factors General clinical support only	**Unlikely Risk Factors** Lack empirical support or contradicted by empirical evidence
• Impulsivity • Antisocial orientation • Aggression • Negative peer group association • Sexual preoccupation • Sexual offense of a male • Sexual offense of a child • Use of violence, force, threats, or weapons in a sexual offense • Environmental support for reoffense	• History of sexual victimization • History of nonsexual offending • Sexual offenses involving penetration • Denial of sexual offending • Low victim empathy

Source: Worling & Långström (2006).

It is important to recognize, however, that Worling and Långström's (2006) typology of empirically supported risk factors has not been replicated. Further, both supporting and contradictory evidence regarding some elements of the typology can be found in other studies. Indeed, the literature is mixed and inconsistent. (For more information on typology, see chapter 2, "Etiology and Typologies of Juveniles Who Have Committed Sexual Offenses," in the Juvenile section.)

For instance, in their meta-analysis involving 59 studies, Seto and Lalumière (2010) found deviant sexual interest as well as social isolation to be significant risk factors for juvenile sexual recidivism.[6] (For more information on recidivism, see chapter 3, "Recidivism of Juveniles Who Commit Sexual Offenses," in the Juvenile section.) Social isolation was also found to be a risk factor by van der Put and colleagues (2013). Social isolation and deviant sexual interest are both described as empirically supported risk factors for juvenile sexual recidivism in Worling and Långström's (2006) typology.

However, Epperson and colleagues (2006), Mallie and colleagues (2011), and Carpentier and Proulx (2011) found empirical support for a history of sexual victimization as a risk factor for juvenile sexual recidivism, and Epperson and colleagues (2006) also found empirical evidence for a history of nonsexual offending as a risk factor. Similarly, Casey, Beadnell, and Lindhorst (2009) found both childhood sexual victimization and adolescent delinquency to be significant predictors of later sexually coercive behavior in their analysis of data from the National Longitudinal Study of Adolescent Health. However, Worling and Långström (2006) considered both prior history of sexual victimization and prior history of nonsexual offending to be unlikely risk factors for sexual recidivism, as did Seto and Lalumière (2010) and van der Put and colleagues (2013). Knight and Sims-Knight (2003, 2004) and Knight, Ronis, and Zakireh (2009) found support for each of the following as risk factors for sexual recidivism: hypersexuality/sexual deviance, impulsivity/antisocial behavior, arrogant/deceitful personality, violent behavior/fantasies, and history of victimization. Yet, only one of these factors (sexual deviance) was included among Worling and Långström's (2006) empirically supported risk factors.

In a meta-analysis conducted after Worling and Långström (2006) introduced their typology, McCann and Lussier (2008)[7] found that deviant sexual interests and having a stranger victim were predictive of sexual recidivism, as were several of the risk factors that Worling and Långström (2006) characterized as empirically unsupported or unlikely risk factors for sexual recidivism. These included a history of prior nonsexual offenses, the use of threats or weapons, having a male victim, and having a child victim. In addition, McCann and Lussier found that older age upon intake for treatment was associated with increased likelihood of reoffending. Nevertheless, they noted that even the risk factors found to be the best predictors of sexual recidivism in their study had a relatively small effect size and were based on findings derived from analyses involving small sample sizes. In an earlier meta-analysis, Heilbrun, Lee, and Cottle (2005)[8] concluded that younger age at first offense, prior noncontact sexual offenses, and having an acquaintance victim (rather than a stranger victim) were associated with sexual recidivism. However, in their study of 193 juveniles who commit sexual offenses, Spice and colleagues (2013) found that only opportunity to reoffend was significantly associated with sexual recidivism, although a number of risk and protective factors were linked to nonsexual recidivism.

Finally, Worling, Bookalam, and Litteljohn (2012) identified obsessive sexual interests and/or preoccupation, antisocial interpersonal orientation, lack of intimate peer relationships/social isolation, interpersonal aggression, and problematic parent-child relationships/parental rejection as risk factors for juvenile sexual recidivism, only two of which were identified as empirically supported or promising risk factors in Worling and Långström's (2006) earlier typology. In his continuing research, Långström (2011) has described sexual offense in a public area, sexual offense involving a stranger victim, two or more sexual offenses, and two or more victims as risk factors for juvenile sexual recidivism. However, only one of these appears in Worling and Långström's earlier typology.

As the findings presented above demonstrate, research on the risk factors for sexual recidivism has produced inconsistent and sometimes contradictory results. Indeed, as Spice and colleagues (2013) observe, it is clear that the research literature regarding risk factors for sexual recidivism among sexually abusive youth is disconnected and varied, with little to unify it. Whether the disparate findings are an artifact of the methodological variations found across studies, a reflection of real-world risk factor dynamics, or some combination of the two remains unknown at this time. Spice and colleagues (2013) and McCann and Lussier (2008) have voiced concerns about the idiosyncratic nature of individual studies as well as the lack of consistency across studies in terms of their research designs, samples, hypotheses, and statistical procedures. However, Rich (2009) argues that risk factors for sexual recidivism may operate differently in different people, and at different points in child and adolescent development. For instance, in a recent study of 1,396 juvenile offenders, van der Put and colleagues (2011) found that the effect of both static and dynamic risk factors on recidivism varied by the age of the adolescent. Thus, risk factors may exert different influences on the propensity to reoffend depending on a number of personal and contextual factors, including the juvenile's age, development and social settings, and the myriad interaction effects different risk factors have in different circumstances and at different points in time. Casey, Beadnell, and Lindhorst (2009) similarly noted how difficult it is to clearly implicate in sexually coercive behavior any one risk factor in the absence of other potential risk factors, again highlighting the role multiple risk factors play in contributing to juvenile sexual recidivism.

Both Seto and Lalumière (2010) and van der Put and colleagues (2013) describe further subtlety in understanding and identifying risk factors for juvenile sexual recidivism. Each set of authors recognizes prior childhood sexual victimization as a risk factor for later juvenile sexually abusive behavior. However, Seto and Lalumière describe childhood sexual abuse as a risk factor for the onset of juvenile sexually abusive behavior, but not for sexual reoffense. Similarly, in their study of 625 sexually abusive youth, van der Put and colleagues found that a history of childhood sexual abuse was not a risk factor for recidivism, although they reported significant differences in the incidence of prior sexual victimization among different types or groups of sexually abusive youth, reflecting both heterogeneity within the population and the multifaceted nature of risk factors.

Risk Factors for Sexual Recidivism: Summary and Conclusions

Despite a developing research base, the empirical evidence concerning the validity of commonly identified risk factors for juvenile sexual offending remains weak and inconsistent. As a result, the knowledge regarding risk factors for juvenile sexual recidivism is speculative and provisional at this point in time, but it is evolving. The inability of research to thus far produce trustworthy and definitive evidence regarding juvenile risk factors for sexual recidivism may reflect problems with the research undertaken to date. However, it is also likely that complex interactions among different risk factors are at play at different times in the development of children and adolescents and that these dynamics are exceptionally difficult to disentangle and document empirically. Similarities found between risk factors that place juveniles at risk for sexual offending and those that place juveniles at risk for many other problem behaviors, including general delinquency, complicate matters even further. Far more research is needed to identify, understand, and construct both static and dynamic risk variables linked specifically to juvenile sexual recidivism.

Juvenile Risk Assessment Instruments

Most studies designed to assess the accuracy and validity of juvenile risk assessment instruments have focused on the overall structure and predictive accuracy of the most widely used instruments rather than on the individual risk factors within them. Since many, if not most, of the risk factors used in these instruments have not been empirically validated, it is not surprising that instrument validation studies have produced weak or inconsistent results. Nevertheless, there is some empirical support for the capacity of risk assessment instruments to identify statistically valid risk factors as well as for the predictive validity of various instruments. However, it is not currently possible to definitively assert that any such instrument is empirically validated in terms of its capacity to accurately predict juvenile sexual recidivism.

Validation Studies of the Most Commonly Used Instruments

Although there are a number of juvenile sexual risk assessment instruments in use today, the two most commonly used instruments in North America are the Juvenile Sex Offender Assessment Protocol-II (J-SOAP-II) and the Estimate of Risk of Adolescent Sexual Offense Recidivism (ERASOR), both of which are structured and empirically informed instruments designed for clinical assessment. The only actuarial assessment instrument currently available for use with juveniles who commit sexual offenses is the Juvenile Sexual Offense Recidivism Risk Assessment Tool-II (JSORRAT-II), but it is not used as extensively as either J-SOAP-II or ERASOR. Unlike J-SOAP-II and ERASOR—both of which are structured clinical instruments—JSORRAT-II is a static assessment instrument; that is, it includes only static risk factors. It has been validated by its designers for use only in Utah (where it was initially developed) and Iowa, but it is also available for use in Georgia and California, where it is presently undergoing validation studies. In California, the instrument has been selected by the State Authorized Risk Assessment Tool for Sex Offenders Committee (www.saratso.org) as the required instrument to be used in the assessment of male juveniles who commit sexual offenses (California Penal Code, §§ 290.03-290.08).

Inter-Rater Reliability

J-SOAP-II, ERASOR, and JSORRAT-II have each been generally reported to have inter-rater reliability (Caldwell, Ziemke, & Vitacco, 2008; Knight, Ronis, & Zakireh, 2009; Martinez, Flores, & Rosenfeld, 2007; Park & Bard, 2006; Viljoen et al., 2008). For example, in a study of both ERASOR and J-SOAP-II, Rajlic and Gretton (2010) found strong inter-rater reliability for both instruments, with an intra-class correlation score of .78 for the total risk assignment of ERASOR and .94 for the J-SOAP-II total score.[9] However, Vitacco and colleagues (2009) report an absence of well-designed and executed inter-rater reliability studies in the juvenile risk assessment field overall, pointing out the need for these studies across populations of juveniles in different treatment or supervision settings as well as for research that examines the potential for allegiance bias. Although their study focused on three sexual risk assessment instruments commonly used with adults, Murrie and colleagues (2009) found that assessed risk levels varied depending on whether the assessment instrument was administered by an evaluator retained by the defense or the prosecution. This suggests that assessed risk scores used in legal proceedings may be influenced by the allegiance of the evaluator. Boccaccini and colleagues (2012) also found that subjective factors influenced assessment outcomes in their study of an actuarial instrument used with adults, even though high inter-rater reliability values were reported for the instrument.

Predictive Validity

Drawing firm conclusions about the predictive validity of juvenile risk assessment instruments is difficult for the following reasons. First, relatively few validation studies of juvenile risk assessment instruments have been undertaken to date, and research that has examined the predictive validity of juvenile instruments has produced rather inconsistent findings. Second, there is very little consistency across validation studies in terms of the recidivism definition employed, the time period studied, the selection of the sample/cohort, the study design itself, and the ways in which statistics are applied[10] and/or interpreted. In addition, some research has reviewed multiple instruments, some of which are not intended nor designed to measure risk for sexual recidivism, while other research has reviewed and evaluated only a single instrument. Sometimes, but not always, the research has also reviewed the capacity of juvenile sexual risk instruments to accurately predict nonsexual recidivism, although none of the juvenile risk assessment instruments currently available for use in the field are designed for that purpose. Notwithstanding these problems, research findings concerning the predictive validity of J-SOAP-II, ERASOR, and JSORRAT-II are sequentially presented in subsequent sections below. Studies that have examined the predictive validity of each instrument are listed in table 2.

Table 2. Snapshot of Predictive Validity Research

Study Authors	Instrument Studied			
	J-SOAP-II	ERASOR	JSORRAT-II	Other
Aebi et al. (2011)	X			
Caldwell & Dickinson (2009)	X			
Caldwell, Ziemke, & Vitacco(2008)	X			• Texas Juvenile Sex Offender Risk Assessment Instrument • Juvenile Risk Assessment Scale • Wisconsin Department of Corrections Guidelines for Release
Chu et al. (2012)	X	X		
Epperson et al. (2006)			X	

Study Authors	Instrument Studied			
	J-SOAP-II	ERASOR	JSORRAT-II	Other
Epperson & Ralston (2009); Epperson, Ralston, & Edwards (2009)			X	
Fanniff & Letourneau (2012)	X			
Hiscox, Witt, & Haran (2007				Juvenile Risk Assessment Scale
Martinez, Flores, & Rosenfeld (2007)	X			
Parks & Bard (2006)	X			
Prentky et al. (2010)	X			
Powers-Sawyer & Miner (2009)	X			
Rajlic & Gretton (2010)	X	X		
Ralston & Epperson (2012)			X	
Viljoen et al. (2008)	X			
Viljoen et al. (2009)		X		
Worling, Bookalam, & Litteljohn (2012)		X		
Viljoen, Mordell, & Beneteau (2012)	X	X	X	

Statistics Used in Assessing Predictive Validity: Area Under the Curve

Although the statistics used to evaluate the predictive validity of risk assessment instruments vary by study, Area Under the Curve (AUC) values (also known as Receiver Operating Characteristic, or ROC, scores) are increasingly being used for this purpose. This is done in part to overcome the possibility of false positives, which can occur with low base rates such as those for the sexual recidivism of juveniles,[11] as ROC analysis is unaffected by variations in base rate (Craig, Browne, & Stringer, 2004; Wollert, 2006). AUC values between .65 and .70 are generally considered to show weak-mild predictive accuracy, values between .71 and .80 indicate moderate predictive accuracy, and values above .80 indicate strong predictive accuracy. AUC values between .50 and .60 suggest that predictive accuracy is no better or little better than chance. AUC values between .61 and .64/.65 offer weak evidence of predictive accuracy, as these values fall below the threshold that demonstrates any meaningful level of predictive validity.

Predictive Validity of J-SOAP-II

J-SOAP-II has received the most attention with respect to its psychometric properties and its capacity for predictive validity. J-SOAP-II has also been studied in combination with, and in contrast to, other juvenile risk assessment instruments, such as ERASOR, JSORRAT-II, and other more general (i.e., nonsexual) juvenile risk assessment instruments.

Table 3 summarizes research findings regarding the predictive validity of J-SOAP-II. AUC values reported in each study for the J-SOAP II total score and the instrument's four subscale scores are presented in the table, in most cases for both sexual and nonsexual or general recidivism predictive accuracy.

Overall, the AUC values reported in table 3 tend to follow an inconsistent pattern across individual studies. AUC values for the J-SOAP-II total score, for instance, range from .51 to .83 for sexual recidivism, indicating that some studies found strong levels of predictive validity while others found that the instrument's predictive accuracy was no better than chance. Similar variation is reported for nonsexual recidivism and for the instrument's four subscales. Variation in the predictive validity of the instrument is even found within individual studies.

The strongest support for the predictive validity of J-SOAP-II arguably comes from the study conducted by Prentky and colleagues (2010). The research examined the predictive validity of the instrument based on an analysis of sexual recidivism for 336 preadolescent and 223 adolescent males using a followup period of 7 years. Two of the researchers who conducted the study were involved in the development of J-SOAP-II. Prentky and colleagues reported total score AUC values of .80 for the preadolescent males and .83 for the adolescent males, who were among the higher risk offenders in the study sample.

Table 3. Overview of Research Into the Predictive Validity of J-SOAP-II

Study Authors	J-SOAP-II Total Score		J-SOAP-II Subscales							
			Scale 1		Scale 2		Scale 3		Scale 4	
			Type of Recidivism							
	Sex	NS/Gen	Sex	NS/Gen	Sex	NS/Gen	Sex	NS/Gen	Sex	NS/Gen
Aebi et al. (2011)	.65	.61	.51	.47	.74	.66	.50	.57	.74	.60
Caldwell & Dickinson (2009) 1-year followup	NA	NA	.23	.39	.59	.55	NA	NA	NA	NA
Caldwell & Dickinson (2009) 49-month followup	NA	NA	.47	.39	.70	.65	NA	NA	NA	NA
Caldwell, Ziemke, & Vitacco (2008) Cox regression	Not Sig	Not Sig	Not Sig	Not Sig	Not Sig	Not Sig	Sig	Not Sig	Not Sig	Not Sig
Chu et al. (2012)	.51	.79	.72	.52	.37	.71	.41	.79	.55	.69
Fanniff & Letourneau (2012)	.58	.60	NG	NG	.64	.61	NA	.61	NA	NA
Parks & Bard (2006) Cox regression	Not Sig	Not Sig	Not Sig	Not Sig	Sig	Sig	Not Sig	Not Sig	Not Sig	Not Sig
Powers-Sawyer & Miner (2009)	.75	.45	.72	.41	.64	.47	NA	NA	NA	NA
Prentky et al. (2010) Preadolescents	.80	NA	.78	NA	.56	NA	NA	NA	.76	NA
Prentky et al. (2010) Adolescents	.83	NA	.83	NA	.66	NA	NA	NA	.81	NA
Rajlic & Gretton (2010) Total sample	.69	.77	.65	.56	.61	.79	.64	.70	.68	.74
Rajlic & Gretton (2010) Juveniles who commit sexual offenses only	.80	.62	.66	.48	.73	.72	.75	.51	.77	.62
Rajlic & Gretton (2010) Juveniles who commit sexual and nonsexual offenses	.51	.74	.59	.51	.41	.72	.51	.73	.53	.69
Viljoen et al. (2008)	.54	.56	.60	.53	.54	.64	.52	.49	.45	.54
Viljoen, Mordell, & Beneteau (2012)	.67	.66	.61	.49	.63	.66	.60	.60	.70	.65

| Study Authors | J-SOAP-II Total Score | | Static Scale (1 and 2) | | Dynamic Scale (3 and 4) | |
	Sex	NS/Gen	Sex	NS/Gen	Sex	NS/Gen
Martinez, Flores, & Rosenfeld (2007)	.78	.76	.63	.68	.86	.74

Note: Results shown in AUC (Area Under the Curve) values unless otherwise noted. Sex=sexual recidivism; NS/Gen=nonsexual/general recidivism; NG=value not given; NA=scale not assessed; Sig=significant.

However, in a more recent study involving 73 adolescent males who sexually offended, Fanniff and Letourneau (2012) found that the J-SOAP-II total score was only marginally predictive of general recidivism (AUC value of .60) and not predictive of felony recidivism, including sexual recidivism (AUC value of .58). In studying both J-SOAP-II and JSORRAT-II, Viljoen and colleagues (2008) reported that neither instrument reached a level of statistical significance in predicting sexual recidivism. J-SOAP-II demonstrated an AUC value of only .54 for sexual recidivism and an AUC value of .56 for general recidivism. Similarly, Parks and Bard (2006) and Caldwell, Ziemke, and Vitacco (2008) found no relationship between the total score of J-SOAP-II and either sexual or nonsexual recidivism. Chu and colleagues (2012) studied the use of J-SOAP-II in Singapore and also found that the total score was not predictive of sexual recidivism (AUC value of .51); however, the researchers reported that the instrument showed moderate predictive validity for general recidivism (AUC value of .79).

In their study, Rajlic and Gretton (2010) found substantial variation in the predictive accuracy of J-SOAP-II within subgroups of juveniles with histories of sexually abusive behavior who later sexually recidivated. While the researchers reported a sexual recidivism AUC value of .69 (demonstrating mild predictive accuracy) based on an analysis of all 286 study subjects, a higher degree of predictive validity was found among the 128 juveniles who had previously committed only sexual offenses, and a much lower degree of predictive validity was found among study subjects who had previously committed both sexual and nonsexual offenses. For juvenile recidivists who had previously committed only sexual offenses, Rajlic and Gretton reported an AUC value of .80, indicating moderate validity in predicting sexual recidivism. Conversely, the researchers reported an AUC of only .51 in predicting sexual recidivism in the group of 140[12] juveniles who had previously committed both sexual and nonsexual offenses, indicating only chance levels of predictive validity.

Finally, Viljoen, Mordell, and Beneteau (2012) recently conducted a meta-analysis that examined the predictive accuracy of several sexual risk assessment instruments, including J-SOAP-II. Aggregated AUC values were reported for each instrument studied.[13] For J-SOAP-II, the researchers reported aggregated AUC values of .67 for sexual recidivism and .66 for general recidivism, both of which narrowly fall into the range of mild predictive validity. It is important to note, however, that these findings arguably reflect a homogenized view of the instrument's predictive validity rather than a set of consistent or stable validation results across different studies, as aggregated AUC values mask and filter out significant variation in outcomes produced across different studies.

J-SOAP-II Subscales

As previously noted, J-SOAP-II consists of four subscales, each of which produces a risk score. As the data reported in table 3 indicate, research examining the predictive validity of these subscales has also produced inconsistent findings. Wide variations in predictive accuracy are found across studies even within specific subscales. For example, AUC values for sexual recidivism within subscale 1 of J-SOAP-II range from a high of .83 (strong predictive accuracy) to a low of .23 (no better than chance). Similar variation is apparent within other subscales of J-SOAP-II.

Although there is some support in the literature for the predictive validity of J-SOAP-II, the empirical evidence can best be described as inconsistent. In some studies, evidence of predictive accuracy has been found for the total score of J-SOAP-II, while in others the total score was found to be less predictive than the individual subscales of the instrument. Rajlic and Gretton (2010) also found significant differences in the predictive capacity of the instrument based on the composition of the juveniles being assessed. Further, in some independent research, J-SOAP-II has been found to be effective in predicting general but not sexual recidivism. Given these disparate findings, J-SOAP-II cannot at this time be considered to be an empirically validated instrument. Far more research is needed to determine whether the disparate validation findings reflect true weaknesses in the predictive accuracy of the instrument or shortcomings within the validation research undertaken to date. However, as Faniff and Letourneau (2012, p. 403) aptly state:

> Mental health professionals conducting predisposition evaluations should proceed with great caution when interpreting J-SOAP-II scores as part of broader risk assessments. Even when J-SOAP-II is only one source informing clinical judgment, evaluators have been unable to produce valid estimates of risk.

Predictive Validity of ERASOR

ERASOR has not been as widely examined as J-SOAP-II. However, like J-SOAP-II, the available research on ERASOR offers inconsistent and weak support for the predictive validity of the instrument.

Table 4 summarizes research findings concerning the predictive validity of the instrument. AUC values reported in each study for the instrument's clinical rating score and total score are presented for both sexual and general recidivism predictive accuracy. The reader should note that the ERASOR total score is a numerical scoring system assigned by researchers rather than a scale that appears in the instrument itself; it is not likely to be used by practitioners in the field. The instrument employs only a clinical rating system based on the evaluator's judgment of risk associated with the presenting risk factors.

As with J-SOAP-II, the AUC values reported for ERASOR vary considerably across studies. For example, AUC values for the clinical rating score for sexual recidivism range from .86 (high predictive validity) to .54 (no better than chance). Total score AUC values for sexual recidivism range from .93 to .54.

The strongest support for the predictive validity of ERASOR comes from the study conducted by Worling, Bookalam, and Litteljohn (2012). The researchers reported an AUC value of .82 for the sexual recidivism clinical rating score based on a mean followup period of 1.4 years. However, the reported AUC value drops to .61 when the followup period increases to a mean of 3.7 years. Worling and his colleagues suggested that this may reflect the deterioration of accurate risk prediction in still-developing adolescents, and noted that the instrument is intended to measure risk in a 2-year period. In discussing their findings, Worling, Bookalam, and Litteljohn (2012, p. 14) stated:

> The fact that more contemporaneous ratings were … more predictive of subsequent sexual offending suggests that it is important for clinicians to reassess adolescents and that clinical and forensic decisions are likely to be more accurate if they are based on more recent risk assessments.

Table 4. Overview of Research Into the Predictive Validity of ERASOR

Study Authors	Total Score		Clinical Rating	
	Sexual Recidivism	General Recidivism	Sexual Recidivism	General Recidivism
Chu et al. (2012)	.74	.66	.83	.69
Rajlic & Gretton (2010) Total sample	.71	.70	.67	.71
Rajlic & Gretton (2010) Juveniles who commit sexual offenses only	.86	.66	.77	.64
Rajlic & Gretton (2010) Juveniles who commit sexual and nonsexual offenses	.54	.61	.54	.58
Viljoen et al. (2009)	.60	.53	.64	.50
Viljoen, Mordell, & Beneteau (2012)	.66	.59	.66	.59
Worling, Bookalam, & Litteljohn (2012) 7.9-year followup (mean 3.7 years)	.72	.65*	.61	.61
Worling, Bookalam, & Litteljohn (2012) 2.5-year followup (mean 1.4 years)	.93	.62*	.82	.62

Note: Results shown in AUC (Area Under the Curve) values.
* Nonsexual violent crimes only. Rates for nonviolent crimes are not reported in this chapter.

Indeed, the study conducted by Worling—one of the instrument's developers—and his colleagues shows variability in results depending on what is measured, when it is measured, and how it is measured. AUC values range from .61 to .82 for the clinical rating score, and from .72 to .93 for the total score in this study.

Although Worling, Bookalam, and Litteljohn (2012) have argued that the results of their study provide support for the predictive validity of ERASOR regarding sexual recidivism, their results varied depending on the length of the followup period and how the instrument was scored. Moreover, Worling and colleagues, like others, studied ERASOR in ways that most field evaluators may not apply the instrument, using: (1) the **total number** of risk factors assessed to be present, (2) a **total score** based on assigning numerical values to each risk factor, and (3) a **clinical rating** scale based on the final judgment of the evaluator (which is the way in which ERASOR is scored, and is designed to be scored, in its use in the field). As noted, based on the design of and instructions for ERASOR, it is the clinical rating score that is most likely to be used in the field.

While some studies other than that conducted by Worling and his colleagues (2012) have found moderate to high levels of sexual recidivism predictive accuracy associated with the ERASOR clinical rating score, others have not produced similar results. For example, Chu and colleagues (2012) reported an AUC value of .83 for the ERASOR clinical scale, indicating moderate to strong predictive validity for sexual recidivism. However, Viljoen and colleagues (2009) examined the predictive validity of ERASOR as part of a larger study of risk assessment instruments and reported an AUC value of only .64, concluding that the instrument did not yield significant predictive validity for accurately or dependably predicting juvenile sexual recidivism.[14]

In their study, Rajlic and Gretton (2010) reported that ERASOR was moderately predictive of sexual recidivism, with an overall AUC value of .71 for the total score and .67 for the clinical rating score. When used to evaluate risk for sexual recidivism among juveniles who had previously committed **only** sexual offenses, ERASOR yielded an AUC of .86 for the total score and .77 for the clinical rating score. However, when used to evaluate predictive validity for sexual recidivism for juvenile sexual offenders who had previously committed both sexual **and** nonsexual offenses, ERASOR resulted in an AUC value of only .54 for both the clinical rating and total score, failing to show predictive validity.

Finally, in their meta-analysis consolidating the results from 33 studies, Viljoen, Mordell, and Beneteau (2012) reported aggregate AUC values for ERASOR of .66 for sexual recidivism and .59 for nonsexual recidivism. Even though an aggregate score potentially inflates the AUC value, Viljoen and colleagues' results still produce only marginal evidence of predictive validity for the instrument. Based on the evidence, ERASOR may be considered a promising but not an empirically validated instrument.

Predictive Validity of JSORRAT-II

JSORRAT-II is the first actuarial risk assessment instrument available for use with juveniles who sexually offend. Although it is still undergoing validation, the introduction of JSORRAT-II has added a significant new dimension to the assessment of juveniles who commit sexual offenses. However, few studies focusing on JSORRAT-II have been undertaken to date, and their findings offer little empirical support for the predictive validity of the instrument.

Table 5 summarizes research findings from five studies that examined the predictive validity of JSORRAT-II. AUC values reported in each study for the instrument's sexual and nonsexual recidivism predictive validity are presented in the table. Again, the research has produced mixed results. AUC

values for sexual recidivism range from a high of .89 (strong predictive validity) to a low of .53 (predictive validity that is no better than chance).

Table 5. Overview of JSORRAT-II Research

Study Authors	JSORRAT-II	
	Sexual Recidivism	**General or Nonsexual Recidivism**
Epperson et al. (2006)	.89*	NA
Epperson & Ralston (2009); Epperson, Ralston, & Edwards (2009)	.65–.66	NA
Ralston & Epperson (2012)	.70	.54
Viljoen et al. (2008)	.53	.54
Viljoen, Mordell, & Beneteau (2012)	.64	NA

Note: Results shown in AUC (Area Under the Curve) values.
* AUC value for sexual recidivism prior to age 18. The AUC value for sexual recidivism at any time is .79.

The strongest support for the predictive validity of JSORRAT-II comes from a study conducted by the instrument's developers, Epperson and colleagues (2006). In their 2006 study based on an initial sample of 636 adjudicated male juveniles who committed sexual offenses, Epperson and colleagues (2006) reported an AUC value of .89 for predicting sexual recidivism prior to age 18, and an AUC value of .79 for predicting sexual recidivism any time (prior to or after age 18). Both values reflect strong predictive accuracy. However, in examining the instrument's capacity to accurately predict sexual recidivism only **after** age 18, Epperson and colleagues reported an AUC value of .64, indicating weak predictive validity. This led the researchers to speculate that different risk factors may be at play for young adult recidivists compared to juvenile recidivists. In a more recent study, Ralston and Epperson (2012) reported an AUC value of .70 for the instrument's capacity to predict sexual recidivism, indicating weak to mild predictive accuracy.

However, other studies focusing on JSORRAT-II have not found the same level of predictive validity that Epperson and colleagues found in their 2006 study or Ralston and Epperson found in their 2012 study. In the only truly independent study of the instrument, Viljoen and colleagues (2008) found no evidence of predictive validity for either sexual or nonsexual recidivism, reporting AUC values of .53 for sexual recidivism and .54 for general recidivism. In their meta-analysis of juvenile risk assessment instrument validation studies, Viljoen, Mordell, and Beneteau (2012) reported an aggregated AUC value of .64 (which included the AUC values previously reported by Epperson and colleagues) for the capacity of JSORRAT-II to predict juvenile sexual recidivism, which falls just below a marginal level of predictive validity despite the aggregated score. Despite the strong AUC values Epperson and colleagues found in their 2006 study, in two subsequent studies Epperson and Ralston (2009) and Epperson, Ralston, and Edwards (2009) reported sexual recidivism AUC values for JSORRAT-II of only .66 and.65, respectively.

In summary, relatively few studies have examined the predictive validity of JSORRAT-II. While there is some evidence supporting the instrument's capacity for accurately predicting sexual recidivism for juveniles prior to age 18, only two JSORRAT-II validation studies undertaken to date have been conducted by independent researchers, and both of these studies have failed to demonstrate that the instrument has a high degree of predictive accuracy overall. Given the limited body of research on the instrument and the considerable variation in findings, JSORRAT-II cannot yet be considered an empirically validated instrument.

State-Specific Juvenile Risk Assessment Instruments

In addition to the three instruments discussed above, a handful of state-specific juvenile risk assessment instruments have been developed and placed into use to meet state requirements for sexual offender registration. (For more information on registration, see chapter 6, "Registration and Notification of Juveniles Who Commit Sexual Offenses," in the Juvenile section.) Structured and empirically based risk assessment instruments have been developed and tailored for use in Texas (Texas Juvenile Sex Offender Risk Assessment Instrument), New Jersey (Juvenile Risk Assessment Scale: JRAS), and Wisconsin (Wisconsin Department of Corrections Guidelines for Release). However, none of these instruments are based on actuarial validation, nor are they empirically validated (Vitacco et al., 2009). Caldwell, Ziemke, and Vitacco (2008) concluded that the risk constructs underlying the instruments were not valid, and that none of the three instruments predicts sexual recidivism.

One study has been completed on JRAS (used in New Jersey). It was conducted by the instrument's developers, Hiscox, Witt, and Haran (2007). The study followed 231 adjudicated male adolescent sexual offenders for an average followup period of 8.5 years and found that one of the three primary factors of JRAS—the antisocial factor—was moderately predictive of nonsexual recidivism and mildly predictive of sexual recidivism. AUC values of .70 and .67 were found for nonsexual and sexual recidivism, respectively. The instrument's sexual deviance factor proved not to be predictive of either sexual or nonsexual recidivism. In terms of the number of youth assessed at a risk level that correctly matched actual recidivism, only 19 percent of youth assessed at moderate risk and 25 percent of youth assessed at high risk actually sexually recidivated; there were false positive rates of 81 percent and 75 percent for youth assessed at moderate and high risk, respectively.

Validation of the In-Development MEGA Instrument

The Multiplex Empirically Guided Inventory of Ecological Aggregates for Assessing Sexually Abusive Adolescents and Children (MEGA) is a structured clinical risk assessment instrument currently in

development. The instrument is not yet available for use in the field; however, it has undergone preliminary validation studies (conducted by its developer) that have focused on the instrument's internal construction and consistency (Miccio-Fonseca, 2009, 2010). While those studies have reported evidence of strong item consistency, no other studies (particularly independent studies) have yet been published regarding other important properties of the instrument, including inter-rater reliability and predictive validity.

MEGA is being developed for use with males and females ages 5–19 and of all IQ levels; this is a remarkably wide range of potentially applicable assessment subjects for a single risk assessment instrument. While the practical benefits of having a single instrument that can be used with so many different subjects are many, targeting such a wide range of subjects with a single instrument (in terms of age, gender, and cognitive capacity) may inadvertently undermine the instrument's capacity to predict recidivism accurately. In a recent study of almost 1,400 juvenile offenders, van der Put and colleagues (2011) found that the effect of both static and dynamic risk factors on recidivism, and hence predictive validity, varied by adolescent age. The researchers suggested not only that different risk assessment instruments be used for juveniles and adults, but that different instruments be used for different age groups **within** adolescence as well.

Summary

Although some empirical support for the predictive validity of J-SOAP-II, ERASOR, and JSORRAT-II can be found in the literature, the instruments do not perform in a manner that suggests or proves their ability to accurately predict juvenile sexual recidivism (Caldwell et al., 2008; Viljoen et al., 2009; Vitacco, Viljoen, & Petrila, 2009). As Knight, Ronis, and Zakireh (2009) have stated, the relatively few studies of juvenile risk assessment instruments undertaken to date have not produced consistent evidence that either J-SOAP-II, ERASOR, or JSORRAT-II are effective in predicting sexual recidivism.[15] Tests of the predictive accuracy of the instruments conducted by independent investigators have typically yielded mixed to poor results for both sexual and nonsexual risk, especially for the prediction of sexual recidivism. Hence, none of the instruments has a consistently demonstrated record of predictive validity and, as Viljoen, Mordell, and Beneteau (2012) note, juvenile risk assessment instruments may be insufficient to make predictions that require a high degree of precision, such as in situations when the civil commitment of juveniles who commit sexual offenses or the placement of juveniles on lifetime sexual offender registries is at stake. As Fanniff and Letourneau (2012, pp. 403–404) aptly state:

> Until existing or new instruments are better validated, evaluations in this context will remain a complex balancing act between the need to provide the courts and other stakeholders with useful information and the serious limitations in empirically based knowledge about sexual risk.

"No juvenile risk assessment instrument has demonstrated consistent predictive validity."

Protective Factors in Assessments of Juvenile Risk

Although risk factors are the foundation of virtually all risk assessment instruments, in recent years more attention has been given to protective factors and their role in mitigating the effects of risk factors. Protective factors have been described in the child and adolescent development literature, and their role in delinquency prevention has long been recognized. Their appearance in the forensic literature and consideration in the process of evaluating and treating risk for juvenile sexual recidivism, however, are both relatively new.

The relationship between risk and protective factors is complex. Jessor and colleagues (1995) describe risk and protection as opposite ends of the same constructs and thus highly correlated, making it difficult to fully understand the role of protection. However, Hall and colleagues (2012) view risk and protective factors as conceptually distinct (rather than opposite ends of a single dimension) and assert that it is not only possible but essential to conceptualize and define risk and protective factors independently from one another. Regardless of which position is right, it remains difficult to estimate the effects protective factors have on risk, even though the process of risk assessment arguably must take protective factors into account.

In his critique of forensic risk assessment in general, Rogers (2000) describes assessment as inherently flawed if it pays attention only to risk factors without consideration of the presence, weight, and action of protective factors. Similarly, Rutter (2003, p. 10) stated, "It seems obvious that attention must be paid to the possibility of factors that protect against antisocial behavior as well as to those that predispose to it." Although not referring to protective factors per se, in describing clinical predictions of risk Monahan (1995) noted the importance of giving balanced consideration to factors that indicate the absence of violent behavior as well as those that suggest the recurrence of violence. Finally, several researchers have described the mitigating effects protective factors can have on risk, noting that these effects have direct implications for programming to reduce violent recidivism, as both risk and protective factors should be targets of intervention and treatment efforts (Lodewijks, de Ruiter, & Doreleijers, 2010; Stouthamer-Loeber et al., 2002). Indeed, Lodewijks, de Ruiter, and Doreleijers (2010, p. 584) stated, "We can safely conclude that protective factors should be an inextricable part of all risk assessment instruments used with youth."

Despite the apparent importance of protective factors, few of the instruments commonly used with juveniles incorporate protective factors, and those that do either have no empirical support or are in development and have not yet been empirically validated. In fact, Worling, Bookalam, and Litteljohn (2012) noted that very little research regarding factors that lead to the cessation of sexual offending

"Despite their importance in mitigating risk, protective factors are incorporated in few juvenile instruments at this time."

behaviors for juveniles has been undertaken to date, and that it will be important for future research to identify protective factors and determine how best to combine risk and protective factors to enhance judgments of future sexual behavior.

One of the only studies to examine the relationship of risk and protective factors to sexual and nonsexual recidivism was recently conducted by Spice and colleagues (2013) using a sample of adolescent males who committed sexual offenses. Although the study failed to find any protective factors that were statistically related to sexual recidivism or desistance, study findings did suggest there may be protective factors that are specific to sexual rather than nonsexual recidivism. Like Worling, Bookalam, and Litteljohn (2012), the researchers called for more research on both risk and protective factors and the roles they play in sexual offending, and they specifically noted the need for studies that examine whether there are protective factors that apply to sexually abusive youth specifically.

A handful of risk assessment tools developed in recent years also are worth noting due to their assimilation of protective factors. These include AIM2 (Print et al., 2007), the Juvenile Risk Assessment Tool (J-RAT) (Rich, 2011), and the previously mentioned MEGA (Miccio-Fonseca, 2010. AIM2 (Print et al., 2007), developed for use in the United Kingdom, is not defined by its developers as a risk assessment instrument per se, but rather as a process for determining the level of supervision required by adolescents who commit sexual offenses. It assesses static and dynamic variants of both risk and protection, although risk factors are described as "concerns" (rather than risks) and protective factors are described as "strengths." AIM2 has not yet received any empirical validation of either its risk or protective scales. J-RAT (Rich, 2011) is a clinical risk assessment instrument for juvenile sexual recidivism that also incorporates a protective factor scale. Like AIM2, it has not been subjected to any statistical testing and can only be considered as a theoretical scale at this time. MEGA (Miccio-Fonseca, 2010) is a juvenile risk assessment instrument that incorporates an integrated protective factor scale, but it is currently in development and has no research support.

Finally, the Protective Factors Scale (PFS) (Bremer, 2006) is not a risk assessment instrument, but it was nevertheless developed specifically for work with sexually abusive youth and its sexuality scale reviews three elements specifically related to such behavior. However, PFS has received scant attention from researchers and practitioners. It has not been subject to any form of empirical validation and is not in general use in the field.

Summary

Research concerning the factors that place juveniles at risk for sexual offending behavior and sexual recidivism is still in its infancy, as is research on the capacity of risk assessment instruments to accurately predict risk for sexual recidivism. Nevertheless, studies that have been undertaken to date provide some important insights about both issues.

First, the range of risk factors for juvenile sexual offending behavior and recidivism is relatively well defined, and the **types and classes** of factors that place youth at risk for sexually abusive behavior or sexual recidivism have been identified. However, our understanding of these factors and how they relate to sexual offending tends to be global rather than specific in nature. The role and effect of risk factors is fairly well understood, but the specific mechanisms through which risk factors develop and ultimately impact the behavior of children and adolescents are not. The effects of risk factors in different circumstances and their interactions with one another are particularly obscure. Moreover, research has not yet produced a universally agreed upon, finite, and valid set of risk factors for sexually offending behavior.

Second, the risk assessment instruments that currently are available for use with juveniles who sexually offend are far from empirically validated. In short, there is a lack of consistent, independently corroborated empirical evidence concerning both the inter-rater reliability and predictive validity of juvenile risk assessments that are available for use at this time, making it difficult to conclude with any degree of confidence that the instruments are scientifically valid. This raises concerns about the capacity of such instruments to reliably and accurately predict the risk of juvenile sexual recidivism or to inform either juvenile court decisions or public policy debates. While some validation research has produced promising findings, the evidence concerning the predictive accuracy of various instruments is mixed and inconsistent overall. Thus, Vitacco and colleagues (2009) describe current instruments as important developmental milestones in further refining the risk assessment process and method, but far from complete. Viljoen, Mordell, and Beneteau (2012) also warn that such instruments are not yet capable of making precise and certain estimates of risk and should thus be used cautiously in legal procedures, such as the civil commitment of juveniles who commit sexual offenses or their placement onto sex offender registries.

Third, given the developmental processes that characterize both childhood and adolescence, there is a clear need for juvenile risk assessment instruments and processes to focus on estimates of short-term rather than long-term risk (Fanniff & Letourneau, 2012; Vitacco et al., 2009; Worling, Bookalam, & Litteljohn, 2012). **Participants in the SOMAPI forum expressed concern that estimates of risk more than 1 to 3 years into the future are unlikely to account sufficiently for the fluid nature of child and adolescent development.** However, the adoption of a short-term assessment model will likely mean that the manner in which juvenile risk instruments are used and researched will have to significantly change.

Finally, Rich (2011) and Spice and colleagues (2013) have argued that there is a need for future research to study not only risk factors and the accuracy of risk assessment instruments, but also the nature of risk itself. They further argue that risk assessment instruments should be used as a platform for case management and treatment rather than for making "passive predictions of limited practical use" (Boer et al., 1997, p. 4). In this vein, Viljoen, Mordell, and Beneteau (2012) write that despite the research focus on the prediction of sexual recidivism, these instruments are also intended to help manage risk and plan treatment to prevent reoffense. They note that increased attention to the utility of tools for these purposes will enable us to move beyond the **prediction** of sexual reoffense toward the **prevention** of sexual reoffense.

Regardless of the strength of the instrument, sound risk assessment requires well-trained risk evaluators who do not simply rely on risk scores when making decisions about a juvenile offender, particularly

decisions with potentially lifelong consequences. As described in the psychological evaluation guidelines of the American Psychological Association (Turner et al., 2001), risk evaluators should use their professional training and knowledge of psychology, human behavior, and social interactions to draw **clinical** conclusions. Even when using an actuarial assessment tool, it remains important for the evaluator to apply clinical judgment in the risk assessment process.

Indeed, **SOMAPI national forum participants noted that there is a need for the provision of federally funded training and technical assistance to ensure the development of well-trained evaluators who understand the nature of the risk assessment process and the limitations of assessment instruments that are currently available.** Well-trained, knowledgeable evaluators are the best defense against the pitfalls associated with erroneous assumptions concerning the predictive accuracy or use of risk assessment instruments for juveniles who sexually offend. Anyone who uses the results of juvenile risk assessments also must understand the strengths and weaknesses of the risk assessment process and the limitations of risk assessment instruments in use today, particularly the lack of empirical evidence demonstrating their predictive accuracy.

Perhaps most important, risk assessment instruments must be integrated into a comprehensive assessment process that produces a thorough understanding of the juvenile who is being assessed. Risk assessment instruments certainly can play an important role in the process, but their current value arguably lies more in their ability to serve as a basis for case management and treatment rather than in their capacity to accurately predict risk. The role that risk assessment instruments can play in identifying the presence of dynamic risk factors that provide targets for treatment is particularly important, as is the role they can play in identifying the presence of protective factors and their potentially mitigating effects on risk. Indeed, **participants in the 2012 SOMAPI forum recommended that protective factors be incorporated into juvenile risk assessment instruments, both those currently in use and those that will be developed in the future.** Future research should be concerned with expanding the knowledge base concerning both risk and protective factors, including the mechanisms through which they affect the propensity to reoffend, particularly in combination with one another.

Finally, **better risk assessment instruments for juveniles who sexually offend and better trained evaluators are both needed.** In describing the "covenant" between the developers and users of risk assessment instruments, Rich (2009) recently underscored how important well-designed instruments and trained, experienced evaluators are for effective professional practice. As Ward, Gannon, and Birgden (2007, p. 207) aptly stated in discussing the responsibility of the instrument end user:

> Practitioners have obligations to always use such measures appropriately, ensure they are trained in their administration, and most importantly, make sure that the assessment process culminates in an etiological formulation that is based around the individual's features alongside those they share with other offenders.

Notes

[1] The base rate refers to the frequency with which a defined situation occurs, or its incidence rate.

[2] Juvenile Sex Offender Assessment Protocol-II (J-SOAP-II).

[3] Juvenile Sexual Offense Recidivism Risk Assessment Tool-II (JSORRAT-II).

[4] Inter-rater reliability refers to the consistency of a measure or tool in giving the same result when the same information is collected and assessed by different evaluators.

[5] Rich (2011) identified 101 different risk factors for juvenile sexually abusive behavior, and more have since been described in the literature.

[6] The meta-analysis involved a combined sample of almost 3,900 adolescent male sexual offenders. In this meta-analysis, Seto and Lalumière described deviant sexual interest as "atypical" sexual interest.

[7] Overall, this meta-analysis involved 18 studies and more than 3,100 juveniles.

[8] The meta-analysis involved nine studies.

[9] An intra-class correlation coefficient greater than 0.75 indicates a high level of inter-rater consistency.

[10] However, Receiver Operating Characteristic scores and resulting Area Under the Curve values have been increasingly used in the assessment of the predictive validity of risk assessment instruments.

[11] The incidence rate at which sexual recidivism occurs among sexual offenders.

[12] Eighteen juveniles were excluded from the breakdown into subgroups due to unavailable data regarding prior sexual and nonsexual offenses.

[13] Viljoen and colleagues studied J-SOAP-II, ERASOR, JSORRAT-II, and Static-99, an adult risk assessment instrument. Overall, the meta-analysis consolidated 33 studies involving more than 6,000 male adolescent sexual offenders.

[14] The other instruments in the study were the Hare Psychopathy Checklist: Youth Version (PCL:YV) and the Youth Level of Service/Case Management Inventory (YLS/CMI), which are designed to assess and predict risk for juvenile nonsexual violence and aggression, respectively; and Static-99, an adult actuarial risk assessment instrument.

[15] Also see Hempel et al. (2011). In their review of juvenile sexual risk assessment instruments, the researchers conclude that "the predictive validities of the risk assessment instruments for JSOs are still insufficient to accurately predict recidivism" (p. 16).

References

Aebi, M., Plattner, B., Steinhausen, H.C., & Bessler. C. (2011). Predicting sexual and nonsexual recidivism in a consecutive sample of juveniles convicted of sexual offences. *Sexual Abuse: A Journal of Research and Treatment, 23,* 456–473.

Ægisdóttir, S., White, M.J., Spengler, P.M., Maugherman, A.S., Anderson, L.A., Cook, R.S., Nichols, C.N., Lampropoulos, G.K., Walker, B.S., Cohen, G.R., & Rush, J.D. (2006). The meta-analysis of clinical judgment project: Fifty-six years of accumulated research on clinical versus statistical prediction. *The Counseling Psychologist, 34,* 341–382.

Allan, M., Grace, R.C., Rutherford, B., & Hudson, S.M. (2007). Psychometric assessment of dynamic risk factors for child molesters. *Sexual Abuse: A Journal of Research and Treatment, 19,* 347–367.

Andrews, D.A., Bonta, J., & Wormith, S.J. (2006). The recent past and near future of risk and/or need assessment. *Crime and Delinquency, 52,* 7–27.

Beggs, S.M, & Grace, R.C. (2011). Treatment gain for sexual offenders against children predicts reduced recidivism: A comparative validity study. *Journal of Consulting and Clinical Psychology, 79*, 182–192.

Boccaccini, M.T., Murrie, D.C., Mercado, C., Quesada, S., Hawes, S., Rice, A.K., & Jeglic, E.L. (2012). Implications of Static–99 field reliability findings for score use and reporting. *Criminal Justice and Behavior, 39,* 42–58.

Boer, D.P., Hart, S.D., Kropp, P.R., & Webster, C.D. (1997). *Manual for the Sexual Violence Risk-20.* Burnaby, BC: The Mental Health, Law, & Policy Institute, Simon Fraser University.

Bonta, J. (1996). Risk-needs assessment and treatment. In A.T. Harland (Ed.), *Choosing Correctional Options That Work: Defining the Demand and Evaluating the Supply* (pp. 18–32). Thousand Oaks, CA: Sage Publications.

Bonta, J. (2002). Offender risk assessment: Guidelines for selection and use. *Criminal Justice and Behavior, 29,* 355–379.

Bonta, J., & Andrews, D.A. (2007). *Risk-Need-Responsivity Model for Offender Assessment and Rehabilitation.* Ottawa, ON: Public Safety Canada.

Bremer, J. (2006). Protective factors scale: Determining the level of intervention for youth with harmful sexual behavior. In D.S. Prescott (Ed.). *Risk Assessment of Youth Who Have Sexually Abused* (pp. 195–221). Oklahoma City, OK: Wood & Barnes.

Caldwell, M.F., & Dickinson, C. (2009). Sex offender registration and recidivism risk in juvenile sexual offenders. *Behavioral Sciences & the Law, 27,* 941–956.

Caldwell, M.F., Ziemke, M., & Vitacco, M.J. (2008). An examination of SORNA as applied to juveniles. Evaluating the ability to predict sexual recidivism. *Psychology, Public Policy, and Law, 14,* 89–114.

Campbell, T.W. (2004). *Assessing Sex Offenders: Problems and Pitfalls.* Springfield, IL: Charles C. Thomas.

Carpentier, J., & Proulx, J. (2011). Correlates of recidivism among adolescents who have sexually offended. *Sexual Abuse: A Journal of Research and Treatment, 24,* 434–455.

Casey, E.A., Beadnell, B., & Lindhorst, T.P. (2009). Predictors of sexually coercive behavior in a nationally representative sample of adolescent males. *Journal of Interpersonal Violence, 24,* 1129–1147.

Chu, C.M., Ng, K., Fong, J., & Teoh, J. (2012). Assessing youth who sexually offended: The predictive validity of the ERASOR, J-SOAP-II, and YLS/CMI in a non–western context. *Sexual Abuse: A Journal of Research and Treatment, 24,* 153–174.

Craig, L.A., Browne, K.D., & Stringer, I. (2004). Comparing sex offender risk assessment measures on a UK sample. *International Journal of Offender Therapy and Comparative Criminology, 48,* 7–27.

Epperson, D.L., & Ralston, C. A. (2009). Validation of the Juvenile Sexual Offender Recidivism Risk Assessment Tool – II (JSORRAT-II) in Iowa. Paper presented at the 28th Annual Research and Treatment Conference of the Association for the Treatment of Sexual Offenders, Dallas, TX.

Epperson, D.L., Ralston, C.A., & Edwards, S. (2009). Juvenile Sexual Offense Recidivism Risk Assessment Tool-II (JSORRAT-II): Updated Research on Reliability and Validity. Paper presented at the 13th Annual Research and Treatment Conference of the Association for the Treatment of Sexual Offenders, Brooklyn Park, MN.

Epperson, D.L., Ralston, C.A., Fowers, D., Dewitt, J., & Gore, K.S. (2006). Actuarial risk assessment with juveniles who sexually offend: Development of the Juvenile Sexual Offense Recidivism Risk Assessment Tool-II (JSORRAT-II). In D.S. Prescott (Ed.), *Risk Assessment of Youth Who Have Sexually Abused: Theory, Controversy, and Emerging Strategies* (pp. 118–169). Oklahoma City, OK: Wood & Barnes.

Epps, K.J. (1997). Managing risk. In M.S. Hoghughi (Ed.), *Working With Sexually Abusive Adolescents* (pp. 35–51). Thousand Oaks, CA: Sage Publications.

Fanniff, A.M., & Letourneau, E.J. (2012). Another piece of the puzzle: Psychometric properties of the J-SOAP-II. *Sexual Abuse: A Journal of Research and Treatment, 24(4),* 378–408.

Graham, F., Richardson G., & Bhate, S. (1997). Assessment. In M.S. Hoghughi (Ed.), *Working With Sexually Abusive Adolescents* (pp. 52–91). Thousand Oaks, CA: Sage Publications.

Grisso, T. (2000). Ethical issues in evaluations for sex offender re-offending. Invited address presented at Sinclair Seminars, Madison, WI.

Grove, W.M., & Lloyd, M. (2006). Meehl's contribution to clinical versus statistical prediction. *Journal of Abnormal Psychology, 115,* 192–194.

Hall, J.E., Simon, T.R., Mercy, J.A., Loeber, L., Farrington, D.P., & Lee, R.D. (2012). Centers for Disease Control and Prevention's expert panel on protective factors for youth violence perpetration. *American Journal of Preventive Medicine, 43,* S1–S7.

Hannah-Moffat, K., & Maurutto, P. (2003). *Youth Risk/Need Assessment: An Overview of Issues and Practices.* Ottawa, ON: Department of Justice Canada, Youth Justice Policy, Research and Statistics Division.

Hanson, R.K. & Bussière, M.T. (1998). Predicting relapse: A meta-analysis of sexual offender recidivism studies. *Journal of Consulting and Clinical Psychology, 66(2),* 348–362.

Hanson, R.K., & Morton-Bourgon, K.E. (2005). The characteristics of persistent sexual offenders: A meta-analysis of recidivism studies. *Journal of Consulting and Clinical Psychology, 6,* 1154–1163.

Hanson, R.K., & Morton-Bourgon, K.E. (2007). *The Accuracy of Recidivism Risk Assessments for Sexual Offenders: A Meta-Analysis.* Ottawa, ON: Public Safety Canada.

Hanson, R.K., & Thornton, D. (1999). *Static 99: Improving Actuarial Risk Assessment for Sex Offenders*. Ottawa, ON: Department of the Solicitor General of Canada.

Hanson, R.K., & Thornton, D. (2000). Improving risk assessments for sex offenders: A comparison of three actuarial scales. *Law and Human Behavior, 24,* 119–136.

Harris, G., & Rice, M. (2007). Characterizing the value of actuarial violence risk assessments. *Criminal Justice and Behavior, 34,* 1638–1658.

Hart, S.D., Kropp. P.R., Laws, R.D., Klaver, J., Logan, C., & Watt, K.A. (2003). *The Risk for Sexual Violence Protocol (RSVP): Structured Professional Guidelines for Assessing Risk of Sexual Violence.* Burnaby, BC: Mental Health, Law, & Policy Institute, Simon Fraser University.

Hart, S.D., Michie, C., & Cooke, D.J. (2007). Precision of actuarial risk assessment instruments: Evaluating the "margins of error" of group v. individual predictions of violence. *British Journal of Psychiatry, 190 (suppl. 49),* s60–s65.

Heilbrun, K., Lee, R., & Cottle, C.C. (2005). Risk factors and intervention outcomes: Meta-analyses of juvenile offending. In K. Heilbrun, N.E. Goldstein, & R. Redding (Eds.), *Juvenile Delinquency: Prevention, Assessment, and Intervention* (pp. 111–133). New York: Oxford University Press.

Hempel, I., Buck, N., Cima, M., & van Marle, H. (2013). Review of risk assessment instruments for juvenile sex offenders: What is next? *International Journal of Offender Therapy and Comparative Criminology, 57(2),* 208 –228.

Hiscox, S.P., Witt, P.H., & Haran, S.J. (2007). Juvenile Risk Assessment Scale (JRAS): A predictive validity study. *The Journal of Psychiatry & Law, 35,* 503–539.

Jessor, R., Van Den Bos, J., Vanderryn, J., Costa, F.M., & Turbin, M.S. (1995). Protective factors in adolescent problem behavior: Moderator effects and developmental change. *Developmental Psychology, 31,* 923–933.

Knight, R.A., & Sims-Knight, J.E. (2003). The developmental antecedents of sexual coercion against women: Testing alternative hypotheses with structural equation modeling. *Annals of the New York Academy of Sciences, 989,* 72–85.

Knight, R.A., & Sims-Knight, J. (2004). Testing an etiological model for male juvenile sexual offending against females. In R. Geffner, K.C. Franey., T.G. Arnold, & R. Falconer (Eds.), *Identifying and Treating Youth Who Sexually Offend: Current Approaches, Techniques, and Research* (pp. 33–55). Binghampton, NY: Haworth Press.

Knight, R.A., Ronis, S.T., & Zakireh, B. (2009). Bootstrapping persistence risk indicators for juveniles who sexually offend. *Behavioral Sciences and the Law, 27,* 878–909.

Långström, N. (2011). Long-term follow-up of criminal recidivism in young sex offenders: Temporal patterns and risk factors. *Psychology, Crime & Law, 8,* 41–58.

Litwack, T.R. (2001). Actuarial versus clinical assessments of dangerousness. *Psychology, Public Policy, and Law, 7,* 409–443.

Lodewijks, H.P.B., de Ruiter, C., & Doreleijers, T.A.H. (2010). The impact of protective factors in desistance from violent reoffending: A study in three samples of adolescent offenders. *Journal of Interpersonal Violence, 25,* 568–587.

Mallie, A.L., Viljoen, J.L., Mordell, S., Spice, A., & Roesch, R. (2011). Childhood abuse and adolescent sexual re-offending: A meta-analysis. *Child and Youth Care Forum, 40,* 401–417.

Martinez, R., Flores., J., & Rosenfeld, B. (2007). Validity of the Juvenile Sex Offender Assessment Protocol-II in a sample of urban minority youth. *Criminal Justice and Behavior, 34,* 1284–1295.

McCann, K., & Lussier, P. (2008). Antisociality, sexual deviance, and sexual reoffending in juvenile sex offenders: A meta-analytical investigation. *Youth Violence and Juvenile Justice, 6,* 363–385.

McGrath, A., & Thompson, A.P. (2012). The relative predictive validity of the static and dynamic domain scores in risk-need assessment of juvenile offenders. *Criminal Justice and Behavior, 39,* 250–263.

Meehl, P.E. (1996). *Clinical Versus Statistical Prediction: A Theoretical Analysis and a Review of the Literature.* Northvale, NJ: Jason Aronson.

Miccio-Fonseca, L.C. (2009). MEGA: A new paradigm in protocol assessing sexually abusive children and adolescents. *Journal of Child & Adolescent Trauma, 2,* 1–18.

Miccio-Fonseca, L.C. (2010). MEGA: An ecological risk assessment tool of risk and protective factors for assessing sexually abusive children and adolescents. *Journal of Aggression, Maltreatment & Trauma, 19,* 734 –756.

Monahan, J. (1995). *The Clinical Prediction of Violent Behavior*. Northvale, NJ: Jason Aronson.

Monahan, J., & Steadman, H.J. (1994). *Violence and Mental Disorder: Developments in Risk Assessment.* Chicago: University of Chicago Press.

Monahan, J., Steadman, H.J., Silver, E., Appelbaum, P.S., Robbins, P.C., Mulvey, E.P., Roth, L.H., Grisso. T., & Banks, S. (2001). *Rethinking Risk Assessment: The MacArthur Study of Mental Disorder and Violence.* New York: Oxford University Press.

Murrie, D.C., Boccaccini, M.T., Turner, D.B., Meeks, M., Woods, C., & Tussey, C. (2009). Rater (dis)agreement on risk assessment measures in sexually violent predator proceedings: Evidence of adversarial allegiance in forensic evaluation. *Psychology, Public Policy, and Law, 15,* 19–53.

Olver, M.E., & Wong, S.C.P. (2009). Therapeutic responses of psychopathic sexual offenders: Treatment attrition, therapeutic change, and long-term recidivism. *Journal of Consulting and Clinical Psychology, 77,* 328–336.

Parks, G.A., & Bard, D.E. (2006). Risk factors for adolescent sex offender recidivism: Evaluation of predictive factors and comparison of three groups based upon victim type. *Sexual Abuse: A Journal of Research and Treatment, 18,* 319–342.

Pedersen, L., Rasmussen, K., & Elsass, P. (2010). Risk assessment: The value of structured professional judgments. *International Journal of Forensic Mental Health, 9,* 74–81.

Powers-Sawyer, A.B., &. Miner, M.H. (2009). Actuarial prediction of juvenile recidivism: The static variables of the Juvenile Sex Offender Assessment Protocol-II (J-SOAP-II). *Sexual Offender Treatment, 4(2),* 1–11.

Prentky, R.A., Li, N., Righthand, S., Schuler, A., Cavanaugh, D., & Lee, A.F. (2010). Assessing risk of sexually abusive behavior among youth in a child welfare sample. *Behavioral Sciences and the Law, 28,* 24–45.

Print, B., Griffin, H., Beech, A., Quayle, J., Bradshaw, H., Henniker, J., & Morrison, T. (2007). *The AIM2 Model of Initial Assessment: Guidance Document.* (Available from the AIM Project, 14 Carolina Way, Salford M50 2ZY, England).

Quinsey, V.L., Harris, G.T., Rice, M.E., & Cormier, C.A. (1998). *Violent Offenders: Appraising and Managing Risk*. Washington, DC: American Psychological Association.

Quinsey, V.L., Harris, G.T., Rice, M.E., & Cormier, C.A. (2006). *Violent Offenders: Appraising and Managing Risk,* 2d ed. Washington, DC: American Psychological Association.

Rajlic, G., & Gretton, H.M. (2010). An examination of two sexual recidivism risk measures in adolescent offenders: The moderating effect of offender type. *Criminal Justice and Behavior, 37,* 1066–1085.

Ralston, C.A. & Epperson, D.L. (2012*).* Validation of the JSORRAT-II in Iowa: Update and Expansion. Paper presented at the 31st Annual Research and Treatment Conference of the Association for the Treatment of Sexual Abusers, Denver, CO.

Rettenberger, M., Boer, D.P., & Eher, R. (2011). The predictive accuracy of risk factors in the Sexual Violence Risk-20 (SVR-20). *Criminal Justice and Behavior, 38,* 1009–1027.

Rich, P. (2009). *Juveniles Who Commit Sexual Offenses: A Comprehensive Guide to Risk Evaluation.* Hoboken, NJ: John Wiley & Sons.

Rich, P. (2011). *Understanding Juveniles Who Commit Sexual Offenses: Assessment, Treatment, and Rehabilitation*, 2d ed. Hoboken, NJ: John Wiley & Sons.

Roberts, C., Doren, D.M., & Thornton, D. (2002). Dimensions associated with assessments of sex offender recidivism risk. *Criminal Justice and Behavior, 29,* 569–589.

Rogers, R. (2000). The uncritical assessment of risk assessment in forensic practice. *Law and Human Behavior, 24,* 595–605.

Rutter, M. (2003). Crucial paths from risk to causal mechanisms. In B.B. Lahey, T.E. Moffitt, & A. Caspi (Eds.), *Causes of Conduct Disorder and Juvenile Delinquency* (pp. 3–24). New York: Guilford Press.

Schwalbe, C.S. (2008). A meta-analysis of juvenile justice risk assessment instruments: Predictive validity by gender. *Criminal Justice and Behavior, 35,* 1367–1381.

Seto, M.C., & Lalumière, M.L. (2010). What is so special about male adolescent sexual offending? A review and test of explanations through meta-analysis. *Psychological Bulletin, 4,* 526–575.

Sjöstedt, G., & Grann, M. (2002). Risk assessment: What is being predicted by actuarial prediction instruments? *International Journal of Forensic Mental Health, 1,* 179–183.

Spice, A., Viljoen, J.L., Latzman, N.E., Scalora, M.J., & Ullman, D. (2013). Risk and protective factors for recidivism among juveniles who have offended sexually. *Sexual Abuse: A Journal of Research and Treatment, 25(4),* 347–369.

Steadman, H.J., Silver, E., Monahan J., Appelbaum, P.S., Robbins, P.C., Mulvey, E.P., Grisso, T., Roth, L.H., & Banks, S. (2000). A classification tree approach to the development of actuarial violence risk assessment tools. *Law and Human Behavior, 24,* 83–100.

Steinberg, L. (2009). Should the science of adolescent brain development inform public policy? *American Psychologist, 64(8),* 739–750.

Steinberg, L. (2010). A behavioral scientist looks at the science of adolescent brain development. *Brain and Cognition, 72,* 160–164.

Steinberg, L., & Scott, E.S. (2003). Less guilty by reason of adolescence. *American Psychologist, 58,* 1009–1018.

Stouthamer-Loeber, M., Loeber, R., Wei, E., Farrington, D.P., & Wikström, P.O. (2002). Risk and promotive effects in the explanation of persistent serious delinquency in boys. *Journal of Consulting and Clinical Psychology, 70,* 111–123.

Turner, S.M., DeMers, S.T., Fox, H.R., & Reed, G.M. (2001). APA's guidelines for test user qualifications: An executive summary. *American Psychologist, 56,* 1099–1113.

van der Put, C.E, Dekovic, M., Stams, G.J.J.M., van der Laan, P.H., Hoeve, M., & van Amelsfort, L. (2011). Changes in risk factors during adolescence: Implications for risk assessment. *Criminal Justice and Behavior, 38,* 248–262.

van der Put, C.E., van Vugt, E.S., Stams, G.J.J.M, Deković, M., & van der Laan, P.H. (2013). Differences in the prevalence and impact of risk factors for general recidivism between different types of juveniles who have committed sexual offenses (JSOs) and juveniles who have committed nonsexual offenses (NSOs). *Sexual Abuse: A Journal of Research and Treatment, 25*, 41–68.

Viljoen, J.L., Elkovitch, N., Scalora, M.J., & Ullman, D. (2009). Assessment of reoffense risk in adolescents who have committed sexual offenses: Predictive validity of the ERASOR, PCL:YV, YLS/CMI, and Static-99. *Criminal Justice and Behavior, 36,* 981–1000.

Viljoen, J.L., Mordell, S., & Beneteau, J.L. (2012). Prediction of adolescent sexual reoffending: A meta-analysis of the J-SOAP-II, ERASOR, J-SORRAT-II, and Static-99. *Law and Human Behavior, 36(5),* 423–438.

Viljoen, J.L., Scalora, M., Cuadra, L., Bader, S., Chávez, V., Ullman, D., & Lawrence, L. (2008). Assessing risk for violence in adolescents who have sexually offended: A comparison of the J-SOAP-II, JSORRAT-II, and SAVRY. *Criminal Justice and Behavior, 35,* 5–23.

Vitacco, M.J., Caldwell, M., Ryba, N.L., Malesky, A., & Kurus, S.J. (2009). Assessing risk in adolescent sexual offenders: Recommendations for clinical practice. *Behavioral Sciences and the Law, 27,* 929–940.

Vitacco, M.J., Viljoen, J., & Petrila, J. (2009). Introduction to this issue: Adolescent sexual offending. *Behavioral Sciences and the Law, 27,* 857–861.

Ward, T., Gannon, T.A., & Birgden, A. (2007). Human rights and the assessment and treatment of sexual offenders. *Sexual Abuse: A Journal of Research and Treatment, 19,* 195–216.

Webster, C.D., Douglas, K.S., Eaves, D., & Hart, S.D. (1997). Assessing risk of violence to others. In C.D. Webster & M.A. Jackson (Eds.), *Impulsivity: Theory, Assessment, and Treatment* (pp. 251–277). New York: Guilford Press.

Will, D. (1999). Assessment issues. In M. Erooga & H. Masson (Eds.), *Children and Young People Who Sexually Abuse Others: Challenges and Responses* (pp. 86–103). London, England: Routledge.

Wollert, R. (2006). Low base rates limit expert certainty when current actuarials are used to identify sexually violent predators: An application of Bayes's Theorem. *Psychology, Public Policy, and Law, 12,* 56–85.

Worling, J.R., Bookalam, D., & Litteljohn, A. (2012). Prospective validity of the Estimate of Risk of Adolescent Sexual Offense Recidivism (ERASOR). *Journal of Sexual Abuse: A Journal of Research and Treatment, 24(3),* 203–223.

Worling, J.R., & Långström, N. (2003). Assessment of criminal recidivism risk with adolescents who have offended sexually. *Trauma, Violence, and Abuse, 4,* 341–362.

Worling, J.R., & Långström, N. (2006). Risk of sexual recidivism in adolescents who sexually offend. In H.E. Barbaree & W.L. Marshall (Eds.), *The Juvenile Sexual Offender,* 2d ed. (pp. 219–247). New York: Guilford Press.

Zimring, F.E. (2004). *An American Travesty: Legal Responses to Adolescent Sexual Offending.* Chicago: University of Chicago Press.

Back To Top

National Sex Offender Public Website | Site Index
DOJ Home | OJP Home | Accessibility | Language Access (Acceso al Idioma) | Legal Policies and Disclaimers | Privacy Policy | FOIA | USA.gov