

A Concise Review on Validated Risk Assessment Tools For Sexually Abusive Youth

L. C. Miccio-Fonseca¹, Lucinda A. Rasmussen²

¹ Clinic for the Sexualities, San Diego

² San Diego State University, School of Social Work

[Sexual Offender Treatment, Volume 6 (2011), Issue 2]

Abstract

Reviewed are validated and cross-validated risk assessment tools for assessing sexual improprieties in youth: J-SOAP-II, ERASOR,2.0, and MEGA . Assessments are significantly more accurate when tools focused on specific populations of youth are employed. The review affirms a New Paradigm of ecologically based, developmentally and gender sensitive risk assessment tools.

Key words: risk assessment, adolescent sex offender, juvenile sex offender, sexually abusive youth, ERASOR, J-SOAP-II, MEGA, JSORRAT-II

Essential for evaluating sexually abusive youths are accurate, developmentally sensitive risk assessment tools. Accuracy ensures: (a) high risk youths receive intensive intervention commensurate with severity of sexually abusive behavior; (b) low risk youths do not receive unnecessary interventions; (c) successful monitoring identifies changes; and (d) resources are allocated more judiciously, bringing considerable cost savings to juvenile justice and child welfare systems.

Clinical interviews are no better than chance in predicting whether a sex offender will reoffend (Monahan, 2000) emphasizing need for standardized tools. Effectiveness of risk assessment tools depends upon: (a) appropriateness for populations assessed (e.g., age, gender, intellectual functioning); (b) validation (and cross-validation) on sizeable samples, demonstrating generalizability; and (c) adherence to stated parameters regarding population addressed and potential limitations. Risk assessment tools must be individualized to age, gender, and intellectual capacities.

Actuarial risk assessment tools reflect fixed numbers of static risk factors, giving probabilistic estimates of reoffending over time (e.g., 5 years). Low base rate of sexual recidivism for youth (i.e., typically less than 14% [Gerhold, Brown, & Beckett, 2007]) makes creating actuarial scales daunting (Fanniff & Becker, 2006). One actuarial tool for juveniles exists: *Juvenile Sexual Offense Recidivism Risk Assessment Tool-II* (Epperson, Ralston, Fowers, DeWitt, & Gore, 2006). Applicable to male youth (age 12-17), *JSORRAT-II* demonstrated very good predictive validity for sexual recidivism in Utah construction sample (i.e., Receiver Operating Characteristics [ROC] analysis showed AUC = .89) (Epperson et al., 2006). Cross validation studies (Utah, Iowa, Georgia) on samples of more than 300 youth demonstrated considerable reduction in predictive validity for sexual recidivism (AUC = .64, .65 and .65 respectively) (Epperson & Ralston, 2007, 2009; Prescott, 2011).

Empirically grounded risk assessment tools are based on risk factors found significantly associated with risk for coarse sexual improprieties¹ and/or sexually abusive behavior² across studies. Tools

having only face validity, not subjected to rigorous scientific testing, are justifiably questionable. Examined are three validated and cross-validated risk assessment tools: (a) *Juvenile Sex Offender Assessment Protocol (J-SOAP-II)*, (Prentky, Harris, Frizzell, & Righthand, 2000; Prentky & Righthand, 2003); (b) *Estimate of Risk of Adolescent Sexual Offense Recidivism (ERASOR)*, Version 2.0, (Worling & Curwen, 2001; Worling, 2004); and (c) *Multiplex Empirically Guided Inventory of Ecological Aggregates for Assessing Sexually Abusive Adolescents and Children (Ages 19 and Under) (MEGA)* (Miccio-Fonseca, 2006, 2009, 2010). Methods of construction, quality of validation and cross-validation research, and tools' application are discussed.

Risk Assessment Tools for Assessing Sexual Improprieties

Construction of risk assessment tools has traditionally relied on research on convicted adult male sex offenders. Vitacco, Caldwell, Ryba, Malesky, and Kurus (2009) asserted "most measures designed to assess sexual recidivism in adolescents are simply that-downward extensions of their adult counterparts" (p. 931). Youth are qualitatively different from convicted adult sex offenders. Many adult risk factors do not relate to adolescent sexual offending (Miner, 2002). Unlike adults, it is unusual for youth (particularly females and children under 12) to have unconventional sexual interests, show deviant sexual arousal, or strategically plan offenses (Chaffin et al., 2008, Miccio-Fonseca, 2000). Miccio-Fonseca and Rasmussen's call for a *New Paradigm* in risk assessment tools for youth (i.e., empirically based, developmentally and gender sensitive, ecologically framed) (Miccio-Fonseca, 2009, 2010; Rasmussen & Miccio-Fonseca 2007) was endorsed by other recognized professionals (Prentky et al., 2010; Prescott, 2011; Rich, 2009; Vitacco, Caldwell, Ryba, Malesky, & Kurus, 2009; Worling, Bookalam, & Littlejohn, in press). Special populations - non-adjudicated youth, females, children under 12, and youth with low intellectual functioning have specific needs not often considered or addressed in risk assessment. *J-SOAP-II*, *ERASOR,2.0* and *MEGA* showed significant findings in validation and cross-validation. There were, however, significant differences among the tools related to their application and generalizability across various populations.

Juvenile Sexual Offender Assessment Protocol (J-SOAP-II)

The 23-item *J-SOAP* (Prentky et al., 2000) has two revisions: 26 and 28 items (Prentky & Righthand, 2003). *J-SOAP* scales (i.e., Sexual Drive/Sexual Preoccupation, Antisocial, Impulsive Behavior, Clinical Intervention and Community Adjustment [i.e., Scales I to IV]) were rationally constructed from research literature on: juvenile sex offenders, delinquent youth, adult sex offenders, and "mixed populations of adult criminals" (Prentky et al., 2000, pp. 76-77). There was no a priori weighting of scales, rather items "were trichotomized and assumed, for lack of empirical data to suggest otherwise, to be of equal importance" (Prentky & Righthand, 2003, p. 6).

Prentky et al. (2000) first tested *J-SOAP* with 96 male, inner city, adjudicated and non-adjudicated sexually abusive youth (age 9-20), assessing at intake and discharge (on average 24 months later); 75 were followed for 12-months, with 3 youths reoffending sexually. Internal consistency reliability coefficients ranged from modest to good (i.e., .68 [Scale IV]; .72 [Scale I]; .73 [Scale II]; and .85 [Scale III] (Prentky et al., 2000). Second study tested the 26-item *J-SOAP* on 153 male sexually abusive youth (age 7-20) drawn from rural child welfare and correctional settings, 29% excluded for missing data, leaving 134 youth for analysis. Revised *J-SOAP* showed modest to excellent internal consistency reliability (i.e., coefficient alphas ranging from .64 to .95) (Righthand et al., 2005). Factor analysis identified four-factor solution consistent with the four scales. Tool was revised to the 28-item *J-SOAP-II* (Prentky & Righthand, 2003).

Prentky (2006, et al., 2010) examined predictive validity of *J-SOAP-II* on 667 male and 155 female youths (ages 3-19). Sample was primarily non-adjudicated, referred from child welfare agencies for evaluation of "sexually inappropriate and abusive behavior" (p. 27) and followed retrospectively for 6 months to 7 years. Findings on females, although previously reported to the study's funding source (Prentky, 2006), were excluded from the final analysis "because the *J-SOAP-II* was not designed to assess females" (Prentky et al., 2010. p. 27), leaving a sample of 233 adolescent and 336 pre-adolescent males.

Sexual recidivism (defined as "new hands-on sexual behaviors") was 14-16% for adolescents and 25-28% for pre-adolescents, recurrence generally within 24 months (Prentky et al., 2010). Researchers hypothesized higher recidivism for pre-adolescents due to "greater persistence associated with earlier age of onset" (p. 29). Sample was divided into those with data on all four scales and Total score ($n = 400$) and those with missing data on Scale III (Clinical Treatment) ($n = 159$). First group was thought to be higher risk due to higher likelihood of referral to treatment. AUC values in ROC analysis (for both full sample and high risk subgroup) ranged from poor to good predictive validity (i.e., .56 to .78 for pre-adolescents and .66 to .83 for adolescents), with no major differences between full sample ($N = 559$) and high risk subgroup ($n = 400$). Adolescents generally had higher AUC values than pre-adolescents. Scales I and IV were most predictive for full sample (AUC values ranging from .74 to .83) while Scale II was least predictive (AUC values ranging from .56 to .67). AUC values on Scale II for pre-adolescents were no better than chance (i.e., .56 for both full sample and high risk subgroup), perhaps because sample was primarily from child welfare and youths likely to be less antisocial (Prentky et al., 2010).

Subsequent research on *J-SOAP-II* involved adjudicated male adolescent sex offenders in: (a) community based programs (Martinez, Flores, & Rosenfeld, 2007); (b) residential facilities (Elkovitch, Viljoen, Scalora, & Ullman, 2008); (c) corrections-based programs (Powers-Sawyer & Miner, 2009); and (d) secure custody facilities (Caldwell et al. 2008; Parks & Bard, 2006; Waite, Keller, McGarvey, Wieckowski, Pinkerton, & Brown, 2005). *J-SOAP-II*'s dynamic scales were better predictors of sexual and nonsexual recidivism than static scales (Martinez et al., 2007). Combined score of Scales I and II showed strong predictive accuracy (average 4-year follow-up period) for sexual recidivism (AUC=.75), however were poor predictors of violent nonsexual and general nonsexual recidivism (Powers-Sawyer & Miner, 2009). Scale II (Impulsive, Antisocial Behavior) performed well in correctional settings, significantly predicting sexual recidivism (Parks & Bard, 2006; Waite et al., 2005) and nonsexual recidivism (Waite et al., 2005). When *J-SOAP* was compared to other tools (*JSORRAT-II*, and *Structured Assessment of Violence Risk in Youth, Version 1.1 [SAVRY]*), none were able to predict sexual recidivism, although *J-SOAP-II* and *SAVRY* predicted nonsexual aggression (Viljoen et al., 2008). Scale IV was the only scale significantly predictive of new felony sex offenses in a study comparing *J-SOAP-II* with risk assessment tools from New Jersey, Texas, and Wisconsin (Caldwell et al., 2008). Elkovitch et al. (2008) found *J-SOAP-II* predicted sexual recidivism and *SAVRY* predicted nonsexual recidivism; however, raters' clinical judgments of risk after completing these tools were unable to predict either type of recidivism.

Estimate of Risk of Adolescent Sexual Offense Recidivism (ERASOR, Version 2.0)

ERASOR,2.0 (Worling & Curwen, 2001) is "an empirically-guided checklist to assist clinicians to estimate short-term risk of a sexual reoffense for youth aged 12-18" (Worling, 2011, p. 1). Template of *Sexual Violence Risk-20* (SVR-20, Boer, Hart, Kropp, & Webster, 1997) (an adult tool) was used to develop *ERASOR,2.0*. Items were based on risk factors from adolescent sex offender recidivism research, published checklists related to clinical judgment of risk and protective factors, and "the

vast literature amassed with respect to adult sexual offense recidivism" (Worling, 2004, p. 239). *ERASOR,2.0* consists of 16 dynamic and 9 static risk factors in 5 categories (i.e., sexual interests, attitudes, and behaviors; historical sexual assaults; psychosocial functioning; family/environmental functioning; and treatment). Risk estimates are based on Total score and overall clinical judgment rating (*Low, Moderate, High*) and determined by the clinician, as opposed to specific scoring rules from *ERASOR 2.0's* manual.

Worling (2004) examined psychometric properties of *ERASOR,2.0* with small sample of 136 adjudicated male adolescents (age 12-18) receiving treatment at community-based programs (Canada; $n = 45$) or at a specialized residential treatment center in Minnesota ($n = 91$). *ERASOR,2.0* ratings were completed by 28 trained master's or doctoral level professionals on clinical assessments they conducted. Interrater reliability was acceptable for most risk factors (average intraclass correlation coefficient [ICC] = .60) and excellent for overall clinical risk estimate (ICC = .92). Internal consistency reliability for Total score was .75. Discharged youth had significantly lower Total scores than those assessed earlier in treatment, evidencing *ERASOR 2.0's* dynamic items can assess change. Youth in specialized residential facilities had significantly higher Total scores than youth in community based placement and were significantly more likely to be rated at "high" or "moderate" risk (Worling, 2004).

Sample was divided into "repeaters" (i.e., prior adjudication for a sex offense and sanction by an adult) and "non-repeaters" (i.e., no such history). Overall clinical judgment rating (AUC = .66) and Total score (AUC = .72) significantly differentiated repeaters from non-repeaters (Worling, 2004). Nevertheless, findings on prior sex offenses do not establish predictive validity (Faniff & Becker, 2006). Dissertation studies also examined *ERASOR,2.0's* psychometric properties; however unpublished studies (e.g., dissertations) have not been subjected to rigorous peer review and perhaps have undetected methodological flaws, therefore are not mentioned here.

Rajlic and Gretton (2010) examined student ratings for Total scores of *J-SOAP-II* and *ERASOR,2.0* on 268 adolescent sex offenders (ASO's) involved in a provincial treatment service. Study compared sexual recidivism rate of ASO's with criminal history of: (a) sex offenses only, and (b) other violent and nonviolent offenses in addition to sex offenses (delinquent ASO's). Significant predictors of sexual recidivism in full sample were: (a) *J-SOAP-II* Total score (AUC = .69); (b) *ERASOR,2.0* Total score (AUC = .71); and (c) *ERASOR,2.0* clinical judgment rating of overall risk (AUC = .67). Both tools significantly predicted recidivism for sex offense only ASO's ($n = 128$), failing to predict "beyond chance levels" (p. 1080) sexual recidivism for delinquent ASO's ($n = 140$). AUC's for sex offense only ASO's were: .80 (*J-SOAP-II* Total score); .86 (*ERASOR,2.0* Total score); and .77 (*ERASOR,2.0* clinical judgment rating). AUC's for delinquent ASO's were: .51 (*J-SOAP-II* Total Score) and .54 (both *ERASOR,2.0* Total score and clinical judgment of overall risk).

Viljoen, Elkovitch, Scalora, and Ullman (2009) compared performance of several risk-assessment tools (i.e., *ERASOR*, *Psychopathy Checklist: Youth Version [PCL:YV]*, Youth Level of Service/Case Management Inventory [*YLS/CMI*], and Static-99) with 193 adolescent males in residential treatment followed for a mean 7.24 year period. Clinical judgment rating from *ERASOR* yielded highest AUC (0.64); however findings were non-significant ($p = .069$). Worling and colleagues (in press) (see below) cited this finding in their literature review; neglecting to mention the AUC value (.64) was non-significant ($p = .069$) and therefore non-predictive.

Retrospective study of official national recidivism data (average follow up = 4.5 years) of 104 sexually offending youth in Singapore examined predictive validity of *ERASOR* compared to *J-SOAP-II* and *YLS/CMI* (Chu, Ng, Fong, & Teoh, in press). *ERASOR* clinical judgment rating (AUC=.83) and Total score (AUC=.74) significantly predicted sexual recidivism; however, inter-rater

agreement (ICC) for the three psychologists coding the data was "fair" ($p = .7$) for both the Total score (.49) and the clinical risk rating (.43), perhaps diluting the AUC findings. Total score of *J-SOAP-II* and *YLS/CMI* was no better than chance (AUC = .51 and .29 respectively).

Worling et al. (in press) attempted to establish predictive validity of *ERASOR,2.0* in prospective research on 191 male adolescent sex offenders aged 12-19 years assessed in five agencies in Ontario, Canada between 2001 and 2007, recidivism defined as new criminal charges (for a sex or non-sexual crime). Youth were followed between 0.1 and 7.9 years ($M = 3.66$; $SD = 2.08$), with 9.4% sexual recidivism. *ERASOR,2.0* Total score and sum of risk factors present were significantly predictive of sexual recidivism (AUC = .72 and .73 respectively); clinical judgment rating was not predictive (AUC = .61). Subgroup of 70 adolescents had recidivism data for shorter follow-up interval (2.5 years, $M = 1.4$; $SD = 0.71$), with sexual recidivism rate of 8.6%. Clinical judgment rating, sum of risk factors present, and Total score were all significant, showing good to excellent predictive validity (AUC = .82, .90, and .93 respectively). To establish arbitrary cut-off scores for *ERASOR,2.0*, Worling et al. "extracted scores from our previous study (Worling, 2004) of 136 adolescents who had offended sexually" (p. 8). These scores for full sample significantly predicted sexual recidivism at modest level for Total score (AUC = .65) and at moderate level for the sum of risk factors present (AUC = .71). For subgroup of 70 adolescents, the scores showed excellent predictive validity for all three *ERASOR,2.0* ratings: AUC's = .93 (Total score); .90 (sum of risk factors present): and .82 (clinical judgment).

Multiplex Empirically Guided Inventory of Ecological Aggregates for Assessing Sexually Abusive Adolescents and Children (Ages 19 and Under) or MEGA

MEGA (Miccio-Fonseca, 2006) is a validated and cross-validated comprehensive tool for assessing risk for coarse sexual improprieties and/or sexually abusive behavior in youth ages 4-19 years (i.e., males, females, children under 12, low intellectual functioning youth). Early underpinnings of *MEGA* involved a descriptive study of sexually abusive individuals, sexual abuse victims, and their families ($N = 656$, males and females, ages 4 to 72). An ecological model of risk and protective factors developed from these findings, providing the conceptual framework for a risk assessment tool (Miccio-Fonseca, 1996, 2000, 2001, 2005). Data from comprehensive empirically guided structured clinical interviews (90 minutes to 6 hours in length) identified risk factors empirically associated with sexual offending (in youth and young adults) and were utilized to create *Fonseca Inventory of Sex Offenders' Risk Factors (FISORF-1998)*, (Miccio-Fonseca, 2005), a risk assessment tool applicable to ages 4-72 years. *FISORF-1998* provided the template for *MEGA*. Annotated clinical data from qualitative interviews on youths (ages 4 to 19) in the 7-year descriptive project (72% of the sample) were used to inform its construction. The evolution of *MEGA* from the 7 year project and the template of *FISORF-1998* make it distinctively different. *MEGA* focuses on several domains related to risk for coarse sexual improprieties and sexually abusive behavior, including: neuropsychological elements, family history and dynamics, antisocial behaviors, and coercive and sexually abusive behaviors.

MEGA was validated and cross-validated on large representative samples of youth ages 4 to 19, including youth with low intellectual functioning. Validation study included 1,184 youth (979 males and 205 females) (Miccio-Fonseca, 2009, 2010). Cross-validation sample was comparable ($N=1056$, males = 953; females = 102; transgender=1) (Miccio-Fonseca, 2011). Youth came from a variety of treatment settings (i.e., outpatient, inpatient, residential, and correctional) in national and international research sites (USA, Canada; England; and Scotland). Cross-validation sample was very ethnically diverse and multilingual; 18% were bilingual and ethnic breakdown included: 49.1 % Caucasian; 20.3% African American; 19.9% Hispanic; 1.1% Asian American; .9 % Native American;

8.4 % Other category. Cross-validation sample was considerably more diverse than validation sample (i.e., 49% were Caucasian, opposed to over 75% for validation) (Miccio-Fonseca, 2009, 2010), allowing for generalizations regarding the findings.

MEGA has four distinctive scales (i.e., *Risk Scale*, *Protective Scale*, *Estrangement Scale* and *Persistent Sexual Deviancy Scale*); all had robust internal consistency reliability findings at validation (coefficient alphas = .80 and above). Cross-validation internal consistency reliability coefficients were comparable: *Risk Scale* (0.81); *Protective Scale* (0.78); *Estrangement Scale* (0.79); *Persistent Sexual Deviancy Scale* (0.74). *Risk Scale* at cross-validation demonstrated moderate predictive validity for a 6-month period, with recidivism defined as a sexually related probation/parole violation (formal or informal). Estimated base rate for juvenile sexual recidivism was 8.4%. Cross-validation showed significant predictive validity for *Risk Scale* (AUC = .71) (95% CI of .62-.80) ($p < .001$). (Miccio-Fonseca, 2011), affirming *MEGA* provides an accurate estimate of risk.

Discussion

Several risk assessment tools are available to professionals who assess risk for coarse sexual improprieties and/or sexually abusive behaviors, but few have been validated and cross-validated on sizable samples of 100 or more. Focus was on three empirically grounded tools (*not actuarial*), two of which have validation and cross-validation data on sizable samples of over 800 (*J-SOAP-II* and *MEGA*) and one with a smaller sample (*ERASOR,2.0*). Two are popular and widely used (*J-SOAP-II* and *ERASOR,2.0*) and one is new and recently cross-validated (*MEGA*).

A limitation of risk assessment tools is lack of universal agreement on terms "recidivism" or "reoffense". Definition of recidivism is inconsistent across studies (i.e., arrests, charges, or adjudications [convictions]). Inconsistency makes meta-analyses of risk assessment studies problematic since studies are measuring different things (Gerhold et al., 2007; Reitzel & Carbonell, 2006). Charges imply guilt; adjudication confirms it. Although charged with a crime, one is presumed innocent until proven guilty. When recidivism is liberally defined as arrest or charge, it is reasonable to question that some of those identified as recidivists may in fact have been innocent. Possibility of "innocent" individuals among a sample of recidivists is a limitation rarely mentioned or considered when recidivism data are published. It is clearly understandable why variables of arrests and/or charges are considered indicators for re-offense. The fact is, however, recidivism is low for sexually abusive individuals, especially youth (i.e., less than 14% - Gerhold et al., 2007). Counting an arrest and/or a charge as recidivism likely inflates the realities of the situation and can skew data toward a higher risk level.

Although pioneer of risk assessment tools for sexually abusive youth and most widely studied, *J-SOAP-II* is limited by: (a) small sample size of validation studies on earlier versions ($N = 75$ and $N = 134$) (Prentky et al., 2000; Righthand et al., 2005); (b) lack of cut-off scores; and (c) inconsistencies in predictive validity findings across different studies. Low base rate of new sexual offenses (3 out of 75 youth in the first study) prevented researchers from making "probabilistic estimates of sexual recidivism" (Prentky & Righthand, 2003, p. 8), thus researchers have questioned *J-SOAP-II's* ability to be predictive and expressed caution in using it as an exclusive determination of sexual reoffense risk (Faniff & Becker, 2006).

Prentky et al. (2010) noted risk assessment tools "with a moderate record of empirical scrutiny" (*J-SOAP-II* and *ERASOR,2.0*) are geared to assessing sexually abusive youth in juvenile justice system "leaving unaddressed the arguably larger number of youngsters within the child welfare system" (p. 43). Perhaps attempting to rectify this gap, Prentky et al. (2010) studied a sample

primarily from child welfare, with a large number of females and children as young as 3 years. However, *J-SOAP-II* was designed for male adolescents and informed to a large extent by research on adults; assessing females and young children is clearly outside parameters articulated in *J-SOAP-II* manual (Prentky & Righthand, 2003).

Studies reviewed showed inconsistencies in predictive validity of *J-SOAP-II* scales. Scale II (Impulsive, Antisocial Behaviors) showing predictive accuracy with correctional samples and youths in secure custody (Parks & Bard, 2006; Powers-Sawyer & Miner, 2009; Waite et al., 2005). Prentky's most recent study evidenced predictive validity of *J-SOAP-II* for adolescents and pre-adolescents on three scales. Scale II, however, was non-predictive for preadolescents (AUC = .56) and modestly predictive for adolescents (AUC = .66-.67) (Prentky, 2006; Prentky et al., 2010). This perhaps reflects difference between the less antisocial child welfare sample that Prentky studied and correctional samples studied by other researchers (i.e., Parks & Bard, 2006; Powers-Sawyer & Miner, 2009; Waite et al., 2005).

ERASOR,2.0 is more sensitive to developmental issues than *J-SOAP-II*, focusing on more dynamic risk factors; 16 of 25 risk factors are dynamic (Worling & Curwen, 2001) compared to 12 out of 28 for *J-SOAP-II* (Prentky & Righthand, 2003). *ERASOR,2.0* takes into account adolescents' ongoing development in cognitive, social, and sexual functioning (Worling, 2004). Nevertheless, construction of *ERASOR,2.0* was informed to a large extent by adult research, and empirical support cited in its manual comes primarily from studies on convicted adult male sex offenders (Worling & Curwen, 2001).

Research suggests that *ERASOR,2.0* has difficulty assessing adolescents who have more serious sex offenses, perhaps paired with violent criminal history. In reviewing Rajlic and Gretton's findings, Worling et al. (2011) emphasized *ERASOR,2.0* was predictive of sexual recidivism in the full sample ($N = 238$), neglecting to discuss differential findings of the two subgroups of male adolescent sex offenders (sex offense only ASOs and delinquent ASOs). *ERASOR,2.0* failed to predict recidivism for delinquent ASOs (half of whom had other nonviolent and violent nonsexual offenses) (Rajlic & Gretton, 2010), a very important point to consider, given adolescent sex offenders with history of violent and other nonsexual offenses are most likely at higher risk and dangerous.

In contrast, *MEGA* was constructed with high risk and very high risk sex offenders in mind. Its *Risk Scale* is moderately predictive (AUC = .71, 95% CI of .62-.80) ($p < .001$). Included are items assessing coercive elements of force, threats of lethal consequences, use of weapons and predatory behaviors (i.e., sexual abuse against strangers and/or casual acquaintances). *Risk Scale* cut-off scores range on a continuum of levels of risk (*Low, Moderate, High, and Very High*) (Miccio-Fonseca, 2009, 2010). *MEGA Risk Scale* is capable of assessing and predicting recidivism of sexually violent and sexually violent predatory offenders whose offenses can be lethal (Miccio-Fonseca & Rasmussen, 2009b). These youths are extremely rare and very dangerous; assessing their risk level is essential to safeguard the community.

Worling et al.'s (in press) findings are notably different from findings of other studies evaluating *ERASOR,2.0*'s predictive validity (Rajlic & Gretton, 2010; Viljoen et al., 2009). It is important to note that other risk assessment studies have failed to report such high AUC's as those reported for *ERASOR,2.0* in Worling's 2011 study. Echoes of Epperson and colleagues' (2006) experience need to be considered, initially reporting good predictive validity for *JSORRAT-II* (AUC = .89), yet showing substantial shrinkage in AUC values in subsequent with Utah, Iowa, and Georgia cross-validation samples (i.e., .64, .65 and .65 respectively) (Epperson & Ralston, 2007, 2009; Prescott, 2011). Worling et al. (in press) report their sample had "similar" characteristics" (p. 7) as the construction sample. This narrows and significantly limits the ability of the tool to perform in the same way with

populations from other locales and diverse cultures. Worling and colleagues' favorable AUC findings must be replicated on other culturally diverse samples in order for *ERASOR,2.0* to be considered robust and/or generalizable.

Although *ERASOR,2.0* was constructed to estimate risk of reoffense "for individuals aged 12-18 who have previously committed a sexual assault" (Worling & Curwen, 2001, p. 3), its potential use with females is ambiguous. *ERASOR,2.0's* manual does not cite any empirical support related to risk factors specific to females, failing to specify how items apply to females. Research on *ERASOR,2.0* has included very few females and when it has, they have been excluded from analysis (Worling et al., in press). Worling (2011) states "Unfortunately, there is no research regarding sexual re-offense risk assessment with adolescent females." He also asserts "there is no research regarding sex re-offense risk assessment with adolescents who have below average levels of cognitive functioning" (www.erasor.org/special-populations). Worling neglects to acknowledge the 2006-2008 validation study of *MEGA* ($N = 1184$) that included large numbers of females (Miccio-Fonseca, 2009, 2010) and youth with low intellectual functioning (Miccio-Fonseca & Rasmussen, 2009a).

MEGA's cross-validation provides impressive gains in developmentally and gender sensitive risk assessment research, reporting cut off scores for male and female youth and findings showing youth with low intellectual functioning were at significantly higher risk (Miccio-Fonseca, 2011; Miccio-Fonseca & Rasmussen, 2011). *MEGA* is the first risk assessment tool to take into account risk factors specific to youth with low intellectual functioning (e.g., neuropsychological). Neuropsychological dynamics are often ignored in assessments of sexually abusive youth; these factors related to the brain and overall functioning constitute a critical set of risk factors for sexually abusive behavior (Miccio-Fonseca, 2001, 2005; Miccio-Fonseca & Rasmussen, 2009a, 2009b), as well as nonsexual aggressive and violent offenses (see review by Creeden, 2006).

J-SOAP-II and *ERASOR,2.0* do not directly assess neuropsychological variables; they typically link them to antisocial behavior and do not refer to them specifically as neuropsychological. *J-SOAP-II* does not assess critical neuropsychological variables related to cognitive functioning (e.g., low intellectual functioning, problems focusing attention, learning disability), subsuming variables related to impaired self-regulation (e.g., impulsivity, anger outbursts) into Scale II: Impulsive, Antisocial Behavior. Construct of impulsivity is assessed by the item "Juvenile Antisocial Behavior" (e.g., vandalism, truancy, fighting, theft, reckless driving) (Prentky & Righthand, 2003). Impulsivity is a behavioral indicator of impaired executive functioning in the brain and likely more definitively categorized as a diagnostic criterion of attention deficits or anxiety/post-traumatic stress disorders, rather than an aspect of antisocial behavior. Although *ERASOR,2.0* and *J-SOAP-II* include some items related to self-regulation and impulsivity, "these items are not specifically designated as neuropsychological risk factors, and it is likely that only seasoned clinicians would consider their relationship with neuropsychological functioning" (Miccio-Fonseca & Rasmussen, 2010, p. 248).

In *MEGA*, impulsivity is a characteristic of youth with problems sustaining attention and/or regulating emotions and assessed with other neuropsychological elements (e.g., low intellectual functioning, learning disabilities, attention problems). These elements are distinct from self-regulation difficulties (Miccio-Fonseca, 2009, 2010; Miccio-Fonseca & Rasmussen, 2009a) and not addressed by the other risk assessment tools described in this review.

Risk assessment tools must be accurate in order to best serve the youth and his or her family, as well as safeguarding the community. Critical in the field of risk assessment is intellectual honesty when reporting findings. It is imperative to resist exaggerating predictive validity, inflating tools' performance, or failing to mention limitations contraindicating their use. Professionals need to

support one another in improving the accuracy of risk assessment, providing solid peer review critique of ongoing research, helping professionals to implement best standards of professional practice.

Research on sexually abusive youth has traditionally failed to make distinctions between individuals according to achievement of developmental milestones across the lifespan. Only in the last decade have such factors been mentioned (Hanson, 2002). Linking risk factors for youth to empirically identified risk factors of adults is inappropriate and unsubstantiated, neglecting to account for unique developmental differences and special needs of youth. Developmental issues are distinguished by gender and age group (i.e., young children under 8, preadolescent children 9 to 11, young adolescents 12 to 14, middle adolescents 15 to 16, and late adolescents 17 to 19) and must be considered when assessing a sexually abusive individual (Caldwell, 2010; Mathews et al., 1997; Miccio-Fonseca, 2000, 2007).

When constructing *J-SOAP-II*, Prentky and colleagues (2000) included data from samples of youth, outcome literature on adult sex offenders, and "mixed populations of adult criminals" (p. 77). Similarly, Worling utilized factors taken from adult sex offender literature when constructing *ERASOR,2.0* (Worling, 2004). In contrast, *MEGA* identifies salient risk and protective factors specific to special populations (e.g., females, children under 12, and youth with low intellectual functioning [Miccio-Fonseca & Rasmussen, 2009a]) and provides an idiosyncratic risk profile of the youth specific to age, gender, and level of intellectual functioning.

The new risk assessment tool *MEGA*³ reflects the New Paradigm of developmentally and gender sensitive ecologically based risk assessment for youth.

References

- Boer, D. P., Hart, S. D., Kropp, P. R., & Webster, C. D. (1997). *Manual for the Sexual Violence Risk-20*. Burnaby, British Columbia: The Mental Health Law and Policy Institute, Simon Fraser University.
- Caldwell, M., Ziemke, M., & Vitacco, M. (2008). An examination of the Sex Offender Registration and Notification Act as applied to juveniles: Evaluating the ability to predict sexual recidivism. *Psychology, Public Policy, and Law*, 14, 89-114.
- Chaffin, M., Berliner, L., Block, R., Johnson, T. C., Friedrich, W. N., Louis, D. G., Lyon, T. D., Page, I. J., Prescott, D. S., Silovsky, J. F., & Madden, C. (2008). Report of the ATSA Task Force on Children With Sexual Behavior Problems. *Child Maltreatment*, 13, 199-218.
- Chu, M. C., Ng, Kynaston, Fong, J., & Teoh, J. (in press). Assessing youth who sexually offended: The predictive validity of the ERASOR, J-SOAP-II, and the YLS/CMI in a non-western context. *Sexual Abuse: A Journal of Research and Treatment*, XX (X), 1-21. Retrieved November 6, 2011 from: <http://sax.sagepub.com/>
- Creeden, K. J. (2006). Trauma and neurobiology: Considerations for the treatment of sexual behavior problems in children and adolescents. In R. E. Longo & D. S. Prescott (Eds.). (2006). *Current perspectives: Working with sexually aggressive youth and youth with sexual behavior problems* (pp. 395-418). Holyoke, MA: NEARI.
- Elkovitch, N., Viljoen, J., Scalora, M., & Ullman, D. (2008). Assessing risk of reoffending in adolescents who have committed a sexual offense: the accuracy of clinical judgments after

completion of risk assessment instruments. *Behavioral Sciences & the Law*, 26 (4), 511-528.

Epperson, D. L., Ralston, C. A., Fowers, D., DeWitt, J., & Gore, K. S. (2006). Actuarial risk assessment with juveniles who offend sexually: Development of the Juvenile Sexual Offense Recidivism Risk Assessment Tool-II (JSORRAT-II). In D. Prescott (Ed.), *Risk assessment of youth who have sexually abused: Theory, controversy, and emerging strategies* (pp. 118-169). Oklahoma City, OK: Woods 'N' Barnes.

Epperson, D., & Ralston, C. A. (2007, November). Validation of the Juvenile Sexual Offender Recidivism Risk Assessment Tool-II (JSORRAT-II). Paper presented at the 26th Annual Research and Training Conference of the Association for the Treatment of Sexual Abusers (ATSA), San Diego, CA.

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

Fanniff, A. M., & Becker, J. V. (2006). Specialized assessment and treatment of adolescent sex offenders. *Aggression and Violent Behavior*, 11(3), 265-282.

Gerhold, C. K., Brown, K. D., & Beckett, R. (2007). Predicting recidivism in adolescent sexual offenders. *Aggression and Violent Behavior* 12(4), 427-438.

Hanson, R. K. (2002). Recidivism and age: Follow-up data form 4,673 sex offenders. *Journal of Interpersonal Violence*, 17(10), 1046-1062. Available electronically from <http://www.sgc.gc.ca/EPub/Corr/eAge1000101/eAge200101.htm>

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(10), 1284-1295.

Mathews, R., Hunter, J. A., & Vuz, J. (1997). Juvenile female sexual offenders: Clinical characteristics and treatment issues. *Sexual Abuse: A Journal of Research and Treatment*, 9(3), 187-199.

Miccio-Fonseca, L. C. (1996). Research report: On sex offenders, victims and their families. Special Edition, *Journal of Offender Rehabilitation*, 23(3/4), 71-83. Published simultaneously as: Comparative differences in the psychological histories of sex offenders, victims, and their families. In E. Coleman, S. M. Dwyer, & N. J. Pallone (Eds.), *Sex Offender Treatment, Biological Dysfunctions, Intrapsychic Conflict, Interpersonal Violence* (pp. 71-83). Binghamton, NY: Haworth.

Miccio-Fonseca, L. C. (1998). *Fonseca Inventory of Sex Offenders' Risk Factors*. San Diego, CA: Author.

Miccio-Fonseca, L. C. (2000). Adult and adolescent female sex offenders: Experiences compared to other females and male sex offenders. Special Edition, *Journal of Psychology & Human Sexuality*, 11(3), 75-88.

Miccio-Fonseca, L. C. (2001). Somatic and mental symptoms of male sex offenders: A comparison among offenders, victims, and their families. *Journal of Psychology & Human Sexuality*, 13(3/4), 103-114.

Miccio-Fonseca, L.C. (2005). Fonseca Inventory of Sex Offenders' Risk Factors (FISORF) - Professional Manual. San Diego, CA: Author.

Miccio-Fonseca, L. C. (2006). Multiplex Empirically Guided Inventory of Ecological Aggregates for Assessing Sexually Abusive Children and Adolescents (Ages 19 and Under) - MEGA . San Diego, CA: Author.

Miccio-Fonseca, L. C. (2007) Understanding the role of bio-physio process, family lovemaps, and paraphillic fugue states. In D. S. Prescott (Ed.), Knowledge and practice: Challenges in the treatment and supervision of sexual abusers (pp. 97-107) Oklahoma City, OK: Wood 'N' Barnes Publishing & Distribution.

Miccio-Fonseca, L. C. (2009). MEGA : A new paradigm in protocol assessing sexually abusive children and adolescents. *Journal of Child and Adolescent Trauma*, 2, 124-141.

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, and Trauma*, 19, 734-756.

Miccio-Fonseca, L. C. (2011). MEGA : A new paradigm in risk assessment tools for sexually abusive youth. Manuscript submitted for publication.

Miccio-Fonseca, L. C., & Rasmussen, L. A. (2009a). Advancement in risk assessment of sexually abusive youth: Applicability of MEGA to low intellectual functioning youth. *Journal of Child and Adolescent Trauma*, 2(3), 161-178.

Miccio-Fonseca, L. C., & Rasmussen, L. A. (2009b). New nomenclature for sexually abusive youth: Naming and assessing sexually violent and predatory offenders *Journal of Aggression, Maltreatment, and Trauma*, 18(1), 106-128.

Miccio-Fonseca, L. C., & Rasmussen, L. A. (2010). Dialogue on risk assessment and accuracy of terms: A response to Worling's (2010) Letter to the Editor. *Journal of Aggression, Maltreatment, and Trauma*, 19(3), 247-251.

Miccio-Fonseca, L. C., & Rasmussen, L. A. (2011). Applicability of MEGA : Cross-validation study with low intellectual functioning youth. Manuscript submitted for publication.

Miner, M.H. (2002). Factors associated with recidivism in juveniles; An analysis of serious juvenile sex offenders. *Journal of Research in Crime and Delinquency*, 39, 421-436.

Monahan, J. (2000). Violence risk assessment: Scientific validity and evidentiary admissibility. *Washington & Lee Law Review*, 57(3), 901-918.

Parks, G. A., & Bard, D. E. (2006). Risk factors for adolescent sex offender recidivism: Evaluation of predictive factors and comparison of three groups based on victim type. *Sexual Abuse: A Journal of Research and Treatment*, 18(4), 319-339.

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). Retrieved: May 6, 2011 from: <http://www.sexual-offender-treatment.org/index.php?id=78&type=123>

- Prentky, R. (2006, May). Risk management of sexually abusive youth: A follow-up study. Final Report to U.S. Department of Justice: Document No. 214261, Award No. 2002-IJ-CX 0029. Retrieved April 6, 2008, from <http://www.ncjrs.gov/pdffiles1/nij/grants/214261.pdf>
- Prentky, R., Harris, B., Frizzell, K., & Righthand, S. (2000). An actuarial procedure for assessing risk with juvenile sex offenders. *Sexual Abuse: A Journal of Research and Treatment*, 12(2), 72-93.
- Prentky, R., Li, N. C., Righthand, S., Schuler, A., Cavanaugh, D., & Lee, A. F. (2010). Assessing risk of sexually abusive behavior in a child welfare sample. *Behavioral Sciences and the Law*, 28, 24-45.
- Prentky, R., & Righthand, S. (2003). *Juvenile Sex Offender Assessment Protocol-II (J-SOAP-II) Manual*. NCJ 202316. Office of Juvenile Justice and Delinquency Prevention, Juvenile Justice Clearinghouse. Retrieved May 14, 2010, from www.csom.org/pugs/JSOAP.pdf
- Prescott, D. S. (2011). Risk assessment of adolescents who have sexually abused. PowerPoint slides from presentation at NOTA Conference, Brighton, UK, September. Retrieved November 12, 2011 from: www.davidprescott.net/
- 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,(10), 1066-1085.
- Reitzel, L. R., & Carbonell, J. L. (2006). The effectiveness of sexual offender treatment for juveniles as measured by recidivism: A meta-analysis. *Sexual Abuse: A Journal of Research and Treatment*. 18(4), 401-421.
- Rasmussen, L. A., & Miccio-Fonseca, L. C. (2007b). Paradigm shift: Implementing MEGA , a new tool proposed to define and assess sexually abusive dynamics in youth ages 19 and under. *Journal of Child Sexual Abuse*, 16(1), 85-106.
- Rich, P. (2009). *Juvenile sexual offenders: A comprehensive guide to risk evaluation*. Holboken, NJ: John Wiley & Sons.
- Righthand, S., Prentky, R., Knight, R., Carpenter, E., Hecker, J. E., & Nangle, D. (2005). Factor analysis and validation of the Juvenile Sex Offender Assessment Protocol (J-SOAP). *Sexual Abuse: A Journal of Research and Treatment*, 17(1), 13-30.
- Vitacco, M. J., Caldwell, M., Ryba, N. L., Melesky, A., & Kurus, S. J. (2009). Assessing risk in adolescent sexual offenders: Recommendations for clinical practice. *Behavioral Sciences and the Law*, 27, 929-940.
- Viljoen, J. L., Scalora, M., Cuadra, L., Bader, S., Chavez, 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(1), 5-33.
- Viljoen, J. L., Elkovitch, N., Scalora, M. J., & Ullman, D. (2009). Assessment of re-offense 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(10), 931-1000.

Waite, D., Keller, A., McGarvey, E. L., Wieckowski, E., Pinkerton, R., & Brown, G. L. (2005). Juvenile sex offender re-arrest rates for sexual, violent nonsexual and property crimes: A 10-year follow-up. *Sexual Abuse A Journal of Research and Treatment*, 17(3), 313-331.

Worling, J. R. (2004). The Estimate of Adolescent Sexual Offense Recidivism (ERASOR): Preliminary psychometric data. *Sexual Abuse: A Journal of Research and Treatment*, 16(3), 235-254.

Worling, J. R. (2010, October). Comprehensive risk assessment with adolescents who have offended sexually. PowerPoint handout. Presentation at the 29th Annual Research and Treatment Conference of the Association for the Treatment of Sexual Abusers (ATSA). Phoenix, AR.

Worling, J. R., & Curwen, T. (2001, February). The ERASOR: Estimate of Risk of Adolescent Sexual Offense Recidivism (Version 2.0). Toronto, Ontario, Canada: Sexual Abuse Family Education and Treatment.

Worling, J.R., Bookalam, D., & Littlejohn, A. (in press). Prospective validity of the Estimate of Risk of Adolescent Sexual Offense Recidivism (ERASOR). *Sexual Abuse: A Journal of Research and Treatment*, XX (X), 1-21. Retrieved September 26, 2011 from: <http://sax.sagepub.com/>

Notes

¹ Coarse sexual improprieties are sexually vulgar comments, expressions, and behaviors. Behaviors evidence an unsophisticated awareness of psychosexual conditions, or environments, or social situations whereby the youth engages in sexual behaviors that are crude, indecent, and outside the societal norms of propriety (e.g., crude sexual gestures, sexually suggestive comments, mooning, looking up skirts, a young child rubbing his or her genitals in public or trying to grab another's genitals, a child looking over a stall in a public restroom).

² Sexually abusive behaviors and improprieties of these youth fall along a coercion continuum of low, moderate, high, or very high (lethal) risk; this applies to sexually abusive youths who are either adjudicated or non-adjudicated.

³ The first author discloses that she is the creator of *MEGA* risk assessment tool.

Author address

L.C. Miccio-Fonseca
Clinic for the Sexualities
591 Camino de la Reina, Suite 705
San Diego, CA 92108
619.293.3330
lcmf@cox.net