# Chapter 2
# A Brief History of Sexual Offender Risk Assessment

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## Introduction

Assessing the risk of further offending behavior by adult sexual perpetrators is highly relevant and important to professionals involved in public protection, and accurate risk assessment is one of the most important developments for the field since the early 1900s (Barbaree, Langton, Gopnik-Lewinski, & Beach, 2013; Craig, Browne, & Beech, 2008). The goal of any risk assessment is to establish the likelihood of future occurrences of sexual offending behavior and to identify strategies that will reduce this potential (Hanson & Morton-Bourgon, 2005; Hart, Laws, & Kropp, 2003; Quinsey, Harris, Rice, & Cormier, 2006). There are three general accepted principles in this evaluation. First, the risk assessment must consider individual characteristics of the offender, called *risk factors*, which have an empirically demonstrated relationship with recidivism. Second, there is no single risk factor sufficiently related to recidivism that it should be considered on its own; a combination of factors is required to conduct a valid risk assessment. Third, structured approaches for the combination of risk factors such as actuarial risk assessment instruments (ARAIs) or professional judgment tools are more accurate than unstructured clinical opinions alone (Hanson & Morton-Bourgon, 2009).

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Over the last three decades, great advances have been made in what we know about sexual offending behavior and how to assess sexual recidivism risk, and the development and promulgation of ARAIs is certainly one of the most important advances. Criminal justice professionals have increasingly endorsed actuarial measures of risk as the most reliable predictive instruments for decision making (Ericson & Haggerty, 1997; Hannah-Moffat & Shaw, 2001).

The fervor toward using ARAIs has permeated the entire criminal justice system with specific reference being made to relevant legislative acts in the USA, Canada, the UK, and other European countries. For example, the USA has enacted legislation allowing for the postprison civil commitment of sex offenders as *sexually violent predators* (SVPs; Covington, 1997; Doren, 2002; Miller, Amenta, & Conroy, 2005). Consequently, the judicial system relies heavily on the opinions of psychologists and other expert witnesses who testify at commitment hearings often citing the use of actuarial tests for the prediction of sexual recidivism. In Canada, the National Parole Board (NPB) notes, "…There are numerous actuarial risk assessment instruments that exist and which the Board must consider in its decision-making process" (National Parole, 2004, p. 20). In order to help the NPB members get a better understanding of these various actuarial risk assessment tools, the NPB invited several forensic psychologists to research and develop a guide on these risk assessment tools. In England and Wales, directions to the Parole Board under Section 32(6) of the Criminal Justice Act 1991 (issued August 2004) regarding the release and recall of life sentence prisoners states the Parole Board must take into account "…any indication of predicted risk as determined by a validated actuarial risk predictor model or any other structured assessment of risk and treatment needs."

In this chapter, we briefly summarize the history and early development of risk assessment from clinical intuition and observation to the development of different "generations" of risk assessment instruments.

## Risk Estimation Through Clinical Observation

Before 1950, there was little structured research focusing on outcome and follow-up recidivism data with any follow-up studies focusing on violence (dangerousness) in mentally disordered offenders. Although not sophisticated by today's standards, the early identification of sexual recidivism risk was usually based on clinical observations in patients and changes in environmental factors. For example, Ernits (1922) found that after the legalization of alcohol sales in 1920 in Estonia, [sexual] assaults on women increased by more than double for the first half of the year. An enlarged prostate gland was alleged to be a common cause of sexual crime in elderly men, and the proposal put forward, and practiced in Germany, is that castration should be adopted as a preventative measure against sexual crimes. It was also noted that in homosexuality, the attractive appearance and physique of the accomplice may be an important causal factor but not in heterosexuality.

In his anthropological study of the American criminal, Hooton (1939) found a great excess of unmarried men among criminals in general, and Bonger (1936) believed that important factors include inadequate housing accommodation, which brings children into close contact with sex life, and low mental standing of parents as predictors of sexual risk.

East and Hubert (1939) suggested that sexual offending risk may be linked to the early experience of perverse activity arising before the ordinary sexual pattern of activity has been established or from a more recent happening which actively repels the normal heterosexual expression. East (1949) commented that psychopathic personalities—a constitutional psychic inferior group—often commit sexual offenses. It was argued that psychoneurotic persons sometimes show their sexual inferiority and strive for superiority by committing a sexual murder or other sexual crimes and that an anxiety state may be a causal factor of a sexual offense. Alcoholic psychoses and schizophrenia were reported to be frequently associated with sexual crime and sexual murder, and morbid impulsive sexual conduct was argued to be an early manifestation of later sexual offending behavior.

Some early references to the examination of risk factors associated with general criminal recidivism were by Glueck and Glueck *500 Criminal Careers* (1930), a pioneering work in the field. Although not specific to sexual recidivism, their research focused on juvenile delinquency from which they developed the "Social Prediction Tables" model for predicting the likelihood of delinquent behavior in youth based on a number of static risk factors, many of which are still relevant today (Table 2.1). For the juvenile delinquents, they made attempts to predict criminality using statistics, followed by the likelihood of their rehabilitation upon release. Glueck and Glueck (1930) were the first criminologists to perform studies of chronic juvenile offenders and among the first to examine the effects of psychopathy among the more serious delinquents and claimed that potential deviants could be identified by as young as 6 years of age.

However, these risk observations were primarily based on unstructured clinical opinion, which has since been shown to be unreliable (Meehl, 1954; Hanson & Morton-Bourgon, 2009; Quinsey et al., 2006). Arguments for and against mechanical prediction had been published since the 1920s with one of the first attempts to introduce an actuarial prediction method into parole which was the "experience table" (Hart, 1924). In a study looking into the factors determining parole, Warner (1923) concluded that life history and background factors were of little value in predicting parole outcome. Reanalyzing Warner's data, Hart (1924) found that the accuracy of the prognostic score could be significantly improved if individual predictors were pooled. The method of using such experience tables has remained largely the same.

In the first large-scale study, Burgess (1928) examined the relationship between offenders' background factors and parole outcome. This study resulted in the development of a prototype expectancy table which was derived from computations of the degree to which violation rates of subpopulations with specific background characteristics deviated from the average violation rate of a given parolee population. Where the subpopulation violation rate was lower than that of the total parolee

**Table 2.1** Glueck and Glueck's (1930) risk factors

| | 1930—*500 Criminal Careers* | 1934—*1000 Juvenile Delinquents* | 1950—*Unraveling Juvenile Delinquency* |
|---|---|---|---|
| Family | – Official record of arrest among family members<br>– Economic hardship<br>– Poor parental education<br>– Abnormal or unhealthy home situation<br>– Long/complete absence of parents<br>– Intemperate (excessive use of alcohol, violent behavior)<br>– Immoral mother<br>– Foreign or mixed parentage<br>– Child moved about during childhood or adolescence<br>– Child left parental home prior to sentence | – Very large family<br>– Poor parental education<br>– Parents separated/divorced<br>– Parents unduly quarrelsome<br>– Insufficient parental supervision/discipline<br>– Parents' excessive use of alcohol/violence<br>– Parents' immoral, foreign, or mixed marriage | – Insufficient parental discipline<br>– Poor supervision<br>– Very large family<br>– Low family cohesiveness |
| School | – Educational retardation | – Educational retardation<br>– Leaving school early in life<br>– Truancy | |
| Lifestyle | – Elicits heterosexual relations<br>– Gambling<br>– Alcoholism<br>– Keeping bad company<br>– Infrequent church attendance<br>– Open conflict with social authorities—school/law | – Hanging around streets during leisure time | – Restless<br>– Impulsive<br>– Extroverted<br>– Aggressive<br>– Destructive |
| Personality/ intelligence | – Dull or borderline intelligence<br>– Psychotic or psychopathic<br>– Neuropathic traits<br>– Extreme suggestibility<br>– Emotional instability<br>– Impulsiveness | – Subnormal intelligence<br>– Marked emotional and personality handicaps | – Hostile<br>– Defiant<br>– Resentful<br>– Suspicious<br>– Stubborn<br>– Assertive<br>– Adventurous<br>– Not submissive to authority, tendency to think in concrete not abstract terms |
| Employment | – Unskilled/semiskilled work prior to incarceration | – Unskilled/semiskilled work prior to incarceration | |

population, the corresponding background factor was considered a favorable one. All positive factors were incorporated into an experience table, and a candidate for parole was assigned one point for each favorable factor in his background. A table giving the violation rate for offenders with different numbers of favorable factors was derived for the population under study. Burgess (1928) found that an experience table was more accurate than a probation officer's predictions of parole success. Similarly, Sarbin (1942) and Wittman and Steinberg (1944) also found that statistical methods are more accurate in outcome predictions. Sarbin (1944) argued a priori for the superiority of mechanical prediction, as not doing justice to the potential flexibility of clinical judgments and that the clinician engages in a weighting-and-adding process used in statistical prediction formulas, but clinicians calculate less reliably and so are less accurate (Grove & Lloyd, 2006).

Although proponents of the clinical judgment continued to emphasize the value of professional intuition, the emphasis in risk prediction slowly changed following Meehl's (1954) publication. Meehl's (1954) seminal book made four major contributions to the clinical-statistical debate which was to advance the field beyond recognition:

1. Distinguished data gathering from data combination, focusing on the accuracy of clinical versus mechanical methods for combining data.
2. A convincing refutation that the clinical-statistical antithesis is artificial, although in his later work he argued against using both together (Grove & Meehl, 1996).
3. A recognition of a clinician's potential for creative insight.
4. Comparisons of clinical and statistical prediction strongly favored statistical prediction.

We will now consider the impact of Paul E. Meehl's contribution to the field of risk prediction in the development of ARAIs for sexual offenders.

## Risk Estimation Through Mechanical Prediction

Meehl (1954) encouraged applying actuarial prediction to clinical assessment in the 1950s. He was one of the first to introduce the idea of mechanical risk assessment tools based on known recidivism factors. Here, Meehl (1954) suggested that mechanical risk assessment tools have explicit item rules as well as clear definitions for combining the item scores into a total score. Using experience tables, these total scores are then translated into probabilistic estimates of risk, a core feature of his definition of an actuarial risk assessment procedure and a method still employed in several modern ARAIs (Hanson & Thornton, 2000; Thornton et al., 2003).

Meehl and Rosen (1955) were among the first to consider the effect of base rates on prediction and adequate sampling methodology in order to enhance predictive accuracy. All actuarial risk instruments are ultimately derived from base rates, which are usually recorded as reoffense or recidivism. So a base rate of 10 % usually means that 10 % of a group of sexual offenders can be expected to reoffend

within a given time period. However, base rates are inherently ambiguous, unreliable, and unstable (Koehler, 1996). It is well documented that base rates differ between ages and subgroups of offenders, increase with longer follow-up periods (Grubin, 1998; Hanson, 1997a; Hood, Shute, Feilzer, & Wilcox, 2002; Prentky, Lee, Knight, & Cerce, 1997), and vary between sexual recidivism studies from 0.10 to 0.40 (Barbaree, 1997). For example, the base rate for rapists (17.1 %) is higher than that of intrafamilial offenders (8.4 %) but less than that of extrafamilial offenders (19.5 %) (Hanson, 2001). Although the recidivist rate for intrafamilial offenders was generally low, those aged between 18 and 24 years are at greater risk of recidivism (30.7 %) (Hanson, 2001).

Szmukler (2001) illustrates how low base rates increase the probability of making a false-positive error prediction. With a base rate of 6 %, an ARAI with good predictive accuracy (e.g., $r=0.70$; see Janus & Meehl, 1997) would be wrong nine times out of 10. Using Szmukler's positive predictive value model, given the base rate for sexual offense recidivism in the UK fluctuates around 3 % (Falshaw, 2002), the same ARAI would be wrong 94 times out of 100 (Craig, Browne, Stringer, & Beech, 2004).

Conversely, raising the base rate increases the probability of making a false-negative error prediction, thus predicting a large number of people will not fail when in fact they will. In reality, the difficulty of predicting events increases as the base rate differs from 0.50 (Meehl & Rosen, 1955). Therefore, the accuracy of our predictions is greatest when the base rate is roughly 50 %. As the base rate drops below 50 % or rises above 50 %, we begin to make more errors, and importantly, we begin to shift the region of error (Prentky & Burgess, 2000). Low-frequency events are difficult to predict, but high-frequency events are easy to predict, and decision-making methods are hardest and need to be highly accurate when predicting the opposite to the predominant pattern. With very infrequent events, the probability of making false-positive errors will be high. Therefore, in attempting to predict failure (i.e., sexual recidivism) when the base rate is small, we end up predicting that a large number of individuals will reoffend when in fact they will not. The probability that a positive result is true varies with the base rate of the group to which to the test is being applied. With rare conditions, even the most accurate test will produce lots of "false positives," and the large number outside the condition serves to magnify even small errors in the test (Janus & Meehl, 1997).

Based on Meehl's (1954) work about the comparison between actuarial and clinical prediction methods, two core variables of ARAIs are that they use explicit methods of combining the risk factors and that the total score which resulted usually from adding up the individual item scores to a total sum score is linked to an empirically derived probability figure (Dawes, Faust, & Meehl, 1989; Hanson & Morton-Bourgon, 2009). Referring to Sawyer (1966), Hanson and Morton-Bourgon (2007) differentiated risk assessment into one of the four following categories depending whether the risk factors are empirically or conceptually derived and whether the final judgment is determined by a structured professional judgment (SPJ)-related procedure or by an explicit algorithm: empirical actuarial, conceptual actuarial, SPJ, and unstructured. The empirical actuarial approach proposed by Hanson and

Morton-Bourgon (2007) is most comparable with the abovementioned historical definition of actuarial assessment by Meehl (1954). In this approach, the items are selected based on the observed relationship with outcome (i.e., recidivism risk), and explicit rules are provided for combining the items into an overall risk judgment (e.g., the Sex Offender Risk Appraisal Guide [SORAG]; Quinsey et al., 2006; or the Static-99; Hanson & Thornton, 2000). In the conceptual actuarial approach, the final judgment is determined by explicit rules, but the items are selected based on theory or on a combination of theory and empiricism. Popular examples of conceptual actuarial risk assessment instruments for sexual offenders are the Structure Risk Assessment (SRA; Thornton, 2002) or the Violence Risk Scale—Sexual Offender Version (VRS-SO; Wong, Olver, Nicholaichuk, & Gordon, 2003).

In their updated meta-analysis, Hanson and Morton-Bourgon (2009) propose two further categories of standardized risk assessment instruments which could be more or less actuarial in terms of Meehl (1954): mechanical and adjusted actuarial. Mechanical risk assessment tools have explicit item rules as well as clear definitions for combining the item scores into a total score. However, they did not provide a table which linked the total scores to empirically derived recidivism probabilities which was a core feature of Meehl's (1954) definition of an actuarial risk assessment procedure. Furthermore, mechanical instruments selected their items based primarily on theory or literature reviews instead of empirical investigations about the relationships between predictors and outcome (Hanson & Morton-Bourgon, 2009). SPJ instruments like the Sexual Violence Risk-20 (SVR-20: Boer, Hart, Kropp, & Webster, 1997) could become mechanical risk assessment tools in this sense if—which is not uncommon in clinical practice—the user omits the SPJ-related final risk judgment and instead of this simply adds up the single item scores to a total score (Hanson & Morton-Bourgon, 2007; Rettenberger, Boer, & Eher, 2010).

The adjusted actuarial risk assessment method is based on the total scores of actuarial or mechanical tools but provides the additional judgment option of a so-called clinical override. In this case, the evaluator is allowed to overrule the actuarially derived final judgment by external factors which are usually not specified in advance. Furthermore, the method of combining the external factors with the results of the actuarial tool is also not predetermined (Hanson & Morton-Bourgon, 2009). The clinical override is one core feature of most SPJ instruments (Boer & Hart, 2009) and is also included in the VRS-SO (Wong et al., 2003).

However, care must be taken when using clinical override in SPJ, and in particular with ARAIs, as any deviation from the empirically approved methodology runs the risk of invalidating the scale (Craig & Beech, 2010). Furthermore, Hanson and Morton-Bourgon (2009) identified at that time only three direct empirical investigations of the clinical override beyond actuarial or mechanical judgment (Gore, 2007; Hanson, 2007; Vrana, Sroga, & Guzzo, 2008) but concluded nevertheless that the result pattern is quite clear: Clinically, adjustments of actuarial and mechanical instruments lead usually to a decrease of predictive accuracy. Therefore, Hanson and Morton-Bourgon (2009) stated that "the simplest interpretation is that the overrides simply added noise" (p. 9). In a recently published study, Wormith, Hogg, and Guzzo (2012) investigated the clinical override option for a relatively new instrument, the

Level of Service/Case Management Inventory (LS/CMI; Andrews, Bonta, & Wormith, 2004), and noted that this clinical feature reduced the predictive validity of the instrument.

Meehl (1954) already claimed that the best prediction scheme is the one that produces the smallest error for each client. This might involve using clinical prediction in one case and statistical prediction in another case. However, to choose the data combining method on a case-by-case method, the assessor would have to know, in advance, which combination method would produce the best result for the individual case (Grove, 2005).

## Generations of Risk Assessment

Based on Andrews and Bonta's (2006) *The Psychology of Criminal Conduct* (PCC), the focus on the conceptualization of different "generations" of risk assessment is that risk assessment should not only provide as much as possible predictive accuracy but also information about the opportunities of risk management, i.e., about the potential risk-reducing influence of (therapeutic) interventions and sanctions (Boer & Hart, 2009; Hanson & Morton-Bourgon, 2009; Wong et al., 2003). Andrews and Bonta (2006) proposed three generations of risk assessment: first, intuitive clinical judgment; second, actuarial risk assessment methods based on predominantly or exclusively static risk factors; and third, risk assessment methods based on dynamic factors (Harris & Hanson, 2010). A fourth generation of risk assessment tools pretends to integrate more systematically data about the intervention and monitoring process with a comprehensive permanently up-to-date assessment (i.e., in terms of a "case management" procedure; Andrews, Bonta, & Wormith, 2006). The most prominent example of a fourth-generation risk assessment instrument is the abovementioned LS/CMI (Andrews et al., 2004).

The proliferation of the second-generation risk assessment instruments as well as the development of third- and fourth-generation risk assessment instruments was strongly influenced and supported by the Risk-Need-Responsivity (RNR) model of offender rehabilitation (Andrews & Bonta, 2006; Harris & Hanson, 2010a, 2010b). Andrews and Bonta (2006) suggested that an effective intervention has to focus on risk (i.e., the risk potential of the single offender for committing new offenses), need (i.e., consideration of empirically proven criminogenic needs in terms of particular treatment goals), and responsivity (i.e., the use of intervention techniques and treatment programs to which the individual offender's abilities, learning style, motivation, and strengths respond).

Today, the RNR model is regarded as probably the most influential model for the assessment and treatment of offenders (Bonta & Andrews, 2007; Ward, Mesler, & Yates, 2007) and was also successfully proven for sexual offenders (Hanson, Bourgon, Helmus, & Hodgson, 2009). Hanson et al. (2009) reported that treatment programs which adhered to the RNR principles showed the best results in reducing recidivism in sexual offenders. Because of the consistency of these findings with the

general offender rehabilitation literature (Andrews & Bonta, 2006; Bonta & Andrews, 2007; Craig, Dixon, & Gannon, 2013), the authors suggested that the RNR model should be the most relevant aspect in the design and implementation of interventions for sexual offenders (Hanson et al., 2009). Obviously, the use of ARAIs could, therefore, be able to improve the risk-reducing results of treatment programs by measuring accurately the individual level of risk with second-generation risk assessment instruments and by defining treatment targets in terms of criminogenic needs with third (or fourth)-generation risk assessment instruments. Indeed, this is a model adopted by the UK National Offender Management Service (NOMS) as part of the Structured Assessment of Risk and Need: Treatment Needs Analysis (SARN-TNA) as well as by other European countries (e.g., Eher, Matthes, Schilling, Haubner-MacLean, & Rettenberger, 2012).

Taken together, the current state of research indicated that actuarially based instruments are today the best available instruments for the prediction of recidivism risk in sexual offenders (Grove & Meehl, 1996; Hanson & Morton-Bourgon, 2009). Furthermore, the use of these instruments has to be regarded as a necessary precondition for the implementation and application of the treatment programs for sexual offenders (Andrews & Bonta, 2006; Bonta & Andrews, 2007; Hanson et al., 2009).

We will now briefly summarize some of the internationally most commonly used second- and third-generation actuarial risk assessment instruments for sexual offenders. Because of the currently already overwhelming and permanently increasing state of empirical knowledge about ARAIs, it is certainly not possible to give a complete review about all existing validation studies of every instrument. However, the aim of the following overview is to give insight into the most important instruments and their scientific and empirical foundation.

## Second-Generation Risk Assessment

The literature has witnessed a proliferation of ARAIs for estimating sexual recidivism risk; probably the most well known include Risk Matrix 2000/Sexual (RM2000-S; Thornton et al., 2003), extensively used in the UK; the Rapid Risk Assessment for Sexual Offense Recidivism (RRASOR; Hanson, 1997b), the Static-99 (Hanson & Thornton, 2000), the Static-2002/R (Phenix, Doren, Helmus, Hanson, & Thornton, 2008), and the Sex Offender Risk Appraisal Guide (SORAG; Quinsey et al., 2006) are also well-known and used scales. Table 2.2 contains a description of scales and the items that make up each of these scales.

Validation studies for second-generation ARAIs have consistently demonstrated predictive accuracy across samples and countries including Australia (Allan, Dawson, & Allan, 2006), Austria (Rettenberger, Matthes, Boer, & Eher, 2010), Belgium (Ducro & Pham, 2006), Brazil (Baltieri & de Andrade Baltieri & de Andrade, 2008), Canada (Kingston, Yates, Firestone, Babchishin, & Bradford, 2008), Denmark (Bengtson, 2008), Germany (Stadtland et al., 2005), New Zealand (Skelton, Riley, Wales, & Vess, 2006), and the UK (Craig et al., 2006a, 2006b).

**Table 2.2** List of items in ARAIs for sexual offenders

| Risk instrument | Scale description |
|---|---|
| Rapid Risk Assessment for Sexual Offense Recidivism Hanson (1997) | This scale was developed in Canada using predominantly North American samples but has since been validated in England and Wales using a prison sample. RRASOR contains four items, past sexual offenses, age at commencement of risk, extrafamilial victims, and male victims. Offenders are allocated points according to the presence of these and given a risk categorization on this basis. Based on a system of assigning points to the presence of such variables, the scale ranges from 0 (first-time incest offenders, over the age of 15) to 6 (extrafamilial boy victim pedophiles with four or more previous convictions and released prior to the age of 25)<br>The scoring manual for RRASOR is available online from Public Safety Canada |
| Static-99 Hanson and Thornton (2000) | Static-99 consists of ten items: prior sex offenses, prior sentencing occasions, convictions for noncontact sex offenses, index nonsexual violence, prior nonsexual violence, unrelated victims, stranger victims, male victims, lack of a long-term intimate relationship, and offender aged under 25 on release (or now, if the offender is in the community)<br>The revised 2003 coding rules for Static-99 are available from www.static99.org |
| Static-2002 Hanson and Thornton (2003) | Static-2002 is an actuarial risk tool for evaluating the risk of sexual and violent recidivism among adult male sexual offenders and should be considered a separate instrument to Static-99. Static-2002 predicts sexual, violent, and any recidivism as well as other actuarial risk tools commonly used with sexual offenders and is slightly better than Static-99. Static-2002 is intended to assess some theoretically meaningful characteristics presumed to be the cause of recidivism risk (persistence of sexual offending, deviant sexual interests, general criminality). Static-2002 has 14 items, with some items modified from Static-99. For example, the item "young" on Static-2002 has four age categories rather than two. New items not included in Static-99 are "any juvenile arrest for sexual offense," "rate of sexual offending," "young, unrelated victims," "any community supervision violation," and "years free prior to index." Static-2002 items are grouped into five domains: age, persistence of sex offending, deviant sexual interests, relationship to victims, and general criminality. Total scores can range from 0 to 14. Several studies have provided support for the predictive validity of Static-2002 (Haag, 2005; Langton, Barbaree, Hansen, Harkins, & Peacock, 2006; Langton, Barbaree, Seto, et al., 2007) with AUC values ranging from 0.71 to 0.76<br>The scoring manual for the Static-2002 is available online from www.static99.org |
| Risk Matrix 2000 Thornton et al. (2003) | This scale has separate indicators for risk of sexual recidivism (RM2000-S), and overall violence (RM2000-V), and can be combined to give a composite risk of reconviction for sexual or nonsexual assaults—Risk Matrix 2000/Combined (RM2000-C). This scale is used in prison, probation, and other mental health settings in the UK, as it is a widely cross-validated, static risk assessment for sex offenders (Harkins & Beech, 2007). An individual's level of sexual violence risk (low, medium, high, very high) is ascertained by a two-stage process. The first stage involves scoring individuals on three easily obtainable items: (1) age at commencement of risk, (2) sexual appearances, (3) and total criminal appearances. From the total score from these three items, an individual is initially rated as low, medium, high, or very high risk. The second stage of RM2000 contains four aggravating factors, said to contribute to elevated risk: (1) male victim, (2) stranger victim, (3) noncontact sexual offenses, (4) and lack of a long-term intimate relationship. If two of these aggravating factors are identified, in an individual's psychosocial history, their risk category is raised one level from Stage 1 of the process and two levels if all four items are present. In a cross-validation study, the RM2000-S obtained moderate (AUC 0.68) accuracy in predicting sexual reconviction, whereas the RM2000-V obtained good accuracy in predicting violent and sexual/violent (combined) (AUC 0.87 and 0.76) reconviction (Craig, Beech, & Browne, 2006a, 2006b) |
| | The RM2000 scoring guide is available from www.cfcp.bham.ac.uk |

(continued)

**Table 2.2** (continued)

| Risk instrument | Scale description |
|---|---|
| Sex Offender Risk Appraisal Guide (SORAG) Quinsey et al. (1998) | SORAG was designed to predict at least one reconviction for a sexual offense. Developed from a version used for violent offenders (Violent Risk Appraisal Guide, VRAG; see Quinsey, et al. 1998), SORAG contained 14 static risk factors including lived with biological parents, elementary school maladjustment, alcohol problems, marital status, criminal history for violent and nonviolent offenses, history of sexual offenses [against girls under 14 years], age at index offense, criteria for any personality disorder, schizophrenia, phallometric test results, and psychopathy (PCL-R, Hare, 1991) scores |

The predictive accuracy of the various ARAIs, using the AUC[1] indices, typically fall between 0.65 and 0.80 with some studies reporting AUC indices of 0.90 for the SORAG (Harris & Rice, 2003) and 0.92 for the Static-99 (Thornton, 2001; for a review see, for example, Craig et al., 2008).

While ARAIs are undoubtedly superior to that of clinical judgment, the use of ARAIs is not without its limitations (Craig et al., 2004; Hart, Laws, & Kropp, 2003). Nevertheless, ARAIs provide a baseline of risk, differentiating between high-, medium-, and low-risk estimations from which more detailed assessments can be conducted, in keeping with the RNR principles.

## Third-Generation Risk Assessment

Dynamic risk factors or the so-called criminogenic needs are the core construct of third-generation instruments (Harris & Hanson, 2010a, 2010b). The central difference between static risk factors captured in the second-generation ARAIs and third-generation dynamic risk factors is that they are amenable to changes based on interventions which can lead to risk-related changes in the individual offender. The most prominent examples for third-generation instruments are the Stable-2007 and the Acute-2007 (Eher et al., 2012; Hanson, Harris, Scott, & Helmus, 2007; Harris & Hanson, 2010a, 2010b). Another dynamic treatment and risk-need assessment framework which will be discussed in more detail on the following pages is the SARN-TNA framework, which is widely used within the National Offender Management Service (NOMS) in England and Wales. Table 2.3 lists the risk items shared by the SARN and Stable-/Acute-2007 dynamic frameworks.

[1] The area under the curve (AUC) of the receiver operating characteristic (ROC) analysis is a comparison of the sensitivity (true positive divided by the sum of the true positive and false negatives) with specificity (true negative divided by the sum of the false positive and false negative), i.e., hit rate against the false alarm rate.

Referring to Cohen (1992), Rice and Harris (2005) formulated the following interpretation criteria for AUC values: Results of 0.71 or above are classified as "good" and numbers between 0.64 and 0.71 are classified as "moderate." Significant AUC values that are below the value of 0.64 are classified as "small."

**Table 2.3** Risk items from third-generation dynamic frameworks

| | Third-generation dynamic frameworks | | |
|---|---|---|---|
| Stable dynamic factors | SRA/SARN (Thornton, 2002; Webster et al. 2006) | Stable-2007 (Hanson et al., 2007) | Acute-2007 (Hanson et al., 2007) |
| Sexual interests (obsession/preoccupation) | Sexual preoccupation (obsession)<br>Sexual preference for children<br>Sexualized violence<br>Other offense-related sexual interests (fetish) | Sexual preoccupation/sex drive<br>Sex as a coping strategy<br>Deviant sexual interests | Victim access<br>Hostility sexual preoccupation |
| Attitudes supportive of sexual offense | Adversarial sexual attitudes<br>Sexual entitlement<br>Child abuse-supportive beliefs<br>The belief women are deceitful | Sexual entitlement<br>Pro-rape attitudes<br>Child molester attitudes | |
| Relationships/socio-affective functioning (intimacy deficits) | Personal inadequacy<br>Emotional congruence with children<br>Grievance stance<br>Emotional loneliness (lack of intimate relationships) | Lack of lovers/intimate partners<br>Emotional identification with children<br>Hostility toward women<br>General social rejection/loneliness<br>Lack of concern for others | Collapse of social supports |
| Self-regulation/ self-management | Impulsive, unstable lifestyle<br>Not knowing how to solve life's problems<br>Out of control emotions or urges (emotional dysregulation) | Impulsive acts<br>Poor cognitive problem-solving skills<br>Negative emotionality/hostility | Rejection of supervision<br>Emotional collapse<br>Substance abuse |

### *Stable-2007 and Acute-2007*

One of the most influential research projects about dynamic risk factors in sexual offenders was the Dynamic Predictors Project (DPP; Hanson & Harris, 2000; Hanson et al., 2007; Harris & Hanson, 2010a, 2010b). The starting point for this research was a study published by Hanson and Harris (2000) where they investigated the differences between two approximately equally large samples of sexual offenders known to have reoffended sexually while on community supervision ($n=208$) and of sexual offenders who have not reoffended ($n=201$). With a focus specifically on the risk factors which could have changed in the time periods proceeding the reoffense, Hanson and Harris (2000) identified two separate types of dynamic risk factors: on the one hand relatively stable enduring traits (e.g., attitudes, cognitive distortions, or self-regulation deficits) and, on the other hand, temporally rapidly changeable acute risk factors located rather in the environment and situational context. This led to the development of the Sex Offender Risk Assessment Rating (SONAR; Hanson & Harris, 2001) which consisted of five stable dynamic risk factors (intimacy deficits, social influences, attitudes, and general as well as sexual self-regulation) and four acute dynamic risk factors (substance abuse, negative mood, anger/hostility, and opportunities for victim access).

Due to conceptual and clinical concerns, the SONAR was later separated into two measures, the Acute-2000 and Stable-2000. In 1999, Hanson et al. (2007) initiated the Dynamic Supervision Project (DSP), a prospective longitudinal field trial examining the reliability, validity, and clinical utility of the Acute-2000 and Stable-2000. A total of 156 parole and probation officers from every Canadian province as well as from the US states of Alaska and Iowa who were trained in the application of the Static-99, the Stable-2000, and the Acute-2000 completed risk assessments on $N=997$ sexual offenders. After an average follow-up of 3 years, the accuracy of the Static-99 for the prediction of sexual recidivism was expectably high (AUC = 0.74). The same was true for the Acute-2000 (AUC = 0.74) although the Stable-2000 (AUC = 0.64) performed less well. For the Stable-2000, not all risk factors showed the hypothesized linear relationship with recidivism or any incremental predictive accuracy beyond the Static-99. In a subsequent revision, the three attitude items were dropped due to a lack of prognostic relevance, and the revised Stable-2007 demonstrated higher predictive accuracy (AUC = 0.67) and incremental predictive power beyond the Static-99 alone (Hanson et al., 2007).

The Acute-2000 was only a subset of the included risk factors which was significantly related to all outcome measures (sexual, violent, and general criminal recidivism). This result led to a revision (e.g., Acute-2007) which separated two different factors: factors relevant for the prediction of violent and sexual recidivism (victim access, hostility, sexual preoccupation, and rejection of supervision) and general criminality factor which contains all seven abovementioned specified risk factors. The option of an eighth unspecified unique risk factor was dropped in the revised Acute-2007 version. Another interesting, and especially for policy makers in applied risk assessment settings, relevant finding was that the Static-99/Stable-2007 risk prediction system showed higher predictive accuracy (up to AUC = 0.84) when used

by "conscientious" officers who were defined by the fact that they have submitted complete datasets without missing data (Hanson et al., 2007).

The Stable-2007 has been cross-validated in only a few independent studies, while the Acute-2007 has yet to be cross-validated. Nunes and Babchishin (2012) conducted a construct validity study about the Stable-2000 and the Stable-2007 by examining correlations between selected items of the risk tools and validated independent measures of relevant constructs. The authors concluded that the results generally supported the construct validity of the stable risk measures, but the degree of convergence was lower than expected (Nunes & Babchishin, 2012). Eher et al. (2012) investigated the predictive and incremental validity of the Stable-2000 and the Stable-2007 in a prison-released sample of sexual offenders from Austria ($N=263$) by using a prospective longitudinal research design. After an average follow-up period of 6.4 years, the Stable-2007 was significantly related to all outcomes (AUC = 0.67–0.71), whereas the Stable-2000 showed only weak predictive accuracy for the prediction of sexual recidivism (AUC = 0.62). Furthermore, the study provided additional evidence for the incremental validity of the Stable-2007 beyond the second-generation static risk factors (Eher et al., 2012). In a further cross-validation study from Austria, Eher et al. (2013) investigated the predictive accuracy of the Static-99 and the Stable-2007 in a sample ($N=96$) of released male forensic patients hospitalized under mandatory treatment who committed sexually motivated offenses. The Static-99 (AUC = 0.86) and the Stable-2007 (AUC = 0.71) were significantly related to sexual reoffending after an average follow-up period of approximately 7 years. Again, the Stable-2007 provided evidence for the incremental predictive accuracy beyond the Static-99 (Eher et al., 2013). In a currently published German study, Briken and Müller (2014) examined the utility of risk assessment instruments like the Stable-2007 for assessing the criminal responsibility and the necessity for placement in a forensic psychiatric hospital according to the German penal code. The authors concluded that specific items of the Stable-2007 (e.g., deviant sexual interests, sexual preoccupations, or relationship deficits) and the Acute-2007 (e.g., sexual preoccupation, emotional collapse, or collapse of social support) could be used as empirically well-established proxy variables beyond and additionally to formal diagnosis according to the International Classification of Diseases (ICD) and the *Diagnostic and Statistical Manual of Mental Disorders* (DSM) criteria, in order to assess the severity of paraphilic disorders (Briken & Müller, 2014).

## *Structured Assessment of Risk and Need: Treatment Needs Analysis (SARN-TNA)*

The SARN-TNA framework is widely used within the National Offender Management Service (NOMS) in England and Wales. The SARN-TNA is an "empirically guided" process for identifying factors related to risk. That is, it directs the assessor to consider only factors that are known to affect the likelihood of further offending. The framework consists of the actuarial RM2000 (Thornton et al., 2003)

assessment and the SARN-TNA, which is used routinely alongside sex offender treatment in order to identify treatment needs. Typically, TNA grid is "opened" before the treatment program and is based on a structured interview and collateral information in order to identify deficits in the offender's *generality* (which refers to the existence of the factor in contexts other than offending) and *offense chain* (which refers to the sequence of situations, thoughts, feelings, and behaviors leading to offenses, including lifestyle features that made the chain more likely to start).

The SARN-TNA comprises 15 dynamic risk factors organized into four domains:

*Sexual Interests Domain*: This domain refers to both the direction and strength of sexual interests and considers offense-related sexual preferences and sexual preoccupation both factors identified as predictive of sexual recidivism (Hanson & Bussière, 1998; Hanson & Morton-Bourgon, 2005; Pithers, Kashima, Cumming, & Beal, 1988; Proulx, Pellerin, McKibben, Aubut, & Ouimet, 1999).

*Offense-Supportive Attitudes Domain*: This domain refers to sets of beliefs about offenses, sexuality, or victims that can be used to justify sexual offending behavior. Denial or minimization of a particular offense is not considered relevant unless it can be linked to more general attitudes. Distorted beliefs in sexual offenders are well supported within the literature (Beech, Fisher, & Beckett, 1999; Hanson & Harris, 2000; Hanson & Scott; 1995; Pithers et al., 1988; Ward, Louden, Hudson, & Marshall, 1995) as offense precursors consistent in both child molesters (Beech et al., 1999; Hanson & Scott, 1995) and rapists (Malamuth & Brown, 1994; Hanson & Scott, 1995). Consistent with this, Hanson and Morton-Bourgon (2005) found denial and minimization unrelated to sexual recidivism, while more general attitudes tolerant of sexual crime were associated with sexual recidivism.

*Relationships Domain*: This refers to the ways of relating to other people and to motivating emotions felt in the context of these interactions. Negative emotional states such as anxiety, depression, and low self-esteem (Pithers et al., 1988; Proulx et al., 1999), and especially anger (Hanson & Harris, 2000), have been found to be offense precursors. Factors such as low self-esteem, loneliness, and external locus of control seem to distinguish child molesters from comparison groups (Beech et al., 1999). Thornton (2002) argues that at least four aspects of socio-affective functioning are relevant to sexual offending: inadequacy (external locus of control, low self-esteem, and loneliness), emotional congruence (being more emotionally open to children than adults), lack of emotional intimate relationships with adults (shallow relationships or the absence of relationships and emotional loneliness), and aggressive thinking (rumination of anger, suspiciousness, sense of grievance, a tendency to rehearse negative emotion, reluctance to see others' point of view). Meta-analytical results support the recidivism relevance of emotional congruence with children and to a lesser extent hostility (Hanson & Morton-Bourgon, 2005).

*Self-Management Domain*: This refers to an individual's ability to plan, problem solve, and regulate dysfunctional impulses that might otherwise lead to relapse (Pithers et al., 1988; Ward, Hudson, & Keenan, 1998). Antisocial behavior and lifestyle impulsivity have been identified as precursors of sexual reoffending

(Prentky & Knight, 1991). Thornton (2002) likens this construct to that of Factor 2 in the Hare Psychopathy Checklist-Revised (PCL-R; Hare, 1991) which has been found to predict sexual recidivism (Firestone et al., 1999; Rice & Harris, 1997).

An Initial Deviancy Assessment (IDA) is calculated from the SARN-TNA and organized into three levels of deviance: *low* deviance, when no dynamic marked risk factors are apparent (i.e., no risk factor within any SARN-TNA domain scores a 2 in both generality and offense chain); *moderate* deviance, where only one domain contains a risk factor/risk factors scoring a 2 in both generality and offense chain; and *high* deviance, where there are two or more domains containing a risk factor with a score of 2 for both generality and offense chain. This is translated to *low*, *medium*, or *high* dynamic risk/treatment need. Assessors are trained in applying the framework and have to pass a competency test and checked for inter-rater reliability. A triangulation method of assessment is used including psychometric evidence, official records (court documents, prison or probation files, treatment logs and reports, prison wing records), and offender interviews (Tully, Browne, & Craig, in press).

Despite its wide use within NOMS, research into the SRA and adapted SARN framework as a risk assessment tool is limited. In one of the two studies described in the original paper, Thornton (2002) compared offenders with previous convictions for child molestation (repeat) against offenders who had been convicted for child sexual offenses for the first time (current only). Using psychometric measures to approximate three of the four domains, Thornton found that the repeat offenders demonstrated more distorted attitudes, more socio-affective dysfunction, and poorer self-management.

In a follow-up study using a similar methodology, Thornton and Beech (2002) found that the number of dysfunctional domains made a statistically significant contribution to prediction over and above the Static-99 risk category. Craig, Thornton, Beech, and Browne (2007) conducted similar research into psychometrically assessed deviant domains in a sample of 119 sexual offenders and found that the SRA deviancy index predicted sexual reconviction independent of the Static-99 (SRA AUC = 0.69). Craig et al. (2007) calculated a Psychological Deviance Index (PDI) by standardizing each of these scale scores for a domain. Of the four dynamic risk domains, the *Sexual Interests* domain obtained a large effect in predicting sexual reconviction over 2-year (AUC = 0.86) and 5-year follow-up periods (AUC = 0.72). The *Self-Management* factor obtained moderate results (AUC = 0.71) in predicting sexual reconviction at 2 years. In comparison, Static-99 obtained moderate accuracy in predicting sexual reconviction, at 2 years (AUC = 0.66) and 5 years (AUC = 0.60). When the rates of sexual recidivism were compared with the PDI, it was found that the increase in rates of sexual recidivism mirrored the increase in the degree of PDI. As the PDI increased from zero, one, two, three, and four, the rates of reconviction were 3 %, 10 %, 8 %, 14 %, and 26 %, respectively. However, when the PDI was grouped into low (0), moderate (1–2), and high (3+) categories, it was found the degree of PDI and rates of reconviction were linear at 3 %, 18 %, and 40 %, respectively.

Wakeling, Beech, and Freemantle (2013) recently examined the relationship between psychometric changes in treatment and recidivism in a sample of 3773 sex

offenders based on the SARN-TNA deviancy domain framework. They reported a 2-year sexual reconviction rate of 1.7 % with a sexual and violent reconviction rate combined of 4.4 %. Clinically significant changes were calculated for the psychometrics. They found that those whose scores were in the "normal range" before and after treatment were reconvicted at a significantly lower rate than those whose scores were not in the "normal range" after treatment on selected psychometric scales. Additionally, participants who were deemed "changed" overall on three of the four risk domains were reconvicted at a lower rate than those who were deemed not to have changed on these domains. Consistent with Craig et al. (2007), psychometric measures of sexual obsession and paraphilia obtained the highest AUC values of 0.71 and 0.62 on average, respectively, in predicting sexual and violent reconviction.

As part of a review and revision of the SARN framework, protective factors are incorporated into the dynamic framework, making more explicit issues of responsivity as well as factors of desistance (see Laws & Ward, 2010), in keeping with the RNR principles (Andrews & Bonta, 2006). This has led to a new needs analysis tool to help guide treatment planning, Risk and Success Factors Analysis (RSFA), and a new risk assessment report format to bring all the evidence together, Structured Assessment of Risk, Need, and Responsivity (SARNR). The framework continues to be centered on the four core domains as well as an additional item, *purpose*, aimed at being a responsible member of society, sticking to the rules, and getting on with the people (good citizenship). The assessment methodology adopts a triangulation of evidence to identify an individual's risk factors based on interview data, observation, file review, treatment program products, and psychometric measures.

This revision explicitly incorporates ideas in the Good Lives Model (GML: Ward, 2002; Ward & Maruna, 2007) emphasizing the importance of life experiences. Incorporating a measure of *purpose* in the SARNR promotes appropriate relationships, contact with the community, and pro-social influences which are often considered important areas for assessment and treatment intervention.

## *Sexual Violence Risk-20 (SVR-20)*

The SVR-20 (Boer et al., 1997) developed more as a set of guidelines and assesses the risk of sexual violence by selecting 20 factors, from an extensive list, that could be comprehensively divided into three main sections to formulate sexual violence risk. Factors include: (a) *Psychological Adjustment*—sexual deviation, victim of child abuse, cognitive impairment, suicidal/homicidal ideation, relationship/employment problems, previous offense history (nonsexual violent, nonviolent), psychopathy, substance use problems, and past supervision failure; (b) *Sexual Offending*—such as high-density offenses, multiple offenses, physical harm to victims, use of weapon, escalation, and cognitive distortions; and (c) *Future Plans*—whether the offender lacks realistic plans and has negative attitudes toward instruction. The AUC indices for the SVR-20 in predicting sexual reconviction are mixed. Craig et al. (2006a, 2006b) as well as Sjöstedt and Långström (2002) found that the SVR-20 was a better predictor of violent reconviction than of sexual

reconviction. Barbaree et al. (2008) reported an AUC of 0.63 in a sample of 468 Canadian sexual offenders, while Rettenberger et al. (2010) reported an AUC of 0.71 in a sample of 394 Austrian sexual offenders. In a Dutch study using a sample of 122 sexual offenders admitted to a forensic psychiatric unit, de Vogel, de Ruiter, van Beek, and Mead (2004) found that the SVR-20 final risk judgment is a better predictor for sexual recidivism than Static-99. In this study, the SVR-20 obtained higher AUC scores for total score (AUC = 0.80) and final risk judgment (AUC = 0.83) than comparable results for Static-99 (AUC = 0.71).

Rettenberger et al. (2011) examined the predictive accuracy and psychometric properties of the SVR-20 in a sample of 493 male sexual offenders assessed between 2001 and 2007 at the Federal Evaluation Centre for Violent and Sexual Offenders (FECVSO) in the Austrian prison system. Sexual reconviction data was examined over a 3- and 5-year period. In measuring predictive accuracy of the scale, Rettenberger et al. (2011) reported encouraging results for the total sample (AUC = 0.72) as well as for the rapist subgroup ($n = 221$, AUC = 0.71) and the child molester subsample ($n = 249$, AUC = 0.77). Of the three subscales, the Psychosocial Adjustment scale produced the most promising results significantly predicting general sexual recidivism (AUC = 0.67) for the entire sample.

Adaptations to the SVR-20 have been made in order to make the scale more relevant to sexual offenders with intellectual disabilities (Boer, Frize, Pappas, Morrissey, & Lindsay, 2010), although these have yet to be empirically validated. Furthermore, the SVR-20 is currently under revision (Boer, Hart, Kropp, & Webster, 2015). The revised SVR-20 (second edition) follows a clear multidimensional focus, all items having both dynamic and static features and all items having variable components (i.e., a continuum exists within items and issues where items interact to produce the complexities we see in the individual case—with some examples within and between items). A convergent approach is recommended—using an appropriate actuarial baseline to provide an anchor for structured clinical evaluation (Boer, 2006; Singer, Boer, & Rettenberger, 2013). Many of the original 20 items remain the same than in the first version although some items have changed or been replaced, allowing for the inclusion of new items. As Boer (2010) noted, given the existing research base for the original SVR-20, to change the scale beyond recognition would invalidate much of the research base. In the Psychosocial Adjustment section, new items "sexual health problems" and "past nonsexual offending" have been included, the latter replacing "past nonsexual violent" and "past nonviolent offenses." The item "past supervision failure" has been moved to the Future Plans section and renamed. In describing the changes to the Psychosocial Adjustment section, Boer (2010) argued it is common for "sexual health problems" to decrease risk and it is also common that sexual desire and ability decrease with age. Thus, this item measures *normal* decreases in risk with aging for all individuals. There are also some individuals who have sexual health disorders that increase their risk if a sexual assault occurs, e.g., HIV. HIV+ persons are not at any greater risk to offend than anyone else, but if an HIV+ person does sexually offend, the victim may be lethally affected. Boer (2010) argued there are some unique cases in which older individuals offend in nonsexual ways due to impotence and there are some individuals who actually do not start offending until they are much older. Within the Sexual Offenses

section, a new item "diversity of sexual offending" replaces "multiple offense types," "actual or threatened physical harm to victim" replaces "physical harm to victim(s)," and "psychological coercion in sexual offenses" replaces "use of weapons of threats of death." It is argued that persons who have committed multiple types (as determined by differing victim characteristics and varying in nature) of sexual offenses are at increased risk for sexual recidivism. This is a risk factor that likely reflects the presence of sexual deviation and attitudes that support or condone sexual violence. Psychological coercion refers to coercive tactics ranging from grooming of victims through the use of gifts or additional privileges for a victim to threats of family separation or abandonment—all of which serve to provide the offender with victim access while protecting the offender's behavior from discovery. Boer (2010) noted this item is supported more by the clinical treatment literature than from the meta-analyses per se. This is a risk factor that likely reflects the presence of sexual deviation (e.g., sadism) and attitudes that support or condone sexual violence. The Future Plans section includes three items (instead of two in the 1997 version). As well as continuing to have "realistic future plans" and "negative attitudes toward intervention," a new item, "negative attitudes toward supervision," has been added. It is argued that noncompliance with supervision is related to recidivism of a general, violent, and sexually violent nature, and persons who reject or do not comply with supervision are at increased risk for criminality and violence. Such attitudes may be related to future sexual violence by resulting in inadequate professional support, leading to increasing sexual deviance, increased distress, or increased risk for exposure to destabilizing influences such as drugs, alcohol, or potential victims. The scoring system has also altered to reflect changes (reductions, no change or increases) in a risk-relevant item over a specified period of time.

## *Risk for Sexual Violence Protocol (RSVP)*

The RSVP (Hart et al., 2003) can be seen as a variation and evolution of earlier SPJ guidelines. Like the SVR-20, the RSVP does not employ actuarial or statistical methods to support decision making about risk. Rather, it offers a set of guidelines for collecting relevant information and making structured risk formulations. The RSVP is an evolved form of the SVR-20 and is based on a rejection of actuarial approaches to the assessment of risk of sexual violence. Similar to the SVR-20, the RSVP identifies the potential risk factors (presence) and makes a determination of their importance to future offending (relevance). However, in addition to the SVR-20, the RSVP provides explicit guidelines for risk formulation, such as risk scenarios and management strategies.

The RSVP assumes that risk must be defined in the context in which it occurs and regards the primary risk decision as preventative and considers steps which are required to minimize any risks posed by the individual. The RSVP is a 22-item protocol divided into five domains including sexual violence history, psychological adjustment, mental disorder, social adjustment, and manageability. The RSVP should not be used to determine whether someone committed (an) act(s) of sexual

violence in the past, and it does not provide an estimate of specific likelihood or probability that someone will commit acts of sexual violence in the future. The authors suggest that the RSVP is designed to highlight information relating to clinical problems rather than producing an overall risk score. Information is structured in a number of steps: case information, presence of risk factors, relevance of risk factors, risk scenarios (possible futures), risk management strategies, and summary judgments. Until now, there has been little cross-validated research reporting on the predictive accuracy or psychometric properties of the RSVP.

## Conclusions

Since the early days of unstructured clinical intuition, the field of risk assessment and the subsequent development of ARAIs for estimating sexual recidivism risk have changed beyond recognition. Following the work of Meehl (1954) and others, the development of mechanical tools to predict outcome events has consistently demonstrated superiority over unstructured clinical intuition. Advances in meta-analytical technologies have led to highly structured and defined ARAIs consisting of factors positively associated with sexual recidivism risk and based on experience tables, from which probabilistic estimates of risk can be derived (Hanson & Morton-Bourgon, 2009). While these measures continue to outperform clinical judgment, they are criticized for failing to adequately explain the risk presented by an individual. Addressing these limitations, clinicians and researchers are looking to third-generation risk assessments. Many third-generation risk assessment frameworks begin with an actuarial estimation of risk followed by a more detailed assessment of criminogenic factors or psychological vulnerabilities (Hanson et al., 2007; Mann, Hanson, & Thornton, 2010; Ward & Beech, 2004), which better target resources and interventions to those who need it, in keeping with the RNR principles of offender rehabilitation. These frameworks (SARNR and Stable-/Acute-2007) are, at present, the best efforts in structuring dynamic risk-related information in a way that both targets treatment need as well as identifies risk scenarios. It is insufficient to simply estimate a level of risk using ARAIs without considering changing dynamic factors, conditions, and events (acute risk) in which the individual's risk is elevated. For practitioners in the field, this is community case management.

A promising area of research will be the development and validation of fourth-generation measures, such as the Level of Service/Case Management Inventory (LS/CMI; Andrews et al., 2004). However, until such time as fourth-generation measures demonstrate predictive validity over and above second-generation measures, ARAIs are, at the present time, the most accurate in estimating sexual recidivism risk in sexual offenders. Combining the use of ARAIs, accompanied with third-generation assessment framworks, as part of a convergent approach (using a variety of tests that "converge" on the issue at hand; see Boer, 2006; Singer et al., 2013) will likely aid in identifying and targeting treatment need, risk assessment and case management.

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