Best Practices

Assessing Violence Risk: A Review and Clinical Recommendations

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Guidance to identify and manage clients with a perceived high risk for future violence is of great importance for mental health professionals. In the past decade, several structured instruments have been developed to assess risk of future violence. Awareness of the limits and abilities of such instruments is required. This article reviews the most well-known risk assessment tools and provides recommendations for how to approach the area of violence risk assessment.

The assessment of the risk of violence that mental health clients pose to others is an inescapable part of clinical practice in all fields, not just prison or forensic settings. Clinicians are faced with a great number of situations in which risk assessments are needed. In many countries, including the United States, the courts have increased the scope of legal issues relying on mental health professionals’ assessment of risk (Skeem, Mulvey, & Lidz, 2000). Tarasoff v. Regents of the University of California (1976) is often referred to in the literature when discussing mental health professionals’ duty not only to assess but also to communicate properly the risk in the protection of third parties. This obligation was defined as a “duty to protect” third parties. The Tarasoff case was about a university student who was seeing a psychologist at the university’s mental health center because a young woman named Tatiana Tarasoff had spurned his affections. The psychologist concluded that the student was a danger to Tarasoff because of his pathological attachment to her as well as his intention to purchase a gun, and the psychologist informed the police both verbally and in writing of the situation. Two months later, the man killed Tarasoff. The Tarasoff family appealed to the Supreme Court of California, asserting that the defendants (both the police and the psychologist) had a duty to warn the victim as well as her family of the danger. The police were released from responsibility, whereas the duties of the therapists were more broadly formulated. In this famous case, the court maintained that the psychologist should also have informed the potential victim of intended harm by the client. The interpretation of the Tarasoff case has thus been adopted in a variety of ways in different jurisdictions (Buckner & Firestone, 2000), and practitioners should be aware of the application of the law in the state where they practice to avoid unnecessary violation of confidentiality (Borum & Reddy, 2001).

Mental health professionals thus have a responsibility to assess violence risk of clients, to define the context (when and under which conditions), and to monitor changes in those conditions (Heilbrun, 1997; Steadman et al., 1994). Clinicians’ abilities to correctly assess future violence in an unstructured manner have been criticized by many (Monahan, 1984; Monahan & Steadman, 1994; Quinsey, Harris, Rice, & Cormier, 1998). It has been argued that unstructured clinical judgments are not made consistently and rationally (Mulvey & Lidz, 1995). However, some researchers have argued that unstructured clinical assessment of risk is more insightful (Fiske, 1993) and is made on a conditional basis (Mulvey & Lidz, 1995). Independent of the rationale behind the assessments, assessments made solely on clinical experience often overestimate risk (i.e., have high false-positive rates; Skeem et al., 2000).

The risk assessment field has developed immensely during the past 2 decades (Heilbrun, Dvoskin, Hart, & McNeil, 1999; Monahan & Steadman, 1994) and has moved from a narrow focus on risk assessment (“violence prediction”) to a broader risk management paradigm (Grann et al., 2005; Hart, 1998b; Heilbrun, 1997). Refined tools to conduct proper risk assessments are not useful if the risk is not communicated so that the court and others who are involved in the client’s case understand (Grann & Pallvik, 2002). Clinicians are naturally concerned not only with the safety of members of the community and risk reduction but also with treatment and improving the welfare of their clients. However, this review focuses specifically on the risk assessment of such clients, not aspects of treatment in general.

Improved assessment of risk might increase accuracy, facilitate communication, and, hence, improve management of violence risk. This article presents some of the most well-
established risk assessment instruments in the field, followed by recommendations for clinicians of how to use these instruments in an appropriate way. First, I introduce the concept of risk factors, which all risk assessment instruments are based upon.

Risk Factors

Because the purpose of risk assessment is to prevent violence and not to predict violence (Hart, 1998b), examining factors within actual reach of clinically administered interventions has much greater relevance from a clinical and practical perspective than does pursuing static factors or dynamic but nonchangeable factors.

Static versus dynamic and individual versus contextual are the two major categorizations of risk factors currently discussed in the literature. However, there are no clear boundaries between these concepts. Static versus dynamic factors refer to the factors’ possibility or inability to change. Static risk factors include historical factors (e.g., previous violent behavior, age at first conviction) and dispositional factors (e.g., sex, height, eye color) and do not alter independent of treatment success or other circumstances. With the terminology suggested by Hanson (1998), stable risk factors have more stability over time (e.g., substance dependence), and acute risk factors are inclined to shift more rapidly (e.g., intoxication). These conceptualizations are important for the selection of which factors to target for interventions and which factors should be monitored (Hanson & Harris, 2000).

Dynamic factors can be further divided into clinically changeable versus not clinically changeable factors. Taking into account that risk factors fluctuate over time (manner such as intermittent, periodic, or monotonous) is important. For example, young age, an important risk factor for violence (Cocozza, Melick, & Steadman, 1978; Cocozza, & Steadman, 1974), can hardly be affected by treatment. However, it is changeable over time, and it has been argued that the heuristic derivative of age is maturity (Elliot, Huizinga, & Menard, 1989), a developmental process that might be influenced or accelerated by treatment.

A risk factor is said to be individual if its scope is a characteristic of the assessed individual. This could be age, sex, or ethnicity; a trait; a psychiatric diagnosis; and so on. A contextual factor, on the other hand, refers to circumstances in the individual’s environment, such as social network, housing conditions, and access to mental health services. Again, the boundaries between the two are not clear-cut, but the main point is that, whereas individual factors are “attached” to the client, contextual factors are less clearly connected to the client. The distinction between individual and contextual factors is important from a policy perspective. If “risk” and “dangerousness” are conceptualized only in terms of individual factors, practitioners will inevitably attribute the client’s proneness to violence only to the client, when, in fact, it may be determined to a great extent by factors attributable to the services provided (or lack of services) and the treatment delivered (or not delivered; Gunn, 1996; Price, 1997). For proper risk assessment, it is therefore crucial to consider not only individual risk factors (e.g., substance misuse, psychopathy) but also contextual risk factors (e.g., lack of social support, no access to treatment).

Risk Assessment Tools

Despite the empirical research concerning risk factors for violence and the legal duty of health professionals to assess and communicate risk, Borum (1996) noted that “there have been virtually no systematic efforts to incorporate this information into a useful, empirically-based framework for clinical assessment” (p. 947). There are now several approaches to the assessment of risk (or “risk prediction”). Traditionally, unstructured clinical assessment has been used. This means that the clinician gathers the information he or she believes to be useful and on the basis of that information makes a judgment of the risk (Otto, 2000).

The accuracy of unstructured risk predictions by mental health professionals was not paid much attention to before the 1970s. The criticism toward unaided clinical judgment has been strong in the past 3 decades (Monahan, 1984; Monahan & Steadman, 1994; Quinsey et al., 1998; Webster, Douglas, Eaves, & Hart, 1997) and is based upon studies indicating low interrater reliability, low validity, and a failure to specify the decision process. In his famous review, Monahan (1984) concluded that unstructured clinical predictions were as accurate as flipping a coin. This conclusion has been challenged in more recent years (Lidz, Mulvey, & Gardner, 1993; Litwack, 2001; Menzies, Webster, McMain, Staley, & Scaglione, 1994).

Unlike clinical risk predictions, actuarial instruments exclude the role of clinical judgments. The items in actuarial instruments are weighted and combined according to a fixed algorithm, and clinicians should not include their own judgments (Grove & Meehl, 1996). The actuarial approach to predict future violence has been criticized by several authors (Grann & Långström, 2007; Grubin & Wingate, 1996; Hart, 1998a; Litwack, 2001; Reed, 1997; Sjöstedt & Grann, 2002). These authors argue that risk assessment should drive risk management and that therefore the factors used for actuarial predictions schemes, which are historical and static in nature, have little informational value to the ultimate and most important real-world task, namely, the prevention of violence. Because actuarial models are mostly based on historical/static variables, treatment will not have any measurable effect on the risk. Risk factors in actuarial instruments are atheoretical and hence can become bizarre in their presentation (Hart, 1998a). It has been demonstrated that actuarial instruments, which are calibrated and optimized for one specific offender population, replicate poorly when adopted in a different setting or population (Grann, Belfrage, & Tengström, 2000),
nor will regression coefficients and other means to “weigh” risk factors derived from one sample replicate well in new populations (Grann & Längström, 2007). As concluded by Grubin and Wingate (1996), actuarial predictions are good in determining who are at low risk of recidivism (i.e., true-false individuals) but are poor to moderate in identifying true-positive individuals. Actuarial schemes may serve to “sort” which inmates should benefit from specialized (expensive) treatment programs and which inmates should not, or which offenders should be subject to a more thorough evaluation of risk for recidivism and which should not; but beyond that, their value in the real world is seriously doubted (Sjöstedt & Längström, 2002). However, the advocates for the actuarial instruments maintain that there are no serious alternatives (see, in particular, Harris, Rice, & Cormier, 2002; Quinsey et al., 1998). Quinsey et al. (1998) stated that “actuarial systems using static or historical predictors work in part because current treatment technology is not very effective in reducing the likelihood of violent recidivism among serious adult offenders” (p. 221).

The consequence of the debate over the merits and limits of actuarial versus unstructured clinical risk assessment has resulted in the synthesis of the two approaches, called structured clinical judgment. For this purpose, a number of checklists consisting of both clinical/risk management items and static/historical items have been developed.

The following sections present some of the most well-known published and tested actuarial and structured clinical risk instruments in an effort to (a) guide practitioners in how to ask and answer the key questions (with respect to changeable vs. static risk factors) and (b) show the strengths and limitations of these instruments with respect to the levels of statistical accuracy (presented when available as area under the receiver operating characteristic curve [i.e., AUC of the ROC]). The AUC of the ROC is not constrained by base rates and is a better measurement of predictive accuracy than many other statistical measurements. The AUC of the ROC may range from .50, indicating prediction of no better than chance, to 1.0, indicating perfect prediction. As a way to structure the risk assessment schemes (mostly specialized to predict a certain type of violence or proneness to violence in a specific category of perpetrators), they have been organized into three categories of violence predictions: violence (general), sexual offenses, and family violence. Each violence prediction category exhibits one actuarial and one structured clinical instrument or checklist. One has to bear in mind that most risk assessment instruments (as those presented in the following sections) have been developed to predict future violence among offenders and not violence in the general population and that the predictive accuracy is most commonly based on offender populations.

Violence (General)

Violence Risk Appraisal Guide (VRAG; Harris, Rice, & Quinsey, 1993). The VRAG is probably the most well-known actuarial instrument aimed to assess dangerousness in high-risk men (Harris et al., 2002; Harris et al., 1993; Webster, Harris, Rice, Cormier, & Quinsey, 1994). This instrument was constructed by taking variables known to predict violent behavior among criminal offenders as well as among men with mental disorders who have records of previous violent behavior and then summarizing the variables into one scheme. The actuarial part of the instrument is constructed in such a way that no clinical training is required, except that a rating of psychopathy using the Psychopathy Checklist–Revised (Hare, 1991) is needed for the coding of the most heavily weighted item, Item 1. VRAG assessments result in a fixed “score.” It is thus based on 12 variables of static nature, such as elementary school maladjustment, psychopathy, age at index offence, and diagnosis of personality disorder, and each item is attached to weighted scores depending on the outcome. The VRAG has, in several studies, been demonstrated to predict violent recidivism with an AUC of the ROC ranging from slightly below .75 to .90 (Harris & Rice, 2003; Harris et al., 2002; Harris et al., 2003; Kroner & Mills, 2001). However, when used with offenders with major mental disorders, the results are less impressive (Grann et al., 2000). In general, the VRAG provides a fair degree of accuracy in predicting future violence, especially in criminal populations.

HCR-20 (Historical, Clinical, and Risk Management) Violence Risk Assessment Scheme (Webster et al., 1997). The clinical checklist HCR-20 was introduced in 1995 (Webster, Eaves, Douglas, & Wintrup, 1995), and the revised Version 2 was published in 1997 (Webster et al., 1997). The checklist is described as a vehicle that should help promote continuing discussion among clinicians in making risk assessments. The checklist is divided into three sections and consists of 10 historical factors (previous violence, young age at first violent incident, relationship instability, employment problems, substance use problems, major mental disorder, psychopathy, early maladjustment, personality disorder, and prior supervision failure), 5 clinical factors (lack of insight, negative attitudes, active symptoms of major mental illness, impulsivity, and unresponsive to treatment), and 5 risk-management factors (plans lack feasibility, exposure to destabilizers, lack of personal support, noncompliance with remediation attempts, and stress). Each item is presented, with the scores ranging from 0 to 2, yielding a total score ranging from 0 to 40. The checklist encourages the clinician to make a judgment on the client’s risk level (low, medium, or high) on the basis of the presence of risk variables and clinical experience. During the past few years, several studies have proved the validity of this checklist in correctional as well as forensic samples (e.g., Douglas, & Cox, 1999; Douglas, Ogloff, Nicholls, & Grant, 1999; Kroner & Mills, 2001; Nicholls, Douglas, & Ogloff, 1997), with an overall AUC of the ROC of approximately .75 (Douglas, Poythress, Spain, Falkenbach, & Epstein, 2002).
Assessing Violence Risk

Sexual Offenses

Static-99 (Hanson & Thornton, 1999). The actuarial scale Static-99 was created as an extension of the previous Rapid Risk Assessment of Sexual Offense Recidivism (Hanson, 1997), which was developed to predict sexual and nonsexual reoffending. The Static-99 is based on 10 historical risk factors (prior sex offenses, prior sentencing dates, any noncontact sex offenses, index nonsexual violence, prior nonsexual violence, any unrelated victims, any stranger victims, any male victims, young age, and single). The risk is presented in numerical scores, and the total scores are translated into four risk categories (low, medium-low, medium-high, and high). The risk factor prior sex offending is weighted, and the other 9 factors have unit weights. The Static-99 has yielded moderate predictive accuracy in predicting reoffending in several offender samples in North America and Europe, with an AUC of the ROC ranging from .70 to .79 (de Vogel, de Ruiter, van Beek, & Mead, 2004; for an overview, see Sjöstedt & Långström, 2001). This instrument showed the highest predictive accuracy when predicting future sexual violence.

Sexual Violence Risk-20 (SVR-20; Boer, Hart, Kropp, & Webster, 1997). The SVR-20 is presented as an assessment method or procedure rather than as a scale, and the coding of the items are presented in nonnumerical terms (N/?/Y/O). When clinicians reassess an individual, changes in the presence of a risk factor should be coded (+/0/-). This information can, in a clear way, determine whether the overall risk has decreased or increased over time. The coding sheet consists of 20 risk factors divided into three areas. The first area consists of risk factors targeting psychosocial adjustment, such as sexual deviation, victim of child abuse, and other historical risk factors presented in checklists for general violence (see the section on the HCR-20). The next area targets the sexual offenses and risk factors such as high density, escalation in frequency or severity, physical harm to victim, use of weapon or threats of death, multiple sex offense types, extreme minimization or denial, and attitudes that support or condone sex offenses. The third and last structured section includes future plans, such as lack of realistic plans and negative attitude toward intervention. A few studies have been conducted to validate the SVR-20 (Dempster, 1998; Douglas & Cox, 1999), and in the most recent study, an AUC of the ROC of .80 was found (de Vogel et al., 2004). The so-called psychosocial adjustment scores have been shown to correlate to nonsexual recidivism (Sjöstedt & Långström, 2002) and, to some extent, improve predictions of sexual violence if added to the fixed factors, such as the offense history (Dempster & Hart, 2002).

Family Violence

Danger Assessment Scale (DAS; Campbell, 1986). The DAS is a checklist based on 15 items coded “yes” or “no” (Campbell, 1986) to screen the risk for lethality in husband-to-wife assaults. The questionnaire is developed in such a way that the partner herself or a mental health worker can fill out the items. The items are based on a review of the literature and consist of risk factors related to general violence, such as access to weapons and escalation of frequency and severity of violence, as well as unique variables, such as assaults during pregnancy. The instrument has shown that higher scores on the DAS are significantly associated with repeated abuse of women (Goodman, Dutton, & Bennett, 2000; Hilton, Harris, & Rice, 2001; McFarlane, Parker, & Soeken, 1995).

Spousal Assault Risk Assessment (SARA; Kropp, Hart, Webster, & Eaves, 1995). Kropp et al. (1995) developed a risk assessment tool called the SARA to identify offenders with risk of future spousal violence. The guide has a similar layout as other assessment tools (HCR-20 and SVR-20) developed by the same group of researchers in Canada, and it consists of 20 items that are coded numerically according to fixed and explicit algorithms. The factors are divided into two sets: The first part consists of 10 items related to violence risk in general, and the second part consists of 10 items related specifically to risk of spousal assault. Kropp and Hart (2000) reported in their study that SARA ratings significantly discriminated between those offenders with and without a history of spousal assault and between recidivists and nonrecidivists in future spousal violence. Other studies have proved the instrument’s usefulness as a risk assessment instrument (Mowat-Leger, 2002). In their retrospective study of the predictive validity of the SARA in a sample of offenders with personality disorders in Sweden, Grann and Wedin (2002) reported that the checklist’s predictive validity exhibited a statistically significant but low improvement above chance (AUC of the ROC = .65) but that the predictive validity was better in subgroups of offenders who had committed more serious criminal acts.

Clinical Recommendations

Violence risk assessment is fraught with ethical dilemmas, and practitioners may feel uneasy making these assessments and may even avoid them as a result. However, risk assessments and detection of threats to third parties are inescapable parts of the clinical practice. When the client reveals information to the practitioner that raises concerns of violence risk toward an identifiable victim, the practitioner needs to take further action to assess and communicate violence risk in a structured way.

The increased use of systematic strategies to assess risk raises important issues of how practitioners are determining which instruments to use. The decision-making process is based on several issues, such as the predictive accuracy of the risk assessment tool, the utility of the instrument to provide information of risk management, and the costs (time and money) of completing the risk assessment in accordance with the instrument.

In most cases, the legal context will determine how violence risk assessment is approached (Melton, Petrila,
Assessments of risk should be based on several sources of information. If available, medical records and documents from several disciplines may be consulted to provide as solid information as possible for the assessment. Additionally, statements of concern of violence risk from others in the client’s social context could be included as an important area of information (Borum & Reddy, 2001).

If the practitioner concludes that a client’s risk of future violence is moderate or high, additional and more elaborate risk assessments should preferably be made by using, for example, the complete HCR-20 in psychiatric settings or risk instruments aimed at identifying risks of violence toward specific victim groups (such as family violence and sexual violence) or in specific settings (such as centers for wife assaulters, prisons, and forensic psychiatric settings). In situations in which risk of violence toward family members is of concern, risk assessment instruments developed to predict general violence might be sufficient or even as good as checklists specifically developed to predict family violence (Grann & Wedin, 2002; Hilton et al., 2001). However, the SARA can be used to match an offender with a treatment intervention, and the DAS can be used to predict the severity of family violence. In settings with sexual abusers, it may be preferable to use the Static-99 to group clients according to their “basic” statistically predicted risk of future sexual reoffending. However, as pointed out previously, the aim is generally not to predict violence but to prevent violence, and dynamic and changeable factors are of great importance to decrease violence risk. The Static-99 provides more or less static factors, which are of less relevance in the clinical practice. The SVR-20 is likely to be useful to supervise changes in risk and as a tool for treatment.

Violence risk assessments are time limited and need to be updated regularly (Quinsey, Coleman, Jones, & Altrows, 1997). It is therefore important to keep good records and to consult them frequently. The interaction between the individual and his or her situation is complex, and so practitioners should consult risk assessment instruments and stay up to date with the empirical literature on risk factors and gather relevant information in each specific case. For example, if the client has acted violently previously, it is recommended that the practitioner set up a violence history protocol. This protocol could include mediators and triggers of previous violence and a description of the process leading up to violence. Recently, an instrument has been developed that aims at facilitating risk supervision in a structured way. This structured checklist is called the Structured Outcome Assessment and Community Risk Monitoring (Grann et al., 2005) and focuses on dynamic and contextual factors (including both potentially protective and risk factors of violence).

Beyond assessments of risk and protective factors, detecting risk communication may be a possible way to prevent violence. Risk communication can appear in virtually any form, both verbal and nonverbal. Considering that violence-prone individuals often have communication difficulties, the...
practitioner needs to be sensitive and proactive when communicating with clients (Haggard-Grann & Gumpert, 2005).

**Summary**

Risk assessments should be cautiously and judiciously used (Dolan & Doyle, 2000). The instruments, actuarial or structured clinical judgment, should be chosen on the basis of context and interpretation, and interpretations of the results in terms of “risk scores” should be made with guarded awareness of the limitations of the instruments.

Risk assessment is a process concerned with a variety of issues—risk for what, when, where, and to whom—not just the mere “prediction” of future violence. Risk assessment should also include situational aspects, including life situation (e.g., living conditions), behavioral patterns (e.g., substance abuse, medication), and foreseeable events or stressors (e.g., child custody dilemmas, separation/divorce).

The first step when determining which instrument to use for a specific risk assessment is to determine the purpose and context for which the instrument is needed. Decisions should be made regarding whether the assessment is for intervention efforts or for a less complex issue (i.e., separating low-risk from high-risk individuals on a group basis). Instruments based on clinical and risk management items (i.e., dynamic, clinically changeable factors) are of great importance in the decision context. Risk assessment tools include mainly static variables established through the long-term likelihood of a previously violent individual to be violent in the future and are of much less clinical interest when dealing with current risk. The validity of assessments made on the basis of checklists that include dynamic factors is, on the other hand, time limited and should therefore be reassessed regularly. The number of risk assessment instruments has increased dramatically over recent years. If used in clinical practice with professional integrity and with full awareness of the scientific foundation of their merits as well as profound limitations, these instruments may indeed aid in the identification and management of high-risk individuals.

**References**


