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# Assessing violence risk among youth

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## Assessing Violence Risk among Youth



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Despite recent declines in the reported rate of juvenile violence, there appears to be increasing public and professional concern about violent behavior among children and adolescents. Media accounts of school shootings and juvenile homicides have prompted a need to develop approaches for systematically assessing violence risk. This article describes the task of assessing general violence risk among youth, and argues that a somewhat different approach is required to assess cases where an identified or identifiable young person may pose a risk to a specifically identified or identifiable target (also referred to as "targeted violence"). Key risk factors for violent behavior among children and adolescents are identified, fundamental principles for conducting an assessment of violence potential in clinical and juvenile justice contexts are outlined, and an approach to assessment when an identified person engages in some communication or behavior of concern that brings him or her to official attention is briefly described. © 2000 John Wiley & Sons, Inc. *J Clin Psychol* 56: 1263-1288, 2000.

Keywords: youth violence; risk assessment; school violence; risk factors; delinquency

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Within recent years, there has been increasing concern about violent behavior among children and adolescents (Zimring, 1998). While the rate of serious violent crime (even school crime) committed by juveniles appears to have been declining since 1993 (Snyder & Sickmund, 1999), high-profile cases of school shootings and murder perpetrated by adolescents periodically dominate the media (Elliott, Hamburg, & Williams, 1998). Tragic incidents, such as the shooting at Columbine High School in Littleton, Colorado, in 1999, have raised awareness among mental health professionals in schools, mental health centers, courts, and the juvenile justice systems about the need for a systematic approach to assessing risk for violence, particularly in emergency situations (Grisso, 1998; Sheldrick, 1999).

In an attempt to respond to this need, numerous professional associations, law enforcement agencies, and advocacy groups have constructed lists of "warning signs" and "pro-

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I wish to thank Tom Grisso and Randy Otto for their helpful comments on a draft of this manuscript. Correspondence concerning this article should be directed to Randy Borum, Department of Mental Health Law & Policy, University of South Florida, 13301 Bruce B. Downs Blvd., Tampa, Florida 33612.

files" in a desperate attempt to identify children and adolescents who may be "at risk" for a serious violent episode. The intent of these efforts for some is punitive and for others is more rehabilitative. The one unifying theme seems to be the need to identify youth that may require further attention, intervention, or supervision, and to accomplish that through some systematic process. While I agree that it is useful to develop systematic processes for assessing risk of violence among children and adolescents in a variety of contexts (e.g., juvenile justice settings, mental health facilities), I do not believe that a single approach will necessarily be equally effective for all decisional tasks, nor do I believe that the profiling approach will be effective for preventing and responding to threats of "the next Columbine."

This article describes the task of assessing general violence risk among youth and argues that a somewhat different approach is required to assess cases in which an identified or identifiable young person may pose a risk to a specifically identified or identifiable target (also referred to as "targeted violence"). In the following sections, I review some of the key risk factors for violent behavior among children and adolescents, outline some fundamental principles for conducting an assessment of violence potential in clinical and juvenile justice contexts, then briefly describe an approach to assessment when an identified person engages in some communication or behavior of concern that brings him or her to official attention.

### Risk Assessment Approaches

Since the early writings about violence prediction in the 1960s, there have been two fundamental shifts in the way in which these assessments are conceptualized and conducted (Borum, Swartz, & Swanson, 1996; Heilbrun, 1997; Litwack, Kirschner, & Wack, 1993; Melton, Petrila, Poythress, & Slobogin, 1997; Monahan, 1996; Webster, Douglas, Eaves, & Hart, 1997). First, the conceptual bases and assumptions underlying these assessments have shifted away from a violence prediction model to a more current and clinically relevant risk assessment/management model. To view the task of assessing violence potential, as prediction per se, implied that "dangerousness" was a dispositional and dichotomous construct that either did or did not reside within a given individual. Consequently, the degree of danger posed was seen as static and not subject to change. However, in the more contemporary conceptualization, dangerousness or "risk" as a construct is now predominantly viewed as contextual (highly dependent on situations and circumstances), dynamic (subject to change), and continuous (varying along a continuum of probability) (National Research Council, 1989). Simply stated, the task of the clinician used to be to determine whether or not an individual was or was not a "dangerous person," whereas now the task is to determine the nature and degree of risk a given individual may pose for certain kinds of behaviors, in light of anticipated conditions and contexts.

Second, related to this conceptual shift, there were fundamental changes that developed in the procedures and practices for conducting assessments of violence risk. The first-generation studies on predictive accuracy yielded rather pessimistic conclusions.<sup>1</sup> Nevertheless, mental health professionals continued to be confronted with the need to

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<sup>1</sup>However, as Monahan (1988) has noted, those studies were plagued by weak criterion measures of violence (resulting in specious false positives) and restricted validation samples (because those who are at greatest risk for violence, and about whom there is likely to be the greatest professional consensus, cannot and will not be released into the community for follow-up). Second-generation studies on predictive accuracy have reported results that are much more promising. These studies suggest that accuracy rates are now higher and that clinicians can distinguish violent from nonviolent patients with a "modest, better-than-chance level of accuracy" (See Otto, 1992; Mossman, 1994; Borum, 1996).

assess risk in clinical and forensic practice, and the courts continued to expect it.<sup>2</sup> As a result, a second generation of research and practice technology emerged. The traditional approach to dangerousness assessment had been unstructured and purely clinical.<sup>3</sup> That is, the clinician would routinely gather clinical and historical information, possibly in combination with some psychological testing such as the MMPI or Rorschach, and based on this general clinical data, make inferences about whether a person is dangerous. Seeing at least preliminary evidence that this approach would not be effective, scholars in the field began more systematic empirical investigations to identify specific risk factors that could be used to distinguish those who behaved violently from those who did not. It was hoped that a more empirically informed body of knowledge would lead to better predictive accuracy.

Subsequently, two trends emerged. The first was the development of actuarial formulas as a method of assessing violence risk (Borum, 1996). Over the years, there has been substantial debate in clinical psychology about the relative superiority of clinical judgment versus statistically derived formulas for a variety of different judgment tasks<sup>4</sup> (Dawes, Faust, & Meehl, 1989; Melton et al., 1997; Miller & Morris, 1988; Quinsey, Harris, Rice, & Cormier, 1998). The existing literature on the comparison of these two methods, across a number of decisional tasks, suggests that statistical formulas generally perform as well or better than clinical judgments (Borum, Otto, & Golding, 1993; Dawes et al., 1989; Garb, 1994; Grove & Meehl, 1996; Melton et al., 1997; Meehl, 1970; Quinsey et al., 1998). The superiority of the formulas is likely enhanced when they are properly and consistently applied, since in those circumstances the reliability would be very high.<sup>5</sup> Based on existing evidence, some scholars have advocated that actuarial methods (statistical equations) are the preferred method for making decisions about likelihood of future violence (Dawes et al., 1989; Faust & Ziskin, 1988; Grove & Meehl, 1996; Quinsey et al., 1998). Others, however, believe that the statistical and practical limitations of the actuarial formulas at this time outweigh their potential benefit as the ultimate arbiter of risk judgments in individual cases (Melton et al., 1997).

This position facilitated a second, alternative trend in assessment approaches: the use of structured or guided clinical assessment. In this approach a clinician conducts a risk assessment by referring to a checklist of factors, each of which may have some form of scoring criteria, that have a demonstrated relationship to violence recidivism based on the existing professional literature. Prior research suggests that one important reason for less than optimal predictive accuracy is that clinicians fail to consider or properly weigh the relevant factors in their risk decisions (Cooper & Werner, 1990; Werner, Rose, Murdach, & Yesavage, 1989; Werner, Rose, & Yesavage, 1983). The guided clinical approach helps to focus clinicians on relevant data to gather during interviews and record reviews, so that

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<sup>2</sup>In *Barefoot v. Estelle*, the U.S. Supreme Court stated that "the suggestion that no psychiatrist's testimony may be presented with respect to a defendant's future dangerousness is somewhat like asking us to disinvent the wheel."

<sup>3</sup>There is sometimes confusion as to the definition of clinical judgment vs. an actuarial approach. Actuarial approaches involve the mechanistic combination of variables (preferably those requiring little or no judgment) to yield a statistically derived estimate of the likelihood of an outcome. Any assessment approach where the "decision" is made by any means other than the statistical combination of variables would generally be considered "clinical judgment."

<sup>4</sup>In a recent meta-analysis of 58 existing studies on violence prediction, Mossman (1994) found that although actuarial equations performed better than human judgments for long-term follow up (one year or more), the average accuracy of the formulas for shorter time periods (less than one year) was comparable to the average for clinical predictions (p. 789).

<sup>5</sup>The actual inter-rater reliability of existing actuarial formulas in general practice, however, is generally not known, even though the existence of scoring criteria requiring judgment certainly introduce the potential for error.

the final judgment, although not statistical, is well informed by the best available research. Recent empirical studies indicate that risk ratings based on guided clinical assessments perform better than unstructured clinical judgments and may perform as well or better than some actuarial predictions (Dempster, 1998; Kropp, Hart, Webster, & Eaves, 1999; Hanson, 1998).

The development of guided clinical assessment protocols for assessing the risk of violence among youth is in very early stages. Although numerous instruments are available for classification purposes in juvenile justice (Howell, Krisberg, Hawkins, & Wilson, 1995), most are not specifically focused on risk for community violence recidivism, nor do they adequately consider dynamic risk factors that may change over time. There are currently two instruments being developed and studied for assessing violence risk in youth. The first is the EARL-20B (Early Assessment Risk List for Boys) (Augimeri, Webster, Koegl, & Levene, 1998). It is composed of 20 items, each with general coding guidelines and is designed to assess violence potential in young boys (under 12). There are six "Family items": Household Circumstances; Caregiver Continuity; Supports; Stressors; Parenting Style; Antisocial Values and Conduct; 12 "Child Items": Developmental Problems; Onset of Behavioral Difficulties; Trauma; Impulsivity; Likeability; Peer Socialization; School Functioning; Structured Community Activities; Police Contact; Antisocial Attitudes; Antisocial Behavior; and Coping Ability; and two "Amenability Items": Family Responsivity and Child Treatability. While this instrument is conceptually promising, there currently are no published psychometric data on the instrument's reliability and validity. An initial validation study is currently underway in which three independent raters are coding 450 clinical files (Koegl, Augimeri, & Webster, 2000).

The second assessment guide is the Structured Assessment of Violence Risk in Youth (SAVRY). The structure of the SAVRY is modeled after existing guided assessment protocols for adult violence risk (Webster, Douglas, Eaves, & Hart, 1997), but the item content is focused specifically on risk in adolescents. The SAVRY is composed of 25 items (Historical, Clinical, and Contextual) drawn from existing research and professional literature in adolescent development and on violence and aggression in youth. An additional five Protective Factors are also provided. (Bartel, Borum, & Forth, 1999; Borum, Bartel, & Forth, 2000).<sup>6</sup> Each item has a three-level scoring structure with specific coding guidelines. Preliminary evidence suggests that scores from the instrument are statistically related to future violent offending in adolescents (Bartel, Forth, & Borum, 2000). In an archival study of 44 adolescent male offenders, scores from the SAVRY correlated .79 with the Wisconsin Juvenile Probation and Aftercare Assessment Form, .83 with the Youth Level of Service/Case Management Inventory; and .20 with number of violent acts (Bartel & Forth, 2000; Bartel, Forth, Gretton, & Hemphill, 1999).

Despite these advances in technology, and an increase in research on clinicians' predictive accuracy with adults, very little data are available concerning the accuracy of risk assessment predictions among juveniles. Hagan & King (1997) examined the accuracy of two psychologists at a juvenile correctional facility in predicting criminal behavior using only clinical judgment. These psychologists were asked to identify individuals "who they believed were very likely to be involved in a crime, particularly, violent crime, within one year." Of those predicted to be at "high risk," 76% were convicted of a felony within one year of follow-up; another 3% were committed as Not Guilty by Reason of Insanity (NGRI) for a criminal offense; and 7% were victims of homicide. By comparison, only 26% of those not identified as high risk engaged in any further illegal behavior

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<sup>6</sup>Additional information on the SAVRY is available from me upon request.

(not just arrest or conviction) within one year. These results suggest that the psychologists were able to identify a high-risk group with a high degree of accuracy, and the use of more stringent recidivism criteria for the high-risk group means that these figures may even underestimate the actual degree of accuracy.

### Risk Factors for Violence and Aggression among Youth

There is an extensive literature on risk factors for violence and aggression among children and adolescents (see Hawkins et al., 1998; Howell, 1997; Loeber & Stouthamer-Loeber, 1998; Rutter, Giller, & Hagell, 1998). In the following section, I will briefly review some of the factors that have the most robust empirical support. For heuristic purposes, I have divided these into three categories: Historical, Clinical, and Contextual (see Table 1).

#### *Historical Factors*

*History of Violence and Delinquency.* In both the adult and child literature, prior violent behavior is perhaps the best single predictor of future violence (Farrington, 1991; Kohlberg, LaCrosse, & Ricks, 1972; Mossman, 1994; Parker & Asher, 1987; Tolan, Guerra, & Kendall, 1995). Risk for future violence increases incrementally according to the number of prior episodes. Antisocial behaviors and/or prior arrest for any criminal/delinquent act also increase the likelihood of a subsequent violent act (Kohlberg et al., 1972; Parker & Asher, 1987). Prior nonviolent delinquency, however, may not be a good predictor of the severity of subsequent violence (Cornell, Benedek, & Benedek, 1987).

Table 1  
*Key Risk Factors for Violence and Aggression in Youth*

<b>Historical Factors</b>	<b>Clinical Factors (continued)</b>
History of violence & delinquency	Negative attitudes
Early initiation of violence	Lack of empathy/remorse
School problems	Attitudes that support violence
Academic failure	Hostile attribution bias
Low bonding or interest	<b>Contextual Factors</b>
Truancy	Negative peer relations
Frequent school transitions	Gang involvement
Victim of maltreatment/abuse	Delinquent peers
Physical abuse	Rejected
Sexual abuse	Alienated
Neglect	Poor parental/family management
Home/family maladjustment	Poor family management
Family conflict	Little interaction between youth and parents
Parental criminality	Extreme or inconsistent parental discipline
Low bonding within family	Lack of personal/social support
<b>Clinical Factors</b>	Stress & losses
Substance use problems	Contextual crime and violence
Mental or behavioral disorder	Neighborhood crime
Psychopathy	Community disorganization
Risk taking/impulsivity	Availability of drugs
Behavioral instability	
Affective instability	
Risk taking	

Antisocial behaviors such as stealing, property destruction, smoking, selling drugs, and early intercourse (before 14 years old) are all linked to later violence among males (Hawkins, Herrenkohl, Farrington, Brewer, Catalano, & Harachi, 1998). There are fewer studies on the relationship of prior violence to future violence in females; however, the existing evidence is less consistent (Stattin & Magnusson, 1989).

*Early Initiation of Violence and Delinquency.* Risk level for future violence increases with earlier onset of juvenile offending and with greater aggregate frequency of juvenile offending. Early initiation may not predict a higher frequency or rate of violent offending per year. Early initiation of violence/delinquency (particularly prior to age 14) is associated with increased risk for violent recidivism and predicts more chronic and serious violence (Farrington, 1991; Thornberry, Huizinga, & Loeber, 1995; Tolan & Thomas, 1995). Farrington (1995), for example, found that about 50% of boys convicted on a violent offense between 10 and 16 years old were again convicted of such an offense by early adulthood, a rate compared to 8% for those with no conviction of violent crime as juveniles. As with prior violence, however, this relationship may also be stronger for boys than for girls (Kratzer & Hodgins, 1996).

*School Problems.* A number of school-related problems have been linked to violence among youth, including low levels of educational achievement and attainment, low interest in education, dropout (prior to age 15), truancy, and poor school quality. Academic failure (low achievement, attainment, poor grades) beginning in the elementary grades is associated with increased risk for later violence and delinquency (Maguin & Loeber, 1996; Denno, 1990; Farrington, 1989a). This factor may be as strong or stronger for females than males. Poor bonding or attachment to school may also be associated with increased risk for violence, particularly in adolescents as opposed to younger children (Maguin et al., 1995);<sup>7</sup> however, the literature here is more equivocal (Elliott, 1994).

*Victim of Maltreatment/Abuse.* Having a history of victimization by abuse or maltreatment is associated with increased risk for violence in youth (Smith & Thornberry, 1995). Being a victim of abuse induces predisposing experiences including: (a) those that model violence and (b) those that reinforce or reward violence (Klassen & O'Connor, 1994). Widom's (1989) work suggests that victims of sexual abuse were slightly less likely than those with no abuse history to commit a violent offense. Those who were physically abused were slightly more likely and those who were neglected showed the greatest increase in risk. Abuse/neglect increased the chances of later delinquency and criminality by 40%. Research suggests that this may be an even stronger risk factor for violence among girls than among boys (Rivera & Widom, 1990).

*Home/Family Maladjustment.* A number of factors related to parental problem behavior and maladjustment within the family system have been linked to violent behavior among youth: (1) Parental Criminality: Most studies suggest that parental criminality increases the risk for violent crime among children and adolescents (Baker & Mednick, 1984; Farrington, 1989), although this has been studied mostly in males. Parental attitudes toward violence in children and adolescents may also play a role. (2) Family Bonding: Although having a strong bond to one's family has been posited as a potential protective

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<sup>7</sup>The persistence of poor school bonding, however, has been linked to negative outcomes in children and adolescents.

factor against the onset of delinquency and violence, the research literature on this issue is sparse and inconclusive. (3) Family Conflict: Discord, conflict, and violent relationships within the family have been linked to increased risk for violence among youth. Prior studies have found associations between marital conflict and partner-directed violence and a youth's likelihood of engaging in violence (Elliott, 1994; Farrington, 1989; McCord, 1979).

### *Clinical Factors*

*Substance Use Problems.* Research consistently supports the proposition that substance abuse is a risk factor for violent behavior (Loeber & Dishion, 1983; Loeber & Hay, 1997; Loeber & Stouthamer-Loeber, 1987) and recidivism (Dembo, Turner, Chin Sue, Schmeidler, Borden, & Manning, 1995). Results of a 20-year longitudinal survey found that drug use during early adolescence was associated with concurrent and later (adolescence and early adulthood) delinquency (Brook, Whiteman, Finch, & Cohen, 1996). Alcohol may be as much of a risk factor as drug use. In a national sample of high school students ( $n = 12,272$ ) from the CDC Youth Risk Behavior Survey, the rate of physical fighting was significantly higher among adolescents who used illicit substances, and this relationship held equally for males and females (Dukarm, Byrd, Auinger, & Weitzman, 1996).

*Mental/Behavioral Disorder.* In the adult literature, current research supports the proposition that major mental disorder (schizophrenia, bipolar, major depression) is a risk factor for violent behavior. Statistically, the association is modest, but robust and significant (Borum, 1996; Monahan, 1992; Mulvey, 1994; Steadman, Mulvey, Monahan, Robbins, Appelbaum, Grisso, Roth, & Silver, 1998). Risk may be particularly associated with delusions involving perceived threat of harm by others and overriding of internal controls (Swanson, Borum, Swartz, & Monahan, 1996). Similarly, in some studies, juveniles who commit murder appear more likely to have psychotic symptoms—particularly paranoid ideation—than other violent inpatient youth with conduct disorders (Bender, 1959; Lewis, Moy, et al., 1985; Lewis, Lovely, et al., 1988; Lewis, Pincus, et al., 1988; Myers, Scott, Burgess, & Burgess, 1995; Myers & Scott, 1998). Often, however, these episodic psychotic symptoms do not appear to be associated with full diagnosable psychotic disorders and the offenses do not appear to be committed in response to such symptoms (Cornell, Benedek, & Benedek, 1987; Myers & Kempf, 1990; Myers, Scott, Burgess, & Burgess, 1995). Attention/concentration deficits (including ADD) and hyperactivity also have been shown to predict violence in childhood, adolescence, and adulthood (Campbell, 1990; Campbell, 1991; Hechtman, Weiss, Perlman, & Amsel, 1984; Loney et al., 1983; Sanson, Smart, Prior, & Oberklaid, 1993; Satterfield, Hoppe, & Schell, 1982; Satterfield & Schell, 1997). Current research shows that hyperactive children show high rates of antisocial behavior and conduct problems in adolescence (Barkley, Fischer, Edelbrock, & Smallish, 1990; Hechtman et al., 1984; Klein & Mannuzza, 1991; Loeber, Green, Keenen, & Lahey, 1995; Mannuzza, Klein, Konig, & Giampino, 1989; Satterfield et al., 1982). Hyperactivity is particularly problematic in the presence of conduct problems, even behaviors less serious than those that would qualify for a conduct disorder (CD) diagnosis in the *Diagnostic and Statistical Manual of Mental Disorders*, Fourth Edition (DSM-IV; American Psychiatric Association, 1994) (Loeber et al., 1995).

*Psychopathy.* The construct of psychopathy is related to, but distinct from, the DSM-IV characterization of anti-social personality disorder (Cleckley, 1976; Cooke, Forth, & Hare,



1998). There are two key dimensions that characterize the construct of psychopathy: (1) Interpersonal/Affective: selfish, callous, remorseless use of others and (2) Social Deviance: the chronically unstable lifestyle (Hare, 1991). There is a strong, consistent relationship between psychopathy and violence and general criminal behavior recidivism. Psychopathy is also associated with violent recidivism among sex offenders. It is hypothesized that psychopathy is a chronic disorder that begins in childhood and lasts for the person's life with little or no "burn out." Criminal offenders high in psychopathy (as measured by the Hare Psychopathy Checklist—Revised; Hare, 1991) have been found to be four times as likely to commit a violent crime as those scoring in the bottom third (Hare, 1998). Since 1990, there have been a number of empirical investigations examining the concept of psychopathy in adolescents. Overall, these studies suggest that features of psychopathy can be reliably assessed in youth and that these features are related to risk for conduct problems and violent offending (Christian, Frick, Hill, & Tyler, 1997; Gretton, 1999; Frick, 1995; Frick, O'Brien, Wooten, & McBurnett, 1994; Lynam, 1998). Forth, Hart, and Hare (1990), for example, modified the PCL-R to apply to youth and found that scores correlated with a number of relevant variables, including number of postrelease violent offenses ( $r = .26$ ) (Forth & Burke, 1998).

*Risk Taking/Impulsivity.* Impulsivity, as characterized by behavioral and affective instability, and marked fluctuations in mood or general demeanor, has been linked to violence and delinquency in youth (Hollander & Stein, 1995; Webster & Jackson, 1997). Farrington (1989), for example, has found impulsivity in youth to be linked to increased risk for violence as measured by self-report and official records. A related notion is the construct of "risk-taking" or "daring," which research by Farrington (1989) and others has been shown to bear an even stronger relationship to violence. This characteristic appears to double or triple the risk for violent behavior among older children and adolescents (Hawkins et al., 1998).

*Negative Attitudes/Cognitions.* Certain attitudes (particularly antisocial ones) or social cognitive deficiencies can increase a youth's risk for violent behavior (Andrews & Bonta, 1995; Catalano & Hawkins, 1996; Dodge, 1991). With regard to social cognitive deficiencies, Ken Dodge and colleagues (Dodge, 1991; Dodge, Petit, McClaskey, & Brown, 1986) have noted two core difficulties among youth that may lead to increased aggression: (1) an inability to generate nonaggressive solutions to interpersonal conflicts and (2) a tendency to frequently perceive hostile or aggressive intent by others, even when none was intended. Concerning cognitive predispositions, appraisals of provocation or intentionality (hostile attribution bias), violent fantasies, aggressive self statements (or "self-talk"), expectations about success or instrumentality of violence may increase risk. Attitudes favoring violence may be more predictive of violence in older, rather than younger children (Zhang, Loeber, & Stouthamer-Loeber, 1997). Inappropriately inflated self-esteem may also be linked to violence risk. Those with an inflated sense of self-worth tend to be very sensitive to any threat to their ego or self-image and may respond aggressively to negative appraisals or feedback. Empirical studies have found that idealization and inflated ratings of self-competence were associated with higher levels of aggression (Hughes, Cavell, & Grossman, 1997). In a recent review, Baumeister, Smart, and Boden (1996) noted that "the more favorable one's view of oneself, the greater the range of external feedback that will be perceived as unacceptably low" (p. 9).

*Anger Control Problems.* Anger can be a "potent activator of aggression" (Novaco, 1994). Anger also tends to be associated with antisocial attitudes, and both are related to

aggression in young offenders (Granic & Butler, 1998). Difficulty managing anger, particularly an explosive temper, is often associated with higher risk (Furlong & Smith, 1994). Anger may increase arousal and consequently risk for aggression; however, trait anger has also been linked to prospective risk for aggression in youth (Cornell, Peterson, & Richards, 1999). Conversely, empathy, guilt, anxiety, or fear may inhibit risk. Aggression associated with high levels of anger-related arousal has been referred to as “affective aggression” (Wells & Miller, 1993). The extent to which anger contributes to violence risk is typically contingent upon mechanisms mediating between aversive events and harmful behavior. As noted above, however, one significant difficulty among aggressive youth is a tendency for cognitive mediating mechanisms to be predisposed to perceive hostile cues from others. The use of alcohol and illicit substances such as PCP, amphetamine, and cocaine, can also mediate affective and behavioral responses, leading to increased anger and violence (Miller & Potter-Efron, 1989).

### *Contextual Factors*

*Negative Peer Relationships.* The nature of peer relationships can be an important factor in understanding and assessing a youth’s risk for aggressive behavior. Two distinct, but potentially related processes help to define negative peer relationships in children and adolescents: peer rejection and delinquent peer affiliation. Peer Rejection: Being “rejected”—i.e., being liked by few, if any, peers and actively disliked by most—is associated with a broad range of negative outcomes for youth, including delinquency and aggression (Coie, Lochman, Terry, & Hyman, 1992; DeRosier, Kupersmidt, & Patterson, 1994; Kupersmidt & Coie, 1990; Ollendick, Weist, Borden, & Greene, 1992). Delinquent Peer Affiliation: Aggressive kids tend to associate with one another in antisocial networks (Cairns, Cairns, Neckerman, Gest, & Garipey, 1988). Such affiliations are a risk factor for subsequent violence, as well as overt and covert forms of delinquency (Keenan, Loeber, Zhang, Stouthamer-Loeber, & Van Kammen, 1995). Social affiliation with a delinquent peer group predicts school-related problems and antisocial behavior (Dishion & Loeber, 1985; Elliott, Huizinga, & Ageton, 1985; Patterson & Dishion, 1985). Delinquent peer groups, however, also appear to influence other youth who have no prior history of significant aggression or antisocial behavior. When delinquent behavior first appears in adolescence and in the context of these deviant peer influences, the behavior is usually limited to adolescence and desists thereafter (Moffitt, 1993). Conversely, affiliation with peers who disapprove of violent and delinquent behavior may reduce the risk of later violence (Ageton, 1983; Elliott, 1994).

*Poor Parental/Family Management.* “Research has consistently shown that parental failure to set clear expectations for children’s behavior, poor parental monitoring and supervision of children, and excessively severe and inconsistent parental discipline of children represent a constellation of family management practices that predicts later delinquency and substance abuse (Capaldi & Patterson, 1996; Hawkins, Arthur, & Catalano, 1995)” (Hawkins et al., 1998, p. 135). Extreme—overly strict or overly permissive—and inconsistent discipline have been associated with increased risk for violence in adolescence (Farrington, 1989; McCord, McCord, & Zola, 1959; McCord et al., 1979). Poor child-rearing practices, parental conflict about child rearing, and poor parental supervision have all been associated with increased risk for violence (Farrington, 1989). Additionally, low levels of parent-child communication and involvement in mid-adolescence tends to increase risk for violent behavior, although this link appears stronger for males than for females (Williams, 1994).

*Stress and Loss.* Stressful life events have been associated with violence among youth in past studies. Attar, Guerra, and Tolan (1994) found that stressful events were linked to higher rates of aggression (rated by teachers) over a one-year period. This link may be particularly salient for persons who have been victims of violence (Felson, 1992). Significant losses may also be precipitants of violent behavior, so it is important to inquire about possible losses that may be material (treasured object), relational (death or separation of close relationship), or loss of status (narcissistic injury).

*Lack of Personal/Social Support.* The presence of supportive relationships can facilitate the successful implementation of an intervention plan and reduce risk of exposure to risky conditions (Estroff & Zimmer, 1994; Estroff, Zimmer, Lachicotte, & Benoit, 1994). Similarly, having positive attachments to others may serve as a protective factor against violence risk. Conversely, hostile or conflictive relationships may increase risk for violence. In a sample of African American youth, kinship social support was positively related to anger suppression for children in high-risk, urban environments (Stevenson, 1998). Similarly, healthy family relationships have been associated with fewer feelings of violence or acts of violence (Rodney, Tachia, & Rodney, 1997). In a prospective study of preschool boys, those who perceived more support had lower aggression ratings (Stormont-Spurgin & Zentall, 1995). Similarly, youngsters who feel hopeless may perceive that family and friends provide very little support and may be more prone to express anger overtly and aggressively (Kashani, Suarez, Allan, & Reid, 1997).

*Community Crime and Violence.* Certain features of the community or neighborhood in which youth live and spend time may affect the risk for violence. Sampson and Lauritson (1994) have extensively reviewed community characteristics associated with increased rates of violent crime and found that social disorganization and community change are two of the most salient factors. In the National Youth Survey, urban youths reported higher rates of violent offenses than those from nonurban areas, while youths living in poverty had rates twice as high as those in the middle class (Elliott, Huizinga, & Menard, 1989). Living in a high-crime neighborhood has also predicted increased risk for violence (Thornberry et al., 1995). In the Seattle study, adolescents who reported living in disorganized communities (e.g., high perceived rates of crime, drug sales, gangs, and poor housing) and those who reported a greater availability of drugs in childhood and adolescence showed a greater variety of violent acts in late adolescence (Maguin et al., 1995). Bad neighborhoods and community disorganization may also predispose youth to an earlier age of onset of violence (Loeber & Wikstrom, 1993), and early initiation of violence among children occurs disproportionately in the worst neighborhoods. This finding applies to males as well as to females (Sommers & Baskins, 1994).

### Principles for Conducting an Effective Risk Assessment for Youth

Psychologists and other mental health professionals must routinely assess violence potential for children and adolescents and make related management decisions in psychiatric emergency services, civil psychiatric hospitals, juvenile justice, and outpatient clinics. Each of these settings may have different policy requirements for the evaluations, the amount and quality of available information may vary, and the nature and exigency of the decisional thresholds may differ. Each of these factors can influence the way in which the risk assessment is conducted. Aware of this diversity, in the following section, I outline some broad principles for violence risk assessment that may be useful for assessing risk of general violent recidivism in different contexts.

### *Safety First*

The first step in conducting a risk assessment is assuring that the youngster, staff, and clinician feel as safe and as comfortable as possible. For high-risk emergency evaluations, routine measures such as searches may be implemented. Before beginning the evaluation, the examiner should also consider the availability of other personnel or security staff, as well as the physical layout and access to the examination area. To the extent possible, the examination should not begin (or continue) if the youth or the clinician do not feel safe.

### *Consider the Context and Implications of the Assessment*

Different risk assessment tasks will require different types of decisions and have different “critical action thresholds.” For example, an assessment conducted in an emergency room or crisis center may require clinicians to make decisions quickly without a comprehensive examination, whereas a discharge decision from an inpatient facility may afford an opportunity for a more thorough review of collateral documentation and interviews. Clinicians must determine the nature of the risk assessment being requested and the purpose or uses for which it is intended. For those assessing risk in youth during a behavioral emergency, the precision of the “prediction” is a less central issue than clinical management. Once a clinician develops a reasonable “clinical concern” about violence potential in a given case (Mulvey & Lidz, 1995), the focus shifts to developing appropriate options for response and disposition.

### *Inquire Directly and Specifically about Violence*

During an emergency evaluation, clinicians should routinely ask a set of screening questions about violent behavior, even if violence is not the presenting complaint. It is important not only to inquire about varying forms of violence and criminal behavior, but also to pose questions in specific behavioral terms. Different youth may define violence differently. An adolescent boy who grabs, threatens, or pushes his mother may not see this as a “violent” act; however, it is certainly relevant information for the clinician. One may begin with general screening questions such as: Have you found yourself hitting people or damaging things when you are angry? Do you ever worry that you might physically hurt someone? Has there ever been a time when you hit, slapped, kicked, pushed, shoved, or grabbed someone? Have you ever had to threaten anyone with a weapon? If there is a positive response to screening questions, then a more detailed inquiry should follow. A listing of some possible detailed questions is included in Table 2. In analyzing patterns and trends in a youth’s history of violent and aggressive behavior, it may be useful to consider the four patterns of adolescent violence outlined by Del Elliott (Elliott, Huizinga, & Ageton, 1986): situational, relationship, predatory and psychopathological (see Table 3).

### *Conduct a Systematic Assessment with Relevant Data*

As noted above, risk assessments that are conducted systematically or according to some structured or guided scheme are more likely to have higher levels of validity. The maxim that “more is better” does not necessarily apply. It is the quality, validity, and relevance of the data, rather than the quantity per se, that will determine the overall quality of the

Table 2

*Questions/Issues for a Detailed Inquiry into Violence History*


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Did the aggression result in injury to others?  
 Was a weapon ever used in the violence?  
 In what context or settings did the violence occur?  
 What was the client's perception of the precipitants?  
 What was the client thinking/feeling at the time of these incidents?  
 During the incident, was the client using drugs or alcohol?  
 Have drugs or alcohol precipitated other incidents?  
 Was the client experiencing psychotic symptoms, such as delusions or hallucinations?  
 Was the client prescribed medication at the time of the most recent incident? Was he/she taking the medication?  
 What about other incidents?  
 Who was the victim or target of recent violence? What about other incidents?  
 What is the relationship of the victim(s) to the client?  
 What is the purpose/meaning of the violence?  
 Does the client see any pattern to episodes of violence?  
 Can the client identify any cues as to when he/she might become violent?  
 Have there been incidents in which the client was close to violence, or seriously considered but refrained? If so, what helped to prevent the violence behavior?  
 What responses would the patient suggest to prevent future violence?

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judgment. This implies that the analysis of risk and protective factors should be comprehensive and driven primarily by findings from the professional literature and empirical research. Risk factors based solely on clinical lore or experience should be viewed with skepticism. This analysis should include static as well as dynamic factors. Static factors are usually historical or demographic risk markers that cannot be changed (e.g., age, sex, history of abuse) or conditions that are considered not to be amenable to change (e.g., psychopathic style). Dynamic factors are those that are more fluid and that may change and be amenable to intervention. Additionally, the evaluations should focus not only on risk factors, but also on protective or mitigating factors. Protective factors may reduce the likelihood of violence either by lessening the negative impact of a risk factor (e.g., substance abuse) or by reducing violence risk directly. Absence of risk factors may even be considered protective. Finally, in collecting information about a client's history of violent

Table 3

*Four Patterns of Adolescent Violence (Elliott et al., 1986)*


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*Situational.* This type of violence is driven by specific situations or contextual factors such as aggression by another person or criminogenic environment.

*Relationship.* Most violence for adolescents (and all age groups) occurs within the context of existing relationships. It may arise from interpersonal disputes or revenge and often involves family or friends (Heller, Ehrlich, & Lester, 1983).

*Predatory.* Predatory violence is typically perpetrated for some type of gain. Youth's desires take precedence over the victim's. This often occurs as part of a pattern of criminal or antisocial activity. Although up to 20% of adolescents may commit such acts, a small proportion (c. 7% of males and 5% of females) account for most of the predatory violence.

*Psychopathological.* This type of violence is caused primarily by a mental or emotional disturbance, such as acting on a delusion. Psychopathological violence among youth is more rare and often less predictable.

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behavior, it is important to consider the reliability of the client's self-report and to use records and collateral information, wherever feasible, to substantiate key facts.

*Consider Base Rates and Developmental Context.* When estimating the likelihood or probability of a given behavior, a clinician is well-advised to rely on base-rate estimates (where they exist) to anchor that decision (Borum, Otto, & Golding, 1993). The term "base rate" simply refers to the known prevalence of a specified type of violent behavior within a given population over a given period of time. In light of this, it is interesting to note that rates of criminal/delinquent activity during adolescence are so high that it is statistically normative (Elliott, Ageton, Huizinga, Knowles, & Cantor, 1983; Hirschi, 1969; Moffitt, Lynam, & Silva, 1994). In a national school-based survey of over 12,000 high school students (Centers for Disease Control—Youth Risk Behavior Survey), approximately 37% reported being in a physical fight one or more times in the prior twelve months (46% of boys and 26% of girls). The rate was highest among the ninth-grade students at 45% and declined each successive year to a low of 29% for high school seniors (Kann et al., 1998). Official crime rates peak sharply at age 17, then drop off sharply in young adulthood. Highest age risk for initiation of serious violent behavior is 15–16 years old. The peak is earlier (14) for girls than for boys (16). After age 20, the risk for initiation is very low. Highest age risk for participation in serious violence is 16–17 years old, with 20–25% of males and 4–10% of females reporting one or more of these acts. After age 17, participation rates drop dramatically and about 80% of those who are violent during adolescence will terminate their violence by age 21. As noted above, early onset of violence also increases the likelihood of future violence. In a self-report study of delinquency (Elliott et al., 1986), about 50% of youths continued violent behavior into adulthood if their first violent acts occurred prior to age 11; about 30% of youths continued violent behavior into adulthood if their first violent acts occurred during pre-adolescence (ages 11–13); and about 10% of youths continued violent behavior into adulthood if their first violent acts occurred during adolescence. Relatedly, Moffitt (1993, 1997) has identified two primary types of delinquent patterns, each of which tend to differ somewhat in the timing and duration of their offending careers. The Life-Course-Persistent comprises a relatively small group (definitely <10%, probably more like 5%) who engage in antisocial behavior at every developmental stage (usually begin prior to age 13). They appear at both ends of the age-crime curve. They frequently have co-occurring disorders, may engage in predatory violence, and have poor/superficial attachments to others. By contrast, the Adolescence-Limited group is more common (and largely responsible for the "peak" in the curve). They typically have better childhood premorbid histories (e.g., fewer behavior problems and less likelihood of co-occurring disorder), and the onset of antisocial behavior typically does not occur until adolescence (after 13). Their pattern of offending tends to be less consistent and any predatory violence tends not to be stable. They, unlike the Life-Course-Persistent, also appear able to form developmentally appropriate attachments to others. A further developmental consideration is the relative lack of temporal stability, in comparison to adults, in the manifestations of certain personality traits and behaviors in children and adolescents (Grisso, 1998). Developmentally, youth are in a much more active state of change, so that certain traits or disorders may vary in their presentations at different stages of psychosocial and emotional development. This change process makes adolescents "moving targets," and consequently more difficult to characterize based on observations made at a single point in time. Thus, clinicians need to consider the developmental context as a potential source of error or bias when making clinical judgments and inferences based on a relatively narrow sample of behavior (Grisso, 1996, 1998).

*Consider Issues of Gender*

Although many of the same risk factors apply for the development of aggression in males as in females (Rowe, Vazsonyi, & Flannery, 1995; Huizinga, Esbensen, & Weither, 1991), as noted above, some do differ in their strength (or even their direction of association) with violence according to gender. Of course, most of the existing research has been conducted on boys because they typically commit more offenses. In official crime records for 1992, males commit four out of five offenses against persons. Females were charged in 6% of juvenile murder arrests and about 19% of aggravated assaults. However, female offenders are entering the juvenile justice system at a younger age and at a higher rate. The increase in arrest rate for juvenile females was more than twice that of males between 1989 and 1993. Girls are also entering gangs with increasing frequency (Snyder & Sickmund, 1999, p. 78). In general, girls tend to show conduct problems at a later age than do boys, although they may begin to lie and steal slightly earlier (Robins, 1986). From late childhood onward, boys tend to show higher rates of conduct problems (Farrington, 1987), and the association between early and later aggression is somewhat stronger than it is for girls (Kellam, Ensminger, & Simon, 1980; Stattin & Magnusson, 1989; Cummings, Ianotti, & Zahn-Waxler, 1989). However, a number of studies have shown that stability coefficients of aggression for girls are often as high as they are for boys (Olweus, 1981; Cairns, Cairns, Neckerman, Ferguson, & Garipey, 1989; Verhulst, Koot, & Berden, 1990). Girls also tend to display more indirect, verbal, and relational aggression (e.g., exclusion of peers, gossip, etc.; Bjorkvist, Lagerspetz, & Kaukiainen, 1992; Cairns et al., 1989; Crick & Cropeter, 1995; Tremblay et al., 1996) and less frequently engage in the most serious forms of violence (gang fighting, homicide, sexual violence; Rutter & Giller, 1983).

*Individualize the Assessment*

Base rates, if reliable, can serve as a mechanism by which to anchor an estimate of likelihood; however, it is also necessary to take into account the interplay and changing interactions over time between the person and the environment. Similarly, although the analysis of risk factors should focus on those for which there is strongest empirical support, there may be consistent risk factors in a given individual's history that do not necessarily appear as risk factors in the general population. For this reason the assessment must be individualized. Having conducted the detailed analysis of past violent acts as recommended above, the clinician can use this information to explore patterns and precipitants in past episodes of violence (e.g., precipitants, circumstances, targets, mental state) as well as factors that have helped the youth avoid potentially violent situations. The clinician may also consider whether there is evidence of an increase or decrease in the severity or frequency of violent events and, if so, identify what factors may be associated with this. This type of examination allows the clinician to develop hypotheses about the specific conditions under which the youth may be more or less likely to behave violently. This might include an appraisal of specific contexts, situations, emotional states, people, or types of interactions that put this individual at increased risk.

*Focus Inquiry on Situational Factors*

One of the most significant judgment errors in risk assessment is a failure to adequately consider situational factors. It is well-documented in the social-psychological literature that situational factors account for more variance than dispositional factors in explaining

all kinds of human behavior (Ross & Nisbett, 1991). In the discussion on risk factors, the salience of stress and social support was emphasized (Klassen & O'Connor, 1994). Family, peer group, school stressors are associated with increased risk for violence. The youth's subjective perception of stress and the roles various people play may be more important than the objective evaluation of stressors and support. If the youth being evaluated is believed to be differentially at risk for offending against a certain victim type, one might also consider the availability of that specific class of victims. The availability and ability to use weapons should also be considered. Nationally, almost 60% of young people reported that they could get a gun if they wanted one (LH Research, 1993). Furthermore, it is important to consider potential exposure to destabilizing conditions—i.e., situations in which persons are exposed to hazardous conditions to which they are vulnerable and which may trigger violent episodes (e.g., presence of weapons, substances, a victim group); the similarity of present/future conditions to conditions of prior offenses (Gendreau, 1995); degree of professional supervision and control in contexts where the youth will reside; therapeutic alliances with providers; and availability of alcohol and drugs.

### *Beware of Cognitive Errors and Biases in Clinical Judgment*

There is a substantial body of research indicating that humans are prone to making specific kinds of errors when processing information (Borum, Otto, & Golding, 1993). Among the most common errors in risk assessment are: (1) Underutilization of Base Rates (discussed above); (2) Confirmatory Bias: a tendency to look for evidence that confirms one's initial beliefs or hypotheses, and ignoring or failing to seek information that is not consistent with, or refutes, those beliefs; (3) Overconfidence: an empirically documented tendency to express more confidence in one's judgments than is actually warranted; and (4) Illusory Correlations: erroneously concluding (through clinical lore or by not assessing information in all four cells of covariation<sup>8</sup>) that there is a relationship between two variables when one does not exist. Corrective strategies that may be helpful in minimizing the impact of these errors include: (1) searching for and listing disconfirmatory information (that is, evidence that runs counter to your own opinion); (2) varying levels of confidence according to validity of data; (3) relying on empirically established relationships.

### *Consider Consultation*

This is a critical principle for improving the quality of clinical decisions and for clinical risk management. Although sometimes the circumstances of an emergency evaluation do not allow for consultation with other professionals before some action must be taken, consultation should be considered when it is available and feasible, particularly for complex or uncertain cases. It may help to broaden the scope of the relevant information considered so as to counter biases and show a good faith effort to comport with the proper standard of care. The consultation should be documented along with the rest of the information from the examination.

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<sup>8</sup>To accurately assess the extent of a relationship between a predictor and an outcome, it is necessary to consider four cells of covariation: (1) cases in which the predictor is present and the outcome is present; (2) cases in which the predictor is absent and the outcome is present; (3) cases in which the predictor is present and the outcome is absent; and (4) cases in which the predictor is absent and the outcome is absent.



## Special Considerations for Threat Assessment

The general principles and approach described above apply to most kinds of clinical risk assessments; however, there are certain circumstances when there is concern that an identified or identifiable youth poses a threat of harm to an identified or identifiable person(s). Assessing the risk for "targeted violence" usually requires a somewhat different approach. The term "Threat Assessment" has been used to refer to the fact-based method of assessing the risk posed by an individual who has engaged in some communication or behavior of concern that has brought them to official attention. Often this may follow an explicit threat or indicators of potential targeted violence (Borum, Fein, Vossekuil, & Berglund, 1999; Fein & Vossekuil, 1998; Fein, Vossekuil, & Holden, 1995). This is the type of situation that schools are now facing with increasing frequency as students become more sensitized to the potential for violence and become more proactive in reporting their concerns to officials (Borum, Reddy, Fein, Vossekuil, & Berglund, 2000; Elliott, Hamburg, & Williams, 1998).

Although the threat assessment approach was developed primarily by the U.S. Secret Service for use in preventing assassinations against its protectees, many of the general principles and approach may be adaptable for appraising risk for other forms of targeted violence. This approach is distinguished from some other risk appraisal methods originating in law enforcement because it does not focus on demographic or psychological profiles; rather the operational focus is on whether the individual has engaged in recent behavior that suggests that he/she is moving on a path toward violence directed at a particular target(s). It also does not rely on verbal or written threats as a threshold for dangerousness or risk (Fein & Vossekuil, 1998). A distinction is made between people who make threats and those who pose a threat. Many people who make threats, may not actually pose a threat. Conversely, there are those who never make any direct threat to a potential victim, but who pose a significant risk of harm (Fein & Vossekuil, 1999). Using communicated threats as an exclusive threshold for concern or action is likely to reduce the effectiveness of violence prevention efforts.

The three basic principles that underlie this approach are:

(1) *Targeted violence is the result of an understandable and often discernible process of thinking and behavior.* This acknowledges that these acts of violence begin with ideas, and move through various stages of planning and preparation, each of which require decisions and actions.

(2) *Violence stems from an interaction among the potential attacker, past stressful events, a current situation, and the target.* Understanding and preventing acts of targeted violence requires a focus on all four elements. An assessor must explore relevant risk factors, recent ideas and behaviors, current stresses, likely response to stress, and the possible attitudes or effects of significant others, including attributes of the potential victim.

(3) *A key to investigation and resolution of threat assessment cases is identification of the subject's "attack-related" behaviors.* Those who commit acts of targeted violence often engage in discrete behaviors that precede and are linked to their attacks, including thinking, planning, and logistical preparations. Attention should also be given to motives and target selection.

Although a full elaboration of the implications of the threat assessment model for school violence or other forms of targeted violence among youth is beyond the scope of this paper (See Borum et al., 1999; Borum et al., 2000; Fein & Vossekuil, 1998; Fein, Vossekuil, & Holden, 1995, for a more detailed description), these basic elements are

introduced to stimulate thinking about how different types of violence—even among youth—may require different approaches for appraising risk. When presented with some behavior of concern suggesting a significant risk of violence toward a particular potential victim, an actuarial approach will not be sufficiently specific. Although the risk factors from a guided clinical assessment may provide useful data for the risk appraisal, the analysis in this type of case will probably need to be much more individualized and fact-based than would be necessary in a more general risk assessment, such as an inpatient discharge decision. Similarly, a “profile” or checklist of warning signs will never be sufficiently sensitive or specific to identify only those youth at risk to commit a school shooting. These approaches may lead to a large number of adolescents who would never engage in a shooting at school being identified as “at risk” and to some youth who actually may be considering serious violence to be overlooked (Borum et al., 2000). Emphasis, instead, should be given to elements such as Ability (e.g., access, means, capacity, and opportunity); Intent (e.g., specificity of plan; action taken toward plan); Thresholds Crossed (e.g., attack-related behaviors; rules broken); Concern by Others (e.g., subject discussed plan/threat with others; others are afraid); and Noncompliance with Risk Reduction (e.g., lacks insight; lacks interest in reducing risk). Consequently, clinicians and administrators need alternative ideas and ways of thinking about prevention and response. The threat assessment approach appears to hold great promise in that regard (Reddy et al., 2000).

### Conclusion

Psychologists and other mental health professionals are regularly called upon to assess the risk of future violence among children and adolescents. Conceptual changes in the process of risk assessment and empirical advances in the epidemiology of violence and aggression among youth have combined to create a strong research-based foundation for clinical practice. Recent research evidence suggests that structured approaches to assessment will be more effective than unstructured approaches. The development of guided clinical assessment protocols for assessing violence risk among youth are just now beginning, and will be a major advance in assessment technology. Relatedly, one evaluation tool or approach will not necessarily be equally effective for all decisional tasks. For example, when an identified or identifiable young person engages in some communication or behavior of concern that brings him or her to official attention, as may be the case in an overheard threat at school, a more individualized, fact-based approach is likely to be more appropriate. Clinicians must recognize the contextual demands of different risk assessment tasks and commit to using the best available information and method to enhance the validity and utility of violence risk assessment for youth.

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