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Countering Violent Extremism: The Use of Assessment Tools for Measuring Violence Risk

Literature Review

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1. INTRODUCTION

The emergence of violent extremism in the United States is a critical concern for the Department of Homeland Security (DHS) and other federal and state agencies, local law enforcement, and the American public. Although both domestic and internationally inspired extremism have been studied by a growing community of researchers over the past several years, this research has not been systematically applied to create tools designed to help professionals such as local law enforcement and community practitioners identify early signs of radicalization and divert individuals away from violence. The Countering Violent Extremism (CVE): Diversion Program—Assessment Tools to Support Secondary and Tertiary Intervention for Violent Extremism project sponsored by the DHS Science and Technology Directorate (S&T) is designed to leverage existing knowledge and expert input from stakeholders and potential end-users to better understand the need for such tools and the path forward in developing an evidence-based tool for potential validation. Creating tools designed to identify early signs of radicalization and to assess individuals for successful completion of diversion and rehabilitation programs is an inherently complex and multifaceted process that has the potential for major positive impacts on security, while also presenting a number of concerns. Because of these issues, the DHS S&T First Responders Group (FRG) requested RTI International develop a summary on the state of the science of risk assessment tools, especially studies highlighting and examining risk assessments used in relation to violent extremism.

This literature review begins by providing a historical context on the common risk and protective factors used in assessments of violence; how they are determined—delineating the differences between individual- and group-level factors, the organizations and agencies that conduct research in this area—and examines the use of validated instruments from such fields as mental health, criminal justice, and psychology. Moving on from this historical background, the summary next focuses on the identity and purpose of existing instruments used specifically in the context of violent extremism, particularly from the international community. Based on studies from Australia, Canada, and the UK, both individual and group assessments are discussed, along with the applicability of such tools within the current American cultural and legal context. From this body of knowledge, the next section examines the gaps in the violent extremism assessment literature and begins to identify potential pathways in the development of a validated tool and the evidence-based requirements for validation. It is followed by a discussion highlighting the limitations and challenges in developing a validated assessment tool for violent extremism. This section examines the difficulty of collecting data on limited opportunities/rare events, accessing the

data that do exist because of national security concerns, the lack of a control and comparison group for these types of studies, and the non-uniformity of current data based on their collection by multiple organizations using differing guidance. The state-of-the-science summary ends with recommendations for DHS S&T in identifying the gold standard and providing the necessary steps in the development of an instrument that can be validated, the promotion of good data collection standards for current and future data sets, and guidance on how risk assessment instruments can and should be used by the practitioner community.

2. METHODOLOGY

The review of scientific literature was conducted beginning with semi-structured interviews with leading researchers in the field of violent extremism and risk assessment tools. Based on these conversations, RTI identified seminal research in both individual and group risk assessment studies and tools used by practitioners. The bibliographies of the research examined led us to additional studies and researchers to interview further in gaining a deeper understanding of the factors they studied and the context of their work. We searched EBSCO and Google Scholar for the full text documents of the works mentioned during the interviews, but in certain instances we also reached out to the individual researchers who directly sent us electronic copies of their research.

Articles relevant to risk assessment, risk and protective factors, and indicators of risk in peer-reviewed journals were collected and categorized. In addition to peer-reviewed journals, we identified and collected government-sponsored research and policy documents on CVE-specific assessment tools developed by the international community. The purpose of this document was simply to develop a baseline of the current research that exists in this field. However, the scientific merit of the articles referenced is noted where relevant to the overall discussion.

3. BACKGROUND LITERATURE

3.1 Brief Historical Context of Risk Assessments

Investigations into the concept of assessing individuals' and groups' proclivities to engage in deviant behavior date back more than 50 years and have been conducted in a myriad of disciplines for a range of unique applications (Borum 2015). Since the late 1980s, researchers have attempted to develop tools for assessing the likelihood that individuals will engage in violence. Although most of the early literature focused primarily on violence in general, the periods just before and since 9/11 have seen an increase in attention to developing risk assessment tools for the types of extremist violence and crimes associated with terrorism. Contemporary risk assessment models view concepts such as "dangerousness" and "risk" as "contextual (highly dependent on situations and circumstances), dynamic (subject to change), and continuous (varying along a continuum of probability)" (Borum et al. 1999, p. 324). With regard to ideologically motivated violence and crimes, the difficulties are compounded.

3.2 Risk Factors and Protective Factors

Traditionally, the term *risk factor* has been used in the field of epidemiology to indicate a trait or characteristic possessed by an individual that makes him or her more likely to experience a given health outcome. For example, smoking is perhaps the clearest example of a risk factor associated with lung cancer—not all smokers contract lung cancer, but all smokers have an increased chance of developing it. The term "risk factor" is often incorrectly used synonymously with "risk indicator." Whereas a risk factor identifies a characteristic affecting probability, an indicator is a marker of affliction. Returning to the lung cancer example, the presence of a tumor would be an indicator of lung cancer, while smoking would still be a risk factor. Smith (2016) points out that "similar to risk factors, it is not expected that every individual who exhibits one or more potential indicators associated with an outcome is necessarily engaging in or experiencing it" (p.7). This assumption has long been established and defended in the epidemiological literature (Kraemer et al. 1997). Related to the concept of a risk factor is the push/pull factor dyad (Borum 2011, 2015; Horgan 2008; Kruglanski et al. 2008; Roberts & Horgan 2008; Smith 2016). In the context of violent extremism, push factors are motivations that drive individuals away from the status quo; examples may include political oppression, a contentious home life, or foreign occupation. Pull factors (Borum 2015; Roberts & Horgan 2008) are lures that attract people to extremist groups such as a sense of belonging, the promise of wealth or respect, or the opportunity to alleviate a grievance (perceived or otherwise).

It is important to note, as Smith (2016) does, that it is unrealistic to expect that the presence of any risk factor—or even the combination of several risk factors—can or will predict “with any accuracy” whether an individual will engage in violent extremism. Although many factors and indicators may indeed be shared among individuals from different time periods and ideologies, radicalization is a complex process with multiple, uniquely evolving pathways to violence (Hamm & Spaaij 2015; Horgan et al. 2016; Klausen 2016; LaFree 2015; Smith 2016). Furthermore, the presence of protective factors can insulate and buffer an individual’s resilience to radicalization into violent extremism as well. Protective factors for engaging in violent extremism, according to Borum (2015, p. 66), are characteristics “that reflect a person’s commitment to conventional norms against terrorism, and that involve activities incompatible with terrorism and militant extremist activity.” Borum states that the field of violent extremism research has not yet adequately identified and validated an empirical list of protective factors that mitigate against engaging in extremist violence, although “rigorous research exists on risk and protective factors for other forms of violence” (Borum 2015, p. 66). Smith (2016) agrees with Borum’s suggestion that more work needs to be done to identify protective factors, although some existing assessment tools for violent extremism—namely the ERG 22+ and VERA 2—do include suggested protective factors (Lloyd & Dean 2015). Examples of potential protective factors that need further validation may include being married, having stable employment, and having no previous history of violence. The importance of understanding protective factors is recognized elsewhere in violent extremism studies literature by Hoffman (2006), Horgan (2009), and Jacobsen (2010).

In recent years, there has been an increased focus on dynamic risk factors and protective factors. Traditional risk assessment tools often measured static risk factors, which are unchanging elements of the individual including past criminal history or nationality. More recent tools have moved toward the inclusion of dynamic factors—changeable, malleable characteristics—in risk assessments (DeMatteo et al. 2016). Examples of dynamic factors may be attitude-based (e.g., antigovernment, pro-criminal, “us versus them”), social (e.g., type of friends, number of close relationships), or behavioral (e.g., substance abuse, stockpiling weapons). Dynamic factors can change over time as a person’s belief system or behaviors evolve, but they can also be changed through interventional methods. The inclusion of dynamic risk factors and protective factors is the result of the adoption of a more therapeutic and protocol-based approach to risk assessment that includes plans for treatment and rehabilitation.

3.3 Common Risk Factors and How They Are Determined

Several projects have attempted to empirically identify risk factors associated with committing extremist violence with varying degrees of scientific success. Smith (2016) evaluated four such projects sponsored by the National Institute of Justice: a project conducted by the National Consortium for the Study of Terrorism and Responses to Terrorism (START), a project conducted by the University of Arkansas, a project led by Indiana State University, and finally a project hosted by the University of Massachusetts Lowell. Both the START and the University of Arkansas projects analyzed lone actors and group actors and made comparisons to nonviolent extremists. The other two projects did not have comparison groups and only looked at lone-actor extremists. All four projects included individuals with various ideological motivations. Smith's study is one of the more significant investigations of risk factors of violent extremism because it compared four projects working independently, and it compared risk factors identified in these studies to risk factors included in existing assessment tools for violent extremism—the ERG 22+, VERA 2, and HCR-20.

Smith (2016) consolidated the findings of each of these studies into a series of tables displaying potential risk factors associated with engaging or attempting to engage in extremist violence. The factors identified in the START and the University of Arkansas projects include the following characteristics and experiences:

- Having a history of criminal violence
- Having a violent extremist friend
- Being a member of a clique of like-minded individuals
- Having psychological issues
- Having less education
- Having trouble in romantic relationships
- Being distant from one's family
- Being younger
- Having a criminal history
- Being a member of a violent extremist group for an extended period
- Being unemployed
- Having a lower social economic status
- Having trouble in platonic relationships
- Being a loner
- Having military experience
- Having been involved with a gang or delinquent peers
- Having a deep commitment to an extremist ideology
- Having sporadic work history
- Failing to achieve one's aspirations
- Having been abused as a child
- Having been abused as an adult
- Being single
- Being a lone actor
- Being male

Smith notes that all the relationships between individual risk factors and engaging or attempting to engage in extremist violence were tested independently of one another, and the result of the interaction of multiple factors remains unclear. In other words, to what degree and extent these factors amplify one another or sum to a total is unknown.

Considering only lone actors, the Indiana State University and University of Massachusetts Lowell studies identified 11 risk factors:

- Being male
- Being single
- Being unemployed
- Having a criminal record
- Living alone
- Having at least a bachelor's degree
- Having received a diagnosis of schizophrenia or delusional disorder
- Having military experience
- Having personal and political grievances
- Having an enabler
- Being socially isolated

Three of these factors (living alone, being socially isolated, and having at least a bachelor's degree) were found to be statistically more prevalent among lone actors than the general population (Smith 2016). It is apparent, however, that many of these characteristics are shared by individuals who never engage in violent extremism or violence, or even become radicalized.

These findings underscore the notion that there is no single profile or pathway to violent extremism, and that risk assessments should instead look to assess indicators. An indicator is a behavior or characteristic that provides possible evidence of conspiring, having conspired, or having committed a violent extremist act. Smith (2016) notes that the lone actor studies conducted by the University of Massachusetts Lowell and Indiana State University isolate seven distinct behaviors leading up to lone-actor attacks:

- Others are aware of individual's grievance
- Others are aware of individual's extremist ideology
- Broadcasting intent
- Expressing a desire to hurt others
- Producing public statements about extremist ideology or grievance
- Verbalizing intent to family or friends
- Stockpiling weapons

Many of the risk factors for lone-actor extremist violence identified in the studies analyzed by Smith are also present in other studies, such as that conducted by Gill, Horgan, and Deckert (2014), who examined a sample, risk factors, and indicators that overlap with the University of Massachusetts Lowell study discussed above. Some of these factors include

previous military history, being male, and living alone. However, they conclude that despite similarities, “no clear profile emerged from the data” (p. 433). Of note, however, Gill and colleagues state that 83% of offenders in their sample broadcast their grievances, 79% broadcast their commitment to a specific ideology, 64% of lone actors told a friend or family member of their intent to engage in extremist violence, 58% of lone actors told another person(s) about their specific plans, and in 59% of cases the individual made a public declaration of his intent to commit an act of extremist violence. These findings suggest that, although a clear profile of violent extremist offenders does not exist and is improbable to be discovered, there may be indicators that an individual might be planning to commit an act of violence. This suggestion highlights the need to have clearly delineated uses for individual assessment tools. For example, some tools may be suitable for ascertaining the degree to which an individual is becoming radicalized, but not whether the person is pursuing violent expressions of radicalization. Similarly, a tool measuring proclivity to engage in violent behavior may not be able to measure radicalization.

4. RISK ASSESSMENT TOOLS

4.1 Different Types of Assessment Tools: Clinical, Actuarial, and Structured Professional Judgment

Borum (2015, p. 64) frames individualized risk assessments as “a problem to be solved, rather than as a prediction to be rendered.” In other words, risk assessments cannot predict future behavior but can identify certain characteristics an individual possesses, according to his or her life history and current disposition, which may provide an indication of the likelihood to engage in the outcome of interest.

The methods by which professionals identify, quantify, or qualify the results of an assessment have been discussed at length in the literature (Borum 2015; Dernevik et al. 2009; Dolan & Doyle 2000; Lloyd & Dean 2015; Monahan 1984). On one end of the spectrum is the unstructured clinical judgment risk assessment in which a professional uses his or her best judgment to evaluate which risk factors are relevant and the importance of those risk factors without the aid of any formalized rubric or protocol. This approach usually leads to a yes/no type evaluation indicating whether the person is likely to engage in the behavior. One advantage of this approach lies in its flexibility to tailor specific evaluations to individual cases based on the given context of the situation. This method has been criticized for its lack of “interrater reliability, low validity and failure to specify the decision-making process (Monahan & Steadman 1994; in Dernevik 2009, p. 304). Previous research has shown that predictions based on unstructured professional judgments are only slightly better than chance (Mossman 1994). This method appears to be plagued by errors typically observed in human judgement, including incorrect beliefs about the validity of risk factors, suboptimal weighting of risk factors, and the inability to correctly factor the low base rate of violent behaviors into the assessment (Scurich 2016). However, Fuller and Cowan (1999; in Dernevik et al. 2009) have shown that multidisciplinary teams’ rates of successful predictions of risk can be comparable with actuarial-based protocols over similar temporal periods.

On the other end of the spectrum, actuarial methods rely on protocols that use correlations between risk factors and violence to determine how much weight to assign each risk factor. Actuarial assessments allow assessors to make decisions based on predetermined relationships and weighting (Meelk 1954 in Dernevik et al. 2009). This method operates on a limited set of common risk factors, which aids in consistency in evaluation from one individual to another. In general, actuarial risk assessments have been shown to be more accurate than unstructured clinical judgment (Grove et al. 2000; Mossman 1994). However,

some (Hart 1998a,b) have argued that actuarial methods do not effectively account for individual variation, focus primarily on static variables, and minimize the role of professional judgment. Others have identified concerns over the generalizability of these tools (Douglas & Reeves 2009).

The debate over whether actuarial or clinical assessments are more reliable in predicting violent behavior has led researchers and practitioners to adopt a hybrid approach that attempts to maximize the strengths of both while minimizing the weaknesses (Borum et al. 1999; Dolan & Doyle 2000). This approach is known as structured professional judgment (SPJ). SPJ assessments include variables shown to have been empirically related to violence in the literature. Borum (2015, p. 63) points out that, "A structured assessment process that is systematic, transparent, and reliant on current evidence would serve the interests of both procedural fairness and substantive security, but a simple process of tallying risk factors is unlikely to be effective." SPJ instruments provide a list of variables, supported by empirical evidence, but stop short of providing the tally that Borum warned about. Instead, each item is rated on a scale (typically ranging from "not present" to "definitely present"), and the evaluator is left to use his or her judgment about the relevance of each factor and the overall level of risk based on the available information. This type of assessment is lauded by many in the literature because of its flexibility for use with a variety of samples (Scurich 2016), improved accuracy over unstructured clinical judgment (Douglas 2009), and appreciation for the role of protective factors (Dolan & Doyle 2000). Although they are an improvement over unstructured clinical judgment and actuarial assessments, SPJ tools do have drawbacks, including the need for an experienced evaluator, inconsistent weighting of risk factors across evaluators, and limited increase in validity compared to simple sum scores (Strub et al. 2014).

A recent survey of mental health professionals identified more than 200 unique instruments being used to assess violence risk across 44 countries. Another 200+ instruments were reported to have been developed for personal or institutional use (Singh et al. 2016).

Table 1 provides a summary of some of the more commonly used actuarial and SPJ risk assessment instruments, including those used for more general violence risk assessments and those developed specifically for violent extremist use (highlighted in grey).

Table 1. Commonly Used Violence Risk Assessment Tools

Tool	Items	Intended Use
Actuarial Assessment Tools		
Classification of Violence Risk (COVR)	Varies	Predict the likelihood of violence in adult psychiatric inpatients upon release.
Level of Service Inventory – Revised (LSI-R)	54	Predict general recidivism in adult offenders.
Psychopathy Checklist – Revised	20	Diagnose psychopathy in adult forensic populations.
Violence Risk Appraisal Guide (VRAG)	12	Predict likelihood of violence in mentally disordered adults with history of violence.
Violence Risk Scale (VRS)	26	Predict likelihood of violence in adult psychiatric patients.
Structured Professional Judgement Assessment Tools		
Extremism Risk Guidance Factors (ERG 22+)	22	Assess risk and needs in convicted extremist offenders and other offenders for whom there are credible concerns about their potential to commit extremist offences.
Forensisches Operationalisiertes Therapie-Risiko-Evaluations-System (FOTRES)	Varies	Assess and manage violent recidivism risk for specific offense in adults.
Historical, Clinical, Risk Management-20	20	Assess and manage violence risk within correctional, civil psychiatric and forensic psychiatric settings.
Historisch, Klinisch, Toekomst-30 (HKT-30)	30	Predict likelihood of violent recidivism in mentally disordered adults.
IAT8	8	Assess whether intervention work is affecting the level of vulnerability to radicalization.
Multi-Level Guidelines (MLG)	20	Assess and manage group-based violence.
RADAR	15	Identify individuals who would benefit from services to help them disengage from violent extremism.
Short-Term Assessment of Risk and Treatability (START)	20	Predict likelihood of violence, suicide, self-harm, and self-neglect.
Structured Assessment of Protective Factors for Violence Risk (SAPROF)	17	Supplement other assessments by providing measure of relevant protective factors.
Structured Assessment of Violence Risk in Youth (SAVRY)	30	Predict likelihood of violence in adolescents.
Terrorist Radicalization Assessment Protocol (TRAP-18)	18	Assess risk of individuals engaging in lone-actor terrorism to assist threat assessors with prioritizing cases for risk management.
Violence Risk Screening-10 (V-RISK-10)	10	Quickly identify psychiatric patients for violence risk and identify those in need of further assessment.
Violent Extremist Risk Assessment -2 (VERA 2)	31	Assess the likelihood of future violence by an identified offender who has been convicted of unlawful ideologically motivated violence.
WAVR-21	21	Assess workplace and campus targeted violence risk.

5. ASSESSMENT TOOLS SPECIFIC TO CVE

Borum (2015) argues that existing SPJ tools for violence in general assume a linear cumulative risk model. In other words, more risk factors present equates to a higher risk of engaging in violence, which is not necessarily true for engaging in extremist violence. Pressman (2009) argued that existing risk assessment tools were an effective way to assess future violence, but were inadequate for assessing violent extremism risk because they in no way account for the background and motivations of ideologically motivated individuals. For these reasons, researchers have been working to develop violent extremism-specific assessment protocols that take advantage of the known strengths of general risk assessment tools but prioritize extremist-specific characteristics over those of individuals likely to commit more general violent acts.

Although risk assessments that attempt to predict general violence are plentiful, the applicability of such instruments for use with violent extremists has been called into question. Specifically, the developers of the HCR-20, one of the most commonly used violence risk assessment tools, have been very clear that its use should be limited to historically violent individuals displaying characteristics of mental illness or personality disorder (Webster et al. 1997). Similarly, Dernevik et al. (2009) suggest that findings and tools developed using offenders with mental illness and generally violent behavior are not applicable to cases where the individual is politically or ideologically motivated.

Roberts and Horgan (2008) called for systematic research to identify the links between risk factors and terrorism as a prelude to the development of tailored risk assessment tools. They argued for the development of empirically valid risk assessment models for terrorism, identifying both the outcomes to be predicted and the risk and protective factors associated with the increase (or decrease) in the likelihood of those outcomes. Monahan (2012) examined several major risk factors for violence studied in the literature and compared the evidence surrounding these factors as they relate to terrorism. He concluded that little to no overlap exists in risk factors for common violence and risk factors for terrorism and indicated that research had largely failed to identify any useful risk factors for terrorism. He did, however, identify four categories of variables that could prove to be valid risk factors for terrorism: (1) ideology, (2) affiliations, (3) grievances, and (4) moral emotions. In a later summary of the findings related to these variables, Monahan (2015) suggested a fifth category he termed "identities," which can be described as a feeling of oneness with a chosen group or cause. Each of these categories has received at least some support over the years.

Monahan (2012) has been critical of the lack of valid risk factors identified by the research community and the inability to assess the risk of extremist violence rather than common violence. One exception that he called out was the Violent Extremism Risk Assessment (VERA), developed to specifically assess the risk of violent extremist behavior (Pressman 2009). At the time, the VERA was on the cutting edge, representing the first known effort to develop a violent extremism-specific tool. Around the same time the VERA was being developed, researchers in Europe were investigating the use of general violence prediction models with individuals convicted of politically motivated offenses (Dernevik et al. 2009). They focused on identifying extremist actors before they turned violent. The conclusions drawn were consistent with the findings of others, specifically, that common violence risk assessment procedures were of limited utility with this population.

5.1 The Violent Extremism Risk Assessment

The VERA was designed and developed to fill the need for a tool to assess the risk of violent political extremism. The VERA was modeled after other existing violence risk assessment tools, most notably the HCR-20 and the SAVRY, to be an empirically grounded SPJ instrument. Using the thinking laid out by Roberts and Horgan (2008), the developers of the VERA sought to identify empirically valid risk factors for terrorism and political extremism. A list of factors relevant to political, religious, and ideological extremism was compared to the most commonly used general violence risk assessments (HCR-20 and SAVRY) to identify overlap (Pressman 2009). Most items used to assess the risk for common violence were unrelated to the risk factors for violent political extremism. These findings supported the development of a tool specifically designed to measure the risk of violent political extremism.

The VERA consisted of 28 items categorized into five sections: (1) Attitude Items, (2) Contextual Items, (3) Historical Items, (4) Protective Items, and (5) Demographic Items. Attitude Items represent thoughts or beliefs that increase the likelihood of violent political extremism and terrorist behavior. Contextual Items examine the impact of individuals' social environments and social links to known extremist groups. Historical Items refer to violent actions in the past or an indication of approval for violence. Protective Items are those aspects of a person's life that may prevent or lessen the likelihood of participation in violent acts. For the VERA, these include a weakening of extremist ideas or increased social support. Finally, Demographic Items refer to sex, age, and marital status, all of which have been shown to be risk factors for terrorism (Monahan 2012).

In 2010, the VERA was modified based on feedback from users, and the VERA 2 was released (Pressman & Flockton 2010). The VERA 2 contains indicators associated with 25 risk factors and 6 protective factors. The four main areas of risk factors were renamed to represent updates and included (1) Beliefs and Attitudes, (2) Context and Intent, (3) History and Capability, and (4) Commitment and Motivation. The protective items section expanded slightly from the original VERA, adding one indicator to cover experiences in deradicalization programs and separating family and community support for nonviolence into two indicators.

Pressman and Flockton (2010) identify evidence to support the inclusion of each of the 31 indicators present on the VERA 2. In addition, many of the indicators closely align with the five categories of promising variables identified by Monahan (2012, 2015). Specifically, Ideology (commitment to ideology justifying violence), Affiliations (personal contact with violent extremists), Grievances (perceived victim of injustice and grievances), and Moral Emotions (feelings of hate, frustration, persecution, alienation) all have items that directly identify the presence of these concepts.

The VERA 2 is generally used in post-conviction, high-security settings with individuals convicted of extremist violence. It has been suggested that the VERA 2 could be of use in information-gathering investigations or in other correctional facilities; however, the developers stress that it is not a panacea for the prediction of radical violence and should be used only as a supplement to existing risk assessment strategies (Pressman & Flockton 2012).

5.2 Multilevel Guidelines for the Assessment and Management of Group-Based Violence

Although the VERA 2 takes social and contextual aspects of the individual's environment into consideration, it is primarily an individual-level approach to assessing risk of violent extremism. That is, characteristics and behaviors that are associated with the individual form the basis for the assessment. The social psychological perspective of violence holds that group membership, group behavior, and group-level factors are likely to play some role in an individual's decision to commit extremist violence (Cook et al. 2013; Pynchon & Borum 1999). Pynchon and Borum (1999) suggest that an examination of the potential impact of group behavior and group membership on individual extremist behavior is necessary given our understanding of the influence that groups and group membership have on behavior in general. Additionally, Cook et al. (2013) identified the need to incorporate both individual and group risk factors into a comprehensive violence risk assessment approach. The result

of this effort was the Multi-Level Guidelines (MLG), a set of SPJ guidelines for assessing group-based violence (e.g., gangs, criminal networks) using both individual- and group-level factors.

The MLG is based on a model of violence risk factors identified in the group-based violence literature. The model consists of four domains of risk factors: (1) Individual, (2) Individual-Group, (3) Group, and (4) Group-Societal. Individual risk factors are independent of group membership and focus largely on the history and previous behavior of the person being assessed. Individual-Group factors are based on the individual's membership in the group and aim to measure the attitudes of the individual and his or her role within the group. Group factors are characteristics of the group's culture. The fourth domain, Group-Societal factors, captures the interplay between the group and society, including the presence of other groups which may be impacting beliefs or behavior. These domains are presented as a nested model with each domain being a member of each subsequent domain (e.g., the individual is contained within the Individual-Group dynamic and so on). Using this model, Cook et al. (2013) identify risk factors for violence within each of the domains.

The MLG is composed of 20 risk factors spread across the four domains identified within the original model. Specifically, the MLG contains six individual, four individual-group, six group, and four group-societal risk factors. Cook et al. (2015) compared and contrasted the content of the MLG with that of the VERA 2 and the HCR-20. For this review, the overlap of the MLG and VERA 2 are of the most interest. The items from both instruments were mapped onto the model of violence risk factors developed in conjunction with the MLG guidelines (Cook et al. 2013). Within the individual domain, the content of the two instruments clustered in the following areas: individual history of violence, adverse childhood experiences, problems fitting in with society, capacity for violent actions, and antisocial orientation. The individual-group domain showed similarities between the instruments related to extremist orientation, dedication to the group/cause, and negative attitudes toward others. Given that the MLG contains two additional domains that are based on group culture and group-society interactions, one would not expect much overlap in these domains. That expectation was confirmed.

5.3 Structured Guidelines for Assessing Risk in Extremist Offenders

As discussed above, around the same time the VERA was being developed, researchers in Europe were investigating how to identify extremist actors before they turned violent (Dernevik et al. 2009). In the United Kingdom, the National Offender Management Service (NOMS) sought an empirically based, transparent method for assessing the risk of future

extremist offenses among offenders to assist with identifying interventions and treatment needs (Lloyd & Dean, 2015). NOMS convened a panel of experts in the fields of risk assessment and terrorism to assist with the development of this new methodology.

The first steps toward the development of the Structured Risk Guidance (SRG) tool involved individual case review of offenders. The goal was to identify what needs within the individual offenders were being satisfied by their extremist behavior and to match these with factors identified in the terrorist/extremist literature. In addition (and likely because of the presence of one of the MLG developers on the advisory panel), NOMS elected to focus not only on the individual, but also on social support and the influence of groups over the individual. Ultimately, 21 factors were identified as common among the convicted extremists that were initially studied. The factors were distributed among four dimensions (1) beliefs, (2) motivations, (3) intent, and (4) capability.

The SRG was shared with users, and casework with known offenders continued. Based on user feedback and the additional casework knowledge, the SRG was revised and ultimately developed into the Extremism Risk Guidelines (ERG). The ERG retained many of the same risk factors from the original tool, with some minor changes. The ERG categorizes risk factors among three dimensions: (1) engagement (a combination of beliefs and motivations from the SRG), (2) intent, and (3) capability. The ERG, developed using Ajzen and Fishbein's (2005) Theory of Reasoned Action to explain extremist offending using the belief-intent-action continuum, maintains clear delineation among those three dimensions. Engagement refers to contact, interaction, or the development of beliefs consistent with an ideologically motivated group. Here the attitudes, behaviors, and group norms necessary for the development of behavioral intent are cultivated. Intent provides a measure of the readiness level or potential to offend. This dimension includes factors examining both the individual's mental state and plans for action or outcomes. The third dimension, capability, contains risk factors that point to the person's knowledge, skills, and abilities for committing extremist offenses and their past criminal history.

The ERG has developed over time into the ERG 22+. The number 22 refers to the number of risk factors spread across the three dimensions. The "+" is used to signify that the instrument is not simply a checklist of risk factors, but rather a process in which assessors take a myriad of factors into consideration. Guidance documents for the ERG 22+ instruct assessors to consider context and personal attributes of the offender in their assessment. In addition, other relevant factors may be identified as contributors or deterrents for extremism. The idea that aspects of the individual or his or her environment may increase

or decrease the likelihood of extremist offenses is consistent with the concept of protective factors observed in the VERA 2.

The ERG 22+ and VERA 2 are similar in some aspects but also display some key differences. The ERG 22+ was developed to assess the likelihood of an individual committing any criminal act on behalf of a group or cause promoting extremist views, whereas the VERA 2 focuses on extremist violence. Although there is some overlap in the dimensions assessed, the tools were developed for different uses, and thus, for example, the ERG 22+ contains no indicators that relate specifically to violence.

5.4 RADAR

The Australian government also saw the need for a risk assessment tool to help combat the terrorist threat. However, unlike the VERA 2, the MLG, and the ERG 22+, the Australians set out to develop a tool that would delineate the observable steps in the process of radicalization so that the individual could be directed to existing state programs to prevent them from committing extremist offenses. Much like the ERG 22+, RADAR is a protocol designed to systematically document all aspects of a person and his or her environment. All of this information is taken into account for decision-making purposes. The protocol consists of two assessments, a screening assessment and an in-depth assessment.

The screening assessment contains 15 indicators across three dimensions: (1) Ideology, (2) Social Relations, and (3) Action Orientation. These dimensions correspond to the three segments of a person's life where they are likely to experience significant shifts during the radicalization process. Ideological shifts are changes to the beliefs and attitudes of individuals during radicalization. Social relations refer to the impact that others including family, groups, and close contacts have during the radicalization process. Finally, Action Orientation is identified as taking an "us versus them" attitude, growing suspicious or hateful of others, and the increased commission of minor crimes with possible escalation over time. Each of these three dimensions is well documented and is represented by risk factors or indicators within each of the assessments tools discussed in this section. RADAR also implements a measure of intensity for each indicator varying from Notable (minor) to Concerning (moderate) to Attention (major) levels of intensity. The division of indicators into varying intensity levels allows assessors to factor in how far along the radicalization continuum the person may be. In addition to the 15 indicators, the screening assessment includes three protective factors (presence of influential/supportive family member, past example of societal engagement, generally not violent) for consideration.

If warranted, based on the results of the initial screening, individuals may undergo an in-depth risk analysis. The in-depth analysis contains 27 indicators arranged around the same three dimensions present in the screening tool. The in-depth analysis requires the gathering of significant details surrounding each indicator to allow for a panel review. Subsequent phases of the protocol, namely the intervention and follow-up stages, incorporate measures of coping and identity to assess the ability of the individual to function post-radicalization and the level of disengagement from the ideology.

Research using the RADAR or direct comparisons to other existing instruments is not available in the published literature. As indicated above, significant overlap exists among the dimensions and indicators present in this and other tools. However, the RADAR differs in that it was specifically designed to identify those at risk for radicalization early in the process. The RADAR is used to identify high-risk individuals who would benefit from programs designed to prevent radicalization, as opposed to trying to predict the likelihood of low base rate violent actions.

5.5 Terrorist Radicalization Assessment Protocol

Building on the foundational risk assessment literature and threat assessment approaches developed by the U.S. Secret Service, researchers have identified patterns of behavior temporally adjacent to acts of targeted violence (Meloy & O'Toole 2011; Meloy et al. 2012, 2014, 2015). Specifically, behavioral patterns that typically immediately precede an act of targeted, nonrandom violence—what they refer to as “warning behaviors”—have been identified to allow law enforcement to better direct resources and attention toward actors who are further along the pathway to violence. These behaviors have been identified primarily through casework on lone-actor offenders including terrorists, school shooters, workplace shooters, and others who have perpetrated violence against a specific target. The central thesis of this approach is that by identifying behavior patterns as they relate to the timeframe of an attack, law enforcement and mental health professionals will be better able to determine the appropriate level of monitoring versus active risk management needed. The developers also hypothesize that these warning behaviors, when supplemented by indicators of characteristics associated with lone-actor terrorism in previous research, may be more useful for identifying lone-actor terrorists than other approaches.

Rather than taking a dimensional approach as the previously discussed instruments have, the Terrorist Radicalization Assessment Protocol (TRAP)-18 examines two broad categories of indicators: (1) warning behaviors and (2) distal characteristics. The TRAP-18 model identifies eight proximal types of behavior, observable in varying patterns, commonly

observed immediately preceding the expression of targeted violence. The presence of these behaviors indicates a warning; consistent with common meteorological parlance, this means that the violent act may be imminent and the individual should be involved in active risk management. In addition to the warning behaviors, the TRAP-18 is used to assess 10 distal, more dynamic characteristics identified in the terrorism literature. These characteristics are commonly observed in individuals with the potential for extremist action, but are not necessarily indicative of those who are about to commit violent acts. A brief description of the warning behaviors and distal characteristics is provided in **Table 2**.

Table 2. Warning Behaviors and Distal Characteristics Assessed Using the TRAP-18 Protocol

Behavior/Characteristic	Description
Warning Behaviors	
Pathway	Researching, planning, or preparing for the violent act.
Fixation	Increasing interest (preoccupation) with a person, cause, or target.
Identification	Developing a desire to be a warrior, commando, or emulate the behavior of others who have committed violent acts.
Novel Aggression	Initial violent action that appears unrelated to the target.
Energy Burst	Increasing activities related to the target, even if they seem harmless.
Leakage	Communicating intent to a third party.
Last Resort	Behavior exhibiting crucial need for violence or taking action.
Directly Communicated Threat	Communication of a direct threat to the target.
Distal Characteristics	
Personal Grievance and Moral Outrage	Loss of something important, identification with a group that has been violated/suffered.
Framed by Ideology	Presence of beliefs that justify intent to act, may be religious, political, or single issue beliefs.
Failure to Affiliate	Failure to make contact or rejection from extremist group.
Dependence on Virtual Community	Active communication with others through virtual networks, including learning new techniques and/or posting opinions/rants.
Thwarting of Occupational Goals	Failure at academic or professional goals.
Changes in Thinking and Emotion	Development of more concrete beliefs with little questioning of extreme ideas. Belief in superiority of self or ideas.
Failure of sexual-intimate pair bonding	Failure to develop significant intimate relationships or sexualizing violence.
Mental Disorder	Past or present symptoms of major mental illness.
Greater Creativity and Innovation	Tactical thinking.

The TRAP-18 developers have identified the tool as an investigative template and stress that it has not been tested well enough to be considered an assessment tool (Meloy & Gill 2016). They also suggest that the TRAP-18 be used in conjunction with other tools (specifically the VERA 2 and MLG) to allow for improved accuracy through multiple methods (Meloy et al. 2015). Early research, however, has been promising. Application of the TRAP-18 to a set of 22 lone-actor European terrorists showed indications of good interrater reliability and positive initial assessments of content validity (Meloy et al. 2015). Meloy and Gill (2016) conducted an initial assessment of the criterion validity of the TRAP-18 using data from 111 lone-actor terrorists from the United States and Europe. In addition, a study by Meloy et al. (2014), using a data set of school shooters and other students of concern who did not commit violent acts, provided some support for the discriminant validity of the instrument's warning behaviors through its ability to discern school shooters from others. The developers have called for additional research into the limitations and utility of the TRAP-18 (Meloy & Gill 2016).

5.6 IAT8

The United Kingdom's Channel program is designed to provide early-stage support for those identified as vulnerable to being radicalized or drawn into committing violent extremist acts. To support the existing components and projects within Channel, the UK developed the IAT8 to serve as an assessment framework or improvement metric to measure the ongoing vulnerability of individuals receiving services through Channel. The IAT8 is intended for ongoing measurement, primarily at the following four stages: (1) the start of support, (2) during support, (3) end of support, and (4) post-support follow-up. Using these milestones as points of measurement, the individual's level of vulnerability can be assessed to provide evidence of the efficacy of the program.

The IAT8 measures an individual's risk using vulnerability and protective factors. Vulnerability factors are influences believed to make the person more vulnerable to radicalization and include both push factors (within individual characteristics) and pull factors (external influences). Protective factors, as defined earlier, are also considered on the IAT8. Each of the eight dimensions is assigned both vulnerability and protection ratings on a 0-3 scale (not evident to strongly applies). Vulnerability indicates a situation where the factor is present and may lead to an increased likelihood of radicalization. Protection circumstances for each factor are indicative of positive influences or outcomes that are

relevant to the factor (e.g., a therapeutic relationship with a professional that would result in healthier attitudes or beliefs, a mentoring relationship, or starting a new activity which serves as a deterrent).

The IAT8 is largely used as a framework for evaluating the effectiveness of programming to reduce vulnerability to extremist ideologies. The repeated measures nature of the instrument lends itself to measurements of within-person changes in vulnerability over time as the person progresses through the relevant program. However, the factors assessed as part of the IAT8 are consistent with those in use on other tools currently available.

6. CHALLENGES ASSOCIATED WITH CREATING A RISK ASSESSMENT TOOL FOR VIOLENT EXTREMISM

There are numerous challenges to developing tools accurate and precise enough to practically and authoritatively measure the risk of an individual engaging in extremist violence. Despite similarities between convicted violent extremists identified in the literature (Borum 2011, 2015; Dernevik et al. 2009; Gill et al. 2014; Grunewalde et al. 2013; Hamm & Spaaij 2015; Horgan 2008; Kruglanski et al. 2008; Roberts & Horgan 2008; Silber & Bhatt 2007; Smith 2016), most researchers and practitioners from private, academic, and federal organizations support the assertion that there is no single profile for or pathway to violent extremism (Borum 2011; Department of Defense 2012; Gill et al. 2014; Hamm & Spaaij 2015; Horgan 2008; Kruglanski & Fishman 2006; Silber & Bhatt 2007; Van der Valk & Wagenaar 2010). Borum et al. (1999, p. 328) argue that the profiles of those at risk for engaging in relatively rare types of violence will never be “sufficiently specific or sensitive” and there will be a large majority of individuals who fit these profiles but who will never engage in violence. Gill et al. (2014, p. 433) supported this claim over a decade later stating, “even if such a profile were evident, an over-reliance on the use of such a profile would be unwarranted because many more people who do not engage in lone-actor terrorism would share these characteristics.” For assessment tools for violent extremism to have any authority, they must be empirically validated. None of the existing tools have been validated, in part because extremist violence is a relatively rare occurrence and its perpetrators are often either killed in the act or arrested and unavailable for interview by researchers (Borum 2015; Department of Defense 2012; Hamm & Spaaij 2015; Roberts & Horgan 2008). Furthermore, motivations for engaging in violent extremism may be dependent on varying cultural and historical contexts, making further analysis of relevant risk factors associated with radicalization and violent extremism even more difficult to statistically analyze.

6.1 Validation

As Roberts and Horgan (2008) pointed out with respect to other areas of criminal justice, the development of “evidence-based, empirically valid risk assessment tools not only aid resource prioritization but can aid attempts to manage a variety of diverse hazards” (p. 8). For this reason, they believe the development of risk assessment models specifically for terrorism is a worthwhile endeavor. The existence of tools that can be used to specifically assess the risk of extremist violence, group-based violence, radicalization, and lone-actor terrorism provide evidence of our ability to identify behavior-specific risk factors from the

extant literature and ongoing case studies. These risk factors have more face and content validity and initially appear more useful in the context of violent extremism than those used in general violence risk assessment tools. The main criticism of these newly developed tools is the lack of published evidence to support their criterion-related validity (Cook et al. 2014; Monahan 2012, 2015). Cook et al. (2014) point out the need for additional research to assess the predictive validity (does the tool predict the intended outcome, e.g., future violence), concurrent validity (is the tool related to other similar tools), and discriminant validity (does the tool correctly distinguish those who engage in the outcome of interest from others who do not). Although some initial work has been done in this area (Meloy & Gill 2016; Pressman & Flockton 2012), the validation methods are less than ideal because of the lack of representative control groups and a dependence on data sets primarily developed by coding open source materials.

Monahan (2015) discussed the lack of any real-world context in which these types of instruments could be validated in the same way common violence assessments are validated. Validation of these instruments often employs a predictive or proscriptive approach where a large group of subjects are assessed using the instrument and are then monitored to determine which of them commits the violent act of interest. These instruments are often validated in mental health facilities or using prison populations where the subjects will be released at some point or where the behavior of interest can occur within the facility. Because of national security concerns, potential terrorists are unlikely to be released to meet the needs of a validation study, and the incredible rarity of the events of interest makes validation within the general population an impossibility.

Given these limitations, the most suitable method for validation is the use of “known group” methods comparing extremists to non-extremists (Monahan 2012). Researchers in the field lament the inability to interact with individuals of interest (known terrorists/extremists) and the reliance on coded datasets, often culled together from case studies using media sources (Monahan 2015; Sageman 2014). Often the data need not have been collected or have been coded by other researchers and may not be useful for answering specific research questions. Sageman (2014) blames the duality within the field (analysts have information but lack the know-how while academics have the know-how but not the information) for the “stagnation” of terrorism research. Monahan (2015) believes that “studying terrorism without studying terrorists is ultimately a futile enterprise” (p. 22). Still, others march on, using data sets of known violent actors (terrorists, extremists, school shooters, assassins) to provide some evidence of validity.

Even with access to known terrorists, validation studies for extremist violence assessments would not be without challenges. The extremely rare occurrence of these events results in very few observations for study, calling into question any probabilistic or statistical outcomes, which are likely to be suboptimally derived. The limited number of known terrorists also creates respondent burden and fatigue issues, leading to decreased cooperation or lower quality data. Another challenge with using known terrorists that raises ethical questions is determining how participation can occur without those who are incarcerated feeling as though they are participating under duress.

In addition, though validation attempts with existing instruments are consistently conducted by their developers, they are rarely published. Developers have significant concerns about granting access to their tools to outside researchers. There are several explanations for not wanting to share the tools (e.g., security, concerns over proper use, intellectual property); however, the lack of transparency raises concerns about confirmatory biases (Meloy & Gill 2016) and calls into question the transferability of the tool to other environments.

6.2 Defining the Target

A more basic issue that must be addressed involves the standardization of definitions and concepts within the larger violent extremism literature. The lack of any universally accepted definition of terrorism creates confusion that affects both theory development and measurement (Freilich & LaFree 2016). Data sources used for research group analyses are often flawed based on inconsistent coding schemes, the use of variable and incomplete sources, and lack of clarity regarding the handling of missing data. Control group studies are plagued by the use of inconsistent comparison groups including non-extremist common violence offenders, nonviolent extremist offenders, violent offenders from other extremist groups, and the general population. Smith (2016, p. 8) points out that determining the appropriate comparison may depend on the purpose of the analysis being conducted: "For example, when the goal of an analysis is to inform practitioners responsible for assessing whether an individual may pose a threat of engaging in extremist violence in order to advise criminal justice agencies on appropriate follow-up actions (e.g., pursuing further investigation, engaging in specific tailored interventions, rehabilitating or releasing individuals who have been incarcerated), arguably it would be most appropriate to compare individuals who have engaged or attempted to engage in extremist violence with other extremists who have come to law enforcement or public attention but who have not engaged or attempted to engage in extremist violence. If, on the other hand, the goal of an analysis is to inform community members and practitioners interested in understanding

characteristics and experiences that may make an individual more vulnerable to radicalization to violent extremism to develop general prevention and/or early intervention efforts, it may be more appropriate to compare individuals who have engaged or attempted to engage in extremist activity with members of the larger population of non-extremists.” Effort needs to be taken to identify appropriate data coding structures and control groups for research.

Violence risk assessment tools also face the challenge of identifying exactly what they are designed to measure. Roberts and Horgan (2008) stress the importance of what they refer to as “hazard identification.” As we have seen in the development of psychological assessments that measure everything from general violence to very specific violent acts (e.g., sexual assault, bullying, spousal or child abuse), the identification of the outcome or hazard is critical to identifying valid risk factors and ensuring proper use of tools across contexts.

6.3 Legal and Cultural Concerns for CVE Assessment Tools

The United States is a pluralistic society comprising many cultures and subcultures, and each group and subgroup has experienced life through its own unique cultural lens. Accordingly, different cultures in the United States have varying attitudes and responses to government outreach, particularly in terms of law enforcement and the judicial system. Despite different experiences and outlooks, there are several values and practices that transcend these microcosms and generally define the American experience—namely rights afforded to citizens by the Bill of Rights.

When designing assessment tools and protocols for conducting assessments, it is important to balance individuals’ first amendment freedoms with concerns for public safety (Council of Europe 2015; Doosje et al. 2013; Horgan 2009; Kruglanski et al. 2008; Silber & Bhatt 2007; Smith 2016). Many domestic and international agencies have clauses in their policy guidelines specifically stating their commitment to upholding these freedoms. For example, guidelines created by the Directorate General Human Rights and Rule of Law for the European Committee on Crime Problems state that “[p]reventing and tackling radicalization and violent extremism shall always be based on the rule of law and shall respect human rights and fundamental freedoms” (Council of Europe 2015, p. 4). The New York Police Department report “Radicalization in the West” states that “[p]rotecting society against destruction, and if possible, diverting vulnerable young men from destructive and self-destructive paths...without trampling our freedoms [sic], requires greater understanding of the process that leads to terrorism” (Silber & Bhatt 2007, p. 12). In the United States and

indeed most culturally western democracies, individuals are free to have extreme and even radical views (FBI 2016; Smith 2016) so long as they are not participating in or inciting violence. In the 2016 report "Preventing Extremism in Schools," the Federal Bureau of Investigation (FBI states "[t]he difference between protected speech and illegal incitement can be a very fine line...The issue is not if the individual voiced his/her support, but rather has advocated imminent violence in support of an extremist organization and that violence is likely to occur as a result" (FBI 2016, p. 13). Similarly in the UK, Lloyd and Dean (2015, p. 41) argue that "individuals are free to hold any beliefs and to express dissent, but where there are democratic means to accommodate this they should not resort to breaking the law or to the use of violence." In other words, unless an individual has broken the law or there is compelling evidence that he or she will break the law, law enforcement is limited in its responses, and many community- and faith-based groups and advocates could object to the administration or prescription of any formal assessment for violent extremism. Interviews conducted by RTI in 2016 revealed that many stakeholders in the Arab American and Muslim American communities question the involvement of law enforcement in the precriminal phase of radicalization. Others stated a concern for being targeted by the FBI for investigation because of simply practicing their religion or attending mosque too frequently (RTI International 2016).

Culturally, Americans have very different responses to the government, particularly law enforcement. This is not to suggest that each individual member of a community shares the same opinions and experiences of the community at large, though. Nevertheless, it is important to consider how the design and application of an assessment tool for extremist violence will be accepted by the communities in which it is deployed. Particular consideration should be paid to avoiding any chance of further alienating a community or individual, or playing into an individual's reasons for becoming radicalized. For example, Victoroff (2005, p. 20; in Kleinmann 2012, p. 285) notes that many terrorists "cite injustices of their treatment by governments that rob them of their identity, dignity, security and freedoms as their motive for joining a terrorist group." Smith, Damphouse, and Roberts (2006, p. 112) point out that the infamous 1993 Waco incident inspired John Pitner to establish "a group that would protect people from government infringement on their rights and basic freedoms" in Washington state. Later several members of this group were arrested on firearms and explosive charges, underscoring the notion that some individuals who have not personally been wronged, but fear the potential of being oppressed by the government, can become radicalized and take steps toward contentious protest.

There are three groups of people who are generally protected by the law when working with potential violent extremists: lawyers, health care providers, and clergy. Any other individual or agency who attempts to “off-ramp” or deradicalize a potential terrorist is not necessarily protected from prosecution, a concern repeated by various CVE stakeholders (RTI International 2016). It is important to clearly provide protections for all those involved in preventing radicalization to violent extremism, as they are more likely to come forward to law enforcement should they become concerned about an individual. A Department of Defense report on predicting violent behavior published in 2012 indicates that in the aftermath of violent extremism attacks, “relevant information might have been known to co-workers, family members, or neighbors...in some cases information was known to medical or law enforcement personnel” (Department of Defense 2012, p. 7). The report continues to suggest that law enforcement officers, teachers, and medical providers often do not fully understand the Health Insurance Portability and Accountability Act and other privacy laws, leading to lack of information sharing between interested parties. For assessments to be conducted and prevention, rehabilitation, or reintegration programs to be designed, clear and open channels of communication must be created and supported through legal protections for those involved.

7. RECOMMENDATIONS

The following recommendations have been taken directly from the literature and serve to highlight the most pressing developmental needs for assessment tools related to violent extremism. It is important to note that there is not a “silver bullet” for assessing whether an individual will resort to violence. Furthermore, tools designed to assess the likelihood that an individual will adopt extremist beliefs may not necessarily be appropriate to determine a probability of engaging in extremist violence. Therefore, more than one tool may be needed to properly identify concerns and develop a plan for reducing unwanted behavior. Lastly, it is important to recognize that successful assessment tools from other fields, such as the Psychopathy Checklist, have taken decades to develop and validate; it is unlikely that an assessment tool for violent extremism can be perfected quickly.

7.1 Validation of Existing Instruments

As discussed above, there is currently a small set of risk assessment tools and protocols that have been developed to assess the risk that an individual will engage in extremist offenses (Lloyd & Dean 2015), extremist violence (Pressman 2009), group-based violence (Cook et al. 2015), or lone-actor terrorism (Meloy et al. 2015). There is considerable overlap in these instruments with respect to the types of risk factors and indicators measured. These tools have been designed independently for specific needs; however, they have been designed to measure similar constructs. As suggested by each of the developers of the various assessment tools and throughout the literature, we recommend continued research using these existing tools, particularly validation studies. To the extent possible, we recommend collaboration with and among the developers of these tools to ensure transparency of the research and to assess the generalizability of the tools across contexts.

7.2 Information Gathering Using Known Extremists

As Monahan (2015) notes, the study of terrorism requires the study of terrorists. Likewise, the study of lone-actor terrorists requires access to lone-actor terrorists, and so on. There are several restrictions that prevent researchers from having access to known offenders. However, steps should be taken to identify possible solutions for researchers seeking access to these individuals; this would help solve the issue of having the know-how but lacking information. We recommend identifying ways for researchers to access these known offender groups, or methods for information sharing or collaboration between analysts who have access to information and the research community.

7.3 Identify Primary Assessment Tool Needs

The violent extremism literature suffers from a significant amount of variation in the way concepts and targets are defined (Kruglanski et al. 2008; Roberts & Horgan 2008). The development of a violent extremism assessment tool requires careful consideration regarding what the outcome of concern is and the purposes of the tool. The history of violence risk assessment includes attempts to measure the likelihood of general violence, sexual assault, spousal violence, child abuse, targeted violence, treatment needs, radicalization, stalking behavior, and so on. For a tool to be effective, it must be designed for a specific end use. We recommend careful planning to identify the outcomes of concern (specific terrorist threat, mass murder, targeted violence, etc.), the types of decisions to be made based on the tool (resource allocation, assessing treatment needs, monitoring, etc.), and the context in which the tool would be used (public policing, incarcerated offenders, etc.). Although general violence risk assessment tools that could be applied to broad categories of people in a wide range of situations have some utility, they likely lack in precision. Furthermore, an assessment tool alone is not able to store historical information about a subject. Agencies and organizations performing risk assessments require a comprehensive system designed to collect, curate, recall, and disseminate information collected by first responders, other agencies, and by other interviewers.

7.4 Identify Relevant Risk/Protective Factors

Once the needs of the tool have been identified, research must be done to identify significant risk factors for the outcome of concern. Existing instruments have shown that risk factors may vary based on the behaviors being measured. Risk factor identification should skew toward more dynamic traits and temporally relevant behavior patterns as opposed to focusing primarily on static, historical factors. In addition, we recommend the identification of relevant protective factors that are likely to reduce the likelihood of the outcome of concern. Protective factors are a powerful influence on the behavior of individuals and are useful for helping to screen out what otherwise may be false positives. Using the best measures to assess overall risk would result in a more efficient use of resources by eliminating the need to focus on less harmful individuals who happen to share common characteristics with extremist actors.

The current state of the science regarding assessment tools for violent extremism is riddled with unknowns. Several tools have been developed in recent years, but their efficacy and authority have been called into question by policy makers, researchers, and end-users alike. By addressing each of the following recommendations taken from the existing literature,

agencies and nongovernmental organizations operating in this space can proceed with greater confidence that the tools they are using are both accurate enough to measure an individual's proclivity toward violent extremist behavior and precise enough to produce reliable results. RTI recommends validating existing instruments in relevant applications with appropriate populations, developing standardized terminology and delineated applications for various tools, and better identifying and understanding not only risk factors and protective factors but also pathways to extremism and violence in general.

8. CONCLUSION

The emergence of domestic radicalization and violent extremism in the United States is an urgent policy concern for the DHS S&T, law enforcement agencies, and the public at large. This is a rapidly emerging and dynamic threat with low prevalence rates within the American context, but has potentially catastrophic impact when radicalization results in violent action. The U.S. government has identified a need to divert individuals from the path of violent extremism. To meet that need, it is critical that frontline professionals who may encounter individuals who are vulnerable to or at risk of radicalization have standardized and validated tools to identify the likelihood that an individual may be radicalizing to violent extremism, and his or her suitability for placement into prevention, diversion, or rehabilitation programs. By understanding the current state of the science for violence risk assessment tools in general and violent extremism-related risk assessment tools specifically, we are now in a much better position to classify available tools and identify the next steps necessary to provide the best path forward toward achieving these goals. In just one decade, the CVE community has made significant progress in developing multiple tools that assess the risk of an individual engaging in extremist offenses, extremist violence, group-based violence, or lone-actor terrorism. Based on this strong foundation, RTI recommends outlining action items in the development of a research agenda that seeks to validate existing instruments in relevant applied settings with appropriate populations. Additional research needs to develop standardized terminology and delineate applications for the various tools; identify relevant risk and protective factors; and better understand pathways to extremism and violence in general. In building on this current knowledge base, the CVE research community can continue to not only advance its understanding of violent extremist behavior, but also create relevant and applicable tools for government agencies, local law enforcement, and community practitioners responsible for ensuring the safety and security of our communities.

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