Risk Domains and Factors of the Multi-Level Guidelines: An Updated Examination of Their Support in the Literature

by
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B.A. (Psychology), Simon Fraser University, 2017

Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Arts

in the
Department of Psychology
Faculty of Arts and Social Sciences

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SIMON FRASER UNIVERSITY
Fall 2019

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Abstract

While the field of violence risk assessment has seen tremendous growth in the area of individually oriented violence, risk assessment for group-based violence (GBV) is still in its infancy. One tool developed specifically for assessing this form of violence is the Multi-Level Guidelines (MLG; Cook, Hart, & Kropp, 2015), which is comprised of 16 risk factors nested into four domains: Individual, Individual-Group, Group, and Group-Societal. Given the rapid pace at which the research on terrorism risk factors, in particular, has developed (Gill, 2015b), this review sought to update the systematic review from which the MLG was developed and examine the extent to which its domains and factors are supported by recent empirical research on GBV. A total of 151 studies were reviewed, spanning several forms of GBV. Overall, the content and structure of the MLG appear to be broadly supported by recent empirical research, although the evidence base for the Individual-Group and Group domains is still relatively small, and the strength of much of this research is limited by methodological constraints. The MLG and the HCR-20 V3 (Douglas, Hart, Webster, & Belfrage, 2013) were then applied to a brief series of case studies of GBV in order to demonstrate the applicability of the MLG to this form of violence, and to compare it to the HCR-20 V3 in this respect. While both tools were found to be broadly applicable, it was clear that the MLG captured specific risk factors that are unique to GBV.

Keywords: Multi-Level Guidelines; risk assessment; group-based violence; terrorism; structured professional judgment.
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Chapter 1.

The Phenomenon of Group-Based Violence

It is difficult to understate the profound impact that group-based violence (GBV) has on global society. A brief survey of the last decade alone highlights the tremendous costs, social, financial, and political, associated with the considerable diversity of GBV all around the world. Since 2012, France has experienced at least 12 terrorist attacks claiming the lives of over 200 people (The Telegraph, 2018). Some of these attacks were the work of lone individuals (such as the July 14th, 2016 attack in Nice, France wherein the attacker drove a truck through crowds of people, killing 86; BBC, 2018a), while others were perpetrated by small groups (such as the November 13th, 2015 gun and bomb attack on several cafés and a concert hall in Paris, France, which killed 130; BBC, 2018a). In response to the November 2015 attack, the government of France declared a state of emergency that was maintained for two years (Hartmann, 2017).

While terrorism may represent one of the most dramatic form of GBV, the phenomenon takes many forms. In 2017, Mexico recorded 31,174 murders, its highest number on record, driven largely by a substantial increase in drug cartel violence (Vera & Brocchetto, 2018). This soaring homicide count amounted to a national homicide rate of 25 per 100,000 inhabitants that year (Vera & Brocchetto, 2018), compared to a Canadian rate 1.8 per 100,000 inhabitants in the same year (Beattie, David, & Roy, 2018). In Pakistan, Human Rights Watch reports that in 2017, 94 women were killed in so-called “honour killings” in the Khyber-Pakhtunkhwa province alone, despite the introduction of new laws aimed at curbing this form of violence (Ijaz, 2017). And in the United States, the Federal Bureau of Investigation (FBI), in its 2011 National Gang Threat Assessment Report, estimated the number of active gang members in the U.S. to be 1.4 million (FBI, 2011). The report also notes that “Gangs are responsible for an average of 48 percent of violent crime in most jurisdictions and up to 90 percent in several others…” (FBI, 2011, p. 9). Thus, it is clear even in restricting one’s view to only the last decade, that GBV, in all of its forms, has profoundly shaped our concerns about, and response to, violent crime, and underscores the need for methods of assessing the risk for GBV, and these methods and tools have begun to emerge. Thus, this thesis
sought to evaluate the recent empirical support for the content of one of these measures by way of a systematic literature review.

1.1. Definition and Forms of GBV

The definition of GBV stems naturally from the definitions of both “violence” and “group”. The World Health Organization (WHO) defines violence as “The intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation” (WHO, 2002). A group can be defined as “an identifiable collective of two or more individuals who have some stable pattern of associations based to some extent on shared attitudes, norms, values, or goals” (Cook, 2014). In this thesis, I adopt the definition of GBV advanced by Cook, Hart, and Kropp (2013), which captures the essential elements of each of its aforementioned components: the actual, attempted, or threatened physical injury of other people that is deliberate and nonconsensual, perpetrated by individuals whose decisions and behaviour are influenced by a group to which they currently belong or with which they are affiliated.

As indicated above, GBV can take many forms, and a wide variety of different groups engage in GBV for a number of different reasons. In the aftermath of September 11th, 2001, terrorism has emerged as one of the most prominent and discussed forms of GBV, however GBV is also a phenomenon of considerable concern in the context of other forms of political and sectarian violence, organized crime (e.g., drug trafficking organizations [DTOs], “mafias”) and street and prison gangs. Other groups for which GBV is a considerable concern include football hooligans (also known as “ultras” and often organized into “firms”), new religious movements1, families or communities in the context of honour-based violence (HBV), and Sovereign Citizens and Freemen on the Land. As the remainder of this thesis focuses on these forms of violence, I will briefly outline their scope and nature.

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1 In this thesis, the term “new religious movement” is considered to be synonymous with the term “cult”. However, the former is used in light of the fact that some consider the term “cult” to be pejorative (Olson, 2006).
1.1.1. Terrorism

Any effort to define “terrorism” is an inherently political exercise and one that is fraught with ambiguity and subjectivity. Hoffman (2006), for example, notes that different agencies within the United States’ federal government with responsibilities regarding terrorism do not even use identical definitions. While a full exploration of the definition of terrorism is beyond the scope of this thesis, it is acknowledged that the selection of any one definition of terrorism is laden with political and cultural assumptions and is unlikely to satisfy all comers. With that said, Hoffman (2006) delineates a number of features that distinguish terrorism from other forms of “crime or irregular warfare” (p. 40) that are instructive in thinking about the phenomenon. Hoffman (2006) contends that terrorist violence is...

- “…ineluctably political in aims and motives;
- violent – or, equally important, threatens violence;
- designed to have far-reaching psychological repercussions beyond the immediate victim or target;
- conducted either by an organization with an identifiable chain of command or conspiratorial cell structure (whose members wear no uniform or identifying insignia) or by individuals or a small collection of individuals directly influenced, motivated, or inspired by the ideological aims or example of some existent terrorist movement and/or its leaders; and
- perpetrated by a subnational group or nonstate entity” (p. 40).

Modern terrorism takes many forms and is informed by myriad ideologies, both religious and secular. A cursory survey of high-profile terrorist incidents since the new millennium reveals the heterogeneity in the phenomenon, ranging from white supremacist lone-wolf gun attacks in the United States, to bombings by dissident republican groups in Northern Ireland, to Islamist-inspired multi-perpetrator gun and bomb attacks in Paris. Well-known terrorist groups include entities such as Hamas, Al-Qaeda and its offshoots, the Provisional Irish Republican Army and its splinter groups, and the Liberation Tigers of Tamil Eelam, but the universe of terrorism is also home to many smaller and less well-known groups, recent and historical, including white supremacist and neo-Nazi organizations such as The Order (Jimison, 2018), Atomwaffen Division (Thompson, Winston, & Hanrahan, 2018), and the National Socialist Underground (AP, 2018). In the United States, concerns about lone-actor terrorism (i.e., acts of terrorism by individuals
who are inspired by an ideology or movement but appear to have acted free from any
direct command and control links to a larger organization) have been steadily growing
since the April 19, 1995 bombing of the Alfred P. Murrah Federal Office Building in
Oklahoma City by far-right anti-government terrorist Timothy McVeigh, which killed 168
people. Other high-profile incidents of high casualty lone-actor terrorist violence have
also fueled anxieties both in North America and Europe, including several instances of
ideologically motivated individuals driving trucks into crowds, as was seen in Nice,
France in 2016 (BBC, 2016) and Toronto, Canada in 2018 (BBC, 2018b).

1.1.2. Organized Crime and Gangs

Another form of GBV comes by way of organized crime groups, including DTOs,
mafia-style syndicates, and prison and street gangs. Over the past two decades, the
explosion of DTO violence in Mexico has been perhaps the most prominent example of
GBV in the context of organized crime. Since the onset of President Felipe Calderón’s
deployment of military forces in the fight against DTOs in 2006, Mexico has seen
unprecedented levels of criminal violence and homicide (Atuesta & Ponce, 2017). In
Europe, the European Union’s Serious and Organized Crime Threat Assessment
reported that in 2017, there were more than 5,000 organized criminal groups being
investigated within the European Union, and that these groups were demonstrating
growing sophistication and complexity. Some jurisdictions have a long history of complex
and institutionalized organized crime, such as Cosa Nostra in Sicily, whose reputation for
violence is well established. As noted by Moro, Petrella, and Sberna (2016), 37% of
homicides in Italian provinces with high concentrations of organized crime are
attributable to these groups. Street and prison gangs are also of considerable concern in
many countries around the world and represent a growing trend in several jurisdictions
(FBI, 2011a; Howell, Egley, Titas, & Griffiths, 2011; Wood, 2019). The FBI, for example,
reported that in 2011, the number of gang members in the United States reached 1.4
million, and that gang members were responsible for an average of 48% of violent
crimes in most jurisdictions and up to 90% in several others (FBI, 2011a). A substantial
body of research has demonstrated that gang membership is associated with a
significant increase in offending, including violent offending (Decker et al., 2013; Melde &
Esbensen, 2013; Pyrooz, Turanovic, Decker, & Wu, 2015; O’Brien et al., 2013). While
research has also found that youth gang involvement tends to be transient and youth
gangs themselves only loosely organized (Decker & Curry, 2000), there are also several examples of long-lasting and durable gangs that have existed for several decades (e.g., Bloods, Crips, MS-13, Latin Kings, Hell's Angels).

1.1.3. Hooligans

A form of GBV that has received considerable attention in Europe is organized football violence, the perpetrators of which are known as “hooligans” or “ultras.” Such violence usually takes place between competing “firms”, often prior to, during, or after a match. While hooliganism was once referred to as “The English Disease,” the phenomenon is of great concern globally (Spaaij & Testa, 2016). There are several notable examples of this violence becoming catastrophic, resulting in scores of fatalities. Among the most tragic historical examples is the Heysel Stadium disaster in 1985, where 39 people were killed and 600 injured as fans were crushed against a wall in a stampede that began when a group of Liverpool F.C. fans charged at Juventus F.C. supporters just before the match began (BBC, 2015). Football hooliganism is, unfortunately, not a relic of the past; in 2012, a stunning 74 people were killed in football violence at a match in Egypt (Spaaij & Testa, 2016).

1.1.4. New Religious Movements

New religious movements (NRMs), sometimes referred to as “cults” or “sects”, constitute a subset of the broader category of what are known as “charismatic groups” (Galanter, 2013, p. 729). According to Galanter (2013), charismatic groups are characterized by four core psychological features: “Members (a) have a shared belief system, (b) sustain a high level of social cohesiveness, (c) are strongly influenced by the group’s behavioral norms, and (d) impute charismatic (or sometimes divine) power to the group or its leadership” (p. 729). While there is some evidence that membership in certain NRMs can have negative psychological sequelae for the individuals involved in them (e.g., Walsh & Bor, 1996), it is important to note that the majority of NRMs, even millenarian or apocalyptic ones, do not engage in terroristic violence (Mayer, 2001). However, there are several notable examples of violence committed by these groups such that they warrant a certain degree of attention and concern. Such groups include Aum Shinrikyo, the Japanese millenarian NRM who in 1995 launched a sarin gas attack on a Tokyo subway, killing several people (Lifton, 2004). Other violent NRMs that most
readers will likely be familiar with include the Branch Davidians under David Koresh and the People’s Temple under Reverend Jim Jones.

### 1.1.5. Honour-Based Violence

Another form of violence that is intrinsically related to group processes is so-called “honour-based” violence (HBV), also referred to as “honour-based abuse” (e.g., Aplin, 2017, p. 1) or, when the victim is killed, “honour-killing” (see Gill, 2017). Gill (2017) defines an honour-killing as “…a murder committed against a woman for actual or perceived immoral behavior deemed to be in breach of a household or community’s honor…” (p. 153); Aplin (2017) further notes that unlike instances of domestic violence that occur between one partner and another, HBV “…is condoned and supported by multiple family members, wherein decisions are made and facilitated by the collective” (p. 1). These definitions highlight the centrality of group processes, at both the family and community level, to this form of violence (Aplin, 2017), with HBV being motivated by an attempt to avenge or restore a family or community’s perceived loss of honour (Gill, 2017).

As noted by Gill (2017), estimates from the United Nations suggest that there are anywhere from 5,000 to 12,000 honour-killings of women in a given year, underscoring the disturbing prevalence of this form of GBV. Gill (2017) further notes that these crimes most typically occur in ethnic minority groups, either in nations with strong cultural notions of honour, or in immigrant populations or a diaspora. While men are sometimes the victim of honour-based violence, the majority of victims are female, and among the most common situational triggers of this violence involve perceived sexual impropriety which is believed to bring “dishonour” to the victim’s family (which can sometimes include events such as the victims’ being raped; Gill, 2017), or a victim’s unwillingness to conform to a marital arrangement preferable to the family or community (Belfrage, 2012; Chesler, 2015).

### 1.1.6. Sovereign Citizens and Freemen on the Land

In the United States, the Sovereign Citizen movement describes a loosely connected group of individuals who adhere to a set of anti-government beliefs which include a broad refusal to acknowledge the authority of most forms of government.
Salient among these forms of authority include local and federal law enforcement, taxation, and other government regulations (Challacombe & Lucas, 2019; Potok, 2011). According to a report from the Southern Poverty Law Center (SPLC), there are an estimated 100,000 adherents to the Sovereign Citizen ideology in the United States, with another 200,000 individuals who have engaged in some form of Sovereign Citizen-“esque” activity (e.g., tax protesting, resisting criminal charges or traffic citations; MacNabb, 2010). As described by the SPLC report, Sovereign Citizens adhere to a complex set of beliefs that form their ideology, rooted in a conspiracy theory that maintains that at some point in the country’s history, the United States government clandestinely transitioned the country from “common law,” under which sovereign citizens were free, to “admiralty law”, under which adherents of the movement believe they are slaves (MacNabb, 2010). Another core element of this theory is what adherents call “the strawman”; in essence, they maintain that with the transition away from the gold standard in 1933, the U.S. federal government began to back the U.S. dollar by pledging U.S. citizens as collateral from the moment of their birth (MacNabb, 2010). Sovereign Citizens believe that when a birth certificate is issued, a shell corporation is made in the baby’s name, creating a “strawman” identity, and that once an individual liberates themselves from this “strawman” identity, they become sovereign citizens and are exempt from government authority (MacNabb, 2010; Theret, 2012). While the Sovereign Citizen movement is native to the United States, similar movements are present in Canada, where they are known as Freemen on the Land (FOTL; Eke, Meloy, Brooks, Jean, & Hilton, 2014), as well as the United Kingdom, New Zealand, and Australia (Pytyck & Chaimowitz, 2013).

While the majority of Sovereign Citizen/FOTL action against government agencies and employees has taken the form of “paper terrorism” (Theret, 2012, p. 13), including vindictive property liens, bogus tax filings designed to ruin the target’s credit score, and frivolous court filings (MacNabb, 2010), there have also been several incidences of violence against law enforcement officers (Potok, 2011; Theret, 2012), and the movement has been identified as a domestic terrorist organization by the FBI (FBI, 2011b).
1.2. GBV as Distinct from Individually Oriented Violence

Given the way in which group processes and dynamics are closely linked to the forms of violence described above, a comprehensive and adequate assessment of risk for GBV requires additional considerations above and beyond those necessary for an assessment of individually oriented violence. More specifically, such a GBV assessment will need to consider not only individual-level risk factors for violence, but also higher-order, group-level factors, capturing not only the dynamics of the group in question but also the way in which the individual being assessed relates to that group. A number of scholars in the field have argued for just such an expanded view of risk in the context of GBV.

As Ellemers, Spears, and Doosje (2002) note, “there is a substantial body of research reporting on phenomena that illustrate the powerful impact of people’s social identities on their perceptions, emotions, and behavior” (p. 163), underscoring the need for an assessor to evaluate how these social dynamics contribute to risk in an individual case. Pynchon and Borum (1999) also emphasize the importance of social factors in the assessment of GBV, highlighting in particular the importance of a group’s attitudes, decision-making, motivations, and the diffusion of an individual’s responsibilities within a group. As Littman and Paluck (2015) assert, “…the violent group itself, and the identity it bestows on participating members, is an often overlooked and yet fundamental source of motivation for an individual’s participation in collective violence” (p. 79).

Similarly, Horgan (2011) asserts that terrorism, for example, cannot be understood on a purely individual level, as a consideration of group processes is essential in this domain. However, Horgan (2011) further argues that the appropriate analytic approach is not one purely focused on group-level variables either; rather, a multi-level approach is the only one that will capture the necessary considerations for a full understanding of individual terrorists. This assertion is echoed by Borum (2015), who advocates a model for assessing terrorism risk that “…blends the nomothetic and idiographic…” (p. 68) and incorporates an assessment of both individual factors and broader social factors. Dernevik, Beck, Grann, Hogue, and McGuire (2009) have also stressed the importance of considering the social psychological or political factors that can influence violence, which most forensic evaluators are not trained or accustomed to assessing.
Chapter 2.

Assessing the Risk for Violence

The field of violence risk assessment has grown tremendously in the last several decades, largely spurred by the development and publication of structured risk assessment measures and guides. Prior to the early 1990s, the most widely used method for assessing an individual’s risk for violence was what has been termed “unstructured clinical judgment” (UCJ; Hart, Douglas, & Guy, 2016), wherein an evaluator makes a determination as to an evaluatee’s risk for future violence on the basis of clinical opinion. The UCJ approach to violence risk assessment has been criticized on a number of grounds, most notably for a lack of predictive validity, transparency, and replicability (e.g., Andrews, Bonta, & Hoge, 1990; Grove & Meehl, 1996; Monahan, 1981, 1995; Webster, Menzies, & Hart, 1995). However, the field of violence risk assessment shifted in the early 1990s, when the UCJ method began to be supplanted by newly developed, structured approaches to violence risk assessment that sought to address the shortcomings of UCJ. This began in earnest in 1993 with the publication of the Violence Risk Appraisal Guide (VRAG; Harris, Rice, & Quinsey, 1993, see also Quinsey, Harris, Rice & Cormier, 1998), which was followed a year later by the Spousal Assault Risk Assessment (SARA; Kropp, Hart, Webster, & Eaves, 1994), and in the time since, a wide variety of risk assessment tools have been developed and published to aid in the assessment of risk for a number of different forms of violence, including general violence (e.g., Historical-Clinical-Risk Management-20; Webster, Eaves, Douglas, & Wintrup, 1995), sexual violence (e.g., Static-99; Hanson & Thornton, 1999; Risk for Sexual Violence Protocol; Hart et al., 2003), domestic and intimate-partner violence (e.g., Ontario Domestic Assault Risk Assessment; Hilton et al., 2004), and stalking (e.g., Guidelines for Stalking Assessment and Management; Kropp, Hart & Lyon, 2008). A number of violence risk assessment measures and guides have also been developed to assess the risk for violence in youth (e.g., Estimate of Risk for Adolescent Sexual Offence Recidivism; Worling & Curwen, 2001; Structured Assessment of Violence Risk in Youth; Borum, Bartel, & Forth, 2003). In addition, some measures and guides have also been developed to structure the assessment of protective factors in evaluatees (e.g., The Structured Assessment of Protective Factors; de Vogel, de Ruiter, Bouman, & de Vries Robbé, 2012).
However, the multitude of existing risk assessment measures differ in important ways, both theoretical and practical, and there is debate as to how the different approaches to violence risk assessment should be categorized. Authors such Andrews, Bonta, and Holsinger (2010) classify risk assessment measures into four generations of approaches, beginning with UCJ and ending with measures that incorporate an actuarial approach to risk assessment with case management considerations, while Monahan (2012) delineates five approaches to violence risk assessment, distinguished by the degree of clinical judgment that they allow, ranging from UCJ to highly structured actuarial approaches. However, a more parsimonious delineation of the approaches to violence risk assessment is offered by Hart et al. (2016), who broadly divide these approaches into two categories: discretionary and non-discretionary. Non-discretionary approaches to violence risk assessment, as the name implies, are those that structure each aspect of process of assessment (identification and measurement of risk factors, combination of risk factors, and final judgment about level of risk) in an effort to remove, as much as possible, the judgment of evaluators from the final judgment of risk (Hart et al., 2016; Monahan, 2012). This approach is most commonly manifested in the form of actuarial risk assessment instruments (ARAI), such as the VRAG (Harris et al., 1993) and Static-99 (Hanson & Thornton, 1999). ARAIs are typically relatively brief measures composed of risk factors for violence, usually of a historic or static nature, that have demonstrated an empirical association with violence in a development sample. These risk factors are scored, weighted, and combined algorithmically, with final scores being used to place offenders into risk categories. These risk categories are associated with numerical recidivism estimates over a fixed time period, drawn from experience tables. These estimates usually take the form of absolute recidivism rates (e.g., the percentage of recidivists in the normative sample who received the evaluatee’s score on the measure) relative risk ratios, (e.g., a statement about the evaluatee’s relative odds of reoffence compared to the “average” offender) or probabilistic recidivism estimates (e.g., a percent estimate of the evaluatee’s likelihood of recidivism over a specified period of time; Hart et al., 2016; Monahan, 2012; see also Phenix, Helmus, & Hanson, 2012, for examples).

On the other hand, the discretionary category consists of the aforementioned UCJ, and the structured professional judgment (SPJ) approach. The SPJ approach to violence risk assessment explicitly incorporates an evaluator’s professional judgment into decisions about risk while also providing a structured framework to guide decision-
making. In the SPJ approach, evaluators rate the presence and relevance of a set of
evidence-based risk factors for violence and come to a conclusion about the individual’s
risk, often expressed as an overall level of risk, degree of concern, or level of
manageability, and may be reported on a trichotomous scale (e.g., low, moderate, or
high). Also unlike ARAIs, SPJ instruments allow and encourage assessors to consider
the presence and relevance of any other case-specific or idiosyncratic factors in a given
assessment that might either increase or mitigate risk, and to document them; evaluators
are not confined to the list of risk factors included in the manuals. Furthermore, some
SPJ measures also invite the assessors to provide opinions about other facets of an
individual’s risk for violence beyond just its likelihood, such as whether any future
violence may involve serious physical harm, and the imminence of any such violence.
The Historical-Clinical-Risk Management-20 (HCR-20; Webster et al., 1995) is an
example of the SPJ approach to risk assessment. In contrast to the ARAI approach, the
SPJ approach was developed to aid in both the assessment and management of risk,
and as such these measures also incorporate a framework to aid in the development of
hypothetical risk scenarios and management plans to reduce the risk for violence. While
actuarial approaches to violence risk assessment are, by nature, anti-idiographic in the
sense that their estimates are derived from group norms, some SPJ measures provide a
framework for developing an idiographic formulation of an individual’s risk for violence,
with evaluators making judgments about the relevance of each individual risk factor to
the evaluatee’s risk, in addition to its presence.

2.1. Evidence for the Effectiveness of Actuarial and SPJ
Risk Assessment

A considerable body of research has examined the effectiveness of both actuarial
and SPJ risk assessment tools, and several broad conclusions can be drawn from this
literature. First, structured approaches to violence risk assessment, such as the actuarial
approach and SPJ, outperform UCJ on a number of fronts, including with respect to
predictive validity and reliability (Hanson & Morton-Bourgon, 2009). Second, both
actuarial and SPJ approaches have been demonstrated to be moderately predictive of
violence (Hanson & Morton-Bourgon, 2009; Yang, Wong, & Coid, 2010). Third, meta-
analytic research comparing these three approaches to risk assessment have generally
found that both actuarial and SPJ approaches show the greater predictive validity than
UCJ (Hanson & Morton-Bourgon, 2009), and while Hanson and Morton-Bourgon (2009) found that actuarial tools demonstrated higher predictive validity than SPJ tools, other meta-analytic reviews have concluded that both approaches are essentially equivalent in this regard (Guy, 2008; Singh, Grann, & Fazel, 2011; Yang et al., 2010). Meta-analytic evidence has demonstrated the effectiveness of structured risk assessment tools in predicting violence, broadly construed (e.g., Guy, 2008; Yang et al., 2010), as well as more specific forms of violence, including sexual violence (Hanson & Morton-Bourgon, 2009) and domestic violence (Helmus & Bourgon, 2011). However, Singh et al. (2011), in their meta-analytic comparison of risk assessment measures, noted considerable heterogeneity in the predictive validity of various tools. In addition, Fazel, Singh, Doll, and Grann (2012) conducted a large-scale meta-analysis of the predictive validity of violence risk assessment measures, combining 73 different samples totalling 24,827 participants, and reported that the measures’ predictive accuracy differed depending on the purpose for which for they were used, and that risk assessment tools generally had higher negative predictive power compared to positive predictive power, which the authors characterized as low to moderate.

2.2. The Application of Structured Professional Judgment to GBV

In a discussion of the application of violence risk assessment to terrorism in particular, Monahan (2012) concluded that SPJ approach to risk assessment was the only appropriate orientation in this domain. This is due to the fact that the actuarial approach’s utility in the context of a phenomenon like terrorism (and other forms of GBV more broadly) is limited by two key elements. First, actuarial approaches are limited by their reliance on normative samples and the assumption that generalizations from these normative samples will have validity when applied to other individuals in different contexts. Second, actuarial approaches are not dynamic in nature and thus are not able to incorporate important contextual or situational factors into their estimation of risk. As has been discussed above, these contextual factors are of paramount importance in the assessment of GBV. Furthermore, the tremendous diversity of GBV, as well as the relatively low base rate of some forms of GBV (e.g. terrorism, violence by new religious movements, etc.) limit the possibility and feasibility of establishing the normative samples necessary to derive actuarial estimates of risk. Conversely, SPJ instruments do
not rely on normative samples, as they do not attempt to produce numerical estimates of risk for violence. Furthermore, as Logan (2016) notes, the SPJ approach goes beyond simply predicting violence and strives to facilitate the formulation of management strategies to prevent violence; this element is of paramount importance when considering the catastrophic consequences GBV can have.

While the SPJ approach does appear to be well-suited to the assessment of GBV (Deverik et al., 2009; Monahan, 2012), existing SPJ violence risk tools which have been developed to assess and manage “common,” individually-oriented violence, such as the HCR-20 V3 (Douglas, Hart, Webster & Belfrage, 2013), do not incorporate the higher order group-level risk factors that may be essential to adequately assess the risk for certain forms of GBV (e.g., terrorism; Borum, 2015; Gudjonsson, 2009). As Borum (2015) notes, while the SPJ approach “seems rather promising” (p. 68), the existing pool of risk factors found in extant SPJ measures may have limited utility in this context, and thus there is a need for a broadened SPJ approach.

To date, a small number of tools have been developed for the assessment of terrorism risk in particular. The Violent Extremism Risk Assessment (VERA-2) is one such tool, comprised of four domains of individual risk factors related to beliefs and attitudes, context and intent, history and capability, and commitment and motivation, and one domain of protective factors (Pressman & Flockton, 2012). Another is the Extremist Risk Guide (ERG 22+), developed within the United Kingdom’s National Offender Management Service, which is comprised of three domains (engagement, intent, and capability) while also allowing assessors to consider idiosyncratic factors (Lloyd & Dean, 2015). The Identifying Vulnerable People Guidance (IVPG; Cole, Alison, Cole, & Alison, n.d.) is a checklist of 16 factors related to the risk for recruitment into violent extremism, and was developed from a review of the existing literature and open source data (Egan et al., 2016), although the authors note that the checklist should not be considered a psychometric tool per se, as it currently lacks validation. The Terrorist Radicalization Assessment Protocol (TRAP-18) is an instrument for aiding in the threat assessment of lone actor terrorists. Derived rationally, the item is composed of eight proximal warning factors and 10 distal characteristics thought to be relevant to the risk for lone-actor terrorism (Meloy, 2017). Lastly, the Structured Assessment of Violent Extremism-30 (SAVE-30; Dean & Pettet, 2017) is an SPJ measure focusing solely on cognitive features of terrorism risk, and was developed from the perspective of a “neurocognitive
learning model” (p. 94) of radicalization, and is combined with algorithmic software that graphically depicts various aspects of an individual’s risk.

Empirical evaluations of these measures are scant; as a consequence, little is known about their psychometric properties. In a systematic review of the psychometric properties of a number of risk measures for violent extremism, Scarcella, Page, and Furtado (2016) found that the VERA-2, IVPG, ERG-22+, and TRAP-18 all evidenced some degree of content validity, while the VERA-2, IVPG, and TRAP-18 were also found to have demonstrated interrater reliability. With respect to predictive validity, Scarcella et al. (2016) reported that the IVPG has been found to possess positive and negative predictive value, and recent research by Meloy et al. (2019) found that some of the items on the TRAP-18 were able to discriminate between violent extremists and non-violent individuals monitored due to security concerns. Another evaluation found that the TRAP-18 was able to postdict violence among Sovereign Citizens (Challacombe & Lucas, 2019).

While these tools share important theoretical and practical features, they can also be divided into two categories along these same lines, with the possible exception of the SAVE-30, which diverges from more traditional SPJ approaches with the inclusion of algorithmic software. The first category includes those tools (e.g., VERA-2, ERG-22+, IVPG) that conform to a more general assessment of risk for terrorism, while the second category, which consists solely of the TRAP-18, is designed to aid in the evaluation of a more specific, targeted terrorist threat (Dean & Pettet, 2017). In particular, the TRAP-18 generally adheres to a “pathway to violence” model (sometimes referred to as a “behavioural progression” model) of violence (see Calhoun & Westun, 2003, 2006; Fein, Vossekuil, & Holden, 1995), which assumes that an individual’s position on a “pathway” to violent extremism can be assessed by way of behavioural indicators that correspond to various stages of this progression (see Klaussen, Libretti, Hung, & Jayasumana, 2018; Silber & Bhatt, 2007). By contrast, tools such as the VERA-2 and ERG-22+ are not developed with this linear model in mind, and instead assess a more general risk for terrorist violence as indexed by broader, less temporally defined risk factors.
2.3. The Multi-Level Guidelines Risk Assessment Tool

While all of the aforementioned measures hold promise for the assessment of terrorism risk, they may not be applicable to other forms of GBV. Furthermore, these measures do not place a substantial or explicit emphasis on the group-level factors relevant to assessing GBV. The Multi-Level Guidelines (MLG; Cook et al., 2013) was developed as a set of SPJ guidelines for the risk assessment and management of several forms of GBV, and has recently been revised (Cook, Hart, & Kropp, 2015). In a fashion similar to Bronfenbrenner’s biopsychosocial model of development (Bronfenbrenner & Morris, 1998), the risk factors in the MLG are nested into a number of hierarchical domains. There are a total of four domains: Individual (I), which includes risk factors at the individual level; Individual-Group (IG), which includes risk factors concerning the way the individual relates to the group; Group (G), which includes risk factors related to the nature of the group; and Group-Societal (GS), which includes risk factors concerning the way the group relates to its societal environment (Cook et al., 2015). The risk factors were derived from a Campbell Collaboration-style systematic review of 197 studies published up to December 2011. The risk factors of the MLG are listed in Appendix A. It is also important to note that with respect to two models of risk assessment tools currently applied to terrorism noted above, the MLG conforms to the more general model of assessing risk as opposed to the more specific and linear behavioural progression model.

The procedure for using the MLG follows the steps contained in several other existing SPJ risk assessment tools (e.g., HCR-20 V3). The beginning of an SPJ risk assessment starts with the gathering of all available and necessary information with which to inform the assessment, as well as documentation of what sources were relied upon. Then, evaluators are directed to rate the presence of the risk factors, indicating whether they are “present”, “possibly or partially present”, or “absent”. Once the presence of risk factors have been established, evaluators then indicate the relevance of each risk factor the individual’s risk for violence, noting whether the factors are “relevant,” “possibly or partially relevant,” or “not relevant.” Then, evaluators are directed to develop a formulation of the individual’s risk for violence. In the SPJ model, this is often done using the Action Theory framework, wherein the relevant risk factors are linked to a set of motivators (those factors that serve to motivate the person to violence),
disinhibitors (those factors that serve to lower the perceived cost of violence to the person), and destabilizers (those factors that serve to disrupt the person’s ability to make careful decisions). With this formulation in mind, evaluators then specify hypothetical risk scenarios in which the individual may engage in violence, and also recommend management strategies to reduce the likelihood of future violence. Summary judgments about the individual’s risk are then given, including the degree of intervention and effort necessary to manage the individual’s risk (often denoted “Case Prioritization” and rated on a three-point scale: “Low,” “Moderate,” or “High”). Similar ratings are also given to judgments about the likelihood of serious physical harm stemming from any future violence (“Serious Harm”), and the potential imminence of any future violence (“Imminent Violence” or “Immediate Action Required”).

Cook (2014) conducted preliminary analyses of the utility, interrater reliability, and structural reliability of the MLG in a sample of 46 professionals in the fields of mental health and criminal justice who were trained on the measure and applied it to a series of archival cases of GBV. Cook (2014) reported that the participants found the MLG to possess utility for practice, and that the MLG evidenced levels of reliability similar to those found in other SPJ measures.

In a case series of five well-known terrorists, Hart, Cook, Pressman, Strang, and Lim (2017) evaluated the interrater reliability of the revised version of the MLG (Cook et al., 2015), as well as its concurrent validity with the VERA-2 and the HCR-20 V3. The authors found the majority of the MLG’s presence and relevance ratings evidenced fair to excellent interrater reliability, which is consistent with Cook’s (2014) findings using the first version of the MLG. With respect to concurrent validity with the HCR-20 V3, the authors found that the majority of the Summary Risk Ratings made with both the MLG and the HCR-20 V3 demonstrated large, statistically significant correlations. However, this concordance was not observed at the Domain level; none of the correlations between the total scores of the presence ratings for the MLG and HCR-20 V3 were statistically significant (Hart et al., 2017). The authors noted, however, that this may be due to a lack of variability present in the ratings due to the very small sample size, and may also reflect the differences between the items captured in the group-level domains of the MLG and the individual-level items in the HCR-20 V3 (Hart et al., 2017). With respect to the VERA-2, Hart et al. (2017) found that only the significant correlations observed were between the VERA-2’s Contextual domain and the Individual-Group,
Group, and Group-Societal domains of the MLG. However, in a qualitative analysis of both measures, Hart et al. (2017) found that, conceptually, there exists substantial overlap between the two measures.

The MLG has yet to receive other forms of validation or empirical examination. It’s potential predictive validity, for example, has not been tested or established, nor has it been evaluated in large samples or samples of specific forms of GBV other than terrorism. There are a number of reasons for this: First, there is an inherent difficulty in evaluating a multi-level tool that indexes risk factors in several increasingly broad domains, as such assessments require access to a broader scope of information; Second, the MLG is intended for use as part of team-based, multidisciplinary assessments, and research that adequately captures this aspect of its real-world use is challenging, in part due to the inaccessibility of such teams to researchers; Thirdly, some of the forms of GBV the MLG is designed to assess have relatively low base rates (e.g., terrorism; Gill, 2015b; Gill, Horgan, Corner, & Silver, 2016), making prediction studies difficult.

2.4. The Present Study

The aim of the present research was to update the Campbell Collaboration-style systematic review from which the MLG was developed. Eight years have elapsed since the original review was conducted (2011), and I believe the time is opportune to reassess the literature on risk factors for GBV and examine whether the they support the content of the MLG in its current form. There are two reasons for this opinion: First, a reassessment at this time is in keeping with the SPJ approach to measure development. SPJ measures are intended to be updated in keeping with advances in the literature, and are typically updated, pending such developments, at approximately 10 to 15-year intervals. For example, the Sexual Violence Risk-20 (SVR-20; Boer, Hart, Kropp, & Webster, 1997) was updated in the form of the SVR-20 V2 (Boer et al., 2017), and the SARA and the HCR-20 have both received two updates each from the time of their original publications in 1994 and 1995, respectively (Douglas et al., 2013; Kropp & Hart, 2013). Second, as Gill (2015b) notes, speaking specifically to terrorism research, “In a very short space of time, the empirical study of terrorist behavior has made some large steps with multiple data-driven, methodologically rich projects producing a lot of insight” (p. 190), which underscores the speed at which the research base on terrorism is
shifting. Thus, this review attempted to ascertain the extent to which the current domains and risk factors included in the MLG are supported by the empirical literature, and attempted to identify any new domains or factors receiving support in the empirical literature that might be considered for inclusion in the MLG. Pursuant to this, recommendations for revision to the MLG, if indicated by the reviewed research, will be presented following a discussion of the results of this systematic review. In addition, as noted by Cook (2014) in the original review, there is a need to review the literature with an eye towards new research in the understudied areas on risk factors for lone actors’ perpetration of GBV, as well as females’ and youths’ risk factors for the same. At present these are relatively unexplored areas, and it is unknown the extent to which the MLG can be usefully applied to these groups. This review also sought to address these concerns. Lastly, this thesis includes a short series of case studies wherein the MLG (including recommended revisions) and the HCR-20 V3 are applied to three real-life cases of GBV in order demonstrate the (differential) applicability of the measures: a case of Sovereign Citizen violence, a case of group-based terrorism, and a case of gang violence.
Chapter 3.

Method

This systematic review utilized a method similar to the one used by Cook (2014), which is based on the Campbell Collaboration (2011) methodology. Specifically, the Campbell Collaboration methodology calls for inclusion and exclusion criteria that are clearly specified, the adoption of an explicit and replicable search strategy, a systematic coding scheme for the included sources, and the inclusion of meta-analytic studies where possible (Campbell Collaboration, 2011). The inclusion criteria for this review, adapted from Cook (2014) and including rationales, are presented in Appendix B, but briefly, in order to be included in this review, studies had to 1) be a published work (e.g., a peer-reviewed academic article, book or book chapter, organizational or government report) or dissertation, 2) empirically examine individual or group-level risk factors or risk markers for the perpetration or intentional facilitation of GBV or 3) review empirical evidence on individual or group-level risk factors or risk markers or the perpetration or intentional facilitation of GBV, 4) and be published on or after January 1st, 2011. Furthermore, studies in languages other than English were included. In this review, GBV was conceptualized as encompassing violence perpetrated by (or inspired by) a wide variety of groups, including terrorist organizations, street gangs, organized crime syndicates, new religious movements, and hooligan firms. In addition, GBV was also taken to include lone-actor terrorists whose violence can be said to be motivated by a group or a group’s ideology, honour-based violence, and violence committed by and influenced by the ideology of those identifying as Freemen on the Land or Sovereign Citizens.

It should be further emphasized that in order to be included, studies had to actually examine risk factors or risk markers (hereafter subsumed in and referred to simply as “risk factors” for brevity’s sake) for the perpetration or facilitation of GBV as defined in the MLG (see above). This means studies with the following common characteristics were not included: examining attitudes towards GBV (e.g., support for political violence) without examining violence or the intentional facilitation of violence itself, examining risk factors for joining or becoming affiliated with a group of the forms noted above without examining the factors related to the perpetration or intentional
facilitation of violence once in the group, and those examining forms of criminal behavior other than violence or the intentional facilitation of violence.

In addition, studies that sought to examine the relationship simply between membership in a group and violence were not included, due to the fact the MLG is designed for use with individuals already affiliated with a group, and is not designed to assess an individual’s risk for joining or becoming affiliated with a group in some capacity. This was a feature of the gang literature in particular, wherein a number of retrieved studies sought to examine the association between membership in a gang and perpetrating violence. While membership in violent groups is associated with a greater risk for violence (e.g., Decker, Melde & Pyrooz, 2013), and thus constitutes a risk factor for GBV, this risk factor is a priori assumed to be present in individuals with whom the MLG is being used, and as such an examination of this variable is of little value in this context.

Lastly, a growing body of research in the terrorism literature in particular has focused on factors that can be said to constitute a behavioural progression towards terrorism and violence (e.g., Klausen, Campion, Needle, Nguyen, & Libretti, 2015; Klausen et al., 2018), examining what Smith (2018b) refers to as risk indicators as opposed to risk factors. As described by Smith (2018b), risk factors “…that increase the likelihood that a certain outcome will occur” (p. 2), while indicators signal that risk factors are present and, in a behavioural progression framework, signal that an individual is moving towards violence (Smith, 2018b). For example, risk factors for lone-actor terrorism may be that an individual harbours attitudes supportive of political violence and has access to high-powered weapons. Risk indicators that may reflect the presence of these risk factors and signal that the individual is moving towards violence could be that they publish a manifesto advocating violence against racial minorities and they begin to stockpile weapons.

The MLG was not designed within a behavioural progression framework, and indeed the manual specifies that the item Conduct Problems is not intended to capture risk indicators of a behavioural progression (Cook et al., 2015). However, in the interest of being more comprehensive, these indicators were coded and extracted from the included studies, as there is some overlap between certain risk indicators and the way in
which some risk factors are operationalized. Furthermore, the coding of risk factors often
depends on the identification and evaluation of risk indicators.

3.1. Search Strategy

As per Cook’s (2014) search strategy in the original review, this review used a
series of pre-determined search terms in several pre-specified databases. Two types of
search terms were employed: (1) a term designed to return results related to GBV
generally, taken from Cook (2014) and (2) nine terms specifically referencing various
forms of GBV. In addition, follow-up searches were conducted in several of the
databases specifically to identify meta-analyses and systematic reviews that may have
been missed in the original searches, and involved the inclusion of the term “meta-
analysis” and “systematic review” in the search bar or in search filters along with the
original term. A “First 100” rule of thumb was adopted, as was done in Cook’s (2014)
original review, such that if a given search returned more than 100 results, only the first
100 were collected. In Cook’s (2014) review, each time more than 100 sources were
returned by the search, less than 10% of the sources were included in the review,
indicating that 100 was an appropriate cut-point. This strategy was adopted to ensure
that the data collection was feasible for a single researcher and that a large amount of
time was not spent screening many sources likely to be excluded. All the search results
were sorted by relevance. No filters were used in the searches, with the exception of the
Google Scholar searches, wherein I filtered out patents and citations. In addition, the
searches aimed specifically at systematic reviews and meta-analyses included filters
towards this end, as noted above. The searches were conducted between January and
April of 2019. Smaller, more focused follow-up searches for each of the search terms
were re-run in PsycINFO, Criminal Justice Abstracts, and International Political Science
Abstracts in October 2019 to collect sources published since April 2019. This search
applied a “First 50” rule of thumb (see above) so as to ensure data collection was
feasible for a single researcher. As with the original searches, no filters were used, and
the results were sorted by relevance.
3.1.1. Pilot Testing

A variety of search terms and databases were pilot tested in order to refine the search strategy. Databases yielding low numbers (i.e., less than three) of relevant sources on the first page of results were removed from the search protocol. Terms were also modified based on search results in order to further optimize them. Pilot testing was conducted in the following databases from June 2018 to October 2018: PsycINFO, Criminal Justice Abstracts, International Political Science Abstracts, National Criminal Justice Reference Service, PubMed/Medline, Humanities and Social Science Abstracts, Web of Science, Sociological Abstracts, ASSIA, International Encyclopedia of Social and Behavioral Sciences, the Campbell Collaboration, and the Cochrane Database of Systematic Reviews. Based on this testing, the number of databases to be searched has been reduced from Cook’s (2014) list. Based on these considerations, the following Boolean search terms² were selected:

1. **General search term**: ((group-based OR group dynamics, group action OR collective action OR group membership OR social identity) AND (violence or assault or aggressive))

2. **Terrorism/Extremism**: ((risk OR assess* OR manag* OR threat) AND (terror* OR extremis*)) OR ((violen* OR assault OR aggress*) AND (terror* OR extremis*)) – Google Scholar term: terrorism extremism violence OR risk OR assessment

3. **Political/Sectarian Violence³**: ((risk OR assess* OR manag* OR threat) AND (political violen* OR sectarian* violen*)) OR ((violen* OR assault OR aggress*) AND (political OR sectarian*)) – Google Scholar term: political sectarian violence OR risk OR assessment

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² Terms were modified for searches conducted in Google Scholar given the idiosyncratic way that the database handles Boolean phrases.

³ As noted earlier, “political violence” and “sectarian violence” are, for the purposes of this thesis, considered to be synonymous with forms of terrorism. This term was added to capture sources that refer specifically to these forms of terrorist violence, as they are frequently used terms in this area.
4. **Gangs**: 
   
   `(risk OR assess* OR manag* OR threat) AND (gang)) OR ((violen* OR assault OR aggress*) AND (gang))` – Google Scholar term: gang violence OR risk OR assessment

5. **Organized Crime**: 
   
   `(risk OR assess* OR manag* OR threat) AND (organized crime)) OR ((violen* OR assault OR aggress*) AND (organized crime))` – Google Scholar term: organized crime violence OR risk OR assessment

6. **Hooligans**: 
   
   `(risk OR assess* OR manag* OR threat) AND (hooligan)) OR ((violen* OR assault OR aggress*) AND (hooligan))` – Google Scholar term: hooligan violence OR risk OR assessment

7. **Bandit**: 
   
   `(risk OR assess* OR manag* OR threat) AND (bandit)) OR ((violen* OR assault OR aggress*) AND (bandit))` – Google Scholar term: bandit violence OR risk OR assessment

8. **Honour-based violence**: 
   
   `(risk OR assess* OR manag* OR threat) AND (hono*r based violen* OR hono*r-based violen*)) OR ((violen* OR assault OR aggress* OR kill*) AND (hono*r based OR hono*r-based))` – Google Scholar term: honor-based violence OR killing OR risk OR assessment

9. **Cult/New Religious Movement**: 
   
   `(risk OR assess* OR manag* OR threat) AND (cult OR new religious movement)) OR ((violen* OR assault OR aggress*) AND (cult OR new religious movement))` – Google Scholar: cult new religious movement violence OR risk OR assessment

10. **Freemen/Sovereign Citizen**: 
    
    `(risk OR assess* OR manag* OR threat) AND (freemen OR sovereign citizen)) OR ((violen* OR assault OR aggress*) AND (freemen OR sovereign citizen))` – Google Scholar term: freemen sovereign citizen violence OR risk OR assessment

The following six databases were searched: Campbell Collaboration Library of Systematic Reviews, Criminal Justice Abstracts, Google Scholar, International Political

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As noted above, the term "new religious movement" is preferred in this thesis, given that some consider the term “cult” to be pejorative. However, given that many refer to "new religious movements” as “cults” in the literature, this term was included in the search phrases.
Science Abstracts (only for the terrorism and extremism, and political and sectarian violence search terms), National Criminal Justice Reference Service, and PsycINFO. In addition, hand searches for published reports from the websites of relevant organizations within countries who are members of the “5 Eyes” intelligence alliance were conducted. The countries included Canada (Royal Canadian Mounted Police, Canadian Security and Intelligence Services, Correctional Service of Canada, Public Safety Canada, Canadian Network for Research on Terrorism, Security, and Society), the United States (Federal Bureau of Investigation, Department of Homeland Security, Central Intelligence Agency, Secret Service, National Gang Center, Department of Corrections, Federal Bureau of Prisons, Global Center on Cooperative Security), the United Kingdom (The Home Office5), Australia (Australian Secret Intelligence Service, Australian Security Intelligence Organization, Australian Institute of Criminology, Australian Federal Police, South Australia Department of Correctional Services, Corrections, Prisons and Parole Victoria, Western Australia Department of Justice), and New Zealand (New Zealand Security Intelligence Service, New Zealand Police, New Zealand Department of Corrections, New Zealand National Assessments Bureau). The reference sections of included full-text sources were also hand searched for additional sources. Lastly, PsycINFO, Criminal Justice Abstracts, International Political Science Abstracts, and the National Criminal Justice Reference Service were searched again specifically for systematic reviews and meta-analyses, either by including the terms “systematic review” and “meta-analysis” in the search or filtering results to include sources employing these methodologies. These follow-up searches were done to increase the comprehensiveness of the review by attempting to capture any systematic reviews or meta-analyses that may not have been returned by the original search. Google Scholar was not re-searched in these follow-up searches due to the platform’s high yield of irrelevant sources relative to the other databases.

3.2. Source Screening

All collected sources were imported and sorted using Bookends reference management software. This software package was also used to remove duplicate

5 The website for the Home Office is an “umbrella site” and directs users to the sites of various organizations within the Home Office, such as MI5, MI6, Her Majesty’s Prison Service, the National Crime Agency, and the Metropolitan Police, among others.
sources from the results. All sources returned from the database searches were screened in a four-step process (see Appendix E). First, the titles of the sources were reviewed for their relevance to the inclusion criteria. Sources deemed relevant at this stage were retained, and those deemed irrelevant were discarded. Second, source abstracts were reviewed for relevance, and sources with abstracts that appeared relevant to the inclusion criteria were retained, while non-relevant sources were discarded. Lastly, I reviewed the full text of the retained abstract sources and relevant sources were retained for coding while irrelevant sources were discarded.

While the Campbell Collaboration guidelines recommend the use of more than one researcher, due to practical limitations, I conducted the screening and coding process alone. To assess for potential bias in using this method, two independent raters (a subject matter expert, Dr. Cook, and a research assistant with an undergraduate degree in psychology, M. E.) completed screening using the inclusion criteria for 90 randomly selected sources (30 at each of the following junctures: title screening, abstract screening, full text screening). This was similar to the procedure used in Cook’s (2014) original review and other Campbell Collaboration reviews (e.g., Gadon, Cooke, & Johnstone, 2005). Following this, any disagreements about inclusion or exclusion were discussed and resolved (i.e., sources where consensus was a different decision than my initial decision regarding inclusion or exclusion).

### 3.3. Source Coding

The retained full-text sources were then coded for several features using a structured coding form, presented in Appendix C. Identified risk factors were extracted onto a chart which accompanied the coding form, presented in Appendix D. Risk factors identified in the retained sources were extracted onto the chart next to the relevant MLG domain and risk factor.

I also made judgements regarding the evidentiary strength of each study on a trichotomous scale (low, moderate, and high). These were subjective judgments of the degree to which the study provided strong evidence for the risk factor(s) it examines, which in turn informed judgments about the relative strength of the evidence for the factors and domains included in the MLG. These judgments were based on my assessment of several study characteristics, including the study’s research design, the
nature and size of the sample, the presence of an appropriate comparison group, the operationalization of the predictor variable(s), the operationalization and nature of the outcome variable(s), and the analytic techniques used. No explicit decision rules for these judgments were formulated a priori due to the high degree of heterogeneity in the methods and foci of the studies reviewed. The application of a priori decision rules across such heterogeneity would inevitably have led to inconsistencies and ambiguities when attempting to fit such rules to a quite disparate set of studies. For this same reason, a formal risk of bias measure was also not adopted. However, to increase the transparency and consistency of these judgments, I have attempted to describe the factors I considered when formulating my decisions (noted above), and the common characteristics of studies rated as low, moderate, and high are described below (see Results).

These judgments should not be considered evaluations of study quality per se, but rather the extent to which it was judged that the findings might be relied upon were they to inform a risk assessment measure that is intended for real-world use. Indeed, a great many studies were included in this review that might rightly be called high quality, especially given the documented challenges of studying phenomena such as terrorism (see Gill, 2015b), but were nevertheless judged to only have low evidentiary strength.

3.4. Interrater Agreement for Source Coding

My extraction of risk factors, my judgments of the appropriate placement of the extracted risk factors relative to the domains and factors in the MLG, the degree of overlap between the extracted factors and contents of the MLG’s domains and factors, whether the extracted factor was empirically supported, and judgments of evidentiary strength were necessarily subjective. Thus, I again assessed for potential bias by randomly selecting a sample of 25 studies which were coded by two other raters, one, a student with an undergraduate degree in psychology (M. E.) and the other, a Masters student in forensic psychology (W. F.), using the coding form (see Appendix D). Each rater completed three practice cases and were provided with feedback to clarify any discrepancies in coding.

Interrater agreement (indexed using intraclass correlations) was calculated on the following facets of the coding sheet: the strength of the evidence, the risk factors
extracted, the placement of the those risk factors within the MLG framework, the degree of overlap between the extracted risk factors and the content of the respective MLG domain and factor, and whether that factor’s associations with violence was supported by the study. Any disagreements between raters were discussed and resolved.

3.5. Synthesis of the Findings

In order to evaluate the extent to which the current domains and factors of the MLG are supported by the empirical research, I synthesized the results of the systematic review through a content analysis (see Elo & Kyngäs, 2008; Krippendorff, 1989), conducted in two stages. First, I conducted a deductive content analysis (Elo & Kyngäs, 2008), using what may be called a “vote counting procedure” (Bushman & Wang, 2009, p. 207). That is, I evaluated the degree of evidentiary support for a number of risk factors that I judged to have overlapped entirely with an item in the MLG and tallied them. This strategy (vote counting) represents a quasi-quantitative approach to evaluating the empirical support for the MLG’s content, which allows for an examination of the extent of a domain or factor’s support in the literature by taking stock of the frequency with which it is supported by the empirical evidence. This portion of the content analysis was deductive in that I was categorizing the identified risk factors into pre-existing categories specified by the MLG (i.e., the items of the MLG; Elo & Kyngäs, 2008). In the second stage of the synthesis, I engaged in an inductive content analysis, so defined because I then endeavoured to group risk factors into clusters, and then attempted to elucidate superordinate categories from these clusters (Elo & Kyngäs, 2008).

The first step of both the deductive and inductive content analyses entailed the identification and extraction of the risk factors examined in the reviewed studies, retaining the authors’ original language whenever possible (occasionally risk factors were re-named to be made more concise or understandable while retaining their meaning; this was only necessary for some qualitative, interview-based studies whose risk factors were not always described with concise labels, but rather emerged from the authors’ prose). These risk factors were extracted onto the chart in shown in Appendix E, next to the item from the MLG that it corresponded with (or, if they did not correspond with any of the items, they were placed in the “OTHER’ category; see Appendix E), along with a code reflecting my judgment of the extent of its conceptual overlap with that item and a code reflecting my judgment of the degree of empirical support that the study’s
results for this risk factor gave to its corresponding MLG item. I then tallied, for each MLG item, the number of studies that had examined one or more risk factors conceptually overlapping with that item, and the number which had found support, partial support, or a lack of support for one or more of the risk factors overlapping with that item. This represents the deductive portion of the content analyses, and the results of this analysis are presented in Table 3.

Once all of the identified risk factors were extracted onto the chart, I grouped them into clusters based on their conceptual similarity, and assigned superordinate category labels to these clusters, reflecting the theme of the constituent risk factors (e.g., “behaviour problems”). I then compared the superordinate categories to the description of MLG item to assess its overlap. This procedure was conducted for two reasons. First, the items of the MLG are very broad in scope; Social Adjustment Problems, for example, includes problems in an individual’s intimate relationships, non-intimate relationships, and problems in education, employment, and finances. As such, numerous studies could conceivably examine risk factors that overlap with some of this content (problems in intimate relationships) while not touching on other facets of the item (e.g., problems in education). Simply noting the number of studies that had examined risk factors that overlapped with Social Adjustment Problems would have ignored the nuance introduced by the scope of the item, and it could have been concluded, for example, that the entire item was supported when the research may, in fact, have only supported one facet of the item. To remedy this, I conducted the inductive content analysis, which allowed me to assess the extent to which facets of certain items may only have received partial examination in the studies reviewed, and in turn to assess whether the item was supported in full, or if only certain facets of the item were supported. The second reason is that, given the large number of individual risk factors overlapping with the various items of the MLG, such an inductive process of grouping factors into categories was necessary to facilitate a coherent evaluation of whether an item was supported or not, and made the results of this evaluation more easily communicable than would be the case if the risk factors were to be examined individually.

In the next step of the inductive content analysis, I first grouped those risk factors that were examined in the included studies that I judged to have only partially overlapped, and those that did not overlap, with items on the MLG into clusters based on their thematic similarities. The same was done with those risk factors that I judged to
have not overlapped with any of the MLG’s items. Those that were idiosyncratic to a particular study, occurred with low frequency (i.e., one or two studies), or did not coalesce into a coherent theme were discarded. From these clusters, I then endeavoured to elucidate superordinate categories that were then examined with regard to the strength of the evidence for the categories’ constituent risk factors. This set of analyses had several objectives: First, I attempted to synthesize the risk factors identified in the literature that partially overlapped or did not overlap with the MLG into a set of categories that could be more manageably communicated than each of the risk factors from each study individually, as this would be have been prohibitively unwieldy and many studies examined identical or closely related factors which conceptually overlapped with the relatively broad risk factors of the MLG. Second, I strove to determine if any categories emerged among the empirically supported risk factors that either only partially overlapped with items of MLG or did not overlap that might suggest that a) the items of the MLG or their definition or description may require modification, and b) if any new risk factors should be added to MLG to reflect the evidence base.
Chapter 4.

Results of the Systematic Review

4.1. Source Screening

The database searches yielded a total of 5,062 sources, and searches of organizational websites and reference sections of included studies yielded 251 and 17 sources, respectively. There was considerable overlap in the sources returned, and once duplicates, sources that were found to have been published prior to January 2011, and overlapping sources were removed, I screened a total of 3,212 sources for relevance. As noted above, sources were screened for inclusion at several junctures: at the title level, abstract level, and full-text level. Sources returned from searches of organizational websites and reference sections were screened at the full-text level. A flowchart of the inclusions and exclusions at each stage are presented in Appendix E. In addition, 16 sources that were included at the full-text level were found to have already been reviewed in a prior systematic review of risk factors for terrorism specifically (Desmarais, Simons-Rudolph, Brugh, Schilling, & Hoggan, 2017). Given that Desmarais et al.’s (2017) study was included in the current review, these 16 studies were not included to avoid redundancy. In total, 167 of the retrieved sources met inclusion criteria, and when the 16 included in Desmarais et al. (2017) were removed, I coded a total of 151 studies. I was unable to obtain full-text copies of 13 sources retrieved in the searches. I reviewed 14 studies that were in languages other than English using Google Translate. Only one non-English (German) study met inclusion criteria and was coded (Krieg & Kliem, 2019).

Interrater agreement was examined using two-way mixed model intraclass correlations (ICCs) for absolute agreement across three raters calculated on a stratified random sample of 90 sources, 30 at each of the following junctures: title, abstract, and

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6 This occurred in cases where the record of the source retrieved from the source did not contain a date or when a previously published work was re-published as an e-book and given a new publication date in the record retrieved in the search.

7 i.e., dissertations and published articles derived from those dissertations, and multiple sources presenting the same results.
full-text. The ICC for inclusion at the title stage was .354; .408 at the abstract stage; and .429 at the full-text stage. The overall ICC was for inclusion/exclusion was .396.

According to Landis and Koch (1977), these ICCs can be characterized ranging from fair to moderate. Given these relatively low ICCs, further discussion is warranted. An examination of the individual inclusion and exclusion decisions in the random samples revealed that these low ICCs were driven by the fact that both M. E. and I adopted a much more liberal approach to inclusion at the title and abstract level, while Dr. Cook was more conservative. At the title level, M. E. and myself excluded eight and 15 studies, respectively, while Dr. Cook excluded 22. At the abstract level, M. E. and myself excluded 11 and 15 studies, respectively, while Dr. Cook excluded 20. Lastly, at the full-text stage, M. E. and myself excluded 16 and 11 studies, respectively, and Dr. Cook excluded 11. I adopted a liberal approach to inclusion at the title and abstract stage so as to protect against prematurely discarding studies that might have met inclusion upon further examination, and given the multi-stage process by which studies were screened, all studies not meeting criteria were eventually excluded at the full-text stage. We discussed all disagreements regarding inclusion/exclusion and consensus was reached on each of 90 sources reviewed.

4.2. Characteristics of Included Studies

Table 1 displays the number and percentage of studies included for each of the different forms of GBV searched for: terrorism, gangs, organized crime, hooligans, bandits, honour-based violence, new religious movements, Freemen on the Land/Sovereign Citizens, and general GBV. Table 1 also displays the frequencies and percentages of studies whose evidentiary strength I categorized as low, moderate, or high for each of the types of GBV. Those studies that were rated as having low evidentiary strength generally shared a number of characteristics, which included small sample sizes, a focus on a single group that raised concerns about generalizability, a reliance on simple descriptive statistics or comparisons between proportions as opposed to the use of inferential statistical models such as regressions, the use of outcome measures that combined violence with other antisocial behaviour, the examination of intentions to commit violence as opposed to actual violence, the lack of an appropriate comparison group, and in the case of narrative reviews, the lack of a systematic method to guard against a non-comprehensive or biased evaluation of the evidence base.
Conversely, studies that were rated as having high evidentiary strength were those that often used large sample sizes (in some cases nearly population-level data), appropriate inferential statistical models (e.g., regressions, survival analyses), made use of time-lagged models allowing for an examination of the temporal relationship between the examined factors and the outcome of interest, and controlled for several important covariates identified in the literature. Lastly, studies rated as having moderate evidentiary strength, naturally, fell between these two poles, often combining inferential statistical models with smaller sample sizes, or compared descriptive statistics between a group of interest and an appropriate comparison group. These studies also included some that aimed to postdict violence, but in so doing employed appropriate inferential statistical techniques.

As noted above, interrater agreement was examined for the following aspects of coding: risk factors extracted, placement of risk factors in the MLG framework, judgments of overlap between extracted risk factors and MLG items, judgments of empirical support between extracted risk factors and violence, and judgments of evidentiary strength. Interrater agreement was indexed by calculating two-way mixed model ICCs for absolute agreement, and ICCs for placement, overlap, and support were calculated on only those risk factors that all three raters extracted, as including factors that were not extracted by some raters in subsequent ICC calculations would decrease ICCs while not accurately representing the agreement that was meant to be assessed at these junctures.

The ICC for extracted risk factors was .174; .552 for placement of risk factors; -.016 for overlap of risk factors; .614 for support for risk factors; .759 for evidentiary strength. According to Landis and Koch (1977), these ICCs can be characterized as ranging from poor (overlap) to substantial (evidentiary strength). These calculations indicate that there was notable variability in the reliability of judgments between raters at different junctures. While this does represent a limitation of the coding and by extension, the review, these values are not entirely surprising given the heterogeneity in the reviewed studies, and the inherent subjectivity of and, in some cases, arbitrariness of certain judgments (e.g., deciding whether a risk factor was supported in a study simply reporting descriptive statistics for variables in a sample without a non-violent comparison group). The implications of this limitation is discussed in the Discussion section.
The majority of the included studies focused on terrorism, while studies on gang violence comprised the next largest group of studies. Studies on all other forms of GBV comprised a rather small proportion of the total at 12.6%, and there were no included studies focused on bandit violence or violence from new religious movements.

Table 1: Frequencies of Included Studies by GBV Type and Evidentiary Strength

<table>
<thead>
<tr>
<th>GBV Type</th>
<th>Evidentiary Strength</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low (%s)</td>
<td>Mod. (%s)</td>
</tr>
<tr>
<td></td>
<td>n</td>
<td>%s</td>
</tr>
<tr>
<td>Terrorism</td>
<td>52</td>
<td>73.2, 53.1</td>
</tr>
<tr>
<td>Gang</td>
<td>10</td>
<td>14.1, 29.4</td>
</tr>
<tr>
<td>Organized Crime</td>
<td>1</td>
<td>1.41, 16.7</td>
</tr>
<tr>
<td>Hooligan</td>
<td>1</td>
<td>1.41, 20.0</td>
</tr>
<tr>
<td>Bandit</td>
<td>0</td>
<td>0, 0</td>
</tr>
<tr>
<td>Honour-Based Violence</td>
<td>3</td>
<td>4.23, 100</td>
</tr>
<tr>
<td>New Religious Movement</td>
<td>0</td>
<td>0, 0</td>
</tr>
<tr>
<td>FOTL/Sovereign Citizen</td>
<td>0</td>
<td>0, 0</td>
</tr>
<tr>
<td>General GBV</td>
<td>4</td>
<td>5.63, 100</td>
</tr>
<tr>
<td><strong>Totals (%)</strong></td>
<td><strong>71 (47.0)</strong></td>
<td><strong>21 (13.9)</strong></td>
</tr>
</tbody>
</table>

Note. “Terrorism” includes political and sectarian violence.

Note. Percentages given are as follows: percentage within strength category (column), percentage within GBV type (row).

I judged just under half of the included studies to have low evidentiary strength for the risk factors I extracted from them, and the majority of these were focused on terrorism. I rated 13.9% of the studies to be of moderate evidentiary strength, and terrorism studies also accounted for the majority of these. Lastly, I judged 39.1% of the studies to have high evidentiary strength, and terrorism again was the focus of the majority of these. Terrorism’s (and to a lesser extent gang’s) overrepresentation in these
categories reflects the fact that, first and foremost, they comprise the majority of the included studies, and indeed the majority of the studies returned from the database searches. This is indicative of the relatively small empirical research base on risk factors for the other forms of group-based violence included in this study. Terrorism’s substantial overrepresentation in the low strength category reflects a few methodological trends I observed in that literature base, almost certainly reflective of the well-established challenges to doing research on the individual risk factors for extremist violence (see Gill, 2015b; Monahan, 2012, 2016; Young & Kearns, 2017). The first is the common use of primarily descriptive analytical approaches as well as the use of case study designs. The second is the relative lack of appropriate comparison groups against which to contrast a sample of known violent extremists. While these studies are certainly informative and valuable to our understanding of terrorism, they fall short of providing strong evidentiary support for the examined variables as usable risk factors because the study designs do not allow us to test the association between a given variable’s presence or absence and the outcome of violence, and because the study designs do not allow us to determine whether the variables examined have the ability to discriminate between a violent and non-violent individual. To achieve these goals, studies would need to include, ideally, a comparison group of non-violent individuals who might be considered radical or extremist in their beliefs, and to examine, using appropriate inferential statistics, which variables predict or are associated with the use of violence. There are, however, some examples of terrorism research incorporating these elements (e.g., Chermak, Freilich, & Suttmoeller, 2011; Knight, Woodward, & Lancaster, 2017; Meloy et al., 2019).

4.3. MLG Domains, Factors, and Their Support

The studies included in this review examined variables that fell into each of the MLG’s four domains (see Table 2). The majority of studies focused on factors in the Individual domain (62.3%), followed by the Group-Societal domain (45.0%), Individual-Group domain (19.9%), and Group domain (15.9%). Overall, the studies examined in this review provide empirical support for factors in each domain, indicating that the ecologically nested framework of the MLG is broadly supported by the evidence base, which is noteworthy given that it is the only risk assessment tool for group-based violence that places a substantial and explicit emphasis on group-level factors. In what
follows, I will examine and describe the extent to which the studies included in this review provide empirical support for each of the risk factors in the MLG. The frequencies of the studies examining each factor also are presented in Table 2.

**Table 2: Frequencies of Included Studies by Domains and Factors Examined**

<table>
<thead>
<tr>
<th>Domain and Factor</th>
<th>Evidentiary Strength</th>
<th>Total n</th>
<th>%s</th>
<th>%s</th>
<th>%s</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I1. Conduct Problems</td>
<td>Low</td>
<td>26</td>
<td>45.6</td>
<td>53.1</td>
<td>7</td>
<td>53.8</td>
</tr>
<tr>
<td>I1. Conduct Problems</td>
<td>Moderate</td>
<td>13</td>
<td>53.8</td>
<td>14.3</td>
<td>7</td>
<td>53.8</td>
</tr>
<tr>
<td>I1. Conduct Problems</td>
<td>High</td>
<td>13.8</td>
<td>53.8</td>
<td>14.3</td>
<td>7</td>
<td>53.8</td>
</tr>
<tr>
<td>I2. Attitude Problems</td>
<td>Low</td>
<td>42</td>
<td>73.7</td>
<td>68.9</td>
<td>10</td>
<td>76.9</td>
</tr>
<tr>
<td>I2. Attitude Problems</td>
<td>Moderate</td>
<td>7</td>
<td>53.8</td>
<td>14.3</td>
<td>7</td>
<td>53.8</td>
</tr>
<tr>
<td>I2. Attitude Problems</td>
<td>High</td>
<td>10</td>
<td>76.9</td>
<td>16.4</td>
<td>9</td>
<td>37.5</td>
</tr>
<tr>
<td>I3. Social Adjustment Problems</td>
<td>Low</td>
<td>48</td>
<td>84.2</td>
<td>63.2</td>
<td>11</td>
<td>84.6</td>
</tr>
<tr>
<td>I3. Social Adjustment Problems</td>
<td>Moderate</td>
<td>13</td>
<td>53.3</td>
<td>40.7</td>
<td>11</td>
<td>53.3</td>
</tr>
<tr>
<td>I3. Social Adjustment Problems</td>
<td>High</td>
<td>11</td>
<td>53.3</td>
<td>40.7</td>
<td>11</td>
<td>53.3</td>
</tr>
<tr>
<td>I4. Mental Health Problems</td>
<td>Low</td>
<td>23</td>
<td>40.4</td>
<td>54.8</td>
<td>8</td>
<td>61.5</td>
</tr>
<tr>
<td>I4. Mental Health Problems</td>
<td>Moderate</td>
<td>3</td>
<td>16.7</td>
<td>37.5</td>
<td>2</td>
<td>66.7</td>
</tr>
<tr>
<td>I4. Mental Health Problems</td>
<td>High</td>
<td>4</td>
<td>16.7</td>
<td>37.5</td>
<td>2</td>
<td>66.7</td>
</tr>
<tr>
<td>Individual-Group</td>
<td></td>
<td>18</td>
<td>60.0</td>
<td>13.8</td>
<td>11</td>
<td>45.8</td>
</tr>
<tr>
<td>IG1. Individual Has Strong Group-Based Identity</td>
<td>Low</td>
<td>3</td>
<td>16.7</td>
<td>37.5</td>
<td>2</td>
<td>66.7</td>
</tr>
<tr>
<td>IG1. Individual Has Strong Group-Based Identity</td>
<td>Moderate</td>
<td>2</td>
<td>66.7</td>
<td>25.0</td>
<td>3</td>
<td>66.7</td>
</tr>
<tr>
<td>IG1. Individual Has Strong Group-Based Identity</td>
<td>High</td>
<td>1</td>
<td>66.7</td>
<td>25.0</td>
<td>3</td>
<td>66.7</td>
</tr>
<tr>
<td>IG2. Individual Has Violent Role or Status in Group</td>
<td>Low</td>
<td>1</td>
<td>5.6</td>
<td>33.3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>IG2. Individual Has Violent Role or Status in Group</td>
<td>Moderate</td>
<td>1</td>
<td>5.6</td>
<td>33.3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>IG2. Individual Has Violent Role or Status in Group</td>
<td>High</td>
<td>1</td>
<td>5.6</td>
<td>33.3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>IG3. Individual Has Strong Commitment to Group</td>
<td>Low</td>
<td>6</td>
<td>33.3</td>
<td>50.0</td>
<td>2</td>
<td>66.7</td>
</tr>
<tr>
<td>IG3. Individual Has Strong Commitment to Group</td>
<td>Moderate</td>
<td>2</td>
<td>66.7</td>
<td>16.7</td>
<td>4</td>
<td>44.4</td>
</tr>
<tr>
<td>IG3. Individual Has Strong Commitment to Group</td>
<td>High</td>
<td>2</td>
<td>66.7</td>
<td>16.7</td>
<td>4</td>
<td>44.4</td>
</tr>
<tr>
<td>IG4. Individual Has Negative Attitudes Toward People Outside the Group</td>
<td>Low</td>
<td>8</td>
<td>44.4</td>
<td>80.0</td>
<td>2</td>
<td>66.7</td>
</tr>
<tr>
<td>IG4. Individual Has Negative Attitudes Toward People Outside the Group</td>
<td>Moderate</td>
<td>8</td>
<td>44.4</td>
<td>80.0</td>
<td>2</td>
<td>66.7</td>
</tr>
<tr>
<td>IG4. Individual Has Negative Attitudes Toward People Outside the Group</td>
<td>High</td>
<td>8</td>
<td>44.4</td>
<td>80.0</td>
<td>2</td>
<td>66.7</td>
</tr>
<tr>
<td>Group</td>
<td></td>
<td>9</td>
<td>37.5</td>
<td>16.7</td>
<td>11</td>
<td>45.8</td>
</tr>
<tr>
<td>G1. Group Has a History of Violence</td>
<td>Low</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>G1. Group Has a History of Violence</td>
<td>Moderate</td>
<td>4</td>
<td>44.4</td>
<td>28.6</td>
<td>2</td>
<td>50.0</td>
</tr>
<tr>
<td>G1. Group Has a History of Violence</td>
<td>High</td>
<td>4</td>
<td>44.4</td>
<td>28.6</td>
<td>2</td>
<td>50.0</td>
</tr>
<tr>
<td>G2. Group Has Violent Norms or Goals</td>
<td>Low</td>
<td>3</td>
<td>33.3</td>
<td>33.3</td>
<td>1</td>
<td>25.0</td>
</tr>
<tr>
<td>G2. Group Has Violent Norms or Goals</td>
<td>Moderate</td>
<td>3</td>
<td>33.3</td>
<td>33.3</td>
<td>1</td>
<td>25.0</td>
</tr>
<tr>
<td>G2. Group Has Violent Norms or Goals</td>
<td>High</td>
<td>3</td>
<td>33.3</td>
<td>33.3</td>
<td>1</td>
<td>25.0</td>
</tr>
<tr>
<td>Domain and Factor</td>
<td>Evidentiary Strength</td>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------</td>
<td>----------------------</td>
<td>-------</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>Moderate</td>
<td>High</td>
<td>n</td>
<td>% s</td>
<td>n</td>
</tr>
<tr>
<td>G4. Group Has Strong Leadership/Power Structure</td>
<td>4</td>
<td>44.4, 50.0</td>
<td>1</td>
<td>25.0, 33.3</td>
<td>3</td>
<td>27.3, 37.5</td>
</tr>
<tr>
<td><strong>Group-Societal</strong></td>
<td><strong>21</strong></td>
<td><strong>30.9</strong></td>
<td><strong>9</strong></td>
<td><strong>13.2</strong></td>
<td><strong>38</strong></td>
<td><strong>55.9</strong></td>
</tr>
<tr>
<td>GS1. Group is Large in Size/Scope</td>
<td>1</td>
<td>4.76, 11.1</td>
<td>1</td>
<td>11.1, 11.1</td>
<td>7</td>
<td>18.4, 77.8</td>
</tr>
<tr>
<td>GS2. Group is Socially Isolated/Isolative</td>
<td>7</td>
<td>33.3, 77.8</td>
<td>0</td>
<td>0, 0</td>
<td>2</td>
<td>5.26, 22.2</td>
</tr>
<tr>
<td>GS3. Group is Operating in an Unstable Environment/Context</td>
<td>15</td>
<td>71.4, 34.9</td>
<td>5</td>
<td>55.6, 11.6</td>
<td>23</td>
<td>60.5, 53.5</td>
</tr>
<tr>
<td>GS4. Group is Threatened By or In Conflict with Other Groups</td>
<td>10</td>
<td>47.6, 25.6</td>
<td>6</td>
<td>66.7, 15.4</td>
<td>23</td>
<td>60.5, 59.0</td>
</tr>
</tbody>
</table>

Note. Frequencies across categories are overlapping, as many studies examined multiple domains.

Note. Bolded percentages in rows are the proportion of studies within the MLG domain.

Note. Un-bolded percentages given are as follows: percentage within the MLG domain (column), percentage across strength categories (row).

### Table 3: Frequencies of Included Studies Examining Risk Factors Fully and Partially Overlapping with MLG Items and Their Support

<table>
<thead>
<tr>
<th>MLG Items</th>
<th>Overlap</th>
<th>Partial Overlap</th>
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*Note.* Most studies examined multiple variables which often fell into different categories and had different degrees of support. As such, frequencies are overlapping across categories.

### I1. Conduct Problems

Twenty studies found support for an association between one or more risk factors overlapping with *Conduct Problems* and violence (16 terrorism, three gang studies, one HBV), while 13 studies (11 terrorism, one gang, one HBV) found partial support for the same. The majority of these studies were of low evidentiary strength, followed by high strength studies and then moderate strength studies. Fourteen studies (11 terrorism, two gang, one Freemen/Sovereign Citizen) that examined one or more factors overlapping with *Conduct Problems* did not find support for an association between these factors and violence, with seven of these studies having low evidentiary strength, three having moderate strength, and four having high strength. The themes extracted from these
studies were entirely consistent with the description of *Conduct Problems*, including its subfactors (prior group-based violence, other prior violence, and prior antisocial behaviour); these themes might be termed “a history of violence”, “communicating intent to commit violence”, “prior criminality”, and “a history of behaviour problems”.

Turning to studies that examined risk factors that partially overlapped with *Conduct Problems* (i.e., those factors that I judged to have matched the definition of the item to a limited degree, though not entirely), eight of these studies (three terrorism, three gang, two hooligan) found support for an association between one or more of these risk factors and violence, and three found partial support for the same. The majority of these studies were of low evidentiary strength, followed by high strength and then moderate strength. Two studies (one terrorism and one gang) did not find support for one or more risk factors partially overlapping with this item, with one having low evidentiary strength and one having high strength. Several themes emerged from these partially overlapping risk factors, although they tended to only be comprised of a relatively small number of factors. These themes might be termed “thrill seeking behaviour”, “unstructured socializing”, “evangelism or assistance for group/ideology”, “seeking extreme religious authority”, and “young age at first offence.” While there is some conceptual overlap with the content of *Conduct Problems* among these themes, it is also clear that they diverge in appreciable ways from that item’s focus on strictly violent and antisocial conduct. Overall, in consideration of the frequencies and strength of the studies reviewed for this item, the evidence suggests that *Conduct Problems* is an empirically supported risk factor, at least for terrorism and gang violence, although the results are not unequivocal. There appears to be some preliminary support for this item in the context of HBV and hooliganism, although firmer conclusions cannot be drawn with respect to these given the small number of studies. The empirical support for the divergent themes that emerged from the partially overlapping risk factors does not appear to be strong, given the small number of the constituent risk factors comprising these themes, and thus do not indicate a need to revise the definition of this item.

**I2. Attitude Problems**

Thirty-two studies (22 terrorism, six gang, and one each of Freemen/Sovereign Citizen, hooligan, HBV, and general GBV) found support for an association between one or more risk factors overlapping with *Attitude Problems* and violence, while three studies
(two terrorism, one gang) found partial support for the same. The majority of these studies were of low evidentiary strength, followed by high strength studies, then moderate strength studies. Six studies (four terrorism, two gang) that examined one or more factors overlapping with *Attitude Problems* did not find support for an association between these factors and violence, with two of these studies having moderate evidentiary strength and four having high strength. The themes extracted from these studies were entirely consistent with the description of *Attitude Problems*, including its subfactors (pro-violence attitudes, antisocial or pro-criminal attitudes, and or anti-authority, oppositional, or noncompliant attitudes); these themes might be termed “pro-violence attitudes or ideology”, “antisocial, anti-authority, or oppositional attitudes”, and “anger and desire for revenge”.

With respect to studies that examined risk factors partially overlapping with *Attitude Problems*, 33 of these studies (30 terrorism, two gang, one Freemen/Sovereign Citizen) found support for an association between one or more these risk factors and violence, while 16 studies, all focused on terrorism, found partial support for the same. The large majority of these were of low evidentiary strength, followed by moderate strength and then high strength studies. Nine studies, all focused on terrorism, that examined one or more risk factors partially overlapping with this item did not find an association between these factors and violence. Six of these studies were of low strength, and three were of moderate strength. Several themes emerged from the examined risk factors; these might be termed “ideological extremism”, “a desire for action”, “ideological vulnerability”, “rigidity and preoccupation”, and “moral judgments”, although the coherence of this last theme is limited by the lack of specificity in the description of these risk factors in their respective studies, and so it will not be considered further.

The large majority of the studies reviewed in this category suggest that *Attitude Problems* is an empirically supported risk factor for GBV. In addition, the risk factors that only partly overlapped with the item coalesced into several themes that were empirically supported, albeit primarily by low strength studies. In sum, this suggests that while the item is, in its current form, support by the evidence, the literature reviewed indicates that the item’s definition and description could benefit from being broadened to include attitudinal problems relevant to, but not necessarily explicitly focused on, violence. This will be elaborated upon in the Discussion below. Given the low frequency of studies
examining other forms of GBV in this category, the claim of support for this item is, at this time, largely restricted to terrorism.

**13. Social Adjustment Problems**

*Social Adjustment Problems* was the most frequently examined item of the MLG, with 46 studies (38 terrorism, seven gang, one HBV), finding support for an association between one or more risk factors overlapping with this item and violence, while 29 studies (26 terrorism, one gang, two HBV) found partial support for the same. The majority of these studies were of low evidentiary strength, followed by high strength studies and then moderate strength studies. However, there were 38 (25 terrorism, seven gang, two HBV, two general GBV, one hooligan, one Freemen/Sovereign Citizen) studies that examined one or more risk factors that overlapped with *Social Adjustment Problems* that did not find an association with violence. Of these studies, the majority had low evidentiary strength, followed by high strength, and then moderate strength. The themes extracted from these studies were quite consistent with the description of *Social Adjustment Problems* and its subfactors (problems in intimate relationship, problems in other relationships, and problems in education, employment, or finances), and might be termed “problems in intimate, family, and peer relationships”, “antisocial family or peers”, “social isolation and disengagement”, “financial, occupational, and general strain”, and “education problems”.

With respect to studies that examined risk factors partially overlapping with *Social Adjustment Problems*, 23 of these studies (20 terrorism, one HBV, one hooligan, one general GBV) found support for an association between one or more these risk factors and violence, while 13 (all terrorism) studies found partial support for the same. The majority of these were of low evidentiary strength, followed by moderate strength and then high strength studies. There were 16 studies (12 terrorism, and one each of general GBV, HBV, Freemen/Sovereign Citizen, and gang) that examined one or more risk factors partially overlapping with this item that did not find an association between these factors and violence, and of these studies, most were of low strength, followed by moderate strength and then high strength studies. Several themes emerged from these risk factors, and they might be termed “socioemotional vulnerability”, “life events”, “personal crises/catalyst”, “personal failure”, “dysfunction in family of origin”, and “marginalization and low socioeconomic status”. Some of these themes had relatively
few constituent risk factors, and many were composed entirely of factors extracted from low strength studies (e.g., personal failure, dysfunction in family of origin).

Overall, while a substantial number of studies found support for risk factors overlapping with *Social Adjustment Problems* (and the themes they coalesce in to), many studies also failed to find support for some of these same risk factors, indicating that the evidence reviewed for this factor is mixed. Furthermore, the evidence does not strongly support the themes that emerged from the risk factors that partially overlapped with this item, given that many of them were primarily composed of low strength studies and had relatively few constituent risk factors. As such, there does not appear to be a need to revise this item to accommodate these divergent themes, at present. In addition, while the evidence reviewed falls short of unequivocally supporting this item's relationship with GBV, it is not recommended that it be removed or revised, for the following reasons: First, a finding of equivocality is not surprising given the diversity in the methodologies and forms of GBV included in the review; it is expected that there will be some amount of variability in the degree of support found for any given risk factor from study to study, even among studies focusing on the same form of violence and using similar methods. Second, the MLG is designed to be broadly applicable to multiple forms of GBV, and indeed the relevance of the tool's items may differ from one form of GBV to another. Given that the current findings regarding *Social Adjustment Problems* are mostly restricted to terrorism and, to a lesser extent, gang violence, removing this item would be premature pending further research into not only these forms of GBV, but others as well.

**4. Mental Health Problems**

Among the items in the Individual domain, *Mental Health Problems* received the least empirical attention. Twenty studies (14 terrorism, three hooliganism, three gang) found support for an association between one or more risk factors overlapping with this item and violence, while 11 studies (all terrorism) found partial support for the same. The majority of these studies were of low evidentiary strength, followed by high strength studies, and then moderate strength studies. Twelve (nine terrorism, one hooligan, one Freemen/Sovereign Citizen) of the studies reviewed examined one or more factors overlapping with *Mental Health Problems* that did not find support for an association between these factors and violence, and the majority of these studies had low
evidentiary strength, followed by moderate strength and then high strength. The themes extracted from these studies were largely consistent with the description of *Mental Health Problems*, including its subfactors (serious mental illness, personality disorder, problems with substance use, and problems due to trauma); these themes might be termed “suicidality and depressive symptomology”, “psychotic disorders”, “substance use”, and “antisocial personality features”. Three other themes emerged among the these risk factors that diverged slightly from the item, which might be described as “non-specific mental disorder” (e.g., Capellan & Anisin, 2018; RTI International, 2018; Erlandsson & Meloy, 2018; Munton et al., 2011; Osman & Wood, 2018; Smith, 2018b), “experiencing abuse or trauma” (e.g., Owens, Evans, Foley, & Lee, 2016; RTI International, 2018; Klaussen et al., 2015; Smith, 2018b), and “impulsivity and a need for excitement” (e.g., Meloy & Pollard, 2017; Thornton et al., 2015; Van Ham et al., 2019). While problems with trauma and abuse are captured in *Mental Health Problems*, simply experiencing trauma and abuse are not, strictly speaking. However, there were no studies in this review that examined the relationship between negative sequelae of trauma from experiencing abuse; rather, the studies that did examine trauma simply indexed its presence.

With respect to studies that examined risk factors partially overlapping with *Mental Health Problems*, seven of these studies (all terrorism) found support for an association between one or more these risk factors and violence. Three of these studies were high strength, three were low strength, and one was moderate strength. One study (terrorism) did not find support for risk factors partially overlapping with this item, and it was a moderate strength study. Two themes emerged from these studies, and they might be termed “psychological vulnerability” and “exposure to violence/sectarian conflict”. While this latter theme is conceptually related to the problems with trauma subfactor of *Mental Health Problems*, the operationalization of the risk factors in this theme lacked specificity (e.g., the nature of the exposure, the consequences of the exposure), and thus I judged them to constitute separate, partially overlapping theme.

Overall, the evidence reviewed appears to support *Mental Health Problems’* association with violence, but this claim is restricted primarily to terrorism, and to a lesser extent, gang and hooligan violence. In addition, the divergent theme of “exposure to violence/sectarian conflict” was supported by three high strength studies and one moderate strength study, suggesting that it may have empirical support. However, the
description of Mental Health Problems subsumes this theme in its coding notes, and as such, no revision is necessary regarding this theme.

**IG1. Individual Has Strong Group-Based Identity**

Five studies (one terrorism, two gang, one general, one hooligan) found support for an association between one or more risk factors overlapping with Individual Has Strong Group-Based Identity and violence, while one study (terrorism) found partial support for the same. Low and high strength studies were the most common, followed by moderate strength studies. There were two studies (one terrorism and one general) that examined one or more factors overlapping with this item that did not find support for an association between these factors and violence, one of which had low evidentiary strength while the other had moderate strength. The only theme to emerge from the supported factors was identical to the item itself.

There was only one study (terrorism) that found support for a risk factor that partially overlapped with Individual Has Strong Group-Based Identity, and this study as of low evidentiary strength. As there was only one risk factor (naivety; Ferguson & McAuley, 2019), no theme could be derived. While this item was sparsely examined, the research reviewed suggests that it is empirically supported, and the studies included in this category were dispersed across four forms of GBV, suggesting it is broadly applicable. However, more research is needed before firmer claims of support can be made for this item’s association with violence.

**IG2. Individual Has Violent Role or Status in Group**

There was only one study (gang) that examined risk factors overlapping with Individual Has Violent Role or Status in Group, and this study found evidence of an association between these factors and violence and had high evidentiary strength. The risk factors examined were being a gang leader and being a popular gang member. There were only two studies (both terrorism) that examined risk factors that partially overlapped with Individual Has Violent Role or Status in Group, one of which had high evidentiary strength and the other which had low strength. These risk factors were “conscript” (Fahey, 2013), and “command and control links with others” (Corner & Gill, 2015), and both were unsupported. While the one study that examined factors that fully overlapped with this item supported its association with violence, more research is
required before a firmer claim can be made regarding this item’s association with violence. It is not recommended that this item be removed from the MLG, however, given its strong face validity; indeed, it is a priori the case that having a violent role in a group necessarily entails engaging in GBV, and thus its consideration is important in an assessment. What is less certain is whether one’s status as a leader or as an influential figure in the group increases one’s risk for violence, which is also included in the description of the item, although the sole study examining these factors does support such an association.

**IG3. Individual Has Strong Commitment to Group**

Seven studies (four terrorism and three gang) found support for an association between one or more risk factors overlapping with *Individual Has Strong Commitment to Group* and violence, while one study (terrorism) found partial support for the same. The majority of these studies were of low evidentiary strength, followed by high evidentiary strength. Only one study (terrorism) that examined one or more factors overlapping with this item did not find support for an association between the examined factor and violence, and this study had low evidentiary strength. Furthermore, the factor that was not supported was fairly specific (swearing an oath to Al-Qaeda; Horgan, Shortland, & Abbasciano, 2018). Only one theme emerged from the risk factors examined, and it entirely overlapped with the item itself.

With respect to studies that examined risk factors partially overlapping with *Individual Has Strong Commitment to Group*, 11 (all terrorism) of these studies found support for an association between one or more these risk factors and violence, while one study (terrorism) found partial support for the same. Most of these were of low evidentiary strength, followed by moderate strength and then high strength studies. One study (terrorism) that examined two risk factors partially overlapping with this item did not find an association between these factors and violence, and it was a low strength studies. Only one theme emerged from these risk factors, and this might be termed “strong/intensifying commitment to ideology”. This theme does overlap to some extent with the item itself, although the constituent risk factors in this theme are less specific to a group in particular and instead reflect strong commitments to belief systems more broadly, including religions and extremist ideologies (e.g., Christmann, 2012; Smith, 2018b).
Overall, the evidence reviewed suggests that this item is empirically supported, although this claim is restricted to terrorism and gang violence, given that these were the only forms of GBV examined for this item. In addition, the support for this item may be tempered to some extent by the fact that the majority of the support comes from low strength studies; thus, more research with stronger designs is required to substantiate this item’s association with violence. The somewhat divergent theme of a strong/intensifying commitment to an ideology also appears to be empirically supported. While this theme is not entirely distinct from the description of the item, it does suggest that the description may benefit from revisions that expand the conception of group to also include broader belief systems or ideologies. This is particularly important in the context of lone actor terrorists, especially those whose ideological movements are more loosely connected and do not often result in the formation of traditional groups or organizations (e.g., Sovereign Citizens). In such cases, identifying an individual’s commitment to an identifiable group may not be possible, as there may be no group to speak of; instead, the appropriate assessment target may be the strength of the individual’s devotion to the risk-relevant belief system or ideology.

**IG4. Individual Has Negative Attitudes Toward People Outside the Group**

Twenty-two studies (18 terrorism, two general, one HBV, one Freemen/Sovereign Citizen) found support for an association between one or more risk factors overlapping with *Individual Has Negative Attitudes Toward People Outside the Group* and violence, while five studies (all terrorism) found partial support for the same. Most of these studies were of low evidentiary strength, followed by high strength and then moderate strength studies. Three studies (all terrorism) examined factors overlapping with this item but did not find support for an association between this factor and violence, and two of these studies were all of moderate evidentiary strength save one low strength study. Two themes emerged from the risk factors examined, both of which overlapped entirely with the description of this item. These might be termed “negative attitudes towards people in the out group” and “grievances”. The vast majority of the studies reviewed found support for this item’s association with violence, but nearly all of these studies were focused on terrorism; as such, it is not clear if this association is applicable to other forms of GBV.
G1. Group Has a History of Violence

Only one study in this review examined the association between a group’s history of violence and its future violence, and it focused on terrorism. The study was high strength and found an association between violence over the year prior and violence during the period under study. While the lack of research attention precludes a strong claim of empirical support for this item, it is not recommended that this factor be removed from the MLG. A group’s history of violence is, prima facie, indicative of that group’s propensity for violence in the future, and while such a propensity may increase or decrease contingent on a number of factors, a history of violence is nevertheless a relevant assessment target. In addition, many of the groups that the MLG is designed to assess are, by their nature, violent.

G2. Group Has Violent Norms or Goals

Five studies (four terrorism and one general GBV) found support for an association between one or more risk factors overlapping with Group Has Violent Norms or Goals and violence, while one study (terrorism) found partial support for the same. The majority of these studies were of low evidentiary strength, followed by high strength studies. There were two high-strength studies that examined two factors overlapping with this item that did not find support for an association between these factors and violence. One theme emerged from the examined studies, and it overlapped entirely with the item itself.

With respect to studies that examined risk factors partially overlapping with Group Has Violent Norms or Goals, eight of these studies (seven terrorism and one gang) found support for an association between one or more these risk factors and violence, while one study (terrorism) found partial support for the same. The majority of these studies were of high evidentiary strength, followed by low and then moderate strength studies. Eight studies (all terrorism) that examined one or more risk factors partially overlapping with this item did not find an association between these factors and violence, and all were high strength studies. Two themes emerged from these partially overlapping factors that somewhat diverged from the item’s description, and these might be described as “group ideology” and “group objectives”. As was the case with the “ideological extremism” theme that emerged from factors partially overlapping with Attitude Problems, the distinction here is the difference in specificity between the content
of the item and the broader theme of “group ideology,” which may not be explicitly violent. Similarly, while “group objectives” is closely aligned with the content of the item, its constituent risk factors do not specify that the goals in question are necessarily violent in nature, though they may be extreme.

Overall, the majority of the evidence reviewed suggests that this item is empirically supported, but the research base is quite small, and thus more research is required in order to draw more definitive conclusions. Furthermore, the evidence reviewed does not appear to support the divergent themes’ association with violence, as the majority of the constituent risk factors come from high strength studies that did not find an association; as such, no revision to this item is recommended.

**G3. Group Has Strong Cohesion**

Five studies (four terrorism and one gang) found support for an association between one or more risk factors overlapping with *Group Has Strong Cohesion* and violence. An equal number of these studies were of low or high evidentiary strength, while one study had moderate strength. There were four studies (three terrorism and one gang) that examined one or more factors overlapping with this item that did not find support for an association between these factors and violence, and an equal number were of low and high evidentiary strength. The single theme that emerged among the examined risk factors overlapped entirely with the item itself.

With respect to studies that examined factors that partially overlapped with *Group Has Strong Cohesion*, there was one low strength study (terrorism) that found an association between one risk factor (increased group pressure; Van Brunt, Murphy, Zedginidze, 2017) and violence. As there was only one factor in this category, no theme could be derived.

Overall, the small body of research reviewed in the category suggests that the support for this item is mixed, and the empirical support does not appear to differ by GBV type (e.g., terrorism or gang violence). However, it may be that this item has a differential relevance depending on the type of GBV being assessed, and future research could investigate this possibility. For example, it may be the case that strong cohesion functions to increase risk in the context of hooliganism, while fractionalization that leads to intra-gang fighting may be the relevant assessment target in a gang
violence context, but more empirical research is required to clarify any such potential differences.

**G4. Group Has Strong Leadership/Power Structure**

Four studies (all terrorism) found support for an association between one or more risk factors overlapping with *Group Has Strong Leadership/Power Structure* and violence, while one study (terrorism) found partial support for the same. The majority of these studies were of low and high evidentiary strength, followed by moderate strength. None of the studies reviewed failed to find an association between factors overlapping with this item and violence. Two themes emerged from these risk factors, which might be described as “organizational structure” and “charismatic leadership”, both of which are consistent with the description of this item.

With respect to studies that examined risk factors partially overlapping with *Group Has Strong Leadership/Power Structure*, there were three low strength studies (all terrorism) that found support for two factors in this category, which were the presence of a leader figure whose espouses Jihadist ideology (Dillon, Neo, & Khader, 2017; Neo, Khader, Ang, Ong & Tan, 2016), and “…leaders’ ability to manipulate readily available, ethno-cultural symbols in the promotion of threat; the economic marginalization of communities historically most susceptible to violence” (Holland & Rabrenovic, 2017, p. 235). These were not judged to have formed a coherent theme, however.

There were no studies in this category that failed to find an association between risk factors related to this item and violence, suggesting that it is empirically supported, though this can only be said for terrorism. It is important to note that the evidence base for this factor is fairly small, however, and would benefit from further investigation.

**GS1. Group is Large in Size/Scope**

Six studies (five terrorism and one gang) found support for an association between one or more risk factors overlapping with *Group is Large in Size/Scope* and violence, while four (three terrorism and one organized crime) studies found partial support for the same. The majority of these studies were of high evidentiary strength, followed by moderate strength and then low strength studies. Six studies (all terrorism) that examined one or more risk factors overlapping with this item did not find an
association between these factors and violence, and all had high evidentiary strength save one low strength study.

Four themes emerged from these risk factors, which might be described as “size of the group”, “age of the group”, “scope of the group’s activity”, and “group capability”. These themes largely overlap with the description of this item in the MLG’s manual (Cook et al., 2015), though the theme of group capability is somewhat more specific than its corollary indicator in the item’s description (“sophistication in functioning”; Cook et al., 2015, p. 31). This theme of group capability was largely composed of factors reflecting a group’s receiving external or state support in the terrorism context (e.g., Dreher & Kreibaum, 2016; Horowitz, Perkoski, & Potter, 2018; Shkolnik, 2017) but also included measures of a group’s attack strength (e.g., conducting multiple attacks or attacking hard targets; Shkolnik, 2017). Overall, the evidence for this item appears to be mixed; while there were several high strength studies that found support for the item, an almost equal number of high strength studies did not. Furthermore, the studies reviewed in the category were almost exclusively focused on terrorism, save one gang and one organized crime study. While the theme of group capability did not receive appreciable empirical support, this item does appear to possess a prima facie importance for appraising violence risk, as the capability to commit violence is a logical prerequisite for the commission of violence. As such, it is recommended that this theme be reflected in the description of the item.

**GS2. Group is Socially Isolated/Isolative**

Four (two terrorism, one gang, one general GBV) studies examined one or more risk factors overlapping with *Group is Socially Isolated/Isolative*, and all four found support for an association between the risk factors examined and violence. All of these studies were of low evidentiary strength. Three themes emerged from these factors that overlapped entirely with the description of this item, and these might be termed “social isolation” and “physical isolation”.

With respect to studies that examined risk factors partially overlapping with *Group is Socially Isolated/Isolative*, three of these studies (all terrorism) found support for an association between one or more these risk factors and violence, while two studies (both terrorism) found partial support for the same. Three of these were of low evidentiary strength, while two had high strength. One theme emerged from these
factors, which might be termed “minority/segregated status”, that touches on a somewhat more expansive conceptualization of the isolation referred to in the item, and captures a broader societal dynamic of social and physical isolation of the group’s members. Given the small number of factors comprising this theme, however, firmer conclusions on this theme’s empirical support cannot be drawn.

Overall, the evidence reviewed appears to support this item’s association with violence, although the strength of this evidence is weak, and would benefit from a greater number of high strength studies. While no revisions are recommended for this item, its empirical support is best characterized as provisional at this time.

**GS3. Group is Operating in an Unstable Context/Environment**

*Group is Operating in an Unstable Context/Environment* was the most frequently examined of the items in the Group-Societal domain, with 28 studies (20 terrorism, six gang, two organized crime) finding support for an association between one or more risk factors overlapping with this item and violence, while eight studies (six terrorism, one gang, one organized crime) found partial support for the same. The majority of these studies were of high evidentiary strength, followed by low strength studies and then moderate strength studies. Ten studies (seven terrorism and three organized crime) that examined one or more factors overlapping with this item did not find support for an association between these factors and violence, five of which had high evidentiary strength, four of which had low strength, and one of which had moderate strength. Three themes emerged from these studies that were quite consistent with the description of this item; these might be termed “poor socioeconomic conditions”, “unstable social/political environment”, and “violent conflict in the area.”

With respect to studies that examined risk factors partially overlapping with *Group is Operating in an Unstable Context/Environment*, nine (seven terrorism, one general, one organized crime, one gang) of these studies found support for an association between one or more of these risk factors and violence, while six studies (five terrorism and one gang) found partial support for the same. The majority of these had high evidentiary strength, followed by low strength and then moderate strength studies. Six studies (all terrorism) that examined one or more risk factors partially overlapping with this item did not find an association between these factors and violence, and all three were high strength studies. Five themes emerged from these risk
factors, which might be termed “demographics”, “social conditions”, and “economic conditions”. These themes capture somewhat broader societal dynamics in which a group might operate than are included in the item’s description (e.g., literacy rates, educational attainment among the population, residential stability, infant mortality rate), although the support for them among the studies reviewed is mixed.

Overall, the evidence reviewed indicates that this item has fairly robust empirical support; a substantial number of the studies that found full or partial support for this item’s association with violence were of high strength and outnumbered the high strength studies that failed to find support. However, as with many of the factors described above, this claim can only be made for terrorism and, to a lesser extent, gang violence.

**GS4. Group is Threatened By or In Conflict With Other Groups**

*Group is Threatened By or In Conflict With Other Groups* was the second most frequently examined item in the Group-Societal domain, with 23 studies (11 terrorism, seven gang, three organized crime) finding support for an association between one or more risk factors overlapping with this item and violence, while 11 studies (six terrorism, four gang, one organized crime) found partial support for the same. The majority of these studies were of high evidentiary strength, followed by low strength studies and then moderate strength studies. Nine studies (seven terrorism and one gang) did not find support for one or more risk factors overlapping with this item and violence, and all were of high evidentiary strength. The themes that emerged from these studies were quite consistent with the description of *Group is Threatened By or In Conflict With Other Groups*; these might be termed “feeling threatened by other groups”, “conflict with other groups”, “proximity to other violent groups”, and “conflict with law enforcement or the state”. A subtheme that emerged among this latter theme was “violent conflict with law enforcement,” in particular.

With respect to studies that examined risk factors partially overlapping with *Group is Threatened By or In Conflict With Other Groups*, three of these studies (one terrorism and two gang) found support for an association between one or more of these risk factors and violence. Three of these had high evidentiary strength, and one had low strength. One high strength study (gang) did not find an association with violence. One theme emerged from these factors, which might be termed “political/economic
discrimination”, although this theme was comprised of a relatively small number of factors, and so no firm conclusion can be drawn regarding its degree of empirical support.

Overall, this item appears to have received relatively robust empirical support, much of which came from high strength studies. In addition, while the majority of these studies focused on terrorism, several also examined gang violence and, to a lesser extent, organized crime, lending support to the broader applicability of this item beyond terrorism.

4.4. Thematic Analysis of Risk Factors Not Overlapping with the MLG

A number of studies included in this review examined risk factors that overlapped with the broader domains of the MLG but did not overlap with any of the MLG’s items. In the Individual domain, 37 studies (23 terrorism, nine gang, two general GBV, one hooliganism, one HBV, one Freemen/Sovereign Citizen) examined one or more factors that received empirical support for their association with violence but did not overlap with any of the items in this domain; 20 of these studies had low evidentiary strength, seven had moderate strength, and 10 had high strength. Twenty-three studies (21 terrorism, one gang, one HBV) examined one or more factors in this domain that received partial support for their association with violence, 15 of which had low evidentiary strength, five of which had moderate strength, and three of which had high strength. Lastly, 28 studies (18 terrorism, seven gang, one general GBV, one hooliganism, one Freemen/Sovereign Citizen) examined one or more risk factors in this domain that did not receive empirical support for their association with violence, 12 of which had low evidentiary strength, six of which had moderate strength, and 10 of which had high strength.

While a large number of risk factors were either idiosyncratic or did not coalesce into a coherent theme, there were a number of themes that emerged from these risk factors which might be termed “demographics”, “capability”, “military or combat experience”, “pre-attack preparations”, and “pre-attack communications of intent”. These latter two themes fit into a “behavioural progression” model of violence and were largely derived from studies that examined this model or examined tools developed within this model, such as the TRAP-18. The themes of “pre-attack preparations” and “pre-attack
communications of intent” were largely supported by the evidence reviewed. “Demographics” also received a considerable amount of support, but this was not unequivocal, as many of the factors comprising this theme were also unsupported. The other domains received limited examination and were comprised of relatively small pools of constituent risk factors, and thus their degree of support cannot be definitively determined.

In the Group domain, seven studies (four terrorism, two gang, one general GBV) examined one or more factors that received empirical support for their association with violence but did not overlap with any of the items in this domain, four of which were of low evidentiary strength, two of which had moderate strength, and one of which had high strength. Only two studies (both terrorism) examined one or more factors in this domain that received partial support for their association with violence, with one being low strength and the other being moderate strength. Lastly, five studies (three terrorism and two gang) examined one or more risk factors in this domain that did not receive empirical support for their association with violence, four of which had high evidentiary strength, and one of which had low strength.

Several of the risk factors examined in this category were either idiosyncratic to a particular study (e.g., group oil production; Dreher & Kreibaum, 2016), or they did not coalesce into a coherent theme. However, two themes did emerge from some of the risk factors, and these might be termed “recruitment and propaganda strategies” and “providing material incentives”. The former received only mixed support from a small number of studies, and the latter received supported by all studies that examined it, although most were of low strength.

In the Group-Societal domain, 23 studies (20 terrorism, two organized crime, one gang) examined one or more factors that received empirical support for their association with violence but did not overlap with any of the items in this domain, two of which were of low evidentiary strength, three of which had moderate strength, and 12 of which had high strength. Nineteen studies (16 terrorism, two gang, one organized crime) examined one or more factors in this domain that received partial support for their association with violence, with two being low strength, one being moderate strength, and nine being high strength. Lastly, 30 studies (23 terrorism, four gang, two organized crime, one general GBV) examined one or more risk factors in this domain that did not receive empirical
support for their association with violence, two of which had low evidentiary strength, five of which had moderate strength, and 15 of which were high strength.

Several themes emerged from the examined risk factors in these studies, the nature of which reflect the broad scope with which these studies addressed GBV. These themes might be termed “societal demographics”, “societal economic factors”, “political structures”, “geography”, and “social/political facilitation of violence”. The vast majority of the risk factors constituting these themes were extracted from high strength studies, reflecting a methodological trend among these studies that involved the use of very large datasets, the inclusion of several control variables, the use of time-lagged models, and the use of inferential statistical models. Each of these themes received thoroughly mixed support among the studies reviewed, and thus it is not clear the extent to which they may be considered empirically supported risk factors for GBV.
Chapter 5.

Discussion

The goal of this systematic review was to update the systematic review from which the MLG was developed (Cook, 2014), with a specific focus on empirical research, in order to assess the extent to which the MLG is supported by the empirical research on GBV that has been published since 2011. In addition, this review aimed to determine whether this research base suggested the presence of additional risk factors that may warrant inclusion in the MLG, or whether the MLG’s existing risk factors should be modified in accordance with the empirical evidence. Lastly, this systematic review sought to evaluate the MLG’s empirical support with respect to three subgroups whose risk factors for GBV were understudied at the time of Cook’s (2014) original review: females, adolescents, and lone-actor terrorists. I will now address these topics in turn.

5.1. Support for the MLG Domains and Risk Factors

Each domain of the MLG received some degree of research attention by studies included in this review, and there was evidence to support risk factors found in each of the four domains. While it was unlikely that the domains of the MLG would require revision or lack evidentiary support given their intentionally broad scope, it is nevertheless worth noting that the tool’s nested framework was supported by the evidence, as it is the only risk assessment tool for GBV that employs this framework. This also lends credence to the assertion of several authors that a robust and comprehensive assessment of the risk for terrorism is particular requires the inclusion of items reflecting not only social factors, but also items reflecting the way an individual interacts with and relates to their environment (Borum, 2015; Horgan, 2011). Furthermore, this finding is also notable in light of the fact that the MLG is the only extant risk assessment instrument for GBV that includes a domain placing an explicit emphasis on factors related to the group in question, independent of the individual’s relationship to the group, suggesting that such factors are worthwhile inclusions in risk assessments for GBV.
Every item on the MLG received research attention (although *Group Has a History of Violence* was only examined in a single study), and all received some degree of empirical support. The research attention, however, was not equally distributed, with risk factors in the Individual and Group-Societal domains being the most frequently examined. This likely reflects a few characteristics of the evidence base as a whole. Studies conducted in the disciplines of psychology and criminology were plentiful, and focused largely on individual risk factors for violence, while studies conducted in the fields of political science and security studies also comprised a large number of the included studies and often approached the topic at a macro-level (i.e., the Group-Societal domain). This indicates that, in terms of the MLG framework, the middle domains of the nested model (Individual-Group and Group) have not received the same degree of attention, which may be due in part to the relatively young age of the psychological investigation of risk factors for GBV, which to date has primarily addressed individual-level risk factors. The lack of research attention on factors falling into these middle domains may reflect a lack of theoretical work on these concepts in the discipline of psychology, which might serve to guide empirical investigations. It may also reflect the predominantly individual focus of both violence risk assessment and psychological assessment more broadly to date; as noted above, the MLG is the first risk assessment instrument to incorporate macro-level factors, and in that sense is incorporating assessment targets that fall outside of the traditional purview of psychological violence risk assessment.

The empirical support for the MLG’s risk factors was also unevenly distributed, and this was likely related to the uneven distribution of research attention. Indeed, while several factors in the Individual-Group and Group domains did receive empirical support, they were often relatively sparsely examined and drawing firm conclusions regarding their support would be premature. However, a few conclusions regarding several of the MLG’s risk factors can be drawn from the studies included in this review (see Table 4). First, in the Individual domain, the empirical research reviewed indicates that *Conduct Problems*, *Attitude Problems*, and *Mental Health Problems* were generally well-supported, although it is worth noting a pattern of some heterogeneity in the support for *Conduct Problems*. While this factor was broadly supported across the studies examined, this factor may be of greater or lesser importance depending on the type of GBV being assessed. With respect to terrorism, several studies have failed to find an
association between prior criminal or antisocial behaviour and extremist violence (e.g., Freilich, Parkin, Gruenewald, & Chermak, 2019; Jasko, LaFree, & Kruglanski, 2017; Klausen et al., 2018; Meloy & Gill, 2016). Thus, it may be that while the presence of such behaviour retains its significance as a risk factor for terrorism, the absence of this factor is not automatically mitigating with respect to an individual’s risk for terrorism, and it may be that items capturing ideological commitment become more salient in such cases. Given that the MLG was developed to be broadly applicable to several forms of GBV, the continued inclusion of this item (or other items with differential relevance across GBV types) is warranted even if its association with certain forms of GBV is not empirically supported; in such cases, the MLG can direct assessors to consider the forms of GBV for which any given item is more or less likely to be relevant, in line with the evidence base.

Social Adjustment Problems also received a considerable amount of research support, but the balance of the evidence was, overall, mixed. This may reflect the fact that a relatively broad range of risk factors examined in this study are captured by this item, and thus heterogeneity among both the factors themselves and the evidence for them is likely to produce a mixed balance of evidence. Nevertheless, the evidence still suggests that Social Adjustment Problems is an important domain to assess, and more research is required to evaluate not only the extent of this factor’s support, but also its dimensions.

In this domain, a partially overlapping theme emerged that warrants some discussion with respect to terrorism risk in particular. Under Attitude Problems, a theme emerged reflecting what might be referred to as “psychological vulnerability”, which was largely comprised of variables reflecting features such naivety, a need for identity, seeking new moral or religious authorities, and rigid thinking. While the strength of the evidence for these this theme was generally low, it did receive some degree of empirical support and was conceptually consistent with behavioral progression models violent extremism which stipulate the emergence of a “cognitive opening” (Klausen et al., 2018, p. 13) early on in the progression, such that the individual becomes vulnerable to adopting extremist beliefs. While the evidence base is not, in my judgment, strong enough to support the inclusion of this as a subitems of Attitude Problems, the inclusion of this feature as an indicator may be informative for assessors.
In the Individual-Group domain, *Individual Has Strong Commitment to Group* received the most robust support, while the other factors, although they received empirical support, were sparsely examined. As noted above, the research into this domain from a risk factor perspective appears to be nascent, and as such the recent empirical evidence base for these risk factors is relatively weak, though they remain conceptually important. Very few themes emerged from the partially overlapping risk factors in this domain, but warranting brief mention is what might be termed “strong commitment to ideology,” which emerged under *Individual Has Strong Commitment to Group*. While this theme diverges only slightly from the “spirit” of this risk factor, it may be helpful to broaden the item’s description to capture strong commitments to extreme belief systems in the absence of a more immediate group, which is more likely to be found in cases of lone actor terrorism, such as Sovereign Citizen violence, than in cases of group-based violence, and may facilitate the assessment of risk in lone actor cases.

As noted above, *Group Has a History of Violence* was only examined in one study in this review. This may indicate that a group’s history of violence is being considered a risk factor, prima facie, in the literature, and not worth empirical investigation. While this is an understandable conclusion when considering groups with long and consistent histories of violence or violent objectives (e.g., Al-Qaeda), such a factor may be more important in cases where a group has only a limited history of violence or aggression and lacks explicitly violent goals. As such, this risk factor ought not be overlooked, and would benefit from investigation with groups that have some albeit limited histories of violence. Two other risk factors in this domain, *Group Has Violent Norms or Goals* and *Group Has Strong Leadership/Power Structure*, both received empirical support but were both sparsely examined, making firm conclusions on their level of support premature. In contrast, *Group Has Strong Cohesion* was more frequently examined and received mixed support, although the total number of studies examining this factor was still relatively small. The studies failing to find support for this item were those that found an association between intra-group conflicts, fractionalization, and violence (e.g., Karakaya, 2016; Schuurman & Horgan, 2016).

Two items in the Group-Societal domain received good empirical support, namely *Group is Operating in Unstable Environment/Context* and *Group is Threatened By or In Conflict With Other Groups*. Both of these items received empirical support from a relatively large number of high strength studies, such that they represent perhaps the...
most robustly supported items in the MLG. By contrast, *Group is Socially Isolated/Isolative* was sparsely examined in the reviewed studies, and while the balance of the evidence suggests that the item is supported, the evidence base is too weak to draw strong conclusions. *Group is Large in Size/Scope* received mixed support from the studies reviewed, including from a relatively large number of high strength studies. However, a closer examination of the studies themselves suggests that those studies whose examined variables comprised a theme that might be termed “group capabilities” more often failed to find an association with violence, while studies reflecting the relative size of the group and its connections to other groups or governments more often found an association with violence. Thus, there may be different dimensions of this broader factor with differing levels of support that further research might clarify.

With the results of this synthesis in mind, it is instructive to look back to theory and to weigh it against what this empirical evidence is suggesting; as well, it is useful to examine the extent to which the MLG is consistent with both this theory and evidence. In the terrorism context in particular, several scholars have recently proposed sets of risk factors and assessment frameworks that appear likely to capture important constructs relevant to the risk assessment of terrorism, based on both empirical and theoretical work. Two will be discussed here: Borum’s (2015) proposed ABC-BASIC assessment framework, and Monahan’s (2012, 2016) list of “promising” risk factors for terrorism involvement.

In his discussion on risk assessment for involvement in terrorism, Borum (2015) proposed an assessment framework oriented around “clusters” (p. 68) of risk, as opposed to a focus on itemized lists of factors that may accumulate in an individual case. As Borum (2015) argues, the assessment of risk by way of clusters of both “activating” (p. 68) and “disinhibiting” factors (p. 68) could allow:

“…the interindividual (idiographic) variability [to be] assessed within, not just between the groupings. The texture or detail will emerge within the lines of inquiry…[which] has the potential to provide a more individualized and integrated picture of terrorism-related risk…” (p. 68).

Borum (2015) proposes six clusters of risk that assessors should consider in evaluating the risk for terrorism, summarized in the acronym ABC-BASIC (affect and
emotions, behaviour, cognitive style, beliefs and ideology, attitudes, social factors, identities, and capabilities). While the ABC-BASIC clusters are primarily individual in their orientation, this assessment framework fits well with the nested model of the MLG, where risk is clustered into domains that are composed of possibly relevant risk factors, the true relevance of which must be established through case formulation. In addition, the Individual and Individual-Group domains capture the clusters in the ABC-BASIC framework, indicating a theoretical convergence and, to the extent that the MLG’s items can be considered parallels of the ABC-BASIC clusters, may suggest that the ABC-BASIC framework is also empirically supported to some degree.

Another set of five assessment targets in the context of the individual risk assessment of terrorism was proposed by Monahan (2012, 2016), based upon his appraisal of the extant literature. These are ideology, affiliations, grievances, moral emotions, and identities, and it is evident that there is clear conceptual overlap between these domains and both the Individual and Individual-Group level risk factors in the MLG and many of the clusters in the ABC-BASIC framework; such overlap again indicates a fair degree of theoretical convergence and, if the empirical support for the items in the MLG can be applied to their parallels among Monahan’s (2012, 2016) set of factors, evidentiary support. Such conceptual overlap suggests, at least at the individual level, that the MLG framework is consistent with at least some of extant theoretical propositions about how best to assess the risk for terrorism involvement. Table 4 presents both a summary of the support that each MLG risk factor received in the current review, as well as what this support may suggest for the parallel risk factors in Borum’s (2015) and Monahan’s (2012, 2016) frameworks.

Table 4: Summary of Evidentiary Support for MLG Risk Factors Compared to Other Proposed Risk Assessment Frameworks for Terrorism

<table>
<thead>
<tr>
<th>MLG Risk Factors</th>
<th>Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>I1. Conduct Problems</td>
<td>✓</td>
</tr>
<tr>
<td>I2. Attitude Problems</td>
<td>✓</td>
</tr>
<tr>
<td>I3. Social Adjustment Problems</td>
<td>~</td>
</tr>
<tr>
<td>I4. Mental Health Problems</td>
<td>✓</td>
</tr>
<tr>
<td>IG1. Individual Has Strong Group-Based Identity</td>
<td>(&gt;Mark)</td>
</tr>
<tr>
<td>IG2. Individual Has Violent Role or Status in Group</td>
<td>(&gt;Mark)</td>
</tr>
<tr>
<td><strong>MLG Risk Factors</strong></td>
<td><strong>Support</strong></td>
</tr>
<tr>
<td>----------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>IG3. Individual Has Strong Commitment to Group</td>
<td>✓</td>
</tr>
<tr>
<td>IG4. Individual Has Negative Attitudes Towards People Outside the Group</td>
<td>✓</td>
</tr>
<tr>
<td>G1. Group Has a History of Violence</td>
<td>(✓)</td>
</tr>
<tr>
<td>G2. Group Has Violent Norms or Goals</td>
<td>(✓)</td>
</tr>
<tr>
<td>G3. Group Has Strong Cohesion</td>
<td>~</td>
</tr>
<tr>
<td>G4. Group Has Strong Leadership/Power Structure</td>
<td>✓</td>
</tr>
<tr>
<td>GS1. Group is Large in Size/Scope</td>
<td>~</td>
</tr>
<tr>
<td>GS2. Group is Socially Isolated/Isolative</td>
<td>(✓)</td>
</tr>
<tr>
<td>GS3. Group is Operating in an Unstable Context/Environment</td>
<td>✓</td>
</tr>
<tr>
<td>GS4. Group is Threatened By or In Conflict With Other Groups</td>
<td>✓</td>
</tr>
</tbody>
</table>

**Borum’s (2015) ABC-BASIC assessment framework**

| **Affect and Emotions** | ✓ |
| **Behaviour** | ✓ |
| **Cognitive Style** | ✓ |
| **Beliefs/Ideology** | ✓ |
| **Attitudes** | ✓ |
| **Social Factors** | ~ |
| **Identities** | (✓) |
| **Capacity** | ? |

**Monahan’s (2012, 2016) promising risk domains**

| **Ideology** | ✓ |
| **Affiliations** | ✓ |
| **Grievances** | ✓ |
| **Moral Emotions** | ? |
| **Identities** | (✓) |

*Note.* ✓ = item is supported; (✓) = item is provisionally supported by a small number of studies; ~ = item received mixed support; ? = support unknown based on current review.
5.2. Factors Not Overlapping with the MLG

Turning to those risk factors that did not overlap with any of the items of the MLG, three themes emerged with a sufficient number of constituent risk factors from moderate or high strength studies to warrant discussion. The first two might be termed “pre-attack preparations” and “pre-attack communication of intent”. These are noteworthy in that they overlap entirely with the behavioural progression model of threat assessment for terrorism embodied by tools such as the TRAP-18, and indeed many of the studies comprising these themes examined the TRAP-18 specifically (e.g., Meloy & Gill, 2016; Meloy et al., 2019). Given that the MLG was not developed within this model, it is not recommended that these be incorporated into the measure as new items, but an awareness of these factors as informative indicators of increasing risk may be of utility in risk assessments for terrorism, and thus these factors are thought to be informative.

The third theme that emerged from the non-overlapping factors was that of “demographics”, including age (e.g., Dubow et al., 2019; Pizarro, 2017; Smith, 2018b), race/ethnicity (Collins, Menard, & Pyrooz, 2018; Merrilees et al., 2013; Smith 2018b), and gender (Pauwels & Schils, 2016; Quinn, Walsh, & Dickson-Gomez, 2019; Smith, 2018b). While the empirical evidence for these factors was thoroughly mixed in the research reviewed, there are other legal, ethical, and practical limitations to the inclusion of ascribed demographic characteristics in a risk assessment measure, though a discussion of these issues is beyond the scope of this study (see Tondry, 2014; but cf. Monahan & Skeem, 2016; Monahan, Skeem & Lowenkamp, 2017). As such, these factors are not recommended for inclusion in the MLG.

5.3. Applicability of the MLG to Females, Adolescents, and Lone Actors

With respect to the applicability of the MLG’s items to females and adolescents, the available evidence does little to provide clear answers. There were several studies of gang and terrorist violence that included mixed gender samples which does provide some indirect support for the applicability of the MLG to both males and females. However, many of the mixed samples, particularly in the terrorism studies, had very small proportions of females, thus seriously limiting the conclusions that can be drawn regarding this question. There were only a few studies that examined GBV among
females in particular (e.g., Carter, 2013; Ghosh, Tiflatti, Chan, Dilimulati, & Dhali 2018; González, Freilich, & Chermak, 2014; Sutton, 2017), but these studies were all of low evidentiary strength. Thus, it is clear that there is a need for research to address this gap. Regarding adolescents, the picture is a bit clearer. The majority of the gang research examined in this study employed either mixed-age samples of both adults and adolescents or examined youth street gangs, suggesting that the MLG is likely applicable to adolescents, at least in a gang context. In addition, the age range in many studies on terrorism included adolescents, lending further support to the possibility that the MLG is applicable to this population.

Lastly, with respect to the MLG’s applicability to lone actor terrorists, the evidence reviewed in this study suggests that the MLG is at least partially applicable to this population, although the relevance of the outer levels its ecological model (i.e., Group and Group-Societal domains) is more tenuous when it comes to lone actors, as the “group” in question may be more amorphous, may exist primarily online, or may be less tangible (e.g., an extremist belief system). Thus, the applicability of these group-level factors to lone actors may depend on how broadly one interprets the content of those items, and the expansion of those items’ descriptions to accommodate this may improve its utility in this regard. Further research comparing the applicability of the MLG to group and lone-actor terrorists will be required before this can be satisfactorily determined. In addition, it may be that measures such as the TRAP-18 are more suitable as to lone actors or could be used in concert with the MLG. It should be noted, however, that the potential irrelevance of the Group and Group-Societal domains to certain lone actors does not preclude the application of the MLG, in its entirety, to this kind of offender; that is to say, the MLG is unlikely to promote myopia in the assessment of lone actors. Rather, an assessor may find that the risk is primarily nested in the Individual and Individual-Group domain, and that the factors in the higher-level domains are not applicable. Thus, the irrelevance of the higher-level domains in a case of lone actor terrorism does not necessarily indicate that the measure is failing to capture the relevant risk factors.

5.4. Summary of Recommendations for Revisions

The results of this review suggest that the MLG, in its current form, does not require substantial revision, and it does not appear to require the addition or deletion of
any risk factors. However, there were three items that the reviewed research suggests may be improved by relatively small changes to their descriptions and set of example indicators (these are summarized briefly in Table 5). I will describe my recommended revisions in turn. First, I would recommend revising the description of Attitude Problems to incorporate the themes of ideological vulnerability (characterized by religious or ideological naivete and a strong need for religious or ideological meaning), rigidity in thinking style (characterized by simple, inflexible thinking, possibly of a dualistic, dogmatic, or totalistic nature), and a desire for action (i.e., feeling compelled to act, or perceiving an action imperative on behalf of their ideological or group commitment).

Second, I would recommend revising the description of Individual Has Strong Commitment to Group to incorporate a broader conception of “group”, so as to capture an individual’s increasing or extreme commitment to an ideology or belief system that is not affiliated with a formal group, or may even be antithetical to formal organization (e.g., Sovereign Citizen beliefs, which are fiercely independent in their orientation and whose adherents do not generally plan or coordinate activities as a group).

Lastly, I would recommend revising the description of Group is Large in Size/Scope to include indicators of a group’s physical capability for violence, which may include financial resources, access to weapons, access to skilled recruits with the requisite abilities, and opportunities for violence (e.g., whether the environment makes is easier or more difficult for the group to engage in violence based on factors such as law enforcement capabilities or response).

Table 5: Summary of Recommendations for Revisions to the MLG

<table>
<thead>
<tr>
<th>MLG Risk Factors</th>
<th>Recommended Revision</th>
</tr>
</thead>
<tbody>
<tr>
<td>I2. Attitude Problems</td>
<td>Amend the description of the item and its indicators to incorporate themes of vulnerability to ideological extremism, rigidity in thinking, and a desire for action.</td>
</tr>
<tr>
<td>IG3. Individual Has Strong Commitment to Group</td>
<td>Amend the description of the item and its indicators to incorporate strong or increasing commitments to a belief system or ideology more broadly.</td>
</tr>
</tbody>
</table>
5.5. Directions for Future Research

This systematic review highlights four important directions for future research on risk factors for group-based violence. The first is the dearth of risk factor research on GBV other than gang violence and terrorism. Indeed, this review found no studies examining risk factors for violence by new religious movements, and only a handful of studies examining risk factors for several other forms of GBV combined. In addition to a need for more research on other forms of GBV, there is a need for more research on the following MLG factors in particular: *Individual Has Strong Group-Based Identity*, *Individual Has Violent Role or Status in Group*, *Group Has a History of Violence*, *Group Has Violent Norms or Goals*, and *Group is Socially Isolated/Isolative*. Second, there is a need for more research on females and adolescents in particular, as the applicability of existing models to these populations is still unclear. Third, and as specifically concerns terrorism research, there is a great need for research on risk factors for terrorism that is conducted with primary data sources; this methodological limitation is especially prevalent in terrorism research relative to gang research, for example. Among terrorism studies included in this review, only 11 that examined risk factors in the Individual or Individual-Group domain accessed primary sources of data, including imprisoned ISIS and Al-Qaeda fighters (Alkhadher & Scull, 2019a, 2019b), white supremacists (Simi et al., 2016), former republican and loyalist paramilitary members in Northern Ireland (Holland & Rabrenovic, 2017; Smith, 2017), and adolescents self-reporting politically-motivated violence in Palestine and Israel (Khoury-Kassabri, Khoury, & Ali, 2017), Northern Ireland (Merrilees et al., 2013; Taylor et al., 2016), Germany (Krieg & Kliem, 2019), and in a large online survey study (Pauwels & Schils, 2016). As Monahan (2016) asserts, while also acknowledging the “heroic and enormously time-consuming efforts…” (p. 22) that have gone into the development of rich and informative secondary datasets (e.g., Gill, 2015a), “…at least regarding risk assessment, studying terrorism without studying terrorists is ultimately a futile enterprise” (p.22). While a full discussion of the

<table>
<thead>
<tr>
<th>MLG Risk Factors</th>
<th>Recommended Revision</th>
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<tbody>
<tr>
<td>GS1. Group is Large in Size/Scope</td>
<td>Amend the description of the item and its indicators to incorporate the theme of a group’s physical capability for violence.</td>
</tr>
</tbody>
</table>
practical, political, and methodological barriers to conducting this research is beyond the scope of this thesis, it is ultimately essential if this area of research is to advance, let alone to progress to a place akin to the state of the science with respect to the risk assessment of other forms of violence, that such research be conducted.

Fourth, and again as pertains specifically to terrorism, there is a need for more risk factor research that employs strong methodologies that allow for the identification of those factors that discriminate between violent and non-violent individuals of interest. Of particular value will be the inclusion of appropriate comparison groups, ideally those individuals who hold extremist beliefs or are of concern from a security standpoint but are not ultimately violent. Among the terrorism studies included in this review, only six included non-violent comparison groups, four of which were focused on individual factors (Chermak et al., 2011; Knight et al., 2017; Meloy et al., 2019; Skillicorn, Leuprecht, & Gobeil, 2015), and two that were focused on group-level factors (Fortna, 2015; Karakaya, 2016). This, coupled with the use of appropriate inferential statistical techniques and ideally pseudo-prospective study designs, would represent important methodological advances in this area.

5.6. Limitations

This review and any conclusions derived from it are subject to a number of limitations. First, although this review strove to be comprehensive, it likely fell short of this goal, as there may have been relevant studies catalogued in databases that were not searched, or relevant sources that were not captured due to the application of the “First 100” and “First 50” rules in my searches. In addition, the literature on terrorism in particular is growing at a fast pace and indeed, follow up searches conducted near the end of this review found a number of new studies that were subsequently included in the review. It is possible that during the writing of this study more were published that were not included. Second, this review was conducted by a single researcher which led to both practical and methodological constraints, not the least of which may have been idiosyncrasies or biases in my judgments of evidentiary strength, the overlap between factors and items, and the degree of empirical support for risk factors. While I attempted to determine the extent of this limitation by way of examining interrater agreement on subsamples of the included studies, the review would undoubtedly have been improved with the inclusion of other researchers completing the source screening and coding, and
if interrater agreement was completed prior to my own screening and coding of the data, rather than assessing for potential bias after my review was complete. Indeed, the interrater agreement for the various coding procedures used in this study was variable, and for some coding decisions was poor. This suggests that some of my judgments may have been, to some extent, idiosyncratic, and the results of this review should be read with that in mind. Third, this review and its conclusions are limited by the nature of the research reviewed. As noted above, there were relatively few studies examining forms of GBV other than gang violence and terrorism, and the majority of included studies were of low evidentiary strength, and thus it is not clear the extent to which the MLG is equally applicable to other forms of GBV as well, and how strong the empirical support for the MLG may be, broadly. Lastly, because this review was designed to build on (and not overlap with) Cook's (2014) original review, the conclusions drawn from this review are necessarily myopic insofar as this review focused on the state of the literature from 2011 until the present.
Chapter 6.

Case Studies

With the above results in mind, I will now apply the MLG and the HCR-20 V3 to a series of three case studies reflecting three forms of GBV: a case of Sovereign Citizen violence, a case of group-based terrorism, and a case of gang violence. Information on each of these cases was derived from freely available sources, located with searches of Google, LexisNexis, and the Canadian Legal Information Institute. Where possible, I sought to rely primarily on court documents, and supplemented this material with media sources.

This exercise has two goals: the first is to demonstrate the application and the applicability of the MLG to cases of GBV, and the second is to examine potential differences in the applicability between the MLG and the HCR-20 V3 to cases of GBV. This comparison was selected for two reasons. First, the HCR-20 (across its three versions) is among the most commonly used risk assessment measures worldwide (Hurducas, Singh, de Ruiter, & Petrila, 2014), and as such is the most likely individually oriented risk assessment tool to be applied to cases of GBV. Second, this comparison allows me to demonstrate both the overlap and the divergence of both measures when applied to the same cases of GBV, illustrating the unique contribution of the MLG’s higher-level domains. This approach was previously employed by Hart et al. (2017) in a case series of terrorists, wherein the application of the MLG was compared to that of both the HCR-20 V3 and the VERA-2.

I restricted my application of the HCR-20 V3 to the Historical scale, as the available information was not sufficient to adequately code the Clinical and Risk Management scales; these latter scales are best completed with access to a clinical interview with the individual or recent file information that speaks to the individual’s current mental state and likely future functioning. In addition, while both the MLG and the HCR-20 V3 encourage assessors to rate the relevance of each item so as to inform risk formulation, only ratings of presence were made in these case studies. This decision was made due to the fact that the quantity of information for each case was fairly limited and precluded a robust formulation of each item’s relevance to violence in each case,
which would require more in-depth sources of information than was available. While these choices do represent limitations, they do not preclude an informative comparison of the application between the two measures, as the overlap between the MLG and the HCR-20 V3 occurs primarily with the Historical scale of the latter. In addition, I will also apply the TRAP-18 to the Sovereign Citizen case to examine potential differences in applicability between it and the MLG, as the TRAP-18 was developed specifically for use with lone actors.

6.1. Case One: Sovereign Citizen Violence

The following case relied on information gleaned from newspaper and other media reports. No court documents were available for review in this case. On May 20th, 2010, two West Memphis police officers pulled over a white minivan travelling east on Interstate 40 in Arkansas, driven by Jerry Kane Jr., 45, and his son Joseph Kane, 16. An argument ensued between the officers and Jerry Kane, who pushed one of the officers into a ditch. Joseph Kane then emerged from the minivan armed with an AK-47 assault rifle and shot and killed both officers. The Kanes then fled the scene and were killed later that day in a shootout with police in a Walmart parking lot (Dewan & Hubbell, 2010).

Jerry Kane Jr. identified as a Sovereign Citizen, an adherent of an ideology that maintains that they are exempt from the laws enforced by federal, state, and municipal governments, the justification for which is mired in a complex web of esoteric philosophies and conspiracy theories (see the Introduction for a more detailed description of this movement and its beliefs). It is not entirely clear when Mr. Kane adopted these extreme anti-government beliefs, and media reports suggest that at one time he may have held an entirely different set of beliefs, having been the son of an Air Force veteran who instilled in his son a respect for the military, authority and the U.S. Constitution (Goetz, Wolff, & Aaronson, 2010). After high school, Mr. Kane himself enlisted in the U.S. Army Reserve, but received a discharge due to a knee injury and shifted his focus to real estate (Goetz et al., 2010). Media reports indicate that in the mid-1980s, he embarked on a string of failed campaigns for municipal government (Dewan & Hubbell, 2010; Goetz et al., 2010), and at the conclusion of the third campaign was arrested and charged with minor theft (Dewan & Hubbell, 2010). Kane again pivoted, this time entering the trucking industry (although he would eventually give this up when he relinquished his driver’s license in an effort to thwart government control
over his life) and shortly thereafter married his first wife, Hope, who passed away in 2007 (Dewan & Hubbell, 2010; Goetz et al., 2010). Those who knew Kane reported that his wife’s passing was devastating; Mr. Kane continued to pay the cell phone bill for his deceased wife for years after her death so that he could call her answering machine and hear her voice (Goetz et al., 2010). That would not be the first major loss in Kane’s life, however, as in 1996 his second child, an infant daughter, suddenly passed away, and those close to Mr. Kane characterized this as a pivotal event in his life (Dewan & Hubbell, 2010). It was around this time that media reports contain information suggestive of his growing attraction to Sovereign Citizen ideology.

Between 1995 and 2001, Mr. Kane was the recipient of numerous citations regarding the state of his home and property, and in 2002 his home was condemned and demolished (Goetz et al., 2010). During this time period, media reports indicate that Mr. Kane made repeated violent threats to law enforcement who came on his property, put up signs in his yard disparaging a judge who sentenced him to community service, and in April of 2003, submitted a court filing explicitly identifying himself as a “sovereign man” (Goetz et al., 2010, p. 6). Mr. Kane began to espouse a number of anti-government, Sovereign Citizen ideas, including that he did not need a driver’s license and that he could decline to engage with law enforcement officers who gave him citations (Goetz et al., 2010). The New York Times reported that he attempted to purchase property at auction with an I.O.U., and that in 2004 he accrued an assault charge for firing a pellet gun at a passing teenager, apparently unprovoked (Dewan & Hubbell, 2010). He was also the subject of foreclosures and lawsuits from the local health department (Dewan & Hubbell, 2010). It was also reported that Mr. Kane was driving a van that was registered to an organization that was housed in a vacant Ohio building that may have once housed the headquarters for the Aryan Nations, a violent white supremacist group (Dewan & Hubbell, 2010).

In 2006, Mr. Kane changed occupations and began a career as a speaker, and he and his son travelled the country offering debt relief seminars to homeowners, and media reports indicate that these seminars were often poorly attended; indeed, his last seminar before the shootings was held in Las Vegas, and was attended by six people (Dewan & Hubbell, 2010; Goetz et al., 2010). At these seminars, Kane also imparted Sovereign Citizen philosophy and tactics to attendees, including advising them to file a complex variety of documents to their country registers that, when done correctly, he
believed, could nullify their mortgage (Goetz et al., 2010). This is a tactic frequently employed by Sovereign Citizens (McNabb, 2011). Kane posted videos of these seminars and others on YouTube and was also a guest on various fringe Internet radio shows, and in some of these disseminations he made vague and threatening statements about a particular I.R.S. agent and a police officer who had arrested him (Dewan & Hubbell, 2010).

There is little evidence that Kane was intimately tied to a larger network of right-wing extremists, although there are suggestions that he may have had links with others in the larger Sovereign Citizen movement (Goetz, 2012). For example, it has been reported that Kane was once investigated for potential links to “domestic terrorism” (Goetz, 2012, p. 2). With respect to his mental health, there is also limited information available, aside from the suggestion of an alcohol abuse problem, which media reports indicated that Kane alluded to in a YouTube video (Dewan & Hubbell, 2010).

6.1.1. Applying the MLG

I will now apply the MLG to the case of Jerry Kane Jr. Given that Mr. Kane died shortly after his offences (thus precluding an assessment of risk for recidivism), I will code the presence of items of the MLG assuming that I am doing so on May 19th, 2010, just prior to the offences in question. I am considering a risk factor to be present or partially/possibly present at the current time if there is some evidence of the risk factor’s presence between May 2009 and May 2010.

I1. Conduct Problems

Previous: Yes

Mr. Kane has a history of making threats against law enforcement officers and has been arrested on several occasions and received numerous citations and fines for his refusal to comply with regulations. He has also been charged with assault for firing a pellet gun at a passerby, seemingly unprovoked.

Current: Yes
On April 10th, 2010, Kane was arrested in New Mexico for driving without a license, and one month later he sent a vaguely threatening letter to the arresting officer’s home.

**I2. Attitude Problems**

*Previous: Yes*

Mr. Kane harbours strong anti-government and anti-authority views and appears to have done so for many years. He has been known to travel armed and has made statements indicating that he would become violent with law enforcement were they to continue to try to enforce regulations and laws on him.

*Current: Yes*

Mr. Kane continues to travel the country conducting his seminars wherein he expresses his strong anti-government views.

**I3. Social Adjustment Problems**

*Previous: Yes*

Mr. Kane has a history of unstable employment, owing in large part to his own behaviour (e.g., relinquishing his driver’s license, ending his career in trucking). He also experienced a string of setbacks in his bids at municipal politics. It is also clear that Mr. Kane has associated himself with similarly minded right-wing extremists, appearing on their radio shows and meeting with them at his seminars. There are also suggestions that he may have ties to white supremacists.

*Current: Yes*

Mr. Kane continues to associate with right-wing extremists by way of his seminars. His lifestyle of traversing the country with his son delivering seminars also suggests that he spends little time with others outside of the Sovereign Citizen movement.

**I4. Mental Health Problems**

*Previous: Possible/Partial*
Kane appeared to make allusions to a substance use problem in a video he posted online, and some described Mr. Kane as “unstable,” although these are not dispositive of a mental health problem.

*Current: Omit*

There is not enough available information with which to rate this item in the current timeframe.

**IG1: Individual Has Strong Group-Based Identity**

*Previous: No*

Mr. Kane’s Sovereign Citizen beliefs are rooted in a strong sense of individualism. While these beliefs have taken center-stage in his life, it does not appear that Mr. Kane has de-individuated himself; to the contrary, his identity is one of fierce individuality.

*Current: No*

In the current period, this dynamic does not appear to have changed; Mr. Kane is no de-individuated, and his identity remains vehemently individualistic.

**IG2: Individual Has Violent Role or Status in Group**

*Previous: No*

To the extent that Mr. Kane’s participation in the Sovereign Citizen movement could be construed as constituting a role in a group, he has not historically occupied a violent role. His participation in the movement has largely consisted of his giving seminars, posting videos online, and taking part in Internet radio broadcasts.

*Current: No*

At present, Mr. Kane does not appear to occupy a violent role in the Sovereign Citizen movement, and his participation in the movement to date has not been characterized by violence.
**IG3: Individual Has Strong Commitment to Group**

*Previous: Yes*

Mr. Kane’s past behaviour indicates a strong commitment to the Sovereign Citizen ideology, as evidenced by the sacrifices he has made for it (e.g., relinquishing his driver’s license and ending his career as a truck driver), and his past record of behaviour with respect to law enforcement and government officials, for which he has been arrested and accrued fines and citations.

*Current: Yes*

Mr. Kane continues to demonstrate a strong commitment to his ideology, and this is most notably demonstrated by the lifestyle he has chosen to live, which consists primarily of travelling the country giving seminars, from which he appears to make very little money. It is also evident that Mr. Kane has imparted these beliefs on his son, whom he travels with.

**IG4: Individual Has Negative Attitudes Toward People Outside the Group**

*Previous: Yes*

Mr. Kane has long held strongly negative attitudes towards government agencies and representatives, as evidenced by his consistent refusal to comply with laws and regulations and his history of threatening and harassing behaviour against government employees and law enforcement.

*Current: Yes*

Mr. Kane continues to espouse extremely negative views of government and government representatives, and the strength of these attitudes does not appear to have diminished in the recent period.

**G1: Group Has a History of Violence**

*Previous: Yes*

Adherents of the Sovereign Citizen movement and other ideologically similar movements have been involved in violence in the past. Among the most notable
examples is that of Terry Nichols, a Sovereign Citizen who assisted Timothy McVeigh in building the bomb that McVeigh detonated in Oklahoma City.

Current: No

There do not appear to be any notable or high-profile incidents of Sovereign Citizen violence during the recent period, and none that might be linked to individuals with whom Mr. Kane may be affiliated.

G2: Group Has Violent Norms or Goals

Previous: No

While the Sovereign Citizen movement has been associated with violence in the past, the group’s fundamental goals or not necessarily violent. Adherents to the movement aim for a separation of the themselves from the authority of government, and while this may entail violence at certain junctures, it does not appear to be a core tenet of the movement’s goals

Current: No

See above.

G3: Group Has Strong Cohesion

Previous: No

The Sovereign Citizen movement is best described as a loosely organized group of individuals adhering to a similar set of beliefs and does not appear to engage in coordinated activities or strategies. While adherents may to express solidarity with one another, it does not appear that there are coordinated social events of tight knit individuals, initiation rituals, distinctive clothing or other signifiers of group membership, or other hallmarks of highly cohesive groups.

Current: No

See above.
**G4. Group Has Strong Leadership/Power Structure**

*Previous: No*

The Sovereign Citizen movement is loosely organized and does not have a central leadership or command structure.

*Current: No*

See above.

**GS1. Group is Large in Size/Scope**

*Previous: Possible/Partial*

While there does not appear to be a wide scope to the activities that Sovereign Citizens partake in beyond individual acts of resistance against government officials, the movement is estimated to have a large number of adherents or sympathizers spread across the United States, Canada, the United Kingdom, and New Zealand.

*Current: Possible/Partial*

See above.

**GS2: Group Has Socially Isolated/Isolative**

*Previous: Yes*

The Sovereign Citizen movement is, by nature, an isolative one, as the primary aim of its adherents is to divorce themselves from the government systems that regulate the broader societies in which they live.

*Current: Yes*

See above.

**GS3: Group is Operating in an Unstable Context/Environment**

*Previous: No*
While Sovereign Citizens are widely dispersed across the countries in which they live, it cannot reasonably be concluded that they are operating in an unstable context, broadly speaking, given that they primarily operate in countries that are highly developed and do not generally experience high levels of political or civil unrest, socioeconomic crises, or violence. This is especially true when considered at an environmental level for Mr. Kane’s community, state, and country.

Current: No

See above.

GS4: Group is Threatened By or In Conflict With Other Groups

Previous: Possible/Partial

While the Sovereign Citizen movement has been of concern to law enforcement for some time, it cannot reasonably be asserted that the movement is currently threatened by the government or any other group in an objective sense. However, adherents of the movement do perceive the government as oppressive and believe that the government has conspired to oppress them, and thus they do appear to perceive some degree of threat towards themselves.

Current: Possible/Partial

See above.

6.1.2. Applying the HCR-20 V3

I will now apply the Historical scale of the HCR-20 V3 to the case of Jerry Kane Jr. As was done with the MLG, due to the fact that Mr. Kane died shortly after his offences (thus precluding an assessment of risk for recidivism), I will code presence of the items of the Historical scale assuming that I am doing so on May 19th, 2010, just prior to the offences in question.

H1. History of Problems with Violence

Presence: Yes
Mr. Kane has a history of making violent threats against law enforcement officers who entered his property. He also has made threats against other government officials in videos, letters, and Internet radio broadcasts. He has also been charged with assault for firing a pellet gun at a passerby, seemingly unprovoked.

**H2. History of Problems with Other Antisocial Behaviour**

*Presence: Yes*

Mr. Kane has a history of non-compliance with regulations and ordinances, including driving without a license. For these behaviours he has accrued numerous citations.

**H3. History of Problems with Relationships**

*Presence: Partial/Possible*

There is some evidence linking Mr. Kane to individuals and locations associated with white supremacist organizations, and he has been investigated for links to suspected extremists. He appears to be involved in an online network of other Sovereign Citizens, with whom he communicates via videos and Internet radio broadcasts. There is limited information about his intimate relationships.

**H4. History of Problems with Employment**

*Presence: Yes*

Mr. Kane appears to have an unstable employment history, in part stemming from some of his own behaviours, such as giving up his driver’s license despite being employed as a truck driver. It also appears that his current occupation delivering seminars is not gainful, and these seminars appear poorly attended.

**H5. History of Problems with Substance Abuse**

*Presence: Partial/Possible*

There is little evidence available about Mr. Kane’s use of drugs or alcohol, but media reports indicate that he has made comments in his online videos suggesting a possible alcohol problem. This information is not dispositive, however.
H6. History of Problems with Major Mental Disorder

Presence: Omit

There is not enough information available to code this item.

H7. History of Problems with Personality Disorder

Presence: Omit

There is not enough information available to code this item.

H8. History of Problems with Traumatic Experiences

Presence: Yes

Mr. Kane has endured two major known tragedies in his life: the death of his infant daughter and the death of his first wife. Mr. Kane appears to have struggled profoundly with these losses, and media reports indicate that his beliefs and behaviours became more extreme in the aftermath of these events.

H9. History of Problems with Violent Attitudes

Presence: Partial/Possible

While the available evidence does not make clear that Mr. Kane harbours explicit or entrenched violent attitudes, although it is clear that he holds oppositional and negative attitudes regarding law enforcement and government officials.

H10. History of Problems with Treatment or Supervision Response

Presence: No

It does not appear that Mr. Kane has ever been engaged in treatment or been under correctional supervision.

6.1.3. Applying the TRAP-18

I will now apply the TRAP-18 to the case of Jerry Kane Jr. As was done with the MLG, I will code the items of the TRAP-18 assuming that I am doing so on May 19th,
2010, just prior to the offences in question. The coding of the items will be done as per the instructions in the TRAP-18 manual (Meloy, 2017).

**Proximal Warning Behaviours**

1. **Pathway: Absent**

   Kane and his son do not appear to have made any plans to attack a specific target or individual, nor have they taken steps towards doing so. They do travel with an assault rifle, although it does not appear that this is in service of a premeditated attack.

2. **Fixation: Present**

   Kane and his son appear to show increasing anger and increasing volatility in their encounters with government representatives, as evidenced by Kane's cryptic statements about police actions leading to inevitable violence on his part. He does appear to be fixated on his Sovereign Citizen beliefs and preoccupations and has made considerable sacrifices to his personal life in order to conduct his seminars full time.

3. **Identification: Present**

   Kane appears to identity strongly with the Sovereign Citizen movement, as indicated by the amount of time he spends travelling the country giving his seminars. Kane does appear to feel strongly that he is engaged in resistance against the government and appears devoted to assisting others in resisting the government, banks, and other institutions. It does not appear that he identities as a warrior or desires to be a pseudocommando.

4. **Novel Aggression: Absent**

   There is no evidence that Mr. Kane has committed a recent act of novel aggression.

5. **Energy Burst: Absent**

   There is no evidence that Mr. Kane has exhibited an increase in the frequency or variety of his activities.
6. **Leakage:** Absent

There is no evidence that Mr. Kane has communicated an intent to commit violence against a target.

7. **Last Resort:** Absent

There is no evidence that Mr. Kane perceives there to be a "violent action imperative" nor a "time imperative."

8. **Directly Communicated Threat:** Absent

Mr. Kane does not appear to have made a direct threat to a specific target recently.

**Distal Characteristics**

9. **Personal Grievance and Moral Outrage:** Present

Mr. Kane harbours intense anger at government representatives, in particular law enforcement. He appears preoccupied with the notion that ordinary people are being oppressed by illegitimate government structures.

10. **Framed by an Ideology:** Present

Mr. Kane harbours deeply held Sovereign Citizen beliefs that he has expressed for many years.

11. **Failure to Affiliate with an Extremist Group:** Absent

It does not appear that Mr. Kane has made an attempt to join or affiliate with any formal group or organization, although he is a participant in the larger and loosely organized Sovereign Citizen movement.

12. **Dependence on the Virtual Community:** Absent

While Mr. Kane does post videos on YouTube and does appear as a guest occasionally on Internet radio programs, his primary source of income and the primary
way he works towards his goals of spreading Sovereign Citizen ideology take place in person at his seminars.

13. **Thwarting of Occupational Goals: Present**

Mr. Kane's seminars do not appear to have been terribly successful, and he has a history of failed occupational endeavours, sometimes precipitated by his own behaviours.

14. **Changes in Thinking and Emotion: Present**

Mr. Kane's Sovereign Citizen beliefs appear to have hardened over time, as has his commitment to the lifestyle and the ideology. His seminars are a venue for him to both make money and spread the ideology.

15. **Failure of Sexually Intimate Pair Bonding: Absent**

Mr. Kane has had two marriages, the first of which ended when his wife passed. He is currently in a long-term relationship with a woman to whom he appears committed.

16. **Mental Disorder: Unknown**

There is some indication that Mr. Kane may have suffered from an alcohol abuse problem in the past, based on vague comments he has made online, although there is not enough information to code this risk factor at present.

17. **Creativity and Innovation: Absent**

There is no evidence of innovation or creativity in this case.

18. **Criminal Violence: Absent**

Mr. Kane does have some history of violence, but it appears to have been reactive in nature as opposed to instrumental.
6.2. Case Two: Group-Based Terrorism

This case relied primarily on court documents for the individual being assessed and others involved in the offence. In particular, the Reasons for Sentencing and Reasons for Judgment were relied on heavily and were supplemented with newspaper and media reports. In June of 2006, Saad Gaya, then 18 years old, was arrested along with 16 others as he was unloading large quantities of ammonium nitrate from a truck in the Toronto suburb of Newmarket, Ontario (R. v. Gaya, 2010). A member of a terrorist group that ultimately became known as the “Toronto-18,” Gaya had for 10 months been assisting the group with a plot to use the fertilizer to create bombs that the group hoped to detonate in several areas around Toronto (Jones, 2010), but the group was stopped by law enforcement after a lengthy and complex investigation (R. v. Gaya, 2010).

The story of the Toronto-18 appears to have begun in earnest in 2005, when Yasin Mohamed and Mohammed Dirie were arrested entering Canada with concealed firearms, driving a rental car paid for by Dirie’s brother-in-law, Fahim Ahmad. Following Dirie’s conviction and incarceration, CSIS agents directed an informant to affiliate himself with Ahmad and his associate, Zakaria Amara (R. v. Gaya, 2010; R. v. N.Y., 2008). The men also provided the informant with extremist materials that advocated violent Jihad and requested his help in running a training camp in Northern Ontario, which ran in the latter half of December 2005 (R. v. N.Y., 2008). At this training camp, participants took part in mock combat operations and were shown extremist materials by Ahmad, who stressed the importance of Jihad to the attendees and stated that the group was ideologically aligned with al-Qaeda (R. v. Gaya, 2008; R. v. N.Y., 2008). Many of the activities at the camp were filmed by Ahmad, who intended to send the materials abroad to gather support for the group among imams and foreign extremists; it also appears that Ahmad was coordinating with Jihadists abroad, was working to import weapons into Canada, and facilitated another individual’s travel to Pakistan so that he could receive training (R. v. N.Y., 2008).

Court documents indicate that the group’s aim was to commit terrorist acts in order to force Canada’s withdrawal of troops from Afghanistan, which the group’s members perceived as an attack on Muslims (R. v. Gaya, 2008; R. v. Gaya, 2010; R. v. N.Y., 2008). Plans discussed included attacking Parliament, detonating bombs at the offices of CSIS, bombing of a military base, and an attack on a nuclear power plant (R. v.
However, in March of 2006, the group had fractured into two factions, one led by Ahmad and the other by Amara, who had had a falling out over Amara’s dissatisfaction with Ahmad and their progress on the plans; it was shortly after this split that Saad Gaya became affiliated with Amara (R. v. Gaya, 2008).

In the Reasons for Sentence, it is reported that Gaya and Amara first met at McMaster University, where Gaya was a sciences student and, by all accounts, an excellent one; it was at this meeting that Gaya was apparently convinced to assist Amara in his plans, stating that the goal was to end Canada’s military involvement in Afghanistan (R. v. Gaya, 2010). While Amara did withhold several details of the plans from Gaya and others, the court documents assert that Gaya was well aware of the likelihood that the truck bombs would kill bystanders, particularly were it to be detonated outside the Toronto Stock Exchange, which was one of the group’s targets (R. v. Gaya, 2010). However, courts documents also indicate that Gaya had expressed reservations about the potential of harm to people and may have originally believed that the bombs would be used only to cause property damage (R. v. Gaya, 2008; R. v. Gaya, 2010).

The Reasons for Sentence indicate that Gaya had a relatively unremarkable background. He had no criminal history prior to his involvement with the Toronto-18, he was noted to have been an excellent student, both in secondary school and at McMaster University, was employed, had a large social support network, and volunteered in his community; prior to his sentencing, Gaya was noted to have filed a brief with 45 letters of reference speaking to his good character from a number of family and community members (R. v. Gaya, 2010). A psychiatric assessment of Gaya concluded that he was not psychopathic, did not present with any personality pathology, was free from any symptoms of a major mental disorder, did not appear to have a problem with anger, and was a low risk for recidivism in the short term (R. v. Gaya, 2010). The assessment did note, however, that Gaya presented with deeply held religious convictions and was also naïve and demonstrated “strong affiliative needs” (R. v. Gaya, 2010, p. 13). The psychiatric assessment further noted that “Mr. Gaya’s sense of religiously motivated moral outrage superseded his perceived need to abide by secular laws” (R. v. Gaya, 2010, p. 13). Furthermore, it was noted that Gaya demonstrated “duplicitous” behaviour (R. v. Gaya, 2010, p. 10), and many of the prosocial individuals in his life were entirely unaware of his associations with the other members of the terror group. The Reasons for Sentence also note that Gaya’s letters of support were also suggestive of some potential
problems with his social adjustment, indicating some degree of immaturity and social isolation (R. v. Gaya, 2010). Collateral sources also report that Gaya was “quite conservative” (R. v. Gaya, 2010, p. 10) in his Islamic beliefs.

Available information indicates that at the time of his sentencing, Gaya expressed genuine remorse for his offence, and had begun engaging in rehabilitative activities while in custody and continued his education via correspondence courses (R. v. Gaya, 2010). He ultimately received a sentence of 12 years (this was later increased to 18 years on appeal; Mehta, 2016), and in February of 2016 was released on day parole, which was extended in August of the same year (Mehta, 2016). Media reports indicate that Gaya was released with conditions that he engage in counselling, and there is no evidence that he failed to comply with these conditions; indeed, the Reasons for Sentencing indicate that he had been receptive to counselling since the time of his sentencing (Mehta, 2016; R. v. Gaya, 2010). Since his incarceration, he has earned a Bachelors degree and has continued to pursue his education, and also appears to have a strong family and community support network.

6.2.1. Applying the MLG

I will now apply the MLG to the case of Saad Gaya, and I will code the presence of the items of the MLG assuming that I am doing so on September 1st, 2016, the day after the publication of the most recent media source reviewed for this case study. I am considering a risk factor to be present or partially/possibly present at the current time if there is some evidence of the risk factor’s presence between September 2015 and September 2016.

I1. Conduct Problems

Previous: Yes

Mr. Gaya’s participation in the Toronto-18 bomb plot represents a very serious offence. While his participation in the plot was not violent, he did work to facilitate violence on behalf of the group.

Current: No
There is no evidence that Mr. Gaya has demonstrated any violent or antisocial conduct since his index offence.

I2. Attitude Problems

Previous: Yes

Mr. Gaya’s participation in the bomb plot and his statements to police made after his arrest indicate that he harboured attitudes that supported and condoned violence as a way to achieve his ideological objectives.

Current: No

It does not appear that Mr. Gaya continues to hold attitudes that support or condone the use of violence to further ideological objectives. He has engaged in spiritual counselling while incarcerated, and reportedly works with two former Correctional Service of Canada imams to speak out against violent extremism.

I3. Social Adjustment Problems

Previous: Yes

While Mr. Gaya did evidence a number of indicators of positive social adjustment (e.g., excellent academic performance, employment, large family support network), there is also evidence that he may have been socially isolated to some extent. Furthermore, as indicated by his index offence, he became deeply embedded in a group of antisocial individuals.

Current: No

There is no evidence that Mr. Gaya continues to evidence social adjustment problems. He has continued his education while in custody and appears to be embedded in a strong family support network.

I4. Mental Health Problems

Previous: No
A psychiatric assessment found Mr. Gaya to be free of any major mental disorders or personality pathology. There is no evidence that he has ever had a substance use problem.

Current: No

There is no evidence to suggest that Mr. Gaya has recently suffered from a major mental disorder, personality disorder, or substance use problem.

**IG1: Individual Has Strong Group-Based Identity**

*Previous: Yes*

While Mr. Gaya appears to have held deep and conservative religious beliefs which formed a part of his identity, it is not clear the extent to which he incorporated the “Toronto-18” in particular into his identity. However, Mr. Gaya appears to have felt a strong sense of identity fusion with the broader Islamic world, such that he perceived Canadian military involvement in Afghanistan as an assault on Muslims the world over.

Current: No

There is no evidence that Mr. Gaya continues to hold a strong group-based identity, as indicated by his working with two imams from the Correctional Service of Canada to denounce violent extremism.

**IG2: Individual Has Violent Role or Status in Group**

*Previous: No*

Mr. Gaya’s role in the group is best characterized as facilitative or logistical. It is not known what his role may have become were the plot not interrupted.

Current: No

It does not appear that Mr. Gaya is currently involved in any group that might be considered potentially violent.

**IG3: Individual Has Strong Commitment to Group**

*Previous: Yes*
Mr. Gaya appeared to be strongly committed to the group and its goals, as evidenced by his willingness to contribute to the bomb plot. It appears that he felt that the violence the group was planning was entirely justified by their ideological commitments, and although he may have initially expressed some reservation about the potential for the bombs to harm people, he continued with the plot despite having to have known that harm to people was highly likely given the targets of the bombs.

*Current: No*

Mr. Gaya is obviously no longer a member of the “Toronto-18,” and does not appear to continue to be strongly committed to the ideology that informed the group’s aims.

**IG4: Individual Has Negative Attitudes Toward People Outside the Group**

*Previous: Yes*

Mr. Gaya harboured strong grievances against the Canadian government for its military involvement in Afghanistan and perceived the government’s actions as an affront to all Muslims. Mr. Gaya felt that the planned violence was justified against the government as a consequence.

*Current: No*

There is no evidence that indicates that Mr. Gaya continues to harbour negative attitudes towards the Canadian government or the those he might perceive as being in an “out-group.”

**G1: Group Has a History of Violence**

*Previous: No*

While some members of the group had been involved in plotting violence for some time, there is no evidence that members of the group engaged in actual violence.

*Current: No*

This item is not applicable given that the group was dissolved following law enforcement intervention.
**G2: Group Has Violent Norms or Goals**

*Previous: Yes*

The objectives of the “Toronto-18” were explicitly violent in nature, and the group pondered a number of different violent attacks against the Canadian government. The group’s leaders stated explicitly that the group was ideologically aligned with al-Qaeda.

*Current: No*

This item is not applicable given that the group was dissolved following law enforcement intervention, and Mr. Gaya is not currently affiliated with a potentially violent group.

**G3: Group Has Strong Cohesion**

*Previous: No*

The “Toronto-18” did not appear to be strongly cohesive. Indeed, the group split into two factions in the months before they were arrested because of disagreements between the two leaders. It also appears that Gaya seldom had in-person contact with Amara during the plot, and the group did not appear particularly tight-knit.

*Current: No*

This item is not applicable given that the group was dissolved following law enforcement intervention, and Mr. Gaya is not currently affiliated with a potentially violent group.

**G4. Group Has Strong Leadership/Power Structure**

*Previous: Possible/Partial*

The “Toronto-18” does not appear to have been characterized by strict rules, punishments, or discipline, and it did not appear to be particularly rigid in its structure. However, it does appear that the group’s leaders possessed a degree of charisma and authority and were able to recruit and influence a relatively large group.

*Current: No*
This item is not applicable given that the group was dissolved following law enforcement intervention, and Mr. Gaya is not currently affiliated with a potentially violent group.

**GS1. Group is Large in Size/Scope**

*Previous: Possible/Partial*

While the group did not have a large number of members relative to other, more established terror groups, there is evidence that the group had ties to other international extremists by way of one of its leaders, Fahim Ahmad. Furthermore, the group did demonstrate a degree of capability as evidenced by their ability to acquire the necessary ingredients to construct a large bomb.

*Current: No*

This item is not applicable given that the group was dissolved following law enforcement intervention, and Mr. Gaya is not currently affiliated with a potentially violent group.

**GS2: Group is Socially Isolated/Isolative**

*Previous: No*

The “Toronto-18” were not isolated, either physically or socially, from the broader society in which they operated, save the time spent at the training camp in Northern Ontario. Indeed, Mr. Gaya apparently continued to attend university while he was involved in the plot.

*Current: No*

This item is not applicable given that the group was dissolved following law enforcement intervention, and Mr. Gaya is not currently affiliated with a potentially violent group.

**GS3: Group is Operating in an Unstable Context/Environment**

*Previous: No*
It cannot reasonably be concluded that the group was operating in an unstable context, broadly speaking, given that they operated in the Greater Toronto area in 2006, a highly developed area that was not experiencing high levels of political or civil unrest, socioeconomic crises, or violence.

Current: No

This item is not applicable given that the group was dissolved following law enforcement intervention, and Mr. Gaya is not currently affiliated with a potentially violent group.

**GS4: Group is Threatened By or In Conflict With Other Groups**

Previous: No

It is not evident that the “Toronto-18” felt that they were being threatened by or were in conflict with another group. Their grievances with the Canadian government appeared to stem from the perception that the government was involved in the oppression of Muslims globally by way of their participation in military action in Afghanistan, but it does not appear that the group felt that the government was threatening them in particular.

Current: No

This item is not applicable given that the group was dissolved following law enforcement intervention, and Mr. Gaya is not currently affiliated with a potentially violent group.

**6.2.2. Applying the HCR-20 V3**

I will now apply the Historical scale of the HCR-20 V3 to the case of Saad Gaya. As was done with the MLG, I will code the presence of items of the Historical scale assuming that I am doing so on September 1st, 2016.

**H1. History of Problems with Violence**

Presence: No
Mr. Gaya has no known history of violent behaviour, nor of making threats of violence. While the ultimate goal of the offence for which he was convicted was violent in nature, Mr. Gaya himself did not commit any acts of violence during his involvement in the plot, though he did work to facilitate this violence.

**H2. History of Problems with Other Antisocial Behaviour**

*Presence: Yes*

Mr. Gaya’s index offence was an extremely serious one, wherein he actively assisted in a terrorist plot to detonate truck bombs around the Greater Toronto Area.

**H3. History of Problems with Relationships**

*Presence: Yes*

Mr. Gaya became deeply involved with a group of antisocial individuals who recruited him into the bomb plot. There are also indications that he was somewhat socially isolated and naïve, returning to his family home by 10 p.m. each night after school. There is no available information about any potential romantic relationships.

**H4. History of Problems with Employment**

*Presence: No*

Mr. Gaya appears to have maintained excellent grades while in university and was employed in the community around the time of his involvement in the plot.

**H5. History of Problems with Substance Use**

*Presence: No*

There is no evidence that Mr. Gaya has ever had a problem with substance use.

**H6. History of Problems with Major Mental Disorder**

*Presence: No*

A psychiatric assessment court found no evidence that Mr. Gaya ever suffered from a major mental disorder.
H7. History of Problems with Personality Disorder

Presence: No

A psychiatric assessment found no evidence that Mr. Gaya exhibited symptoms of psychopathy or antisocial personality disorder, nor of any other personality pathology.

H8. History of Problems with Traumatic Experience

Presence: No

There is no evidence that Mr. Gaya has experienced a major trauma or has experienced any negative sequelae stemming from any such event. A psychiatric assessment found that he demonstrated no negative residual effects following his extended placement in segregation while in custody.

H9. History of Problems with Violent Attitudes

Presence: Possible/Partial

Mr. Gaya was described as a conservative Muslim, but it is not evident that his belief system included Jihadist beliefs prior to his meeting with Amara. While he did express grievances with the Canadian military presence in Afghanistan and came to believe that violence was justified for the purposes of forcing the Canadian government to withdraw its troops from the conflict, it does not appear that Mr. Gaya experienced intrusive, fixated, or ruminative thoughts of violence.

H10. History of Problems with Treatment or Supervision Response

Presence: No

While in custody, Mr. Gaya has continued to pursue his education, earning a Bachelors degree. He has engaged in spiritual counselling and has indicated a receptivity to counselling since the time of his sentencing. There is no evidence that he has exhibited problems with his treatment or supervision, and his day parole was recently extended.
6.3. Case Three: Gang Violence

This case relied primarily on the Reasons for Sentence for the individual being assessed, supplemented by newspaper and media sources. Real Christian Honorio, aged 35, plead guilty to and was convicted of second-degree murder for his role in the January 1st, 2009 gang-related shootings that became known as the Bolsa Restaurant Massacre in Calgary, Alberta. At the time, Mr. Honorio was 25 years old and a member of the “403 Soldiers”, a street gang with ties to the larger “Fresh Off the Boat” (FOB) gang, which controlled a large drug distribution network in the city and was active from 2002 until 2009 (R. v. Honorio, 2016). In 2002, a fallout within FOB spawned a splinter group, the “Fresh off the Boat Killers” (FK), which became engaged in a heated gang war with FOB from 2002 until 2009, which involved the deaths of 24 people.

The FOB gang was described as among the most violent in Canada (Grant & Bakx, 2013), and was said to control a large drug distribution network. The FOB gang was also reported to have close links with the “United Nations” gang in British Columbia (Bolan, 2016). The gang also operated in Alberta prisons and jails and had forged alliances with Indigenous gangs such as Red Alert and the Alberta Warriors. (Grant & Bakx, 2013). Unlike some street gangs, FOB appeared to operate with relatively few rules or constraints on its members, who were loosely organized into divisions, each with their own leaders (Grant & Bakx, 2013). Save for monthly payments to the gang, FOB did not enforce a dress code or require its members to receive tattoos. However, Nicholas Chan, the leader of FOB, did provide explicit financial incentives for members to attack and kill rival FK members, and was reported to have ordered the 2009 shooting at Bolsa (Grant & Bakx, 2013). Chan was arrested in July of 2013 (Grant & Bakx, 2013).

In late 2008, Mr. Honorio and five associates were charged with weapons offences after police conducted a raid on a home wherein Mr. Honorio and his associates were storing drugs, weapons, and four homemade explosives (CTV, 2009). Mr. Honorio was released on bail in December of 2008. Shortly after his release on bail, he met with members of the FOB, and engaged in a conspiracy to kill a rival gang member, Sanjeev Mann, who was believed to have shot a member of FOB sometime prior. To orchestrate this, they decided to kidnap Aaron Bendle, a rival gang member and affiliate of Mann’s, in order to lure Mann to the location where they would shoot him. Court documents indicate that Mr. Honorio was eager to affiliate with FOB in order to
obtain drugs, weapons, and bulletproof vests, and volunteered to act as the shooter in Mann’s murder in an effort to “prove himself to the FOB” (R. v. Honorio, 2016, 4); he was also one of three individuals who kidnapped Bendle. On the January 1st, 2009, Honorio and his co-conspirators attended the restaurant where the meeting with Mann was to take place and entered the building and shot and killed Mann. Honorio shot and killed a patron of the restaurant as he fled in the parking lot.

Prior to his weapons charges in December of 2008, Mr. Honorio had no criminal record, and his family reported that they were unaware of their son’s street gang involvement, and indeed knew little about his life in the two or three years prior to his participation in the Bolsa restaurant shootings (Slade, 2012). Court documents indicate that prior to the shooting, Mr. Honorio was “gainfully employed” (R. v. Honorio, 2016, p. 7), and that he was in the process of working towards his GED. Court documents further indicate that Mr. Honorio had strong family support during his legal proceedings, as well as support within the Catholic Filipino community. There is limited information regarding Mr. Honorio’s mental health history, save the testimony of an undercover detective who participated in a “Mr. Big” operation against Mr. Honorio, wherein he stated that Mr. Honorio claimed to become sexually aroused when witnessing the officer threaten another undercover officer as part of the ruse in which they had engaged Mr. Honorio. The detective also testified that Mr. Honorio reported similar arousal when asked to count large sums of money for the officers at a hotel (Martin, 2012). While this information is limited and far from dispositive, it does suggest the possible presence of antisocial or sadistic features. During the undercover operation which led to his being charged, he was reported to have bragged about his shooting Mann during the attack (Slade 2012b), and it was further reported that he offered to help the undercover officers find and kill a supposed informant within his gang (Slade, 2012a). It was also reported that Mr. Honorio refused to provide sworn testimony against his co-conspirators and as a consequence, was held in contempt of court (Slade, 2013).

6.3.1. Applying the MLG

I will now demonstrate the application of the MLG’s items to Mr. Honorio’s case. In doing so, I am assuming that I am rating the presence of these items at the time of his sentencing (i.e., June 2016). I am considering a risk factor to be present or
partially/possibly present at the current time if there is some evidence of the risk factor's presence between June 2015 and June 2016.

**I1. Conduct Problems**

*Previous: Yes*

Mr. Honorio has a documented history of group-based violence in the past, namely his participation in the Bolsa Restaurant Massacre, wherein he shot and killed an innocent restaurant patron as he fled in the parking lot. He also received weapons charges stemming from a police raid which found him to be in possession of weapons, drugs, and homemade explosive devices. Mr. Honorio was also actively seeking to acquire weapons, drugs, and bulletproof vests for his gang.

*Current: No*

Mr. Honorio’s last known conduct problems occurred during his participation in staged illicit activities in the context of an undercover operation against him. During the past year, there is no evidence that Mr. Honorio has exhibited any other conduct problems.

**I2. Attitude Problems**

*Previous: Yes*

In the Reasons for Sentence, the judge stated that Mr. Honorio’s behaviours “clearly show an intention to pursue a life of gang affiliation and crime” (R. v. Honorio, 2016, p.15). He was reported to have bragged about his involvement in the Bolsa shooting to undercover officers. He made attempts to ingratiate himself with the violent FOB gang and was a member of the 403 Soldiers.

*Current: Partial/Possible*

Media reports indicate that Mr. Honorio apologized to the family of his victim at his sentencing hearing (Grant, 2016), though given the fact that these statements were made in the context of a sentencing hearing, it is unclear how indicative of change they are. Mr. Honorio’s defence also informed the court that Mr. Honorio remains deeply religious, although it is not clear if this was the case at the time of the shooting.
I3. Social Adjustment Problems

Previous: Yes

Mr. Honorio appears to have had a large and supportive family and extended support network in the Catholic Filipino community, although his father told the media that in the years prior to the shooting, he knew little of his son’s activities. Prior to the offence, Mr. Honorio was employed, but he had not completed his GED. His family was apparently unaware of his street gang involvement. He was deeply involved in an antisocial peer group, as evidenced by his involvement in street gangs.

Current: Partial/Possible

Mr. Honorio’s family attended his sentencing hearing, and the court was told that he maintains a strong connection to his family and the larger Catholic Filipino community. However, media reports indicate that his sentencing hearing was attended by friends and former gang affiliates of his and is unclear to what extent he may have either built a stronger prosocial support network or disassociated from antisocial peers.

I4. Mental Health Problems

Previous: Partial/Possible

An undercover detective testified that Mr. Honorio reported becoming sexually aroused when witnessing staged violence in the context of the “Mr. Big” operation, and when instructed to count money for the undercover detectives, which suggests the possibility of antisocial or sadistic features, although this is not dispositive. There is no other evidence that he may suffered from a major mental disorder, personal disorder, or other psychological disturbance.

Current: Omit

There is not enough available information with which to rate this item.

IG1: Individual Has Strong Group-Based Identity

Previous: Omit

There is not enough available information with which to rate this item.
Current: Omit

There is not enough available information with which to rate this item.

**IG2: Individual Has Violent Role or Status in Group**

*Previous: Yes*

Mr. Honorio was an active participant in the shooting of Mr. Mann, the kidnapping of Mr. Bendle, and the murder of the innocent restaurant patron.

*Current: No*

At present, there is no evidence that Mr. Honorio is maintaining his affiliation with the gang. In recent years, FOB appears to have been fractured and weakened in the aftermath of high-profile arrests and law enforcement efforts, and thus it is unlikely that Mr. Honorio currently maintains his same role in either the 403 Soldiers or FOB.

**IG3: Individual Has Strong Commitment to Group**

*Previous: Yes*

Mr. Honorio demonstrated a strong commitment to the FOB by volunteering to kidnap Bendle and to shoot Mann. He also refused to be sworn and testify against his fellow gang members in court and was given a 15-day sentence for contempt of court.

*Current: No*

At present, there is no evidence that Mr. Honorio remains a participant in the 403 Soldiers or the FOB, and no evidence that he maintains a strong commitment to either of these groups. There is, for example, no evidence that he has recently engaged in activities on behalf of the gang while in remand.

**IG4: Individual Has Negative Attitudes Toward People Outside the Group**

*Previous: Yes*

Undercover detectives reported that Mr. Honorio bragged about his participation in the shooting of Mann.
At his sentencing hearing, Mr. Honorio made an apology to the victim’s family, and court documents indicate that his behaviour was indicative of remorse. There is no evidence that Mr. Honorio continues to hold negative attitudes towards outgroup members, including his victims.

**G1: Group Has a History of Violence**

*Previous: Yes*

The FOB has a long and documented history as one of Calgary’s most violent street gangs.

*Current: No*

The available open-source information does not provide any evidence that FOB members were engaged in gang-related violence between June 2015 and June 2016.

**G2: Group Has Violent Norms or Goals**

*Previous: Yes*

The FOB gang leadership explicitly incentivized its members to attack and kill FK members with monetary rewards.

*Current: No*

The available evidence is unclear with respect to whether the FOB continues to exist in any meaningful way, but the available information suggests that the group is fractured to the point of not being operational. As such there is no clear evidence that the group continues to actively pursue violent goals or adhere to violent norms.

**G3: Group Has Strong Cohesion**

*Previous: No*

The FOB gang appeared to have been loosely organized into semi-autonomous divisions with no clear directives from the gang leadership save that they must send money to the gang once a month. They did not adhere to a particular dress code or
mandate that members receive tattoos. The group also fractured in the past, which led to the formation of their rivals, the FK.

Current: No

Given that the gang appears to be largely defunct, there is no evidence for this risk factor at present.

**G4. Group Has Strong Leadership/Power Structure**

Previous: No

FOB leadership appeared to place few constraints on the activities and behaviours of FOB members. The group was broken up into different divisions or chapters, each with their own lower-order leaders, and they were free to operate as they wished.

Current: No

Given that the gang appears to be largely defunct, there is no evidence for this risk factor at present.

**GS1. Group is Large in Size/Scope**

Previous: Yes

The FOB gang was described as having control over a large drug distribution network. It had a significant presence in correctional institutions in Alberta, and media reports indicate that FOB members had become involved in businesses to acquire intelligence and possessed sophisticated weaponry and materials.

Current: No

Given that the gang appears to be largely defunct, there is no evidence for this risk factor at present.

**GS2: Group is Socially Isolated/Isolative**

Previous: No
FOB did not appear to isolate its members from the larger society in which they were embedded; they did not confine their members psychologically. FOB members lived in the Calgary area in various communities and were not physically isolated.

**Current: No**

Given that the gang appears to be largely defunct, there is no evidence for this risk factor at present.

**GS3: Group is Operating in an Unstable Context/Environment**

**Previous: No**

FOB operated in Calgary, which cannot be categorized as a presenting an unstable context or environment (e.g., no economic crises, war, political instability, etc.).

**Current: No**

Calgary continues to present as a stable environment.

**GS4: Group is Threatened By or In Conflict With Other Groups**

**Previous: Yes**

The FOB was engaged in a heated gang war with the FK from around 2002 until 2009, which overlapped with the time that Mr. Honorio was affiliated with the gang. This conflict with the FK was a direct contributor to the shooting in which Mr. Honorio took part.

**Current: No**

Given that the gang appears to be largely defunct, there is no evidence for this risk factor at present.

**6.3.2. Applying the HCR-20 V3**

I will now apply of the Historical scale of the HCR-20 V3 to Mr. Honorio’s case. As was done with the MLG, I am assuming that I am rating the presence of these items at the time of his sentencing (i.e., June 2016).
H1. History of Problems with Violence

Presence: Yes

Mr. Honorio’s index offence (the shooting at the Bolsa restaurant) was severe and violent in nature. He also took part in the kidnapping of Mr. Bendle.

H2. History of Problems with Other Antisocial Behaviour

Presence: Yes

Mr. Honorio, just prior to his index offence, was on bail for charges stemming from his possession of drugs, weapons, and homemade explosives. He was also an active member of the 403 Soldiers.

H3. History of Problems with Relationships

Presence: Yes

Mr. Honorio appears to have been embedded in his gang set, and as such spent considerable time among antisocial peers. There is no available information about his romantic relationships, and it appears that his family knew nothing of his gang activity or his life in the two-to-three years prior to his index offence, suggesting a lack of connection.

H4. History of Problems with Employment

Presence: No

Court documents indicate that prior to his index offence, Mr. Honorio was “gainfully employed,” suggesting that he was not solely reliant on proceeds from his gang activity to subsist.

H5. History of Problems with Substance Use

Presence: No

There is no available evidence that Mr. Honorio has a history of problems with substance use.
H6. History of Problems with Major Mental Disorder

Presence: Partial/Possible

An undercover detective testified that Mr. Honorio reported becoming sexually aroused when witnessing staged violence in the context of the “Mr. Big” operation, and when instructed to count money for the undercover detectives, which suggests the possibility of antisocial or sadistic features, although this is not dispositive.

H7. History of Problems with Personality Disorder

Presence: Omit

There is insufficient evidence regarding Mr. Honorio’s mental health history to code this item.

H8. History of Problems with Traumatic Experiences

Presence: No

There is no evidence that Mr. Honorio has suffered any major traumas, nor that he is experiencing difficulties subsequent to any such trauma.

H9. History of Problems with Violent Attitudes

Presence: Yes

In the Reasons for Sentence, the judge stated that Mr. Honorio’s behaviours “clearly show an intention to pursue a life of gang affiliation and crime” (R. v. Honorio, 2016, p. 15). He was reported to have bragged about his involvement in the Bolsa shooting to undercover officers. He made attempts to ingratiate himself with the violent FOB gang and was a member of the 403 Soldiers.

H10. History of Problems with Treatment or Supervision Response

Presence: Yes

At the time of his index offence, Mr. Honorio was on bail subsequent to his being charged with possession of weapons, which stemmed from a police raid on a home he was in which contained drugs, weapons, and homemade explosives.
6.4. Discussion

These case studies served to demonstrate possible applications of the MLG to three different cases of GBV and compared the applicability of the MLG to that of the HCR-20 V3 and, in the case of Jerry Kane, Jr., the TRAP-18. These cases will be taken in turn. First, in the case of Jerry Kane, Jr. the MLG was observed to have a relatively good fit with the facts of the case, although as was discussed above, there were several Group and Group-Societal factors that did not appear relevant to the loosely organized nature of the Sovereign Citizen movement, and these factors served to highlight the relatively disorganized nature of the movement. Therefore, it is unclear what impact the Group and Group-Societal risk factors may have had on Kane’s decision to engage in violence. A similar conclusion regarding the application of the MLG to lone actor terrorism was drawn by Hart et al. (2017), who highlighted that while the Individual and Individual-Group level risk factors appeared to fit a lone actor case well, the higher level domains were most useful when assessing group-based terrorism, and indeed such group-based forms of violence are what the MLG was developed to assess. In this case, the HCR-20 V3 appeared to apply at least as well as the MLG, with the exception of the MLG’s ability to index Kane’s strong extremist ideological commitments, with was ultimately of great importance to understanding the motivation for Kane’s violence. In this case, there did not appear to be evidence for most of the TRAP-18's Proximal Warning Behaviours, although there were relatively more Distal Characteristics, however there was ultimately only evidence for six of the 18 TRAP-18 items.

In the case of Saad Gaya, the MLG appeared to fit the facts of the case well, and when compared to the HCR-20 V3, the importance of the MLG’s measuring of strong commitments to an extremist ideology became clear. On the HCR-20 V3, Gaya only demonstrated evidence of three of the 10 risk factors on the Historical scale (and were the assessment to have been conducted prior to his arrest, this would have dropped to two). Thus, the MLG’s Individual-Group and Group domains were necessary in order to capture the key fulcrums on which Gaya’s risk appears to have pivoted, namely his strong commitment to an extremist ideology and the strong influence the group had on him. This reflects the utility of the MLG’s higher-level domains of risk in a case of group-based terrorism emphasized by Hart et al. (2017).
Lastly, in the case of Real Honorio, the MLG again evidenced a good fit the facts of the case, as did the HCR-20 V3. This is not surprising given that the Individual domain of the MLG was intended to function as an abbreviated version of the HCR-20 V3. As was the true in the Gaya and Kane cases, the higher-level domains of the MLG served to capture important factors in Honorio’s case that likely served to exert an important influence on his risk for violence, in particular his gang’s violent conflict with their rivals, and the strong violent norms of the group. Thus, while the HCR-20 V3 may have been sufficient to measure several important risk factors in this case, the inclusion of the MLG allowed for the measurement of higher-order factors that would not have otherwise been indexed by the HCR-20 V3.

6.4.1. Limitations

Though completed primarily for demonstration purposes, these case studies carry important limitations that are worth noting. First, they relied on open source materials, which necessarily limited the depth of breadth of information with which to code the risk assessment measures. Second, the risk assessment measures were coded with the benefit of hindsight; even when relying on information pertaining to the time period before the violent event in question (as was done in the Kane case), the availability of information would likely have been different were the risk assessments to have been completed in real time, and available information may be interpreted in a different way when viewed with foreknowledge of the outcome. Nonetheless, this exercise met the goals of demonstrating the application and the applicability of the MLG to cases of GBV and examining potential differences in the applicability between the MLG and the HCR-20 V3 to cases of GBV.

6.5. Conclusion

This study sought to systematically review recent empirical research on risk factors for GBV in order to examine the extent to which the MLG’s domains and factors are supported by the evidence base. In addition, it sought to demonstrate the application of the MLG to a brief series of GBV case studies alongside the HCR-20 V3 in order to (a) illustrate the MLG’s applicability to this form of violence, and (b) compare the applicability
of the MLG to that of the HCR-20 V3 in cases of GBV. The results of this review and case study series suggest five conclusions.

First, the MLG’s domains and factors are broadly supported by the evidence reviewed, which spanned several different forms of GBV. Second, while each of the MLG’s domains and all but one item received some degree of empirical support, the evidence base for items in the Individual-Group and Group domains is relatively small, and more research on these factors is necessary before stronger conclusions can be drawn. Third, there is a relative lack of empirical research on risk factors for forms of GBV other than terrorism and gang violence, thus limited the conclusions that can be drawn on the applicability of the MLG to a broader spectrum of GBV. Fourth, the evidence base for risk factors for GBV is, overall, relatively weak, and suffers from several methodological constraints that will need to be overcome if the field is to advance to a degree similar to what has been accomplished in the area of individually oriented violence risk assessment. Lastly, the case series illustrated the unique contribution of the MLG’s group-level factors to the cases reviewed and indicated that while the HCR-20 V3 was applicable, it did not capture important facets of risk that existed in the group-level domains.
References

(* indicates studies included in the review)


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Appendix A.

Risk Domains and Factors of the MLG (from Cook et al., 2015)

Domain 1: Individual

I1. Conduct Problems: “This risk factor reflects the evaluatee’s history of conduct problems. Conduct problems may include the evaluatee’s perpetration of (a) group-based violence, (b) other violence, (c) other (non-violent) antisocial conduct” (p. 4).

I2. Attitude Problems: “This risk factor reflects problems with the evaluatee’s attitudes, beliefs, values, or thoughts that are entrenched and support or condone the use of violence. Problems with attitudes may include (a) pro-violence attitudes, (b) antisocial (pro-criminal) attitudes, or (c) anti-authority, oppositional, or noncompliant attitudes” (p. 8).

I3. Social Adjustment Problems: “This risk factor reflects problems with social adjustment related to problems with (a) close personal (intimate) relationships, (b) other personal (non-intimate) relationships, or (c) employment, education, or finances. This includes any pattern of lack of integration with social, governmental, and educational/vocational conventions. Lack of integration includes problems with participating or refusal to participate in pro-social behaviour in the person’s community or country” (p. 9).

I4. Mental Health Problems: “This risk factor reflects problems with mental health including (a) serious mental illness, (b) personality disorder, (c) problems with substance use, or (d) problems due to trauma. This also includes any suicidal or homicidal ideation” (p. 10).

Domain 2: Individual-Group

IG1. Individual Has Strong Group-Based Identity: “This risk factor reflects personal- or self-identity of the evaluatee as primarily or solely defined by their membership in the group or groups with which they affiliate. Group-based identity is prominent and has been internalized and entrenched into the evaluatee’s identity” (p. 17).

IG2. Individual Has Violent Role or Status in Group: “The risk factor reflects the evaluatee’s current role or status in the group or the evaluatee’s desire to initiate, defend, or improve their status in the group. Role in the group means the evaluatee’s rank or standing in the group hierarchy or collective” (p. 18).
IG3. **Individual Has Strong Commitment to Group:** “This risk factor reflects an unwavering dedication and attachment to the group. Commitment to the group is the acceptance and/or adherence to the group’s ideology, obedience to the group’s leadership, and dedication to the group’s beliefs or goals” (p. 20).

IG4. **Individual Has Negative Attitudes Towards People Outside the Group:** “This risk factor relates to the evaluatee’s negative thoughts and feelings toward people outside the group. Negative attitudes are personal values, beliefs, and emotions that directly or indirectly encourage or excuse violence toward people outside the group” (p. 21).

**Domain 3: Group**

G1. **Group Has a History of Violence:** “This risk factor reflects the use of violence by the group; that is, any affiliate of the group engaging in group-based violence (GBV) or general violence. GBV is defined as actual, attempted, or threatened harm to a person or persons that is deliberate and non-consensual by any individual members of the group whose decisions and behaviour are influenced by the group to which they belong, with which they are affiliated, or with which they identify. Group members committing the violence may serve a variety of roles in their perpetration of past GBV. Roles include organizational support, logistical support, operational support, or operational action. Violence is defined as the actual, attempted, or threatened harm to a person or persons” (p. 24).

G2. **Group Has Violent Norms or Goals:** “This risk factor reflects violent norms of the group. Violent norms that directly or indirectly encourage or condone violent action by the members of the group. Violent norms may include rigid and specific rules of how and when violence is committed” (p. 27).

G3. **Group Has Strong Cohesion:** “This risk factor reflects unified and cohesive membership of the group. Group cohesion is the closeness among the group members, and is reflected by the strength of attachment among members, the perceived longevity of their closeness, the amount of time members spend together, and the shared traditions of the affiliates of the group” (p. 28).

G4. **Group Has Strong Leadership/Power Structure:** “This risk factor reflects strong violent leadership or power structure of the group by an individual or group of leaders. Strong leadership is the high status and influence of group leaders that directly or indirectly supports, condones, or justifies use of violence by the group. This may include the use of discipline or coercion of the group or group leadership to establish affiliate commitment, group cohesion, and affiliate use of violence for the group. Discipline may be in the form of violence, including intimidation or threats, or other punitive action” (p. 29).
Domain 4: Group-Societal

GS1. *Group is Large in Size/Scope:* “This risk factor reflects the extensive economic, geographic, or social influence and control of the group. Scope of the group can range from neighborhood/community, municipal, regional, state/provincial, national, continental, or international. The broader the scope of the group, the more the group’s operations are related to GBV. This risk factor also reflects the size of the group in relation to the geographic or social context in which the group operates” (p. 31).

GS2. *Group is Socially Isolated/Isolative:* “This risk factor reflects the separateness and distinctiveness of the group. An isolative group is self-contained, whereby the group is physically, socially, and structurally independent from society. The group may be isolated by society or the community at large or may as a unit isolate from society by seeking out separateness or distinctiveness” (p. 32).

GS3. *Group is Operating in an Unstable Context/Environment:* “This risk factor reflects a lack of stability or uncertainty in the geographical and political region or regions the group operates in due to economic crises, war, or political uncertainty. This may result in the use of violence by the group to meet basic needs during times of instability and uncertainty” (p. 33).

GS4. *Group is Threatened By or In Conflict With Other Groups:* “This risk factor reflects threats, conflict, or competition or perception of mistreatment or disadvantage of the group with or in relation to other violent and non-violent out-groups” (p. 34).
Appendix B.

Inclusion Criteria and Rationales

1. The date range for this review spans from January 2011- present.
   - Rationale: The previous review included sources until December 2011. In order to capture any research from 2011 that may have been delayed in its publication, this review will overlap with the original review by one year. Overlapping sources will be omitted from the analyses.

2. Sources must be one of the following published forms: academic articles, books or book chapters, government or organizational reports; or one of the following unpublished forms: dissertations or theses.
   - Rationale: This will be done to reduce the risk of publication bias which may be incurred by relying solely on academic articles or books and chapters.

3. Sources must examine individual or group-level risk factors for the perpetration or intentional facilitation (e.g., tactical or logistic support for terrorism) of GBV
   - Rationale: This is the focus of the study. Participation in GBV can include behaviour that is not specifically violent but facilitates violence or makes violence more likely.

4. Sources must NOT solely examine the relationship between membership in a group and violence.
   - Rationale: While membership in a violent group is an established risk factor for violence, the MLG is designed for use with individuals already affiliated with a group or movement, and thus this risk factor is assumed a priori and an assessment of their status as a member of the group is necessarily redundant.

5. Sources must be empirical in nature or review empirical literature.
Rationale: While the previous review incorporated theoretical sources, the literature in the field has advanced in the time since the original review, and empirical sources are needed to more firmly establish the validity of risk factors.

6. Research in languages other than English was included.

- Rationale: GBV is a worldwide phenomenon, and non-English sources will be included to ensure the review is comprehensive. Translations will be acquired where possible.

7. Types of groups included in the review will be those specified by the WHO (2002): terrorist groups (including religious, political, and environmental terrorists), gangs, organized crime, bandits, and hooligans. Group violence not specified above, such as spontaneous group violence (e.g., riots) and racial and political genocide were excluded. In addition, this review will also include lone-actor terrorists whose behavior is motivated or influenced by the ideology of a group, honour-based violence, and violence committed by and influenced by the ideology of those identifying as freeman or sovereign citizens.

- Rationale: The WHO (2002) list of the forms of GBV ensures that the forms of violence included will have international relevance. The inclusion of the forms of violence not specified by the WHO (2002) serve to ensure that the review is more comprehensive.
Appendix C.

Coding Form for Full-Text Sources

Source File Name:

FULL-TEXT CODING FORM
MLG Updated Systematic Review

Source title:

Year of publication:

First author:

Inclusion Criteria (check to make sure they are met)

☐ Published on or after January 1, 2011.
☐ Is an academic article, book or chapter, government or organizational report, dissertation or thesis.
☐ Reports original empirical research or re-analysis of empirical data OR is a quantitative or narrative review of empirical research.
☐ Examines risk factors for the perpetration of GBV or the intentional facilitation of GBV (e.g. logistical or tactical support for terrorism).

Form of GBV examined:
☐ GBV generally
☐ Terrorism (group ☐ or lone actor ☐)
☐ Political/Sectarian violence
☐ Gang
☐ Organized crime
☐ Hooligan or organized sporting violence
☐ Bandit
☐ Cult or NRM
☐ Freemen/sovereign citizen
☐ Honor-based violence

Did the study primarily examine:

☐ Risk MARKERS
☐ Risk FACTORS

Was a risk assessment tool used in the study? Specify:

Purpose of the study to evaluate a particular tool ☐
Judgment of Evidence Strength
Make a judgment of the strength of the evidence for the risk factor(s). Consider:

- **Study's purpose & design** (what's the goal of the study and what type of design is employed? e.g., retrospective, pseudo prospective, prospective, survey, experimental, case study, qualitative, correlational, descriptive, etc.)
- **Nature of sample** (size of sample, where did it come from, timeframe, etc.)
- **Presence of appropriate comparison group** (was there a comparison group, was it violent/non-violent, is it comparable to the group under study?)
- **The measures used**
- **The analysis used**
- **Conceptual coherence of the findings**
- **Author's conclusions re: the risk factor(s)** (do the authors indicate the evidence is strong?)

Indicate if N/A for sample, measures, analytic strategy as appropriate (in the case of narrative review or systematic review, for example).

**Study Purpose and Design:**

**Sample/Data Source(s):**

- Mixed gender  □ Male  □ Female  □ Adolescent  □ Adult  □ N/A (group-level study, systematic or narrative review, unspecified, etc.)

**Measures/Variables of Interest (list all that are examined in study):**

**Analytic Strategy:**

- □ **Low** (this study provides weak support for identified risk factors, at best) Why?:

- □ **Moderate** (the study provides some tentative support for the identified risk factors) Why?:

- □ **High** (the study provides strong support for the identified risk factors) Why?:

Are these risk factors supported by other research in the review? □
Appendix D.

Risk Factor Chart

In column 2:

Content overlap between MLG factor and risk factor from study: 
O = overlap, S = some overlap, N = no overlap

Support for risk factor(s):
(+) risk factor’s association with outcome is supported
(p) risk factor’s association with outcome is partially supported
(-) risk factor’s association with outcome is not supported

<table>
<thead>
<tr>
<th>MLG Factor</th>
<th>Content and Support</th>
<th>Specific Term Used</th>
<th>Notes</th>
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<tbody>
<tr>
<td>Individual Domain</td>
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<tr>
<td>I1. Conduct Problems</td>
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<td>a. Group-based violence</td>
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<td>b. Other violence</td>
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<td>c. Other antisocial conduct</td>
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<td>I2. Attitude Problems</td>
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<td>a. Pro-violence attitudes</td>
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<td>b. Antisocial attitudes</td>
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<tr>
<td>c. Anti-authority, oppositional, noncompliant attitudes</td>
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<td>I3. Social Adjustment Problems</td>
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<td>a. Close personal relationships</td>
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<td>b. Other relationships</td>
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<tr>
<td>c. Employment, education, finances</td>
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<td>I4. Mental Health Problems</td>
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<td>a. Serious mental illness</td>
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<td>b. Personality disorder</td>
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<td>c. Substance use</td>
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<td>d. Due to trauma</td>
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<td>IG2. Violent Role or Status in Group</td>
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<td>G1. History of Violence</td>
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Appendix E.

Flowchart of Screening Process

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8 Adapted from the PRISMA flow diagram (Moher, Liberati, Tetzlaff, Altman, & The PRISMA Group, 2009).