PERSPECTIVES ON TERRORISM

RESEARCH ARTICLE

Risk and Protective Factors Associated with Violent Extremism: A Multilevel and Interdisciplinary Evidence-Based Approach

Caroline Da Silva,* Nicolas Amadio, Rachel Sarg, Bruno Domingo and Massil Benbouriche

Volume XVIII, Issue 3
September 2024

ISSN: 2334-3745
DOI: 10.19165/2024.9365

Abstract: This integrative review aims to inform research, policy and practice at the tertiary level of prevention targeting radicalised individuals, whether they have acted on their radicalisation or not. It stresses the need to respond to the terrorist threat with a multilevel and interdisciplinary evidence-based approach in order to account for the complexity of the issue. To do so, drawing from the socio-ecological model of violence, we categorise across four levels of analysis (i.e. individual, relationship, community, and societal) the risk and protective factors associated with violent extremism and reported in the existent systematic reviews and meta-analyses on this issue. As a result, we observe an overemphasis on the study of individual factors, with a few relationship factors, and no community or societal factors reported. To address this limitation, we emphasise the need for future studies to focus on risk and protective factors across the four levels of analysis. We also suggest future systematic reviews and meta-analyses to focus on qualitative data. Finally, based on the individual and relationship factors identified in the examined systematic reviews and meta-analyses, but also on the community and societal factors identified in narrative reviews, we propose a socio-ecological model of violent extremism.

Keywords: Preventing violent extremism, behavioural radicalisation, risk and protective factors, socio-ecological model of violence, evidence-based practice.

** Corresponding author: Caroline Da Silva, University of Rouen Normandy, e-mail: caroline.da-silva6@univ-rouen.fr*

Introduction

The numerous terrorist attacks enacted worldwide since 9/11 warrant the need for better prevention strategies to be implemented. These strategies can be seen as part of a continuum in which prevention is carried out with the general population with no apparent risk (primary prevention), with individuals identified as being at risk of radicalisation (secondary prevention), and with radicalised individuals, whether they have acted on their radicalisation or not (tertiary prevention).[1] Hence, these strategies are designed to prevent the onset and continuity of the cognitive (i.e. attitudes and behavioural intentions) and behavioural outcomes of radicalisation. That is a subscription to a radical ideology through the justification or support for the use of violent radical behaviours (i.e. cognitive radicalisation), and the acting out on behalf of this ideology (i.e. behavioural radicalisation).[2] Cognitive and behavioural radicalisation should be seen as extremities to a continuum, starting with growing sympathy for a radical ideology, and evolving to the point of taking violent action in the name of that ideology.

The present integrative review will focus on the endpoint of this continuum (i.e. behavioural radicalisation) by discussing the risk and protective factors associated with violent extremism, that is, "involvement in violent radical behaviours, including illegal and violent sub-terroristic behaviours motivated by a radical ideology, and behaviours that can be classified as terrorism."[3] Of note, "sub-terroristic radical violence includes acts of violence against persons and property that is usually nonlethal and fall short of the legal definitions of terrorism."[4] However, in between these two extremities of cognitive and behavioural radicalisation, other forms of nonviolent behaviour can be found, such as interacting with radical communities online and offline, and downloading and promoting propaganda. Although considered as behavioural expressions of radicalisation, because of the absence of physical violence, these behaviours are not considered as pertaining to the category of behavioural radicalisation and, therefore, are not considered in the present review. Moreover, as observed by Schuurman and Carthy[5], the risk and protective factors associated with violent extremism may differ from those associated with other radicalisation-related behavioural outcomes. For instance, the authors have shown that alignment with a group whose main strategy is violence and access to weapons are strongly associated with violent extremism rather than with other radicalisation-related behavioural outcomes, whereas alignment with an extremist (but nonviolent) group and parenting during radicalisation are associated with participation in nonviolent activism. Therefore, the risk and protective factors reported in the present integrative review are informative to prevention strategies targeting violent extremism and cannot be extended to the prevention of other radicalisation-related behavioural outcomes.

In the last decade, a growing body of quantitative and qualitative research has focused on identifying risk and, to a lesser extent, protective factors associated with cognitive and behavioural radicalisation. Systematic reviews and meta-analyses synthesising the available quantitative evidence have also flourished.[6] Risk and protective factors are the factors observed to be, respectively, positively or negatively associated with the outcome of interest (i.e. cognitive and/or behavioural radicalisation).[7] Both risk and protective factors can be considered either dynamic or static, meaning that they can be, respectively, modified or not through outside intervention.[8] Moreover, concerning protective factors, it is necessary to distinguish between promotive factors and buffering protective factors.[9] Promotive factors are understood to exert a direct inverse effect on the individual's probability of acting out, regardless of the risk factors to which the individual is exposed, whereas buffering protective factors are understood to attenuate the negative impact of risk factors, thus exerting a moderating effect only when risk factors (or a given risk factor) are (is) present.[10] It is noteworthy that no single risk (or protective) factor can lead to (or prevent) behavioural radicalisation. Instead, it is the combination of different risk factors and the presence or absence of protective factors that might be associated with

acting out or refraining from acting out.[11] Indeed, by comparing radicals who engaged in radical and violent behaviours to those who did not, Schuurman and Carthy showed that acting out is the product of a combination of the presence of risk and the absence of protective factors.[12]

Drawing from the socio-ecological model of violence, the present integrative review aims to put forward a comprehensive analysis of risk and protective factors associated with violent extremism by bringing together all factors identified in the aforementioned systematic reviews and meta-analyses, and organising them across different levels of analysis.[13] By doing so, we aim to inform research, policy and practice at the tertiary level of prevention and propose a multilevel and interdisciplinary evidence-based approach to this challenging issue.

The Socio-Ecological Model

The socio-ecological model has been proposed by Dahlberg and Krug to understand any form of violence perpetration (or victimisation).[14] It explains violence as a multifactorial and multilevel phenomenon. In this perspective, no single factor can explain alone why an individual becomes a perpetrator (or a victim) of violence. Instead, it is the interplay between various factors that should be considered. Accordingly, the scholars stress that the various factors involved in violence perpetration (or victimisation) can be observed across four levels: 1) individual, 2) relationship, 3) community, and 4) societal. The individual level refers to individual characteristics across psychological, biological, and personal history factors that are likely to increase (or decrease) the individual's likelihood of violence victimisation (or perpetration). The relationship level refers to proximal social relationships (e.g. peers and family members) that might lead the individual toward (or away from) violence victimisation (or perpetration). The community level refers to environmental factors in which such relationships are embedded in (e.g. schools and neighbourhoods) and targets the contextual characteristics that might be positively or negatively associated with violence victimisation (or perpetration). Hence, both relationship and community factors can be considered as social factors. Finally, the societal level refers to macro-level factors (e.g. social norms and policies) that can positively or negatively influence violence victimisation (or perpetration).

Dahlberg and Krug also stress the importance of this multifactorial and multilevel model in informing multifaced interventions.[15] For them, all levels should be tackled at once across various interventions. On the individual level, the interventions will focus on attenuating individual characteristics which are understood as risk factors, whereas strengthening those are understood as protective factors. On the relationship level, the interventions will focus on proximal relationships aiming to address those representing a risk for the individual and strengthen (or develop) those protecting them from violence victimisation (or perpetration). On the community level, the interventions will focus on addressing the social problems that are present in the social environments in which the individual is embedded. Finally, on the societal level, the interventions will focus on promoting societal change by tackling cultural, social and economic factors associated with violence victimisation (or perpetration).

Although intended for the prevention of violence in general, this model has been applied by other scholars to the understanding of specific forms of violence (see Hales[16] for university-based sexual violence perpetration, and Wallace et al.[17] for cyber-dating victimisation). In Hales' analysis of university-based violence perpetration, gender-based cognitions, such as sexist thoughts, are highlighted as individual-level risk factors.[18] Perceived approval of sexual aggression by students' peers is considered a relationship-level risk factor, whereas studying in universities promoting a hypermasculine student lifestyle (e.g. fraternity membership) is considered a community-level risk factor. Finally, one of the societal risk factors put forward

by the author is the normative sexual objectification of women. Hence, drawing from the socio-ecological model, the present integrative review proposes an analysis of violent extremism across individual, relationship, community, and societal levels.

Other Attempts

Of note, this is not the first attempt to organise and discuss risk and protective factors per level of analysis. For instance, LaFree and Schwarzenbach discuss micro- (individual) and macro-level (societal) risk factors pertaining to cognitive and behavioural radicalisation, within the field of criminology.[19] In such a dichotomic structuration, social (relationship and community) risk factors were not considered as such and were then presented as pertaining either to the micro (individual) level (e.g. radical peers) or macro (societal) level (e.g. group structure and dynamics). Doosje et al., however, considered the individual, social, and societal levels of analysis in their discussion on factors influencing radicalisation leading to violence as well as de-radicalisation.[20] Nonetheless, in both papers, it is not clear how the risk and protective factors were selected. Also, in both cases, the structuring of factors through levels of analysis is not based on a theoretical framework. As a consequence, different understandings of individual, social and societal factors are applied, making it difficult to draw conclusions across papers. Finally, neither paper goes beyond the structuration of risk and protective factors per level of analysis. That is, they do not explain why this structuration is important and do not provide much guidance for research and practice.

Moreover, the need to adopt an integrative and multilevel approach in the fight against extremism was also put forward by Bouhana.[21] In her moral ecology of extremism, this scholar states the importance of considering the drivers of extremism across four levels of analysis. One level includes individual factors, two more levels comprise environmental factors, and a fourth level refers to societal factors. In her work, she highlights the need for prevention strategies to focus not only on individuals at risk, but also on the social environments and societal factors that can create or reinforce this risk. Her study was not included in the present integrative review for three main reasons. First, this work was not peer-reviewed and does not constitute a systematic review. Second, the scholar mobilises a broader definition of extremism, considering every harmful action deviating from the moral conduct established by the law in a given country, whereas in the present review, we are interested in one specific outcome: violent extremism, defined as a violent action on behalf of a radical ideology. Third, as a consequence of this broader definition, it is not possible to identify, among the risk factors put forward by the author, which ones are associated with this specific outcome variable.

A more fine-grained and systematic approach to this issue was recently proposed by Ohls et al. in their systematic review of risk and protective factors pertaining to cognitive and behavioural radicalisation.[22] The authors proposed their categorisation across eight domains: 1) static factors, 2) past and current social environments, 3) psychological features, 4) personality features and social factors, 5) ideology, 6) religiosity, 7) criminal past, and 8) behavioural and emotional patterns. For each domain, the authors present (when available) risk and protective factors, which allows a more comprehensive understanding of their dynamics. Importantly, the authors also examine qualitative data, which is lacking in the previously mentioned systematic reviews. However, the authors focus only on Islamic radicals and violent extremists. Therefore, although they propose a multifactorial and multilevel understanding of cognitive and behavioural radicalisation, their conclusions are limited to one specific ideology, preventing generalisation to other ideologies. Moreover, in their systematic review, it is not possible to distinguish factors associated with radical attitudes and intentions (i.e. cognitive radicalisation) from those associated with radical and violent behaviours (i.e. behavioural radicalisation). Similarly, in Feddes et al.'s systematic review[23] of risk and protective factors associated with cognitive and

behavioural radicalisation, it is not clear, when they mention factors associated with violent extremism, if these factors are indeed associated with actual behaviour or with behavioural intentions. The authors nevertheless put forward demographic, structural, personality, group, trigger, capacity, opportunity, and resilience factors observed in quantitative and qualitative studies, which represents an important step in the understanding of radicalisation processes.

These attempts can be seen as a starting point for the discussion on the need to implement a multilevel and interdisciplinary evidence-based approach to violent extremism by encompassing risk and protective factors across individual, relationship, community, and societal levels of analysis. We follow in their footsteps by proposing a more systematic analysis of the issue, as well as by focusing only on the endpoint of the radicalisation process (i.e. violent extremism).

Risk and Protective Factors Associated with Violent Extremism

Selection Criteria

The papers included in the present integrative review are peer-reviewed systematic reviews or meta-analyses reporting quantitative data on the association between risk and/or protective factors associated with behavioural radicalisation (i.e. violent extremism) among adults. Moreover, considering the methodological issues in studies investigating the role played by mental disorders and their inconsistent findings, systematic reviews and meta-analyses focusing specifically on mental disorders as risk factors were not included.[24]

The choice to focus only on systematic reviews and meta-analyses of quantitative data stems from their methodological rigour, compared to narrative reviews. Indeed, as stated by Pae, the findings provided by systematic reviews and meta-analyses are based on “comprehensive and systematic literature searches in all available resources, [...] avoiding subjective selection bias”, whereas findings provided by narrative reviews are more descriptive than comprehensive, and prone to subjective selection bias.[25]

Some systematic reviews and meta-analyses that did not meet the aforementioned criteria were, however, not included. Desmarais et al.’s systematic review[26] was not included because the authors also considered theoretical papers, which is not in line with our approach focusing on empirical and quantitative evidence. Likewise, the systematic reviews conducted by Vergani et al.[27], Ohls et al.[28], and Feddes et al.[29] were not included because it is not possible to distinguish factors associated with cognitive radicalisation from those associated with behavioural radicalisation (i.e. violent extremism). Moreover, Emmelkamp et al.’s meta-analysis[30] was not considered, because it focuses on radicalisation among juveniles.

In the end, the following systematic reviews and meta-analyses were included: Lösel et al.[31], Wolfowicz et al.[32], and Zych and Nasaescu.[33] The risk and protective factors reported in these as, respectively, positively and negatively associated with violent extremism, are presented and discussed below.

Risk Factors

Table 1 displays the sixteen risk factors identified in the examined systematic reviews and meta-analyses as relevant for violent extremism. These are structured per level of analysis according to the socio-ecological model.[34] The majority of the identified risk factors pertain to the individual level (n=11), with only a few factors reported at the relationship level (n=5) and none at the community and societal levels. It is important to note that the risk factors are named

and defined in the following table as they were labelled in the examined systematic reviews and meta-analyses. Some of these factors are marked by negative connotations, expressing subjective judgement values. For instance, the risk factor "deviant peers" might be interpreted differently depending on the perspective one adopts. However, such a fine-grained distinction goes beyond the scope of the present review. For this reason, we decided to employ the terms and definitions found in the examined systematic reviews and meta-analyses.

Table 1. Risk Factors Associated with Violent Extremism and their Characteristics

Factor	**Definition**	**Type**	**Level of analysis**	**Reference**
Authoritarianism/ fundamentalism	Submission to higher authority/ aggression to out-groups	Dynamic	Individual	Wolfowicz et al., 2020, 2021
Criminal history	Criminal record for unspecified offences	Static	Individual	Wolfowicz et al., 2020, 2021
Thrill seeking	Taking risks just for fun of it, without thinking of consequences	Dynamic	Individual	Wolfowicz et al., 2020, 2021
Radical Attitudes	Support for or justification of radical violence in the name of a cause	Dynamic	Individual	Wolfowicz et al., 2020, 2021
Job loss	Recent loss of employment	Dynamic	Individual	Wolfowicz et al., 2021
Unemployed	Lack of gainful employment	Dynamic	Individual	Wolfowicz et al., 2020, 2021
Prior incarcerations	Prior incarcerations for unspecified offences	Static	Individual	Wolfowicz et al., 2021
Low self-control	Impulsivity, quick to anger	Dynamic	Individual	Wolfowicz et al., 2020, 2021
Perceived injustice	Feeling that one or one's ingroup is treated unjustly	Dynamic	Individual	Wolfowicz et al., 2021
Welfare recipient	Beneficiating from social benefits	Dynamic	Individual	Wolfowicz et al., 2020, 2021
Gender	Being a male	Static	Individual	Wolfowicz et al., 2021
Parental abuse	Physically abused by parents	Static	Relationship	Wolfowicz et al., 2021
Experienced violence	Perpetrated/victim of violence involving strangers, bullies, or parents	Static	Relationship	Wolfowicz et al., 2020, 2021
Deviant peers	Peers support/involved in deviance, including radicalism	Dynamic	Relationship	Wolfowicz et al., 2020, 2021
Online contact with radicals	Online contact with radicals	Dynamic	Relationship	Wolfowicz et al. 2021
Radical family	Family members with cognitive or behavioral radicalisation	Dynamic	Relationship	Wolfowicz et al. 2021; Zych & Nasaescu, 2022
Critical family event	Various critical family events (e.g. divorce, serious illness or death).	Static	Relationship	Zych & Nasaescu, 2022

Individual

At the individual level, being a male and having a criminal record were found to be static risk factors associated with violent extremism. Dynamic risk factors were also identified. These are related to employment (recent loss of employment, lack of gainful employment, and being a welfare recipient), personality traits (authoritarianism/fundamentalism, low self-control, thrill-seeking), perceived injustice (directed at the individual and/or their group), low social integration, and radical attitudes.

Relationship

At the relationship level, we observe static and dynamic risk factors related to family issues: critical family events and parental abuse for static risk factors; and radical family members for dynamic risk factors. The influence of radical peers (deviant peers and online contact with radicals) also appears as a dynamic risk factor.

Protective Factors

Similarly, Table 2 (see below) displays the eighteen protective factors identified in the examined systematic reviews and meta-analyses as relevant for violent extremism. These are structured per level of analysis according to the socio-ecological model.[35] The majority of the identified protective factors pertain to the individual level (n=12), with only a few factors reported at the relationship level (n=6), and none at the community and societal levels. As for the risk factors, the reported protective factors are named and defined in the following table as they were in the examined systematic reviews and meta-analyses. Some of these factors are marked by positive connotations, expressing subjective judgment values. For instance, the protective factor "prosocial peers" might be interpreted differently depending on the perspective one adopts. However, as previously explained, such a fine-grained distinction goes beyond the scope of the present review.

Individual

At the individual level, there is evidence that ageing, as well as positive experiences at school (school bonding, school performance), protect against violent extremism. These are static protective factors. Other dynamic protective factors were also observed. These are related to education (high level of education), employment, social class (high socioeconomic status), religion (intensive religious practice), institutions' perceptions (police and law legitimacy, law abidance), personality traits (self-control), and cognitions (value complexity).

Relationship

Similar to relationship risk factors, relationship protective factors highlight the influence of social networks. However, as they are protective, these dynamic factors refer to a prosocial influence, in the sense that family commitment, parental involvement, having nonviolent peers and prosocial significant others, and establishing contact with foreigners is negatively associated with violent extremism. Also, personal discrimination was observed to be negatively associated with violent extremism. Although counter-intuitive, as other negative experiences (e.g. perceived injustice) appear as a risk factor, Lösel et al. argue that the observed negative association between personal discrimination and violent extremism might stem from the ideology under scrutiny (i.e. far-right extremism).[36] They argue that, in this context, other variables, such as higher self-esteem and authoritarian attitudes, function as risk factors, which may counteract feelings of discrimination. It is important to note, however, that this association was observed only in one single paper, requiring further investigation.[37]

Table 2. Protective Factors Associated with Violent Extremism and their Characteristics

Factor	Definition	Type	Level of analysis	Reference
Age	Being older	Static	Individual	Wolfowicz et al., 2020, 2021
Education	Highest level of education attained	Dynamic	Individual	Lösel et al., 2018
Employment	Having a job	Dynamic	Individual	Lösel et al., 2018
Intensive religious practice	Not specified	Dynamic	Individual	Lösel et al., 2018
Law abidance	There is a duty to follow and abide by the law	Dynamic	Individual	Wolfowicz et al., 2020, 2021; Lösel et al., 2018
Law legitimacy	Respect for the government/law/authorities	Dynamic	Individual	Wolfowicz et al., 2020, 2021
Perceived personal discrimination	Not specified	Static	Individual	Lösel et al., 2018
Police legitimacy	Respect for the police	Dynamic	Individual	Lösel et al., 2018
School bonding	Enjoying going to school and/or studying/attachment to school	Static	Individual	Wolfowicz et al., 2020, 2021
School performance	Good grades	Static	Individual	Lösel et al., 2018
Self-control	Low impulsivity	Dynamic	Individual	Lösel et al., 2018
Socioeconomic status	Level of personal/household income	Dynamic	Individual	Zych & Nasaescu, 2022
Value complexity	Acknowledgement that values may be in conflict	Dynamic	Individual	Lösel et al., 2018
Contact to foreigners	Not specified	Dynamic	Relationship	Lösel et al., 2018
Non-violent peers	Not specified	Dynamic	Relationship	Lösel et al., 2018
Family commitment	Importance of family, feeling that parents are important, family cohesion, leisure time with parents, parental involvement, parental care, and democratic parenting	Dynamic	Relationship	Zych & Nasaescu, 2022
Parental involvement	Parents show interest, praise, and are aware of whereabouts	Dynamic	Relationship	Wolfowicz et al., 2020, 2021; Lösel et al., 2018
Significant other not involved in violence	Not specified	Dynamic	Relationship	Lösel et al., 2018

Dynamic Individual Factors in the Spotlight

In the examined systematic reviews and meta-analyses, much more dynamic, as opposed to static, risk and protective factors were identified. This supports the importance of evidence-based prevention programs likely to modify those factors by an intervention. Indeed, although static factors can be informative in the risk evaluation, they are not relevant for the interventions,

because they cannot be modified by them. Therefore, in terms of prevention, the identification of dynamic factors is of great importance. These will inform interventions aiming to reduce the influence of risk factors and strengthen the influence of protective factors.

In terms of level of analysis, the majority of the identified risk and protective factors are concentrated at the individual level, with very few factors observed at the relationship level, and none at the community and societal levels. Although risk factors like being a recipient of welfare benefits and having a low socioeconomic status point to issues related to social class and social inequalities, and could, therefore, be considered at the societal level, they were measured here at the individual level. Their equivalent at the societal level could be, for instance, the Gini coefficient, which measures income inequality in a country. Hence, the Gini coefficient, when low, could be considered as a risk factor, and, when high, as a protective factor. This does not mean that all individuals living in a country with a low Gini coefficient are at risk of violent extremism, or that all individuals living in a country with a high Gini coefficient are not at risk. As we will discuss later, no (risk or protective) factor should be considered in isolation. It is its interaction with other factors that really matters.

The observed overemphasis on the individual level indicates that the remaining levels are overlooked or understudied at the moment or, at least, neglected by the examined systematic reviews and meta-analyses. For instance, in Wolfowicz et al.'s systematic reviews and meta-analyses[38] the authors state that their focus is exclusively on micro-level (individual) factors, excluding from their analyses community-level factors, such as community-level deprivation and population density, and societal-level factors, such as gross domestic product (GDP) and Gini coefficient.[39] As a consequence, societal risk factors such as those identified by LaFree and Schwarzenbach[40] are absent in the examined systematic reviews and meta-analyses. That is ethnic heterogeneity, ethnic tension, exclusion of ethnic groups from political power, minority socioeconomic discrimination, (long-term) income inequality, failed or weak states, repressive counter-terrorism measures, population size, immigration, and civil and interstate conflicts.

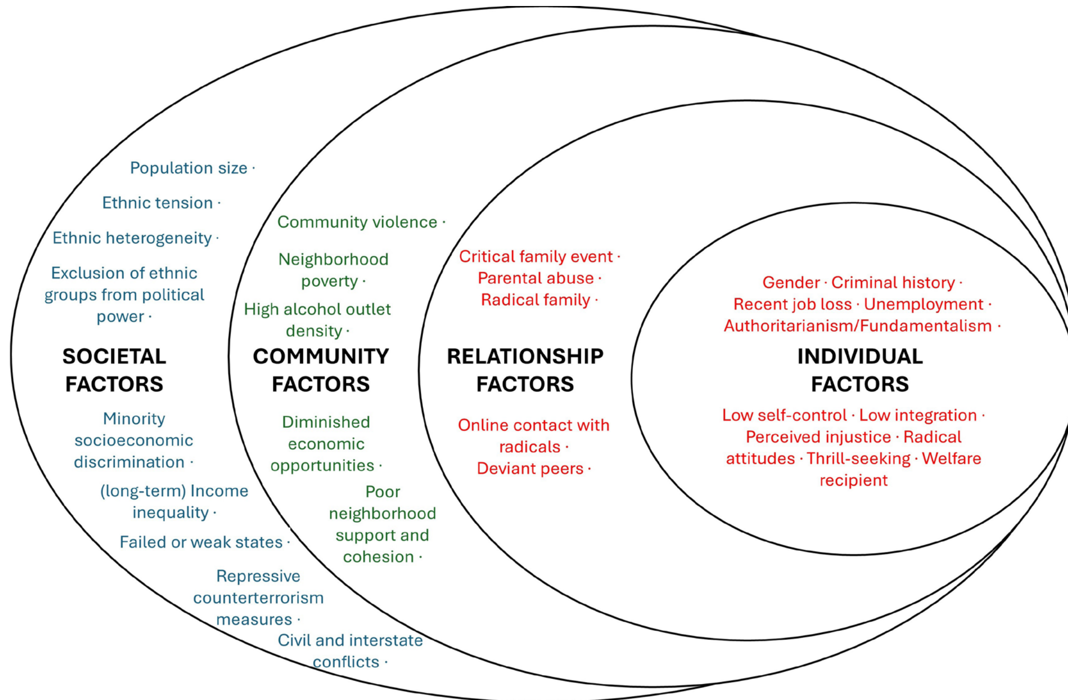
Another related explanation for the observed scarcity of relationship factors, and the absence of community and societal factors, is disciplinary bias. Indeed, the issue of violent extremism has been most often studied separately by different disciplines, resulting in a monodisciplinary approach. Consequently, the understanding of violent extremism is reduced to a few individual, social, or societal factors, depending on which discipline lens is favoured. Taken separately, the findings from each discipline can only provide a partial picture of this complex and challenging issue of violent extremism. For instance, whereas research in psychology focuses mainly on individual factors, social (relationship and community) and societal level factors might be of greater interest to scholars from other fields within social sciences (e.g. sociology, political science) in which qualitative, rather than quantitative, research is more common practice. Therefore, by focusing on systematic syntheses of quantitative data, our review might have neglected qualitative data providing support for the existence of other (relationship, community, and societal) risk and protective factors. For instance, in their interview study with ISIS and al-Qaeda members incarcerated in Kuwait, Scull et al. concluded that being a Bidoon, which can be considered a societal factor, might increase the individual's vulnerability toward joining a terrorist organisation.[41] It remains unclear, however, whether this factor can also be associated with violent extremism. Of note, Bidoon is a term used to refer to "[…] stateless Arab minority in Kuwait who were not included as citizens at the time of the country's independence […]. [They] face difficulties in obtaining civil documents, finding employment, and accessing healthcare, education, and other social services provided to Kuwaiti citizens."[42]

Socio-Ecological Model of Risk and Protective Factors Pertaining to Violent Extremism

As recognised by Dahlberg and Krug[43], violence is a multifactorial and multilevel phenomenon. In order to account for its complexity, it is necessary to be able to explain it by combining of different factors stemming from internal mechanisms, social relations, social environments, policies, ideologies and social norms pervading a given society. Given that the majority of the identified risk and protective factors pertaining to violent extremism are situated at the individual level, the current state of knowledge allows us to understand which individual characteristics might lead to (or prevent) violent extremism, but makes it difficult to understand how social and societal factors can facilitate or, on the contrary, counter violent extremism. As a result, we only get a partial picture of the phenomenon and can only provide partial answers.

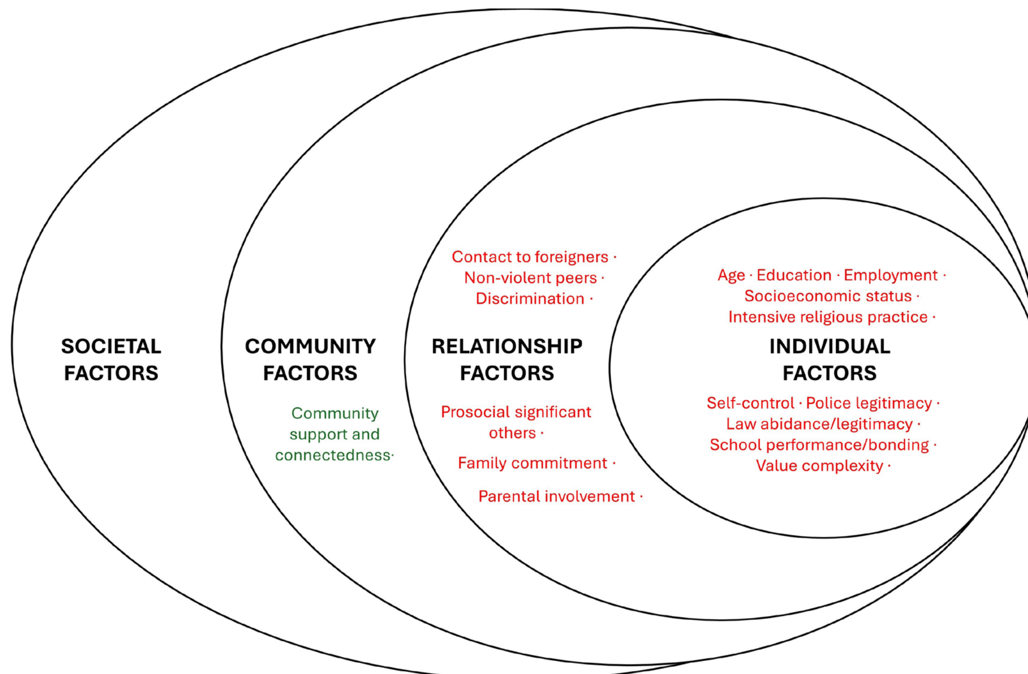
To cope with this limit, and to guide future research, policy and practice, we propose hereafter a socio-ecological model of risk and protective factors pertaining to violent extremism (cf. Figures 1 and 2).[44] This model is based on the individual and relationship factors identified in the examined systematic reviews and meta-analyses[45] but also on societal factors identified in LaFree and Schwarzenbach's narrative review.[46] Moreover, as community factors are absent in these, we completed the model by drawing some potential community-level risk and protective factors from Armstead et al.'s narrative review of risk and protective factors associated with violence in general.[47] Despite its methodological limits (i.e. the absence of a systematic approach), the authors also apply the socio-ecological model in their categorisation of risk and protective factors, which makes it easy for their inclusion in our proposed socio-ecological model of risk and protective factors pertaining to violent extremism.[48] As discussed by Dahlberg and Krug, various forms of violence can share a number of risk factors.[49] For this reason, some individuals can be at risk of perpetrating more than one type of violence. Likewise, as noted by Estano et al., violent extremism shares some commonalities with ordinary crime in terms of classic criminogenic factors.[50] In line with this argument, Raets showed that the dimensions concerning disengagement and social reintegration of violent extremists are the same as for the ordinary criminal population, although group involvement, ideology, and socio-legal responses appear more prevalent for violent extremists.[51] Hence, this extrapolation from factors associated with violence, in general, to violent extremism, in particular, follows the rationale according to which, while violent extremism is a particular form of violence, it remains a form of violence after all. The community protective and risk factors identified in Armstead et al.'s narrative review as pertaining to violence in general, can give us some indications of potential community protective and risk factors associated with violent extremism, which obviously needs to be tested empirically.[52] At this stage, we cannot state that these factors are associated with violent extremism, but in view of what has been discussed above, we have reasons to believe that this might be the case. Finally, to the best of our knowledge, societal-level protective factors associated with violent extremism or violence in general, are not reported in any existing review, which makes it impossible for us to complete the proposed model on this particular level.

Figure 1. Socio-ecological model of risk factors pertaining to violent extremism



Note: Adapted from Dahlberg & Krug.[53] Factors identified in the examined systematic reviews and meta-analyses[54] are highlighted in red, those identified in LaFree and Schwarzenbach's narrative review[55] are identified in blue, and those identified in Armstead et al.[56] are highlighted in green.

Figure 2. Socio-ecological model of protective factors pertaining to violent extremism



Note: Adapted from Dahlberg & Krug.[57] Factors identified in the examined systematic reviews and meta-analyses[58] are highlighted in red, those identified in LaFree and Schwarzenbach's narrative review[59] are identified in blue, and those identified in Armstead et al.[60] are highlighted in green.

Risk and Protective Factors as a System

In many studies, risk and protective factors are treated separately. However, although presented in distinct socio-ecological models for clear visualisation, risk and protective factors should be understood as a system in the sense that they are complementary to each other. Hence, risk and protective factors should be simultaneously considered. Moreover, because of the observed overemphasis on individual factors, these studies always end up concluding on the heterogeneity of profiles of violent extremists (i.e. the absence of a common risk profile). More precisely, the predominance of individual factors and the scarcity or lack of data on the other levels (i.e. relationship, community, and societal) make it difficult to identify common patterns beyond individual differences. The importance of simultaneously identifying risk and protective factors across levels of analysis relies on the assumption that no single factor can explain, by itself, violent behaviour.[61] Instead, it is the combination of various risk factors that might lead to violent extremism. Similarly, it is the combination of various protective factors, in the presence or absence of risk factors[62], that can prevent violent extremism.

Although Ohls et al. go one step further by exploring risk and protective factors across dimensions, which could inform risk assessment and interventions, their findings are limited because of their descriptive nature and because they conflated cognitive and behavioural outcomes of radicalisation.[63] Similarly, although Bouhana's moral ecology of extremism also explores risk factors across different levels of analysis, her findings are also limited because they are not peer-reviewed, as well as by their descriptive nature and by the broader definition of extremism employed.[64]

Finally, Clemmow et al. put forward an analysis of how risk and protective factors co-occur and relate to each other and to violent extremism.[65] Through a latent class analysis, the authors observed different risk and protective profiles tapping into different components of radicalisation, namely propensity, situational, and exposure. They also showed that some of these profiles interact either to increase or to buffer the risk of radicalisation. However, as the study was conducted among a general sample and the outcome measure was behavioural intentions, its findings are informative for prevention strategies focusing on the cognitive component of radicalisation, but not necessarily for those focusing on its behavioural component. Indeed, as shown by Ajzen, behavioural intentions do not necessarily lead to actual behaviour: perceived control over one's own behaviour, positive attitudes toward the behaviour under consideration and subjective norms are necessary to link intentions to actions.[66] Also, in their analysis, community and societal factors are not considered. They nevertheless provide evidence for the interactional and cumulative effects of individual and relationship-level risk and protective factors in leading to (or preventing) violent extremism intentions.

Onset Offending vs. Reoffending

As the present integrative review focuses on risk and protective factors associated with violent extremism, it is informative to the prevention of onset offending, but not necessarily to recidivism. Indeed, it is known that factors related to onset offending are not always the same or as relevant in explaining re-offending.[67]

However, the scientific literature on the issue of re-offending among violent extremists is scarce. Hasisi et al.'s study of risk and protective factors associated with recidivism among terrorism-related convicts is one rare example of such an effort.[68] In their study, based on secondary data from terrorism-related convicts in Israel (n=1,585), the sentence length appears to prevent recidivism. Specifically, they observed that a longer sentence decreases the likelihood of recidivism, among first-time offenders and recidivist offenders. In this result, it is difficult

to disentangle the influence of sentence length from the influence of ageing on recidivism. Indeed, the authors also find that ageing functions as a protective factor against recidivism. Hence, the negative association between the sentence length and recidivism is probably due to the violent extremists' older age at the moment of release. Other risk and protective factors identified by Hasisi et al. are: prior incarceration and affiliation with a terrorist organisation, for risk factors; and marital status, for protective factors.[69] Also relying on secondary data from terrorism-related convicts in Israel (n=26,667), Carmel et al. identified the following risk factors pertaining to recidivism: prior incarceration, younger age at release, sentence length (below seven years), offence type (being convicted for violent and disorderly offences), affiliation with a terrorist organisation and being single.[70] Likewise, also relying on secondary data pertaining to 85 violent extremists scattered all over the world, Altier et al. identified ageing and higher socioeconomic status as protective factors against recidivism, whereas radical attitudes and connections appeared as risk factors.[71] However, in their sample, when controlling for beliefs and social connections - unlike observed by Hasisi et al.[72] and Carmel et al.[73] - marital status does not appear to protect against recidivism. Finally, relying on secondary data from Guantanamo Bay detainees (n=731), Fahey showed that, among the various risk factors considered, only time since release predicted recidivism, which demonstrates the importance of a longer follow-up study.[74]

The aforementioned results should be considered with caution, as they all rely on secondary data, encompassing official documents as well as news reporting. Another reason is their lack of consensus on what is considered recidivism. It is important to note that the recidivism rates identified in these different studies are strongly dependent on various recidivism characterisations. For instance, some studies use reincarceration related to violent extremism as a measure of recidivism[75], whereas others prefer the broader conception of reengagement in violent extremism, independently of incarceration.[76] These findings suggest, nevertheless, that some risk (e.g. radical attitudes and connections) and protective (e.g. older age and higher socioeconomic status) factors can be observed both in relation to the onset of offending and reoffending of violent extremism.

Evidence-Based Practice

Among the various risk and protective factors put forward in the proposed model, many are neglected by prevention interventions, as noted by Hassan et al.[77] In a recently published book chapter, the authors highlight that intervention programs targeting employment were effective in tackling violent extremism. This is in line with the proposed socio-ecological model of violent extremism in which lack of employment appears as a risk factor, whereas employment functions as a protective factor. Other successful interventions, however, targeted civic education/engagement and citizenship, but were not observed in the present integrative review as protective factors. The results of interventions targeting other factors, which were not observed in the present integrative review, are inconclusive. This is the case for interventions targeting the development of knowledge on radicalisation and religion, empathy, self-esteem, self-image, confidence, and identity. These findings highlight that some factors need further inquiry (e.g. civic education/engagement and citizenship), as well as that some interventions are not evidence-based. One possible explanation, highlighted by the researchers, is the novelty of studies examining risk and protective factors and the even more recent publication of systematic reviews regrouping and synthesising these studies. Indeed, as the researchers argue, the majority of the intervention programmes examined were designed and implemented at a time when these risk and protective factors were unknown. These findings highlight the importance of researchers, policymakers and practitioners working together in order to effectively counter violent extremism, and the proposed socio-ecological model aims to facilitate this process.

Future Perspectives

To deal with the observed overemphasis on individual factors pertaining to violent extremism, we proposed a socio-ecological model encompassing individual, relationship, community and societal risk and protective factors pertaining to violent extremism.[78] Future systematic syntheses aiming to provide a more comprehensive understanding of violent extremism should apply such a model and, therefore, also focus on social (relationship and community) and societal factors reported in qualitative and quantitative studies. Although this is a less common practice, systematic reviews and even meta-analyses of qualitative data are achievable goals that ought also to be applied to the field of violent extremism.[79] Also, more research targeting social relations and environments (i.e. at the relationship and community levels, respectively), as well as social norms and broader policies (i.e. at the societal level), should allow for a more comprehensive understanding of risk and protective factors associated with violent extremism across all levels of analysis proposed by Dahlberg and Krug.[80] Finally, more research focusing on the risk and protective factors associated with other (nonviolent) radicalisation-related behavioural outcomes (e.g. downloading and promoting propaganda) should allow a more comprehensive understanding of which factors are exclusive to this form of behaviour and which factors are common across violent and nonviolent radicalisation-related behavioural outcomes. This research could also investigate if nonviolent radicalisation-related behaviours can serve as a risk or protective factor for violent extremism.

The risk and protective factors reported in the proposed socio-ecological model should also be tested empirically in order to attest to the model's relevance across different radical ideologies. Such an effort of empirical validation of the socio-ecological model was conducted by Wallace et al. in the context of cyber dating violence (DV) victimisation.[81] The results of their online survey conducted among 456 adolescent girls suggest that the following factors are associated with increased risk of cyber-DV victimisation: clinical dissociation and emotion dysregulation, for the individual level; offline (verbal-emotional and sexual) dating violence, for the relationship level; and living in neighbourhoods with lower levels of social disadvantage, for the community level. However, when all variables are included in the same model, the individual ones are no longer associated with victimisation. Moreover, whereas the relationship-level variables accounted for 28.2 percent of variation in the model, the community-level variables only accounted for 1.36 percent of variation. This suggests that relationship-level factors have a greater influence on the risk of cyber-DV victimisation. It remains to be established whether this is the case when we consider factors associated with violence perpetration rather than victimisation, across the various forms of violence and, in particular, regarding violent extremism. Finally, although the authors claim to provide an empirical test of the socio-ecological model, societal-level factors are left out of their analysis for non-explained reasons. This might be due to the difficulties in actually measuring factors at this level. However, such difficulties do not imply impossibility as shown elsewhere.[82] Hence, although Wallace et al.'s research is an important step in the empirical validation of the socio-ecological model of violence, future studies should put more effort into measuring the societal level and, therefore, providing an empirical validation of the model across its four levels.[83]

In the model's validation, it is also important to consider the influence of the co-occurrence of risk and protective factors and if (and how) these interact. One way of doing this is to adapt the research protocol proposed by Clemmow et al.[84] By mobilising a sample of terrorism-related convicts, one could conduct a latent class analysis in order to better grasp how the putative risk and protective factors featured in the proposed socio-ecological model interact in order to lead to (or to prevent) violent extremism. Such research will also help to identify which protective factors exert promotive or buffering effects.[85] It is also possible that some of the factors identified may function for some individuals as risk factors, while for others, they will

function as protective factors. This would probably be due to the interaction with other risk and protective factors. However, no overlap was observed between the risk and protective factors identified in the examined systematic reviews and meta-analyses, suggesting the need for further studies.

Given the focus of the present integrative review (i.e. risk and protective factors pertaining to violent extremism), its content is informative to the prevention of behavioural radicalisation, but not necessarily to the prevention of cognitive radicalisation (i.e. radical attitudes and behavioural intentions). Future research syntheses could also apply the socio-ecological model of violence to the understanding of these cognitive outcomes of radicalisation across individual, relationship, community, and societal risk and protective factors.[86] Likewise, as previously stated, by focusing on risk and protective factors associated with violent extremism, the present integrative review is informative for the prevention of onset offending, but not necessarily for the prevention of recidivism among terrorism-related convicts. Given the paucity of empirical studies on the latter, more research efforts are needed to distinguish between exclusive and mutual risk and protective factors pertaining to these two different outcome behaviours (i.e. onset offending and recidivism), as well as a more systematic inquiry, ideally with primary data, on the risk and protective factors associated with recidivism across different levels of analysis. Such research can inform social reintegration strategies aiming to facilitate the transition between the prison release and the return to society of terrorism-related convicts. This is of great importance, given the increasing number of prison releases expected for the next years.[87]

Conclusion

The socio-ecological model of violent extremism proposed in the present integrative review aims to provide a comprehensive (multifactorial, multilevel, and interdisciplinary) and evidence-based analysis of this complex and challenging issue. At first, this review's aim was to classify, across four levels of analysis (i.e. individual, relationship, community, and societal), the risk and protective factors reported in the examined systematic reviews and meta-analyses as pertaining to violent extremism. The ultimate goal of such a classification is to provide a socio-ecological model of violent extremism based on the most robust empirical evidence. However, as a consequence of the observed overemphasis on individual factors and the lack of community and societal factors, this goal was not fully achieved. In order to address these difficulties, we completed the community and societal levels of the model with factors identified in narrative reviews.

Hence, at its current state, the proposed socio-ecological model is intended to inform research. It might help to encompass the observed overemphasis on individual factors and the epistemological gap between the different disciplines in social sciences by highlighting the need to understand violent extremism as a multifactorial phenomenon which needs to be examined across different levels, and, therefore, opening avenues for an interdisciplinary take on the issue. Future research efforts might be oriented in this direction, as well as on the empirical validation of the model.

Then, after its empirical validation and, if necessary, reformulation, this model is intended to inform practice by providing an integrative model of prevention. Precisely, it has the ambition to inform interventions that will focus on the interaction of individual, relationship, community/environmental, and societal risk and protective factors. By doing so, it remains an individual-level approach, in the sense that it aims to inform interventions concerned with the risk of individual progression toward violent extremism. However, although focusing on the individual, this model highlights that these interventions should also consider the individual's social relations and environments, as well as the societal context in which the individual is embedded.

Hence, the interventions can focus on eliminating (or at least attenuating) risk factors, while providing and reinforcing protective factors. This can mostly be done at the first two levels (i.e. individual and relationship). For instance, based on the proposed socio-ecological model, an intervention should aim to decrease the individual's perception of injustice and increase their self-control at the individual level, and help individuals to move away from sources of radical influence and toward sources of prosocial influence at the relationship level. Although it can be difficult to target community and societal factors with an intervention, these levels can, nevertheless, inform the risk evaluation, allowing for the identification of individuals with a greater risk of acting out. For instance, individuals with low self-control and in contact with deviant peers, who are also exposed to community violence and to ethnic heterogeneity, might be at higher risk than their counterparts who, although presenting the same individual and relationship risk factors, are not exposed to the aforementioned community and societal risk factors.

Finally, while interventions guided by this model remain focused on individuals, public policies informed by this model can support these interventions, but also target changes at community and societal levels. However, such policies should go beyond short-term solutions, such as welfare policies, by providing the means for individuals to overcome, instead of cope with, poverty. This can be achieved, for instance, through educational programs.[88] Another example of a societal risk factor that might be countered by public policies is ethnic tension. Public campaigns targeting this risk factor could, for instance, try to bring people together by putting forward diversity as something that can enrich rather than divide the nation.[89]

Caroline Da Silva, PhD, is an associate professor in social and organisational psychology at the University of Rouen Normandy (France). Her research has two main areas of focus: identity processes, particularly identity misrecognition; and the socio-psychological underpinnings of engagement in (and disengagement from) violent extremism. (https://orcid.org/0000-0001-7738-0118)

Nicolas Amadio, PhD, is an associate professor in social sciences at the University of Strasbourg (France) and researcher at the laboratory LinCS, UMR 7069 (CNRS, Unistra) / Lab for interdisciplinary cultural studies. He currently coordinates the TROC research (Terrorists Reintegration in Open Custody -ANR-20-CE39-0007). His research work includes conflict studies, criminology and socio-legal studies.

Rachel Sarg, PhD, is an associate professor in social sciences at the University of Lorraine (France). Her research focuses on beliefs, radicalisation and counter-terrorism, justice, and the prison world.

Bruno Domingo, PhD, is an associate professor in political science at IDETCOM (Institut du Droit de l'Espace, des Territoires, de la Culture et de la Communication), Toulouse Capitole University (France), and an associate researcher at the Fondation Maison des Sciences de l'Homme (FMSH, France). His areas of interest include security policies, radicalisation and counter-terrorism phenomena.

Massil Benbouriche, PhD, is an associate professor in psychology and justice at the University of Lille (France). He holds a PhD in psychology (experimental social psychology), a PhD in criminology, and has experience as a clinical psychologist with violent and sexual offenders. His research focuses on self-regulation in maladaptive behaviours. (https://orcid.org/0000-0001-7490-5417)

Endnotes

1 Ghayda Hassan, Sébastien Brouillette-Alarie, Sarah Ousman, Deniz Kilinc, Eléa L. Savard, Wynnpaul Varela, … the CPN-PREV team, *A systematic review on the outcomes of primary and secondary prevention programs in the field of violent radicalisation* (Canada, Canadian Practitioners Network for the Prevention of Radicalisation and Extremist Violence, 2021), https://cpnprev.ca/systematic-review-2/

2 Clark McCauley and Sophia Moskalenko, "Understanding political radicalisation: The two-pyramids model," *American Psychologist* 72, no. 3 (2017): 205-216, https://doi.org/10.1037/amp0000062 ;Michael Wolfowicz, Yael Litmanovitz, David Weisburd, and Badi Hasisi, "Cognitive and behavioral radicalisation: A systematic review of the putative risk and protective factors," *Campbell Systematic Reviews* 17, no. 3 (2021): 1–90, https://doi-org/10.1002/cl2.1174

3 Ibid, p. 37.

4 Ibid, p. 4.

5 Bart Schuurman and Sarah Carthy, "Understanding (non) involvement in terrorist violence: What sets extremists who use terrorist violence apart from those who do not?," *Criminology & Public Policy* 00, (2023): 1-34, https://doi.org/10.1111/1745-9133.12626

6 Friedrich Lösel, Sonja King, Doris Bender, and Irina Jugl, "Protective factors against extremism and violent radicalisation: A systematic review of research," *International journal of developmental science* 12, no. 1-2 (2018): 89-102, https://doi.org/10.3233/DEV-170241; Michael Wolfowicz, Yael Litmanovitz, David Weisburd, and Badi Hasisi, "A field-wide systematic review and meta-analysis of putative risk and protective factors for radicalisation outcomes," *Journal of Quantitative Criminology* 36, (2020): 407–447, https://doi.org/10.1007/s10940-019-09439-4; Wolfowicz, Litmanovitz, Weisburd, and Hasisi, "Cognitive and behavioral radicalisation: A systematic review of the putative risk and protective factors."; Izabela Zych and Elena Nasaescu, "Is radicalisation a family issue? A systematic review of family-related risk and protective factors, consequences, and interventions against radicalisation," *Campbell Systematic Reviews* 18, no. 3 (2022): 1–68, https://doi.org/10.1002/cl2.1266

7 Wolfowicz, Litmanovitz, Weisburd, and Hasisi, "Cognitive and behavioral radicalisation: A systematic review of the putative risk and protective factors."

8 James Bonta and Donald A. Andrews, "Risk-need-responsivity model for offender assessment and rehabilitation," *Rehabilitation* 6, no. 1 (2007): 1-22. https://www.securitepublique.gc.ca/cnt/rsrcs/pblctns/rsk-nd-rspnsvty/rsk-nd-rspnsvty-eng.pdf

9 Jean-Pierre Guay, Geneviève Parent, and Massil Benbouriche, "Disentangling promotive and buffering protection: Exploring the interface between risk and protective factors in recidivism of adult convicted males," *Criminal justice and behaviour* 47, no. 11 (2020): 1468-1486, https://doi.org/10.1177/0093854820945745

10 Ibid.

11 Wolfowicz, Litmanovitz, Weisburd, and Hasisi, "Cognitive and behavioral radicalisation: A systematic review of the putative risk and protective factors."

12 Schuurman and Carthy, "Understanding (non) involvement in terrorist violence: What sets extremists who use terrorist violence apart from those who do not?"

1 Linda L. Dahlberg and Etienne G. Krug, "Violence—A global public health problem," in *World report on violence and health,* ed. Etienne G. Krug, Linda L. Dahlberg, James A. Mercy, Anthony B Zwi, and Raphael Lozano (Geneva: World Health Organization, 2002), 1-21.

14 Ibid.

15 Ibid.

16 Samuel T. Hales, "Sexual violence in higher education: Prevalence and characteristics of perpetrators," in *Stopping gender-based violence in higher education: Policy, practice, and partnerships,* ed. Clarissa J. Humphreys and Graham J. Towl (London: Routledge, 2022), 109-127, https://doi.org/10.4324/9781003252474-8

17 Aiméé Wallace, Rachel Langevin, and Martine Hébert, "An Analysis of Risk and Protective Factors Associated with Cyber-Dating Violence Victimization of Adolescent Girls: An Ecological Perspective," *Journal of Child & Adolescent Trauma* 16, (2023): 1017-1029, https://doi.org/10.1007/s40653-023-00558-6

18 Hales, "Sexual violence in higher education: Prevalence and characteristics of perpetrators,"

19 Gary LaFree and Anina Schwarzenbach, "Micro and macro-level risk factors for extremism and terrorism: Toward a criminology of extremist violence," *Monatsschrift für Kriminologie und Strafrechtsreform* 104, no. 3 (2021): 184-202, https://doi.org/10.1515/mks-2021-0127

20 Berjan Doosje, Fathali M. Moghaddam, Arie W. Kruglanski, Arjan De Wolf, Liesbeth Mann, and Allard R. Feddes, "Terrorism, radicalisation and de-radicalisation," *Current Opinion in Psychology* 11, (2016): 79-84, https://doi.org/10.1016/j.copsyc.2016.06.008

21 Noemie Bouhana, "The moral ecology of extremism: A systemic perspective," *Department of Security and Crime Science* (London, 2019), 2-32, https://www.gov.uk/government/publications/the-moral-ecology-of-extremism-a-systemic-perspective

22 Isgard Ohls, Diba S. Hosseini, Aleksandra Spasojevic, Felix Brandes, Rashid Bajwa, Kaser Ahmed, Jürgen Gallinat,Anne Karow and Marc Allroggen, "A Systematic review of the risk and protective factors for processes associated with Islamist radicalisation and extremism," *Terrorism and Political Violence*, (2023):1-21, http://doi.org/10.1080/09546553.2023.2243349

23 Allard R. Feddes, Lars Nickolson, Naomi van Bergen, Liesbeth Mann, and Bertjan Doosje, "Extremism thinking and doing: A systematic literature study of empirical findings on factors associated with (de) radicalisation processes," *International Journal of Developmental Science* 17, no. 1-3 (2023): 7-18. https://content.iospress.com/articles/international-journal-of-developmental-science/dev230345

24 Emily Corner, Helen Taylor, Isabelle Van Der Vegt, Nadine Salman, Bettina Rottweiler, Florian Hetzel, ... and Paul Gill, "Reviewing the links between violent extremism and personality, personality disorders, and psychopathy," *The Journal of Forensic Psychiatry & Psychology* 32, no. 3 (2021): 378-407, https://doi.org/10.1080/14789949.2021.1884736; Paul Gill, Caitlin Clemmow, Florian Hetzel, Bettina Rottweiler, Nadine Salman, IsabelleVan Der Vegt, ... and Emily Corner, "Systematic review of mental health problems and violent extremism," *The Journal of Forensic Psychiatry & Psychology* 32, no. 1 (2021): 51-78, https://doi.org/10.1080/14789949.2020.1820067; Kiran M. Sarma, Sarah L. Carthy, and Katie M. Cox, "Mental disorder, psychological problems and terrorist behaviour: A systematic review and meta-analysis," *Campbell systematic reviews* 18, no. 3 (2022): 1-65, https://doi.org/10.1002/cl2.1268; Margot Trimbur, Ali Amad, Mathilde Horn, Pierre Thomas, and Thomas Fovet, "Are radicalisation and terrorism associated with psychiatric disorders? A systematic review," *Journal of psychiatric research* 141, (2021): 214-222, https://doi.org/10.1016/j.jpsychires.2021.07.002

25 Chi-Un Pae, "Why systematic review rather than narrative review?," *Psychiatry investigation* 12, no. 3, (2015): p. 417, http://dx.doi.org/10.4306/pi.2015.12.3.417

26 Sarah L. Desmarais, Joseph Simons-Rudolph, Christine Shahan Brugh, Eileen Schilling, and Chad Hoggan, "The state of scientific knowledge regarding factors associated with terrorism," *Journal of Threat Assessment and Management* 4, no. 4 (2017), 180-209, https://doi.org/10.1037/tam0000090

27 Matteo Vergani, Muhammed Iqbal, Ekin Ilbahar, and Greg Barton, "The three Ps of radicalisation: Push, pull and personal. A systematic scoping review of the scientific evidence about radicalisation into violent extremism," *Studies in Conflict & Terrorism* 43, no. 10 (2020): 854-854, https://doi.org/10.1080/1057610X.2018.1505686

28 Ohls, Hosseini, Spasojevic, Brandes, Bajwa, Ahmed, ... and Allroggen, "A Systematic review of the risk and protective factors for processes associated with Islamist radicalisation and extremism."

29 Feddes, Nickolson, van Bergen, Mann, and Doosje, "Extremism thinking and doing: A systematic literature study of empirical findings on factors associated with (de)radicalisation processes."

30 Julie Emmelkamp, Jessica J. Asscher, Inge B. Wissink, and Geert Jan J. M. Stams, "Risk factors for (violent) radicalisation in juveniles: A multilevel meta-analysis," *Aggression and Violent Behavior* 55, (2020): 1-16, https://doi.org/10.1016/j.avb.2020.101489

31 Lösel, King, Bender, and Jugl, "Protective factors against extremism and violent radicalisation: A systematic review of research."

32 Wolfowicz, Litmanovitz, Weisburd, and Hasisi, "A field-wide systematic review and meta-analysis of putative risk and protective factors for radicalisation outcomes."; Wolfowicz, Litmanovitz, Weisburd, and Hasisi, "Cognitive and behavioral radicalisation: A systematic review of the putative risk and protective factors."

33 Zych and Nasaescu, "Is radicalisation a family issue? A systematic review of family-related risk and protective factors, consequences, and interventions against radicalisation."

34 Dahlberg and Krug, "Violence — A global public health problem."

35 Ibid.

36. Lösel, King, Bender, and Jugl, "Protective factors against extremism and violent radicalisation: A systematic review of research."

37 Maarten S. O. De Waele, and Lieven Pauwels, "Youth involvement in politically motivated violence: Why do social integration, perceived legitimacy, and perceived discrimination matter?," *International Journal of Conflict and Violence* 8, (2014): 134-153, http://doi.org/10.4119/UNIBI/ijcv.379

38 Wolfowicz, Litmanovitz, Weisburd, and Hasisi, "A field-wide systematic review and meta-analysis of putative risk and protective factors for radicalisation outcomes."; Wolfowicz, Litmanovitz, Weisburd, and Hasisi, "Cognitive and behavioral radicalisation: A systematic review of the putative risk and protective factors."

39 However, some factors identified by the authors as pertaining to the individual level, are considered in the present review as pertaining to the relationship level (e.g. parental abuse), indicating a different understanding of these levels. Indeed, whereas the authors understand as individual level any factor involving the individual, in the present review, drawing from the socio-ecological model, we consider as relationship level those factors involving the individual's proximal relations.

40 LaFree and Schwarzenbach, "Micro and macro-level risk factors for extremism and terrorism: Toward a criminology of extremist violence."

41 Nicholas C. Scull, Othman Alkhadher, and Salman Alawadi, "Why people join terrorist groups in Kuwait: A qualitative examination," *Political Psychology* 41 no. 2 (2020): 231-247, https://doi.org/10.1111/pops.12622

42 "Kuwait: Bidoon," Minority Rights Group International, accessed September 25, 2023. https://minorityrights.org/minorities/bidoon/#:~:text=Profile,country's%20independence%20or%20shortly%20thereafter.

43 Dahlberg and Krug, "Violence—A global public health problem."

44 Ibid.

45 Lösel, King, Bender, and Jugl, "Protective factors against extremism and violent radicalisation: A systematic review of research."; Wolfowicz, Litmanovitz, Weisburd, and Hasisi, "A field-wide systematic review and meta-analysis of putative risk and protective factors for radicalisation outcomes."; Wolfowicz, Litmanovitz, Weisburd, and Hasisi, "Cognitive and behavioral radicalisation: A systematic review of the putative risk and protective factors."; Zych and Nasaescu, "Is radicalisation a family issue? A systematic review of family-related risk and protective factors, consequences, and interventions against radicalisation."

46 LaFree and Schwarzenbach, "Micro and macro-level risk factors for extremism and terrorism: Toward a criminology of extremist violence."

47 Theresa L. Armstead, Natalie Wilkins, and Amanda Doreson, "Indicators for evaluating community- and societal-level risk and protective factors for violence prevention: Findings from a review of the literature, *Journal of public health management and practice* 24, (2018): 42-50, https://doi.org/10.1097/PHH.0000000000000681

48 Dahlberg and Krug, "Violence—A global public health problem."

49 Ibid.

50 Nicolas Estano, Martine Herzog-Evans, and Massil Benbouriche, "Psycho(patho)logie et psycho-criminologie de l'extrémisme violent : données disponibles et implications [Psycho(patho)logy and psycho-criminology of violent extremism: available data and implications]," *Cahiers de la sécurité et de la justice*, no. 46 (2019) : 20-29, https://www.cvereferenceguide.org/sites/default/files/2022-08/Extr%C3%A9misme%20violent%20et%20d%C3%A9sengagement%20de%20la%20violence.pdf#page=21

51 Sigrid Raets, "Desistance, disengagement, and deradicalization: a cross-field comparison," International Journal of Offender Therapy and Comparative Criminology, (2022): 1-38, https://doi.org/10.1177/0306624X221102802

52 Armstead, Wilkins, and Doreson, "Indicators for evaluating community- and societal-level risk and protective factors for violence prevention: Findings from a review of the literature."

53 Dahlberg and Krug, "Violence—A global public health problem."

54 Lösel, King, Bender, and Jugl, "Protective factors against extremism and violent radicalisation: A systematic review of research."; Wolfowicz, Litmanovitz, Weisburd, and Hasisi, "A field-wide systematic review and meta-analysis of putative risk and protective factors for radicalisation outcomes."; Wolfowicz, Litmanovitz, Weisburd, and Hasisi, "Cognitive and behavioral radicalisation: A systematic review

of the putative risk and protective factors."; Zych and Nasaescu, "Is radicalisation a family issue? A systematic review of family-related risk and protective factors, consequences, and interventions against radicalisation."

55 LaFree and Schwarzenbach, "Micro and macro-level risk factors for extremism and terrorism: Toward a criminology of extremist violence."

56 Armstead, Wilkins, and Doreson, "Indicators for evaluating community- and societal-level risk and protective factors for violence prevention: Findings from a review of the literature."

57 Dahlberg and Krug, "Violence—A global public health problem."

58 Lösel, King, Bender, and Jugl, "Protective factors against extremism and violent radicalisation: A systematic review of research."; Wolfowicz, Litmanovitz, Weisburd, and Hasisi, "A field-wide systematic review and meta-analysis of putative risk and protective factors for radicalisation outcomes."; Wolfowicz, Litmanovitz, Weisburd, and Hasisi, "Cognitive and behavioral radicalisation: A systematic review of the putative risk and protective factors."; Zych and Nasaescu, "Is radicalisation a family issue? A systematic review of family-related risk and protective factors, consequences, and interventions against radicalisation."

59 LaFree and Schwarzenbach, "Micro and macro-level risk factors for extremism and terrorism: Toward a criminology of extremist violence."

60 Armstead, Wilkins, and Doreson, "Indicators for evaluating community- and societal-level risk and protective factors for violence prevention: Findings from a review of the literature."

61 Wolfowicz, Litmanovitz, Weisburd, and Hasisi, "Cognitive and behavioral radicalisation: A systematic review of the putative risk and protective factors."

62 Guay, Parent, and Benbouriche, "Disentangling promotive and buffering protection: Exploring the interface between risk and protective factors in recidivism of adult convicted males."

63 Ohls, Hosseini, Spasojevic, Brandes, Bajwa, Ahmed, ... and Allroggen, "A Systematic review of the risk and protective factors for processes associated with Islamist radicalisation and extremism."

64 Bouhana, "The moral ecology of extremism: A systemic perspective,"

65 Caitlin Clemmow, Noémie Bouhana, Zoe Marchment, and Paul Gill, "Vulnerability to radicalisation in a general population: a psychometric network approach," *Psychology, Crime & Law* 29, no. 4 (2023): 408-436, https://doi.org/10.1080/1068316X.2022.2027944

66 Icek Ajzen, "The theory of planned behaviour," *Organisational behavior and human decision processes* 50, no. 2 (1991): 179-211, https://doi.org/10.1016/0749-5978(91)90020-T.

67 Alfred Blumstein, and Jacqueline Cohen, "Characterizing criminal careers," *Science* 237, no. 4818 (1987): 985–991, https://doi.org/10.1126/science.237.4818.985; Alex R. Piquero, David P. Farrington, and Alfred Blumstein, "The criminal career paradigm," *Crime and Justice* 30, (2003): 359-506, https://doi.org/10.1086/652234

68 Badi Hasisi, Tomer Carmel, David Weisburd, and Michael Wolfowicz, M., "Crime and terror: Examining criminal risk factors for terrorist recidivism," *Journal of Quantitative Criminology* 36, (2020): 449-472, https://doi.org/10.1007/s10940-019-09415-y

69 Ibid.

70 Tomer Carmel, Michael Wolfowicz, Badi Hasisi, and David Weisburd, "Terrorist recidivism in Israel: Rates, patterns and risk factors," in *Understanding recruitment to organised crime and terrorism,* ed. David Weisburd, Ernesto U. Savona, Badi Hasisi, and Francesco Calderoni (Germany: Springer, 2020), 85-104.

71 Mary Beth Altier, Emma Leonard Boyle, and John G. Horgan, "Returning to the Fight: An Empirical Analysis of Terrorist Reengagement and Recidivism," *Terrorism and Political Violence* 33, no. 4 (2021): 836-860, http://doi.org/10.1080/09546553.2019.1679781

72 Hasisi, Carmel, Weisburd, and Wolfowicz, M., "Crime and terror: Examining criminal risk factors for terrorist recidivism."

73 Carmel, Wolfowicz, Hasisi, and Weisburd, "Terrorist recidivism in Israel: Rates, patterns and risk factors."

74 Susan Fahey, "Predictors of release from Guantanamo Bay and detainee recidivism," *International Journal of Criminology and Sociology* 2, (2013): 453-468, https://doi.org/10.6000/1929-4409.2013.02.41

75 Carmel, Wolfowicz, Hasisi, and Weisburd, "Terrorist recidivism in Israel: Rates, patterns and risk factors."; Hasisi, Carmel, Weisburd, and Wolfowicz, M., "Crime and terror: Examining criminal risk factors for terrorist recidivism."

76 Altier, Boyle, and Horgan, "Returning to the Fight: An Empirical Analysis of Terrorist Reengagement and Recidivism."; Fahey, "Predictors of release from Guantanamo Bay and detainee recidivism."

77 Ghayda Hassan, Sébastien Brouillette-Alarie, and Sarah Ousman, "Risk for violent radicalisation: primary, secondary and tertiary prevention programmes effectively address risk and protective factors?" in *Violent extremism: A handbook of risk assessment and management,* ed. Caroline Logan, Randy Borum, & Paul Gill (London: UCL Press, 2023), 179-212.

807Dahlberg and Krug, "Violence—A global public health problem."

81 e.g., see Ladislav Timulak, "Meta-analysis of qualitative studies: A tool for reviewing qualitative research findings in psychotherapy," *Psychotherapy Research* 19, no. 4-5 (2009): 591-600, http://doi.org/10.1080/10503300802477989

82 Dahlberg and Krug, "Violence—A global public health problem."

83 Wallace, Langevin, and Hébert, "An Analysis of Risk and Protective Factors Associated with Cyber-Dating Violence Victimization of Adolescent Girls: An Ecological Perspective."

84 Armstead, Wilkins, and Doreson, "Indicators for evaluating community- and societal-level risk and protective factors for violence prevention: Findings from a review of the literature."; LaFree and Schwarzenbach, "Micro and macro-level risk factors for extremism and terrorism: Toward a criminology of extremist violence."

85 Wallace, Langevin, and Hébert, "An Analysis of Risk and Protective Factors Associated with Cyber-Dating Violence Victimization of Adolescent Girls: An Ecological Perspective."

86 Clemmow, Bouhana, Marchment, and Gill, "Vulnerability to radicalisation in a general population: a psychometric network approach."

87 Guay, Parent, and Benbouriche, "Disentangling promotive and buffering protection: Exploring the interface between risk and protective factors in recidivism of adult convicted males."

88 Dahlberg and Krug, "Violence—A global public health problem."

89 Europol, *European Union Terrorism Situation and Trend Report 2021* (Luxembourg: Publications Office of the European Union, 2021), https://www.europol.europa.eu/publication-events/main-reports/european-union-terrorism-situation-and-trend-report-2021-te-sat.

90 Jo Walker, Caroline Pearce, Kira Boe, and Max Lawson, *The Power of Education to Fight Inequality: How increasing educational equality and quality is crucial to fighting economic and gender inequality* (Oxford: Oxfam, 2019), https://doi.org/10.21201/2019.4931

91 Caroline Da Silva, Nicolas Amadio, Rachel Sarg, Bruno Domingo, Sarah Tibbels, and Massil Benbouriche, "Preventing radicalization leading to violence: Insights from the significance quest theory and its 3N model," *Journal of Community and Applied Social Psychology* 33, no. 3 (2023): 608-622, https://doi.org/10.1002/casp.2667

About

Perspectives on Terrorism

Established in 2007, *Perspectives on Terrorism* (PT) is a quarterly, peer-reviewed, and open-access academic journal. PT is a publication of the International Centre for Counter-Terrorism (ICCT), in partnership with the Institute of Security and Global Affairs (ISGA) at Leiden University, and the Handa Centre for the Study of Terrorism and Political Violence (CSTPV) at the University of St Andrews.

Copyright and Licensing

Perspectives on Terrorism publications are published in open access format and distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives License, which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited, the source referenced, and is not altered, transformed, or built upon in any way. Alteration or commercial use requires explict prior authorisation from the International Centre for Counter-Terrorism and all author(s).

© 2023 ICCT

Contact

E: pt.editor@icct.nl
W: pt.icct.nl