

A Systematic Review of Neurodivergence, Vulnerability, and Risk in the Context of Violent Extremism

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BACKGROUND

Existing research does not indicate that there is a direct causal link between neurodivergence and engagement in violent extremism in the general population. However, while estimates vary, a proportion of individuals within violent extremist populations are also neurodivergent. While much attention has been given to the presence and prevalence of neurodivergence in extremist populations, there is a need to understand more about the relevance and functional role of neurodivergence in these contexts. Specific features of neurodivergent conditions such as autism spectrum disorder (ASD) and attention-deficit/hyperactivity disorder (ADHD) may affect individuals' experiences, functioning, and behaviour in ways that may contextualise vulnerability to such engagement, as well as resilience and disengagement, that may differ from their neurotypical counterparts.

OBJECTIVES

This systematic review aimed to synthesise existing knowledge on the relevance and functional role of neurodivergence, specifically ASD and ADHD, in the context of violent extremism, radicalisation, and mass violence. Specifically, it aimed to investigate the following research questions:

1. What is known about the functional role of ASD and ADHD in the context of vulnerability and/or resilience to radicalisation, terrorism, and mass violence?



2. What is known about risk management of individuals who have neurodevelopmental needs in the context of violent extremist offending?
3. What recommendations can be made for professional training, skills, and effectiveness in the risk assessment and management of individuals who have neurodevelopmental needs?
4. What is the quality, extent, and gaps of the existing research in this field?

REVIEW METHODOLOGY

This research adopted a systematic review approach, based on the PRISMA 2020 guidelines (Page et al., 2021). Documents were identified through a keyword search of relevant electronic databases, after which they were screened for inclusion based on pre-determined eligibility criteria. The selection process is outlined in Figure 1. At each stage, documents that

OVERVIEW

NEURODIVERGENCE, VULNERABILITY, AND RISK IN THE CONTEXT OF VIOLENT EXTREMISM

did not match the eligibility criteria were excluded. Relevant themes, methods, sample information, key findings, and document metadata were extracted from documents using a uniform template. The findings were synthesised using a qualitative thematic analysis of the included documents.

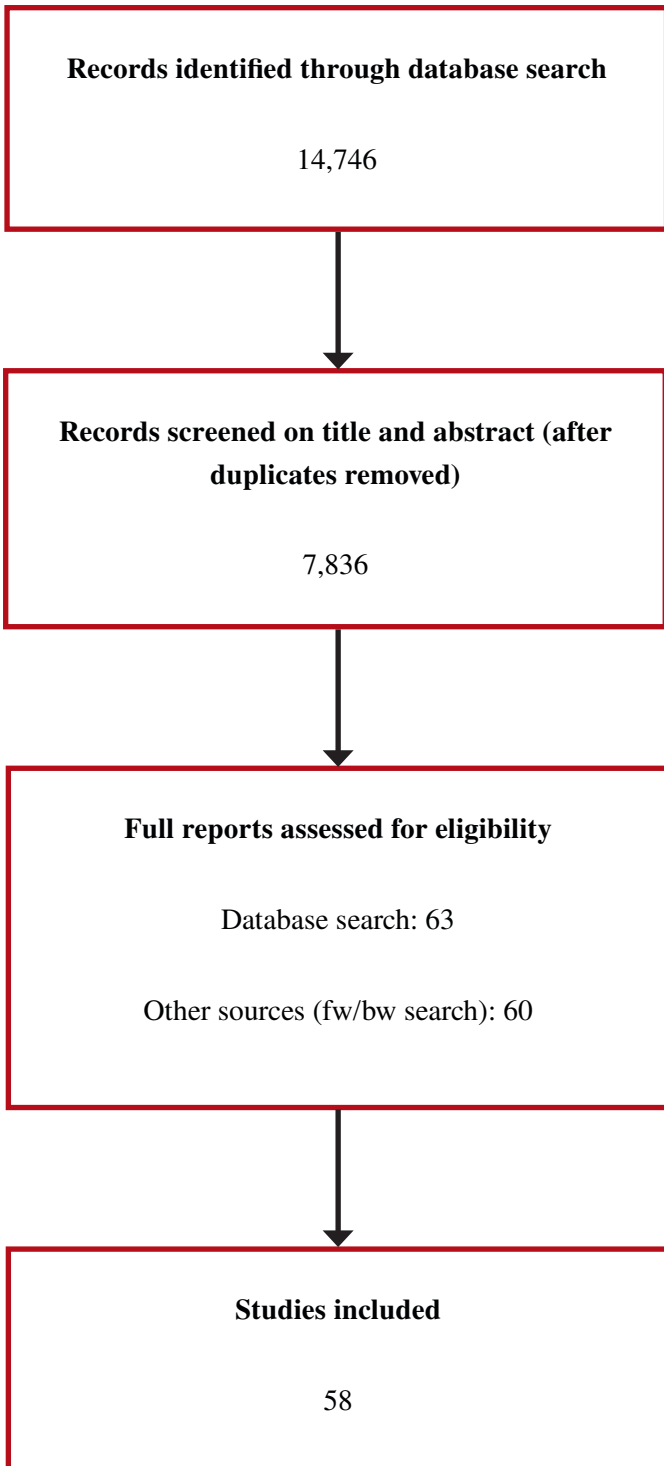


Figure 1. Systematic review flow diagram.

KEY FINDINGS

THEME 1: PREVALENCE

Six papers included calculated the prevalence of ASD/ADHD in their samples. These found a prevalence of 2-28% for ASD and 1-36% for ADHD among the violent extremist and mass murderer populations studied. However, these estimates varied greatly depending on the sample studied.

THEME 2: SOCIAL AND RELATIONSHIP DIFFICULTIES

No common direct link or pathway was found between social and communication difficulties (more commonly associated with ASD) and offending behaviour. Difficulties in social communication were linked to difficulties in forming relationships, social rejection, and isolation. This may lead to feelings of resentment and personal grievance, fuelling revenge fantasies and identification with extreme ideologies, such as incel narratives. These difficulties may also push individuals to retreat into online communities, where they may be exposed to more extreme content and actors. In some documents, social naïveté was linked to a vulnerability to exploitation.

THEME 3: HYPERFIXATION, OBSESSIONALITY, AND CIRCUMSCRIBED INTERESTS

The literature highlighted that neurodivergent extremists and mass murderers tended to have obsessional interests that became linked to their offending behaviour. Three recurring obsessions or interests found in the literature were mass murder, weapons (firearms, knives, and bombs), and extremist narratives or ideologies. Interests in weapons were in some cases (particularly in the US) linked to their access and possession, and subsequently their use in attacks.

THEME 4: COGNITIVE STYLES

The literature discussed the relevance of rigid cognitive styles and a need for predictability, rules, and routines. Changes to routines were associated with stress and frustration that may contribute to grievances, while ‘rule-based’ ideologies that claim to restore order were considered attractive. Some papers also mentioned that a tendency to overfocus on minute details whilst overlooking the bigger picture and context could be associated with a lack of consideration of consequences. Executive function difficulties were implicated in professional and academic challenges faced by individuals that may have contributed to grievances, as well as impulsive violence.

THEME 5: SENSORY ISSUES

The cases discussed in the literature suggest that heightened sensory sensitivity may contribute to difficulties in school or work and subsequent isolation. It may also lead to a perception of the world as threatening, potentially influencing a pathway to violence. Meanwhile, sensory hyposensitivity/under-sensitivity may be expressed through sensation-seeking behaviours, including interests in violent video games, fire, explosions, weaponry, and shooting.

THEME 6: VIVID FANTASIES AND IDEATION

Neurodivergent individuals may experience and seek sensory stimulation or soothing through vivid fantasies and ideation. In the cases described in the literature, this included detailed visual and written fantasies depicting violent ideation and preoccupations with death, in some cases transitioning from fantasy to action. These vivid ideations can extend to idealised versions of the individual, contributing to a grandiose narrative surrounding the individual and their actions. Some studies suggest that these ideations may arise as a maladaptive response to prolonged isolation, while others propose a connection to paranoid or psychotic ideation linked to comorbid disorders.

THEME 7: EMOTIONAL DYSREGULATION

Emotional dysregulation was described in response to external stressors like changes in routines, sensory overload, and social rejection, leading to feelings of frustration, anxiety, and grievance. Additionally, internalised emotional struggles, including low mood, aggression, and self-esteem issues were noted, and may be linked to comorbidities. These emotional difficulties can both stem from and contribute to social isolation, as well as a sense of grievance.

THEME 8: COMPLEX NEEDS, COMORBIDITIES, AND TRAUMA

The literature highlights that there are often additional factors that may interact with or exacerbate difficulties associated with neurodivergent symptoms. As well as environmental factors and stressors, several other external aspects can create complex and interacting needs. This included comorbidities (e.g., other types of neurodivergence, psychosis, schizophrenia, depression, and anxiety), trauma (such as experiences of abuse), and other life stressors (such as familial, relationship, and employment difficulties).

THEME 9: ENHANCING RESILIENCE AND CONSIDERATIONS FOR PRACTICE

The literature provides some suggestions for enhancing resilience and protection amongst this population. These encompass factors associated with neurodivergence that may reduce vulnerability and risk in some contexts (such as a decreased propensity to engage with other extremists offline due to social difficulties); ways in which symptoms can be addressed or alleviated to reduce vulnerability (e.g., encouraging engagement in healthier interests, restoring routines); and ways in which additional comorbidities and life stressors can be addressed to reduce vulnerability (e.g., psychotherapy).

OVERVIEW

NEURODIVERGENCE, VULNERABILITY, AND RISK IN THE CONTEXT OF VIOLENT EXTREMISM

The literature also suggests integrating considerations around neurodivergent needs alongside existing threat and risk assessment processes. However, it is emphasised that such assessments should be conducted by knowledgeable mental health clinicians, and caution is advised against attributing behaviours solely to a diagnostic label.

CONCLUSIONS

Overall, a multitude of different factors can contribute to violent extremism and mass violence risk – often involving the crystallisation of different diagnoses, environmental factors, and stressors that uniquely combine in individuals. Importantly, there is no evidence to directly link neurodivergence to violent extremism or mass violence in the general population. Within populations of concern, risk assessment approaches may benefit from considering how neurodivergent traits and symptoms can contextualise risk, vulnerability, and resilience; and their interaction with external and convergent factors. Considering the push and pull factors to mass violence and violent extremism through the lens of neurodivergence may also be relevant for supporting disengagement.

ABOUT THIS PROJECT

This is the Overview taken from the full Systematic Review. You can find all the outputs from this project at: www.crestresearch.ac.uk/projects/practice-consolidation-and-assessment/

The Centre for Research and Evidence on Security Threats (CREST) is funded by the UK's Home Office and security and intelligence agencies to identify and produce social science that enhances their understanding of security threats and capacity to counter them. Its funding is administered by the Economic and Social Research Council (ESRC Award ES/V002775/1).